

Board of Directors Meeting Agenda

Date: July 15, 2021

Time: 5:30 p.m.

Location: Virtual Meeting (online)

Powering forward. Together.



AGENDA

SACRAMENTO MUNICIPAL UTILITY DISTRICT BOARD OF DIRECTORS MEETING

In accordance with the Governor's Executive Order N-29-20 and the Emergency Board Meeting Procedures adopted by the SMUD Board of Directors, the regular Board meeting and other public meetings are closed to the public to align with state, local, and federal guidelines and social distancing recommendations for the containment of the coronavirus.

Live video streams and indexed archives of meetings are available at:

http://smud.granicus.com/ViewPublisher.php?view_id=16

Members of the public may register to provide verbal comments at an upcoming Board or Committee meeting by e-mailing a request to speak to PublicComment@smud.org. Please include the date of the meeting, name, and topic or agenda item the requestor wishes to speak on. The request may also be submitted while the meeting is in progress during the standard time for the agenda item or topic. **Pre-registration is strongly encouraged by no later than 3:00 p.m. on the day of the meeting.**

Members of the public may provide written public comments on a specific agenda item or on items not on the agenda (general public comment) by submitting comments via e-mail. Comments may be submitted to PublicComment@smud.org and will be placed into the record of the meeting.

Members of the public that are listening to or watching the live stream of a Board meeting and wish to submit written comments on a specific agenda item as it is being heard may submit their comments, limited to 250 words or less, to PublicComment@smud.org, noting the agenda item number in the subject line. The Board President may read comments for items on the agenda into the record, in her discretion, based upon such factors as the length of the agenda or the number of e-mail comments received. General public comment for items not on the agenda will not be read into the record but will be provided to the Board and placed into the record of the Board meeting if it is received within two hours after the meeting ends.

July 15, 2021 – 5:30 p.m.

Zoom Webinar Link: [Join SMUD Board of Directors Meeting Here](#)

Webinar ID: 160 631 3480

Password: 201012

Phone Dial-in Number: 1-669-254-5252

Call to Order.

a. Roll Call.

1. Approval of the Agenda.

2. Committee Chair Reports.

- a. Committee Chair report of July 13, 2021, Finance and Audit Committee
- b. Committee Chair report of July 13, 2021, Energy Resources & Customer Services Committee
- c. Committee Chair report of July 14, 2021, Policy Committee

Items 5 through 7 were reviewed by the July 13, 2021, Finance and Audit Committee. Item 8 was reviewed by the July 13, 2021, Energy Resources & Customer Services Committee. Items 9 through 14 were reviewed by the July 14, 2021, Policy Committee.

Comments from the public are welcome when these agenda items are called.

Consent Calendar:

- 3. Approve Board member compensation for service rendered at the request of the Board (pursuant to Resolution 18-12-15) for the period of June 16, 2021, through July 15, 2021.
- 4. Approval of the minutes of the meeting of June 17, 2021.
- 5. Authorize the Chief Executive Officer and General Manager to award a contract to **Anixter Inc.** for pole line hardware and electrical supplies for a five-year term from July 20, 2021, to July 19, 2026, for an amount not-to-exceed \$25 million. **Finance and Audit Committee 7/13. (Jennifer Davidson)**
- 6. Approve Contract Change No. 6 to Contract No. 4500096911 with **Securitas Critical Infrastructure Services, Inc.** for Rancho Seco security services to extend the contract expiration date by five years from August 1, 2021, to August 1, 2026, and increase the contract amount by \$15 million, from \$10.9 million to \$25.9 million. **Finance and Audit Committee 7/13. (Jennifer Davidson)**
- 7. Approve an increase to the aggregate contract not-to-exceed amount for gas pipeline professional engineering services by \$3 million, from \$2 million to \$5 million, for Contract No. 4500113214 with **Alisto Engineering Group** and Contract No. 4500113213 with **Gas Transmission Systems, Inc.** **Finance and Audit Committee 7/13. (Lora Anguay)**
- 8. Adopt criteria to adjust SMUD ward boundaries using the 2020 data released by the U.S. Census Bureau and set schedule for public redistricting workshops. **Energy Resources & Customer Services Committee 7/13. (Laura Lewis)**
- 9. Accept the monitoring report for **Strategic Direction SD-13, Economic Development Policy.** **Policy Committee 7/14. (Gary King)**
- 10. Accept the monitoring report for **Strategic Direction SD-14, System Enhancement.** **Policy Committee 7/14. (Frankie McDermott)**
- 11. Approve proposed revisions to **Governance Process GP-1, Purpose of Board.** **Policy Committee 7/14. (Laura Lewis)**

12. Approve proposed revisions to **Governance Process GP-2, Governance Focus.**
Policy Committee 7/14. (Laura Lewis)
13. Approve proposed revisions to **Governance Process GP-3, Board Job Description.**
Policy Committee 7/14. (Laura Lewis)
14. Approve proposed revisions to **Governance Process GP-7, Guidelines for Board**
Member Behavior. Policy Committee 7/14. (Laura Lewis)

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Public Comment:

15. Items not on the agenda.

Board and CEO Reports:

16. Directors' Reports.
17. President's Report.
18. CEO's Report.
 - a. Board Video re: US Cold Storage

Summary of Board Direction

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ANNOUNCEMENT OF CLOSED SESSION AGENDA

1. **Conference with Legal Counsel – Significant Exposure to Litigation.**

Pursuant to Section 54956.9(d)(2) of the Government Code:

One case.

* * * * *

Board Committee Meetings and Special Meetings of the Board of Directors are held at the SMUD Headquarters Building, 6201 S Street, Sacramento

The SMUD Board of Directors is currently operating under Emergency Board Meeting Procedures. In response to local, state, and federal directives, the following meetings will be held virtually (online).

July 13, 2021	Finance and Audit Committee and Special SMUD Board of Directors Meeting	Virtual Meeting (online)	5:30 p.m.
July 13, 2021	Energy Resources & Customer Services Committee and Special SMUD Board of Directors Meeting	Virtual Meeting (online)	Immediately following the Finance and Audit Committee and Special SMUD Board of Directors Meeting scheduled to begin at 5:30 p.m.
July 14, 2021	Policy Committee and Special SMUD Board of Directors Meeting	Virtual Meeting (online)	5:30 p.m.
August 3, 2021	Strategic Development Committee and Special SMUD Board of Directors Meeting	Virtual Meeting (online)	5:30 p.m.
August 10, 2021	Strategic Development Committee and Special SMUD Board of Directors Meeting	Virtual Meeting (online)	5:30 p.m.
August 11, 2021	Policy Committee and Special SMUD Board of Directors Meeting	Virtual Meeting (online)	5:30 p.m.
August 17, 2021	Finance and Audit Committee and Special SMUD Board of Directors Meeting	Virtual Meeting (online)	5:30 p.m.
August 18, 2021	Energy Resources & Customer Services Committee and Special SMUD Board of Directors Meeting	Virtual Meeting (online)	5:30 p.m.
August 31, 2021	Special SMUD Board of Directors Meeting	Virtual Meeting (online)	5:30 p.m.

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Regular Meetings of the Board of Directors are held at the SMUD Headquarters Building, 6201 S Street, Sacramento

The SMUD Board of Directors is currently operating under Emergency Board Meeting Procedures. In response to local, state, and federal directives, the following meeting will be held virtually (online).

August 19, 2021

Virtual Meeting (online)

5:30 p.m.

Pursuant to Resolution No. 20-06-08 adopted on June 18, 2020, Emergency Board Meeting Procedures are in effect:

Members of the public may make either a general public comment or comment on a specific agenda item by submitting comments via email. Comments may be submitted to PublicComment@smud.org. Comments will be provided to the Board and placed into the record of the Board meeting if it is received within two hours after the meeting ends.

Members of the public that are listening or watching the live stream of a Board meeting and wish to comment on a specific agenda item as it is being heard, may submit their comments, limited to 250 words or less, to PublicComment@smud.org. The Board President may read the comments into the record, in her discretion, based upon such factors as the length of the agenda, the number of email comments received, and whether the Board is in danger of losing a quorum. Comments will be provided to the Board and placed into the record of the Board meeting if it is received within two hours after the meeting ends.

Members of the public may register to provide verbal comments at an upcoming Board or Committee meeting by emailing a request to speak to PublicComment@smud.org. Please include the date of the meeting, name, and topic or agenda item the requestor wishes to speak on. The request may also be submitted while the meeting is in progress during the standard time for the agenda item or topic. Pre-registration is strongly encouraged by no later than 3:00 p.m. on the day of the meeting.

ADA Accessibility Procedures: Upon request, SMUD will generally provide appropriate aids and services leading to effective communication for qualified persons with disabilities so that they can participate equally in this virtual meeting. If you need a reasonable auxiliary aid or service for effective communication to participate, please email Toni.Stelling@smud.org, or contact by phone at (916) 732-7143, no later than 48 hours before this virtual meeting.

RESOLUTION NO. _____

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

That this Board hereby approves Board member compensation for service rendered at the request of the Board (pursuant to Resolution 18-12-15) for the period of June 16, 2021, through July 15, 2021.

Sacramento, California

June 17, 2021

The Board of Directors of the Sacramento Municipal Utility District met in regular session via virtual meeting (online) at 5:31 p.m.

Roll Call:

Presiding: President Bui-Thompson

Present: Directors Rose, Fishman, Herber, Kerth,
Tamayo, and Sanborn

Present also were Paul Lau, Chief Executive Officer and General Manager; Joe Schofield, Deputy General Counsel and Assistant Secretary, and members of SMUD's executive management; and SMUD employees and visitors.

Director Herber shared the environmental tip.

President Bui-Thompson called for approval of the agenda.

Director Fishman moved for approval of the agenda, Director Tamayo seconded, and the agenda was unanimously approved.

President Bui-Thompson announced that the winning team from the Youth Energy Summit was on hand to provide their presentation.

Jacobe Caditz, Manager of Community Education and Technology, introduced Team Mystic, one of 19 high school teams that competed in the Youth Energy Summit where teams were tasked with implementing a community service project focused on sustainability and equity in transportation. He noted that President Bui-Thompson provided the welcome for the Summit, and Mr. Lau had provided a session. He thanked staff member Kaelin Sherrell, who manages the project and met with students on a regular basis.

Team Mystic from Mira Loma High School, comprising team members Anuhya Banerjee, Isha Khandwala, Peter Nelson, Emma Samford, and Kate Schuette, presented their project, Paths to Keeping it Green. A copy of the slides used in their presentation is attached to these minutes.

President Bui-Thompson thanked the team for their presentation and noted it is a wonderful program. Directors Herber, Tamayo, Fishman, and

Sanborn commended the team on their project and the professional delivery of their presentation.

Director Fishman, Chair, presented the report on the Strategic Development Committee meeting held on June 8, 2021.

Director Sanborn, Chair, presented the report on the Policy Committee meeting held on June 9, 2021.

Director Herber, Chair, presented the report on the Finance and Audit Committee meeting held on June 15, 2021.

Vice President Rose, Chair, presented the report on the Energy Resources & Customer Services Committee meeting held on June 16, 2021.

President Bui-Thompson then addressed the consent calendar consisting of Items 4 through 11.

Jennifer Davidson, Chief Financial Officer, and Alcides Hernandez, Pricing Supervisor, provided a presentation for Consent Calendar Item 9. A copy of the slides used in their presentation is attached to these minutes.

President Bui-Thompson announced that Vice President Rose would assist in leading the meeting for the remainder of the agenda.

Vice President Rose called for statements from the public regarding items on the consent calendar.

Alex Morris, Executive Director of California Energy Storage Alliance (CESA), spoke to Consent Calendar Item 9 and commended SMUD on the fair and open stakeholder process employed in developing the rate proposal. He noted that solar plus storage creates a lot of value and reliability. He encouraged the Board to consider five- to 10-year timeframes as behind-the-meter resources are leveraged in order to consider contractual time periods.

Mohit Chhabra, a Senior Scientist with the Natural Resources Defense Council (NRDC), spoke to Consent Calendar Item 9 in support of the process and proposal SMUD has developed. He stated he was involved in the California Public Utilities Commission (CPUC) proceeding and referenced a recently released report on different proposals that found in order to get a really fair and balanced tariff that does not cause rate increases, a charge must be

imposed for self-consumption which SMUD's proposal did not. He stated subsidies that lower the price of solar needed to be focused for low income customers.

Mark Graham, a customer from Elk Grove, spoke to Consent Calendar Item 9 and stated the CEO & GM Report was not on the website or in the information packet. He stated the Board should not set the date for the public hearing. He stated the public workshops and CEO & GM Report should mention Proposition 218, Proposition 26, and Article XIII C of the California Constitution.

Ted Ko, from Stem, Inc., spoke to Consent Calendar Item 9 and stated he echoed the comments of Alex Morris. He stated that without commenting specifically on the solar rates component of the proposal, Stem, Inc. supports the storage design of the proposal.

Jan Smutny-Jones, a SMUD ratepayer and member of the Value of Solar Committee, spoke to Consent Calendar Item 9 and stated SMUD had done a great job of developing a creative alternative approach to transmission the net energy metering (NEM) 1.0 program to a more cost efficient, cost effective, equitable program. He stated he understood the need to give early solar adopters a soft landing but questioned whether paying 13 cents for the next nine years was the right price.

Dara Salour, representing energy consulting firm AESC, spoke to Consent Calendar Item 9 and stated SMUD's energy storage tiered incentive program that allows for standalone battery storage, participation in critical peak pricing, or as part of a virtual power plant is very innovative and will help to advance the energy storage industry and increase the amount of solar plus storage in SMUD territory between now and 2030.

Public comment was received and read into the record regarding Consent Calendar agenda item 6, a copy of which is attached to these minutes, from the following members of the public:

- Katherine and Ralph Elder

Vice President Rose then announced he would entertain a motion on the consent calendar. Director Fishman moved for approval of the consent

calendar, Director Kerth seconded, and Resolution Nos. 21-06-01 through 21-06-08 were unanimously approved.

RESOLUTION NO. 21-06-01

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

That this Board hereby approves Board member compensation for service rendered at the request of the Board (pursuant to Resolution 18-12-15) for the period of May 16, 2021, through June 15, 2021.

Approved: June 17, 2021

INTRODUCED: DIRECTOR FISHMAN				
SECONDED: DIRECTOR KERTH				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
BUI-THOMPSON	X			
ROSE	X			
FISHMAN	X			
HERBER	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

RESOLUTION NO. 21-06-02

WHEREAS, Senate Bill 901 (2018) and Assembly Bill 1054 (2019) revised the California Public Utilities Code section 8387 (PUC § 8387) to require that before January 1, 2020, and annually thereafter, every publicly owned electric utility (POU) prepare a **Wildfire Mitigation Plan (WMP)**, present it in a noticed public meeting, and accept comments; and

WHEREAS, PUC § 8387 also requires that each POU update its plan annually and submit the update to the **California Wildfire Safety Advisory Board (WSAB)** by July 1 of each year; and

WHEREAS, by Resolution No. 19-10-09, adopted on October 17, 2019, this Board adopted SMUD's **WMP** and authorized the Chief Executive Officer and General Manager to make future changes to the SMUD **WMP** that further the primary purpose of the SMUD **WMP** and provide a net benefit to SMUD; and

WHEREAS, SMUD submitted its **WMP** to the **WSAB** on April 3, 2020; and

WHEREAS, by Resolution No. 20-11-04, adopted on November 19, 2020, this Board adopted SMUD's 2021 **WMP**; and

WHEREAS, on December 9, 2020, the **WSAB** approved its **Guidance Advisory Opinion for the 2021 Wildfire Mitigation Plans of Electric Publicly Owned Utilities and Cooperatives**; and

WHEREAS, staff prepared the **2021 Informational Response** and the **Wildfire Mitigation Plan Recommended Metrics** in response to **WSAB's** recommendations and presented to the SMUD Board of Directors Policy Committee at a duly noticed public meeting on June 9, 2021, at which meeting opportunity for public comment was provided; **NOW, THEREFORE**,

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

Section 1. This Board adopts, as supplement to SMUD's **2021 Wildfire Mitigation Plan** adopted on November 19, 2020, the **2021 Informational Response** and the **Wildfire Mitigation Plan Recommended**

Metrics substantially in the form set forth in **Attachment A** and **Attachment B** hereto and made a part hereof.

Section 2. The Chief Executive Officer and General Manager, or his designee, is authorized to make future changes to the SMUD **WMP** that, in his prudent judgment: (a) further the primary purpose of the SMUD **WMP**; and (b) are intended to provide a net benefit to SMUD.

Approved: June 17, 2021

INTRODUCED: DIRECTOR FISHMAN				
SECONDED: DIRECTOR KERTH				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
BUI-THOMPSON	X			
ROSE	X			
FISHMAN	X			
HERBER	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

SACRAMENTO MUNICIPAL UTILITY DISTRICT WILDFIRE MITIGATION PLAN 2021 INFORMATIONAL RESPONSE

RESPONSES TO WILDFIRE SAFETY ADVISORY
BOARD'S 2021 GUIDANCE ADVISORY OPINION

Draft: May 3, 2021

I. PURPOSE OF THIS 2021 INFORMATIONAL RESPONSE

The California Wildfire Safety Advisory Board (WSAB) issued the *Guidance Advisory Opinion for the 2021 Wildfire Mitigation Plans of Electric Publicly Owned Utilities and Cooperatives* (“2021 WSAB Guidance Advisory Opinion”) on December 15, 2020. The Sacramento Municipal Utility District (SMUD) provides this document to the WSAB in order to respond to each of the recommendations included in the 2021 WSAB Guidance Advisory Opinion.

After public outreach and review by a qualified independent evaluator, SMUD’s 2021 Wildfire Mitigation Plan (WMP) was presented in a noticed public meeting to, and adopted by, SMUD’s governing Board in November 2020. This Information Response is submitted with SMUD’s adopted 2021 WMP to address the WSAB’s recommendations. For each recommendation SMUD provides a narrative response and/or a cross reference to the location in SMUD’s 2021 WMP where the topic is addressed. Where the recommendation is not applicable to SMUD, the response will provide a brief description supporting this conclusion.

II. CONTEXT SETTING INFORMATION

WSAB requested that POUs provide an informational table to assist the WSAB Staff and Board members in understanding the unique characteristics of each POU.

Table 1: Context-Setting Information

Utility Name	[POU]	
Service Territory Size	900 square miles	
Owned Assets	X Transmission X Distribution X Generation	
Number of Customers Served	Approximately 641,000 customer accounts	
Population Within Service Territory	Approximately 1.5 Million people	
Customer Class Makeup	<i>Number of Accounts</i>	<i>Share of Total Load (MWh)</i>
	88.3% Residential; 1.5% Government; 0.4% Agricultural; 8.6% Small/Medium Business; 1.3% Commercial/Industrial	46.8% Residential; 6.6% Government; 0.7% Agricultural; 6.8% Small/Medium Business; 39.1% Commercial/Industrial
Service Territory	25.8% Agriculture 0.1% Barren/Other 0% Conifer Forest 0% Conifer Woodland 0% Desert 0.3% Hardwood Forest 3.9% Hardwood Woodland	

Location/Topography¹	29.5% Herbaceous 0.1% Shrub 37.9% Urban 2.3% Water
Service Territory Wildland Urban Interface² (based on total area)	4.5% Wildland Urban Interface; 8.4% Wildland Urban Intermix;
Percent of Service Territory in CPUC High Fire Threat Districts (based on total area)	<input type="checkbox"/> Includes maps Tier 2: 0% Tier 3: 0% SMUD operates its Upper American River Project outside its territory within the High Fire Threat District, as described in the 2021 WMP, pages 26-28.
Prevailing Wind Directions & Speeds by Season	<input type="checkbox"/> Includes maps CalFire provides the following description in its 2020 Unit Strategic Fire Plan Amador-El Dorado Unit (AEU): “Fire weather for AEU is typically dominated by three general weather phenomena; the delta push influence, north wind events, and east foehn winds caused by high pressure development in the Great Basin. All three weather conditions cause potential increases in fire intensity and size. The delta influence is the most common and surfaces frequently throughout summer. Typically, high pressure systems will dominate Northern California in the summer months bringing extremely hot and dry conditions over much of the region. As these systems develop, they will tend to yield near the Delta and Sacramento areas bringing the marine influence to the Unit. This is generally considered a good thing for fire behavior; slightly cooler afternoon temperatures and increases in relative humidity. The downside is the strong winds that typically accompany these patterns can override any benefit that may come from marine air. Typically, this type of wind will subside after sundown causing fire behavior to drop off dramatically. The other critical wind patterns that are difficult to predict for AEU are the Northerly and Easterly winds. They are relatively rare, and often are forecasted only the day before. Northerly or Easterly winds are typically warmer and drier than most other wind patterns due to air compression. These conditions provide the perfect environment for increased fire intensity and large fire growth. Fire growth is typically wind driven, however as these events recede, fire immediately returns to fuel/topography driven in

¹ This data is based on the California Department of Forestry and Fire Protection, California Multi-Source Vegetation Layer Map, depicting WHR13 Types (Wildlife Habitat Relationship classes grouped into 13 major land cover types) available at: <https://www.arcgis.com/home/item.html?id=b7ec5d68d8114b1fb2bfbf4665989eb3>.

² This data is based on the definitions and maps maintained by the United States Department of Agriculture, as most recently assembled in *The 2010 Wildland-Urban Interface of the Conterminous United States*, available at https://www.fs.fed.us/nrs/pubs/rmap/rmap_nrs8.pdf.

	<p>opposing directions to the wind driven direction. This type of wind event is commonly referred to as a Santa Ana Wind in Southern California, and a foehn wind in the Sierra/Cascade Region.”</p> <p>2020 Unit Strategic Fire Plan Amador-El Dorado Unit, https://osfm.fire.ca.gov/media/j0zbdecg/2020-aeu-fire-plan.pdf]</p>
Miles of Owned Lines Underground and/or Overhead	<p>Overhead Dist.: 3,871.0 miles Overhead Trans.: 461.9 miles Underground Dist.: 6,663.6 miles Underground Trans.: 17.3 miles</p>
	Explanatory Note 1 - Methodology for Measuring “Miles”: [e.g., circuit miles, line miles.] Circuit miles.
	Explanatory Note 2 – Description of Unique Ownership Circumstances: None
	Explanatory Note 3 – Additional Relevant Context: [e.g., percentage of lines located outside service territory] See Table 4 on page 27 in SMUD’s WMP.
Percent of Owned Lines in CPUC High Fire Threat Districts	<p><i>Overhead Distribution Lines as % of Total Distribution System (Inside and Outside Service Territory)</i></p>
	<p>Tier 2: 0% Tier 3: 0%</p>
	<p><i>Overhead Transmission Lines as % of Total Transmission System (Inside and Outside Service Territory)</i></p>
	<p>Tier 2: 18.6% Tier 3: 11.4%</p>
	Explanatory Note 4 – Additional Relevant Context: No Tier 2 or Tier 3 areas exist within SMUD’s Service Area. SMUD’s overhead facilities in the High Fire Threat District are part of its Upper American River Project (UARP) as described in the WMP (see, e.g., pages 26-28, including Table 4).
Customers have ever lost service due to an IOU PSPS event?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Customers have ever been notified of a potential loss of service to due to a forecasted IOU PSPS event?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Has developed protocols to pre-emptively shut off electricity in response to elevated wildfire risks?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Has previously pre-emptively shut off electricity in response to elevated wildfire risk?	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If yes, then provide the following data for calendar year 2020: <i>Number of shut-off events:</i> 0 <i>Customer Accounts that lost service for >10 minutes:</i> N/A <i>For prior response, average duration before service restored:</i> N/A</p>

III. CROSS REFERENCE TO STATUTORY REQUIREMENTS

WSAB requested that POU provide a clear roadmap as to where each statutory requirement is addressed within the POU WMP.

Table 2: Cross References to Statutory Requirements

Requirement	Statutory Language	Location in WMP
Persons Responsible	PUC § 8387(b)(2)(A): An accounting of the responsibilities of persons responsible for executing the plan.	Section [9.1.1] Page [46]
Objectives of the Plan	PUC § 8387(b)(2)(B): The objectives of the wildfire mitigation plan.	Section [1.3] Page: [10]
Preventive Strategies	PUC § 8387(b)(2)(C): A description of the preventive strategies and programs to be adopted by the local publicly owned electric utility or electrical cooperative to minimize the risk of its electrical lines and equipment causing catastrophic wildfires, including consideration of dynamic climate change risks.	Section [3] Page [14]
Evaluation Metrics	PUC § 8387(b)(2)(D): A description of the metrics the local publicly owned electric utility or electrical cooperative plans to use to evaluate the wildfire mitigation plan's performance and the assumptions that underlie the use of those metrics.	Section [9.3.1] Page [48]
Impact of Metrics	PUC § 8387(b)(2)(E): A discussion of how the application of previously identified metrics to previous wildfire mitigation plan performances has informed the wildfire mitigation plan.	Section [9.2.1] Page [48]
Deenergization Protocols	PUC § 8387(b)(2)(F): Protocols for disabling reclosers and deenergizing portions of the electrical distribution system that consider the associated impacts on public safety, as well as protocols related to mitigating the public safety impacts of those protocols, including impacts on critical first responders and on health and communication infrastructure.	Sections [6.1.1 & 7.2] Pages [30 & 41]
Customer Notification Procedures	PUC § 8387(b)(2)(G): Appropriate and feasible procedures for notifying a customer who may be impacted by the deenergizing of electrical lines. The procedures shall consider the need to notify, as a priority, critical first responders, health care facilities, and operators of telecommunications infrastructure.	Sections [7.1 & 7.2] Pages [40 & 41]
Vegetation Management	PUC § 8387(b)(2)(H): Plans for vegetation management.	Section [6.4] Page [35]
Inspections	PUC § 8387(b)(2)(I): Plans for inspections of the local publicly owned electric utility's or electrical cooperative's electrical infrastructure.	Section [6.3] Page [32]

Prioritization of Wildfire Risks	<p>PUC § 8387(b)(2)(J): A list that identifies, describes, and prioritizes all wildfire risks, and drivers for those risks, throughout the local publicly owned electric utility’s or electrical cooperative’s service territory. The list shall include, but not be limited to, both of the following:</p> <p>(i) Risks and risk drivers associated with design, construction, operation, and maintenance of the local publicly owned electric utility’s or electrical cooperative’s equipment and facilities.</p> <p>(ii) Particular risks and risk drivers associated with topographic and climatological risk factors throughout the different parts of the local publicly owned electric utility’s or electrical cooperative’s service territory.</p>	<p>Section [4.3] Page [21]</p> <p>Sections [4.3] Pages [21]</p> <p>Section [5.1] Page [26]</p>
CPUC Fire Threat Map Adjustments	<p>PUC § 8387(b)(2)(K): Identification of any geographic area in the local publicly owned electric utility’s or electrical cooperative’s service territory that is a higher wildfire threat than is identified in a commission fire threat map, and identification of where the commission should expand a high fire threat district based on new information or changes to the environment.</p>	<p>Section [5.1] Page [26]</p>
Enterprise-wide Risks	<p>PUC § 8387(b)(2)(L): A methodology for identifying and presenting enterprise-wide safety risk and wildfire-related risk.</p>	<p>Section [4.3] Page [21]</p>
Restoration of Service	<p>PUC § 8387(b)(2)(M): A statement of how the local publicly owned electric utility or electrical cooperative will restore service after a wildfire.</p>	<p>Section [8] Page [44]</p>
Monitor and Audit	<p>PUC § 8387(b)(2)(N): A description of the processes and procedures the local publicly owned electric utility or electrical cooperative shall use to do all of the following</p> <p>(i) Monitor and audit the implementation of the wildfire mitigation plan.</p> <p>(ii) Identify any deficiencies in the wildfire mitigation plan or its implementation, and correct those deficiencies.</p> <p>(iii) Monitor and audit the effectiveness of electrical line and equipment inspections, including inspections performed by contractors, that are carried out under the plan, other applicable statutes, or commission rules.</p>	<p>Section [9.4] Page [50]</p> <p>Section [9.4.2] Page [50]</p> <p>Section [9.3.1] Page [48]</p>

<p>Qualified Independent Evaluator</p>	<p>PUC § 8387(c): The local publicly owned electric utility or electrical cooperative shall contract with a qualified independent evaluator with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of its wildfire mitigation plan. The independent evaluator shall issue a report that shall be made available on the Internet Web site of the local publicly owned electric utility or electrical cooperative, and shall present the report at a public meeting of the local publicly owned electric utility’s or electrical cooperative’s governing board.</p>	<p>Section [10] Page [52]</p>
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IV. WSAB GUIDANCE ADVISORY OPINION RECOMMENDATIONS

The WSAB Guidance Advisory Opinion identifies 14 specific recommendations that POUs are requested to address in their 2021 WMPs. As specified in Public Utilities Code § 8387(b)(1), each POU is required to perform a comprehensive revision to the POU’s WMP at least once every three years. Pursuant to this guidance, the POUs will be updating their WMPs based on the direction of their local governing boards within this 3-year cycle. Because the WSAB’s recommendations have been provided after the initial WMP submission, the POUs will have varying capacities to fully address each recommendation in their 2021 WMP. This Section IV restates each of the WSAB recommendations and provides an opportunity for each POU to do one or more of the following: (1) provide a narrative response to the recommendation; (2) provide a cross reference to where in the POU’s WMP this topic is addressed; (3) describe why the recommendation is not applicable to the POU; or (4) inform the WSAB of the POU’s intent to address the recommendation at the point of the POU’s next comprehensive revision, occurring in either the 2022 or 2023 WMP.

A. Plan Structure

WSAB Recommendation #1: Provide context-setting information about the POU and provide a simple guide to where the statutory requirements are addressed within the WMP.

POU Response: See Sections II and III above.

WSAB Recommendation #2: Provide a short description of the POU’s public review and approval (if required) for the WMP. This description may also include a brief explanation of the funding mechanisms for wildfire mitigation efforts.

POU Response:

SMUD staff prepare the WMP through an organization wide, cross functional working group and engage in extensive public outreach to its first responders, local agencies, community-based organizations and public, including posting the draft WMP for an advertised public comment period. SMUD retained a qualified independent third party to review the plan for compliance with statute and industry standard. The WMP and QIE report was then presented to SMUD's Board of Directors in a publicly noticed meeting, for adoption.

While the WMP is not a budget document, SMUD adopts its budget through open and public processes. Program commitments reflected in any given budget are impacted by many factors, including risk evaluations, system condition and requirements, emergency occurrences, economy, legislation, environment, and liability exposure. These commitments are consistently under evaluation, and program priorities can change if any of these factors shift.

WSAB Recommendation #3: Identify where the POU has posted the most recent Independent Evaluator (IE) Report and if your POU plans to enhance future IE reports, please summarize in what ways.

POU Response: The most recent IE report can be found at this link:

https://www.smud.org/-/media/Documents/In-Our-Community/Safety/SM20-002_WMP_IR_V1.ashx

SMUD retains the IE through a competitive procurement process and will continuously review the IE scope of work to ensure a robust and complete evaluation process.

WSAB Recommendation #4: Develop, in collaboration with POU industry associations, WMP guidelines for future WMPs, understanding that it may take multiple cycles for POU to integrate these recommendations into the WMPs.

POU Response: This document is intended to include, as appropriate, responses to the recommendations in the WSAB's Guidance Advisory Opinion for the POU's 2021 WMP. This document also represents the combined effort of the POU industry associations to further the development of a template to respond to the WSAB's Guidance Advisory Opinion in a future reporting WMP cycle.

B. Customer Impacts

WSAB Recommendation #5: Describe the potential impact investor-owned utilities (IOU) public safety power shutoff (PSPS) events could have on POU customers and how the POU manages these impacts. For POU's that are also balancing authorities, describe the criteria for wildfire related de-energizations. Responses shall only provide aggregated information that does not provide customer-specific information or other potentially sensitive data.

POU Response: SMUD does not have any interconnections with an IOU at the distribution voltage levels, therefore SMUD is not impacted by IOU distribution PSPS events. SMUD interconnects with Pacific Gas & Electric Company (PG&E) at the transmission level and maintains its own generation and energy resources to serve its customers. SMUD's exposure to a PG&E transmission PSPS event is limited to transmission curtailment or shortfall. SMUD has processes in place to address such potential shortfalls through such mechanisms as alternative transmission paths, internal generation, and demand response. As a last resort we have process in place to implement rolling outages which limit customer/community impact to short periods of around one hour. SMUD would communicate directly with its customers in such an event, with forecast of impacted communities available on our website (<https://www.smud.org/en/Customer-Support/Outage-Status>).

WSAB Recommendation #6: Describe the utility customer communication plans with respect to wildfires and PSPS, and in particular describe the methods, content and timing used to communicate with the most vulnerable customers, such as Access and Functional Needs (AFN) customers, medical baseline customers, non-English speakers, and those at risk of losing water or telecommunications service.

POU Response: As noted above SMUD's customers are unlikely to be directly impacted by an IOU PSPS event.

SMUD's customer communication plans are described in the WMP, see section 7.2 on page 41, first paragraph after the numbered bullets, and the first and second paragraphs in the second column in that section. The Opt-in program called out in that section is being developed to allow Vulnerable Populations or AFN customers the ability to opt in for additional notifications.]

C. The Grid

WSAB Recommendation #7: Provide details on each POU's system hardening and grid design programs, including: (1) the goals of the programs and the risk any particular program is designed to mitigate; (2) approach to PSPS mitigation and prevention; and (3) identify any resource shortages.

POU Response: SMUD's approach to grid hardening is discussed in the WMP, section 3 on page 14, section 4.3 on page 21, section 6 on page 29. See also SMUD's response to "WSAB Recommendation #5" above for resource shortages mitigation.

WSAB Recommendation #8: Describe annual visual patrols on potentially impacted circuits and the risks the POU is inspecting for. Describe whether and how system inspections lead to system improvements. Describe line patrols before, during, and/or after a critical fire weather

event, such as a Red Flag Warning with strong winds, or following a fire that burned in areas where electric facilities are or could have been impacted.

POU Response: SMUD's approach to system inspections is discussed in the WMP, section 6.3 on page 32, section 9.4.4.1 on page 50, section 8 on page 45.

WSAB Recommendation #9: Describe options considered by POU (including through the joint efforts of the POU associations) to identify previously unidentified risks that could lead to catastrophic wildfires.

POU Response: The electric utility industry is collaborative in nature. Vendors, hardware manufacturers, and engineering teams reach out to peers, customers, and vendors when certain trends or problems with equipment or hardware are encountered. This type of information is typically shared more broadly at industry conferences and workshops. SMUD maintenance and planning staff, and operational staff are in constant communications with identified partners to share and learn from such collaborative efforts.

For example, SMUD maintenance and planning staff are constantly monitoring failure related fire/wildfire events around the state, and around the country. When equipment or hardware failures are identified as the cause of fires or wildfires at another utility, questions are asked for failure risk associated with similar equipment or hardware used at SMUD. These questions are further evaluated and analyzed for risks at SMUD. An example is the transmission line C-hook insulator failure. SMUD, and a majority of other electric utilities have similar insulators on their transmission lines. SMUD engineering staff initiated a pilot project to capture high-resolution images of transmission line hardware using drones to closely analyze the amount of wear on c-hooks and other hardware. This project is ongoing and has the potential to yield many more benefits than a single component risk evaluation.

D. Risk Assessment

WSAB Recommendation #10: Describe the particular wildfire risks associated with system design and construction such as topography and location near the HFTD areas of another utility's service territory. Describe any G.O. 95 exempt assets and possible updates to G.O. 95 that could facilitate more resilient utility transmission and distribution assets.

POU Response: SMUD's assessment of wildfire risks is discussed in the WMP, see, e.g., section 4

POUs as a general matter voluntarily comply with the CPUC's General Orders, including General Order 95 (GO95) that addresses overhead lines. SMUD incorporates the standards developed in GO95 into its procedures and meets or exceeds these standards. SMUD considers a wide array of industry standards and regulations when developing its design and construction criteria. We design to the highest applicable industry standard. (NESC, IEEE, ANSI etc.)

In the WMP, see section 6.5.2 on page 35 for GO95 exempt assets.

Regarding changes to GO95, SMUD notes that the CPUC recently updated several Rules impacting wildfire safety. CMUA, SMUD and other POUs actively participated in that process and SMUD suggests that any future changes to GO95 be assessed through similar properly noticed proceedings allowing participation from all interested parties.

E. SITUATIONAL AWARENESS TECHNOLOGY

WSAB Recommendation #11: Provide context-setting information about the prevailing wind directions and speeds, differentiated by season, along with average weather conditions by season. Describe how and why situational awareness technology is installed, and where on the system. Describe the decision-making process regarding the installation of situational awareness technology, including constraints such as budgets, availability of equipment, knowledge to effectively deploy, or qualified personnel to install and monitor effectively. Identify any other agencies, utilities, or fire professionals that the data from these devices is shared with.

POU Response: SMUD's situational awareness initiatives, including weather monitoring activities, are discussed in the WMP (see, e.g., section 3, page 17, and section 6.5.3, page 36). SMUD is willing and able to share data upon request.

F. VEGETATION MANAGEMENT

WSAB Recommendation #12: Describe treatment plans for all types of vegetation associated with utility infrastructure, from the ground to the sky, which includes vegetation above and below electrical lines.

POU Response: SMUD's vegetation management program is discussed in the WMP, see, e.g., sections 6.4.1 and 6.4.2 on page 3. SMUD's Integrated Vegetation Management (IVM) approach, includes all tools (pruning, tree removal, mastication, livestock grazing, herbicide, etc.) to address and manage vegetation around and near SMUD's Transmission and Distribution assets. Treatment methods are selected based on an array of factors and site-specific conditions, including landowner consultation and review of sensitive species and habitat.

SMUD's integrated vegetation management approach employs a variety of methods to manage those species, including annual clearing, livestock grazing, and direct and targeted herbicide treatments. Two specific methods used to monitor re-growth are traditional visual patrols and the use of remote sensing LiDAR and imagery.

WSAB Recommendation #13: List the qualifications of any experts relied upon, such as scientific experts in ecology, fire ecology, fire behavior, geology, and meteorology. Specify the

level of expertise of the POU staff that manages the contractors performing vegetation management. Describe measures each POU takes to ensure that POU staff and contractors comply with or verify compliance with Cal/OSHA standards on Minimum Approach Distances (MAD).

POU Response: SMUD's in house Vegetation Management (VM) employees have decades of Utility Vegetation Management (UVM) experience, and also nearly all have industry credentials and formal educations (AS/AA, BS/BA, MS degrees, Certified Arborist, Utility Specialists, Tree Risk Assessment Qualified (TRAQ), Municipal Arborists, as well as other relevant industry credentials. SMUD's contractors' management teams are also Certified Arborists, and bring extensive Utility Vegetation Management Line Clearance Qualified knowledge to the program.

WSAB Recommendation #14: Describe whether the POU has considered innovative and alternative approaches to vegetation management.

POU Response: SMUD's Vegetation Management Program includes deployed remote sensing technology, analytic data analysis, and computer learning, where reasonable to drive continuous improvement in SMUD's UVM program. Additionally, SMUD has partnered and collaborated with landowners (Federal and Private) to improve forest health and reduce fire risk well outside SMUD easements to target and reduce "fall-in" trees and forest fuels adjacent to the utility assets. Also of note, SMUD holds industry leadership roles in several UVM organizations such as; Utility Arborist Association (UAA), North American Transmission Forum (NATF), as well as other organizations to continue to explore and pilot new technology and tools in SMUD's UVM program.

Wildfire Mitigation Plan

Recommended Metrics

1. **Progress metrics** that are designed to track concrete actions toward reducing wildfire risk. Progress metrics include absolute metrics (e.g., number of grid condition findings per circuit mile)
 - Number of circuit miles inspected from Patrol/Detail Line inspections in HFTD and PCA
 - Number of [GO95 Rule 18](#) Level 1 findings in HFTD and PCA
 - Number of GO95 Rule 18 Level 2 findings in HFTD and PCA
 - Number of GO95 Rule 18 Level 3 findings in HFTD and PCA
 - Number circuit miles inspected for vegetation compliance (PCA, HFTD)
 - Aerial Flight patrols (miles, Valley, and UARP, annual reporting)
 - Number of trees trimmed or removed
 - Vegetation Management Quality Control for electric transmission in all UARP (Semi-annual reporting)

2. **Program targets** that outline utility progress toward the utility's own specific targets identified in their WMP
 - PCA Hardening (Hardware replacement, #6CU reconductor) Status (How many locations completed each quarter)
 - Hardware Replacement
 - Number of Pole locations
 - #6CU Reconductor
 - By maps/job packages. (Issued to design & Construction as package) (semi-annual reporting)
 - UARP 4kV underground conversion. Status
 - By project/Line.
 - Reach out to Jose to identify best method to track progress.
 - Vegetation Management Activities
 - UARP Additional Trimming/Removing Activities (Number of trees addressed per quarter)
 - Trees worked (trimmed/removed) (El Dorado/Sac County)

- Pole Clearing Status (annual reporting)
 - Cleared by start of fire season.
- 3. **Outcome metrics** that track wildfire and planned de-energization related outcomes on impacted communities. Outcome metrics include leading and lagging indicators of wildfire and de-energization risk and while they describe utility risk reduction, they may be collected from a variety of sources including utilities themselves, CAL FIRE, Cal OES, and others.

(Report only for Cal Fire designated fire season, in PCA only)

- Number of Wire Downs
- Number of OH Outage Events caused by contact with animals
- Number of Outage Events caused by contact with vegetation inside of right of way
 - *Tree preventable (grew into lines, exceeded GO requirements)*
- Number of Outage Events caused by contact with vegetation outside of right of way
 - *Tree non-preventable: (Palm frond, broken tree branch blow-in or fall in, whole tree falling into lines)*
- Number of OH Outage Events due to foreign material in the line
- Number of contacts with Federal, State and local government offices (specific to wildfire or de-energization related contacts) (semi-annual reporting)
- Number of mailers sent to customers related to Wildfire Mitigation activities (semi-annual reporting)
 - Email/direct mail to MED rate customers and Senior ID customers
 - Customer Connection sent out with SMUD bills

RESOLUTION NO. 21-06-03

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

This Board accepts the monitoring report for **Strategic Direction SD-4, Reliability**, substantially in the form set forth in **Attachment C** hereto and made a part hereof.

Approved: June 17, 2021

INTRODUCED: DIRECTOR FISHMAN				
SECONDED: DIRECTOR KERTH				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
BUI-THOMPSON	X			
ROSE	X			
FISHMAN	X			
HERBER	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

SACRAMENTO MUNICIPAL UTILITY DISTRICT

OFFICE MEMORANDUM

TO: Board of Directors

DATE: June 1, 2021

FROM: Claire Rogers *CR 6/1/21*

**SUBJECT: Audit Report No. 28007404
Board Monitoring Report; SD-04: Reliability**

Audit and Quality Services (AQS) received the SD-04 *Reliability* 2020 Annual Board Monitoring Report and performed the following:

- A review of the information presented in the report to determine the possible existence of material misstatements;
- Interviews with report contributors and verification of the methodology used to prepare the monitoring report; and
- Validation of the reasonableness of a selection of the report's statements and assertions.

During the review, nothing came to AQS' attention that would suggest the SD Board Monitoring report did not fairly represent the source data available at the time of the review.

CC:

Paul Lau

Board Monitoring Report 2020

SD-4 Board Strategic Direction on Reliability



1. Background

Strategic Direction SD-4 states that:

Meeting customer energy requirements is a core value of SMUD.

Therefore:

- a) SMUD will assure all customer energy requirements are met. This will be accomplished through the use of: (i) its generation resources and purchase power portfolio 100 percent of the time; and (ii) its transmission assets to assure an overall availability of at least 99.99 percent.
- b) SMUD will achieve distribution system reliability by:

Limiting the average frequency of outage per customer per year to:

With major event: 0.99 – 1.33

Excluding major event: 0.85 – 1.14

Limiting the average duration of outages per customer per year to:

With major event: 67.5 – 93.3 minutes

Excluding major event: 49.7 – 68.7 minutes

Ensuring that no individual circuits exceed these targets for more than two consecutive years. For circuits that exceed these targets for two consecutive years, a remedial action plan will be issued and completed within eighteen months.

- c) SMUD will maintain the electric system in good repair and make the necessary upgrades to maintain load serving capability and meet regulatory standards.

2. Executive Summary

Improving reliability is essential to meeting customer energy requirements and drives customer loyalty.

SMUD was in compliance for both generation and transmission availability. SMUD met all energy supply requirements 100% of the time through its generation resources and purchased power. At a peak load of 3,057 MW (which occurred on August 18), 49% of the generation was

provided by internal resources and 51% was provided by purchased power. The transmission availability was at 100% for the year.

SMUD was in compliance for both SAIDI and SAIFI for the distribution system reliability metrics in 2020. The outage mitigation and prevention plans put into place have had a significant improvement on system reliability, decreasing outage durations and frequency from the previous years. The 2020 distribution system reliability performance can be seen in Table 1 below.

Table 1: 2020 Distribution System Reliability Performance

	SD-4 Limit	2020 Results
SAIFI	1.14	0.90
SAIDI (minutes)	68.7	47.6

There were no major events in 2020. Major events are those defined as events caused by earthquake, fire, or storms of sufficient intensity which result in a state of emergency being declared by the government. Absent the declaration of a state of emergency, any other natural disaster may be excluded only if it affects more than 15% of the system facilities or 10% of the customers, whichever is less.

Of the total number of distribution circuits, 97.6%, or 737 circuits, met the Board's reliability criteria. Twenty-eight projects were issued to improve the reliability, of which eighteen have been completed. The remaining ten projects are on schedule to be completed within the eighteen-month requirement. These projects include cable replacement, line reconductor, avian mitigation, and targeted vegetation management.

3. Additional Supporting Information

Generation

Hydro Generation Facilities

The availability rate for SMUD's hydro generation system in 2020 was 80.14% and for the June 1st through September 30th peak period, hydro generation availability was 96.56%. SMUD's Upper American River Project (UARP) hydro system generated 713,823 MWh. The budgeted generation was 1,530,124 MWh.

Gas Pipeline Operations

SMUD's gas pipeline had a 100% availability rating in 2020 and provided a constant flow of gas to SMUD's thermal generation facilities. All necessary maintenance activities were successfully completed in accordance with our operations and maintenance plans and procedures.

Thermal Generation Facilities

The overall availability rate for SMUD's thermal generation facilities was 91.09% and for the June 1st through September 30th peak period, thermal plant availability was 99.26%. SMUD's thermal generation facilities generated a net total of 5,285,487 MWh against the budgeted generation of 5,427,460 MWh.

Transmission and Distribution

SMUD has approximately 484 miles of transmission lines and 10,507 miles of distribution lines including 69kV. Approximately 40% of the distribution lines are installed overhead and 60% percent are installed underground. The transmission system is predominately overhead except for 18 miles of underground lines located in the Carmichael and downtown areas.

4. Challenges

Staff monitors circuit reliability regularly to assess circuits that could potentially exceed the reliability limits. Outage causes, trends, and reliability impacts are analyzed to identify projects that will bring the reliability of these circuits within the acceptable range. This ongoing process ensures that circuit reliability impacts are identified and addressed as they occur throughout the year. The main drivers for the distribution system performance, along with the mitigation measures for each, are summarized below.

Drivers for Reliability Performance

Underground Cable Failures

In 2020, underground cable failures were the leading driver toward reliability impact. The number of outages due to cable failure increased by 15.6% compared to 2019. SAIDI and SAIFI values rose by 29% and 79% respectively. The main drivers for the increased cable failures are due to the 120,000 circuit feet replacement quantity reduction in 2019 from the planned 370,000 circuit feet to 250,000 circuit feet. Additionally, unforeseen failures on the 69kV system had a significant impact to SAIDI and SAIFI as well.

It is anticipated that the failure quantity and SAIDI/SAIFI will decrease in 2021 compared to 2020 due to the increased cable replacement quantities in 2020 and 2021. Additionally, two 69kV cable replacement projects are anticipated to be completed in 2021, which will significantly improve future SAIDI/SAIFI reliability indices. Furthermore, SMUD is testing and monitoring the remaining direct-buried 69kV circuits for any deterioration to proactively address potential issues.

Vehicle Accidents

Vehicle accidents were among the leading drivers toward reliability impact in 2020. Overall we saw a 2% decrease in the number of vehicle accidents, a slight increase in SAIDI minutes and

29% decrease in SAIFI for 2020 when comparing with 2019. Although the reliability statistics for vehicle accidents have improved since 2019, they still comprise 23% of SAIDI minutes and 20% of SAIFI for 2020.

In 2020, SMUD installed new visibility strips on 108 poles, and relocated 2 poles based on the analysis of car-pole incidents that identified assets that have been impacted multiple times. Furthermore, staff assess ongoing car-pole incidents and develop appropriate mitigation. In 2021, SMUD plans to install pole barrier systems at 2 pole locations, new visibility strips on 400 poles, and to relocate 5 poles.

Equipment Failures

The second most impactful reliability driver for 2020 was equipment failure. Equipment related outages are associated with a wide variety of distribution line components, such as fuses, poles, wire hardware, broken connectors, broken jumpers, failed transformers, broken cutouts and more. Outages due to failed equipment continue to be evaluated to locate and address any systemic deficiencies.

Although failed equipment was one of the leading causes of outage events for 2020, the overall number of outages decreased by 158 or 24% while SAIDI and SAIFI decreased by 41% and 39% respectively for 2020 when compared to 2019. This improvement in reliability can be attributed to the reduction in 69 kV equipment failures in 2020. There were 6-69kV equipment failures in 2019 with a combined SAIDI of 2.6 minutes and SAIFI of 0.03. The largest outage was caused by a broken jumper on Elk Grove Feeder 3, a 69 kV line affecting more than 18,000 customers, with a SAIDI of 2.5 minutes and SAIFI of 0.03. This single outage was contributing to 94% of SAIDI and 88% of SAIFI for 69kV equipment failures in 2019. Contrarily, there was only 1-69 kV equipment failure in 2020 where an insulator failed at Hurley Feeder 6 with a SAIDI of 0.09 minutes and SAIFI of 0.002 affecting 1,562 customers.

Correcting deficiencies on the 69kV system has a large reliability impact because 69kV circuits affect a larger number of customers than lower voltage distribution circuits. Staff is actively looking for ways to reduce equipment failures. Staff reviews outage reports for accuracy and failure trends. Through routine inspections, Inspectors and Troubleshooters try to identify deficiencies before they result in failure.

Unknown Outages

Unknown outages comprised approximately 16% of outages in 2020. This category saw a decrease of 21% in the amount of outages and 44% in SAIDI minutes. Contrarily, SAIFI increased 9% for 2020. During an outage, a Troubleshooter is dispatched to patrol the lines to determine the cause of the outage. An outage is classified as “Unknown” if the Troubleshooter cannot find the specific cause. Although direct evidence is not found, the most likely cause of these outages is flashover between phase conductors during windy conditions, from bird, or animal contact.

Line reframing addresses outages caused by high winds, birds and animals. The overhead lines are reconstructed with increased spacing between phases, reducing the possibility of flashover between phase conductors.

The avian protection program addresses bird caused outages by installing bird diverters, spike strips, and insulated covers on energized equipment. Bird diverters are a visual aid to help birds avoid our overhead lines and spike strips installed on cross arms discourage birds from landing on our facilities. Covers are installed on exposed conductors, cutouts, and transformer bushings to keep birds and animals insulated from energized equipment.

- 5. Recommendation:** It is recommended that the Board accept the Monitoring Report for SD-4 Reliability.

6. Appendices

Appendix 1: Generation Supplementary Information

Major hydro generation maintenance and construction activities include:

- Loon Lake powerhouse chiller replacement
- Loon Lake powerhouse machine hall mesh installation to protect against rockfall
- White Rock tunnel rock bolt augmentation and shotcrete completion
- Chili Bar Powerhouse preparation for purchase from PG&E
- Camino unit 1 generator rewind study
- Camino tunnel rock trap inspection and repair
- Camino surge basin road repair to Brush Creek
- Camino unit 1 circuit breaker replacement
- Robbs peak tunnel rock trap inspection and repair
- Robbs Forebay dredging and trash rack repairs
- Fresh Pond HVAC system controls modernization
- Sourdough Hill telecommunications tower replacement foundation installation
- Union Valley and Ice House gates analysis, dam safety inspections and responses to FERC part 12D assessments
- Transformer dissolved gas analysis instrumentation and bushing monitoring installations at White Rock unit 2, Loon Lake, Jaybird unit 2 and Camino unit 2
- Powerhouse instrumentation intelligence upgrades engineering design
- White Rock phase unit 2 circuit breakers and disconnect switches replacement
- White Rock pressure relief valve and servomotor refurbishment
- White Rock unit 1 controls upgrade
- Generator partial discharge monitoring system installations at Jaybird unit 2 and Robbs Peak
- Powerhouse and switchyard grounding studies for Camino, Jaybird, Union Valley and Loon Lake
- 4kV power system undergrounding

Gas Pipeline Operations Capital improvements and major maintenance activities include:

- Interconnection to Procter & Gamble and Air Products manufacturing sites to facilitate PG&E natural gas transmission to their customers.
- Installation of a bracketed pipe support at the Winters station to replace a concrete pipe support to reduce corrosion potential and facilitate future inspections.
- Purchase of mainline valves 8, 10 and CPP actuators for 2021 installation
- Cathodic protection station installation at 47th Avenue
- Cathodic protection station installation and AC mitigation at 28th Street
- Valve station safety assessments

Thermal Generation Facilities Major thermal generation maintenance and construction activities completed include:

Central Valley Financing Authority (CVFA; Carson Cogen):

- Auxiliary Boiler Vent Valve Automation completed
- Distributed control system (DCS) upgrade engineering design and procurement activities completed; installation of DCS upgrade deferred to 2021 due to pandemic

Sacramento Cogeneration Authority (SCA; Procter & Gamble Cogen):

- Completed Transformer Upgrade

Sacramento Power Authority (SPA; Campbell Cogen):

- Completed alternative fire water pump installation to allow for intake of Sacramento County recycled water (Shared costs with Regional Sanitation District and City of Sacramento)

Sacramento Financing Authority (SFA; Cosumnes Power Plant):

- Zero liquid discharge evaporator replacement completed
- Distributed control system upgrade completed
- Boiler feed pump system 1 feedwater fiber at heat recovery steam generator replacement was deferred due to pandemic

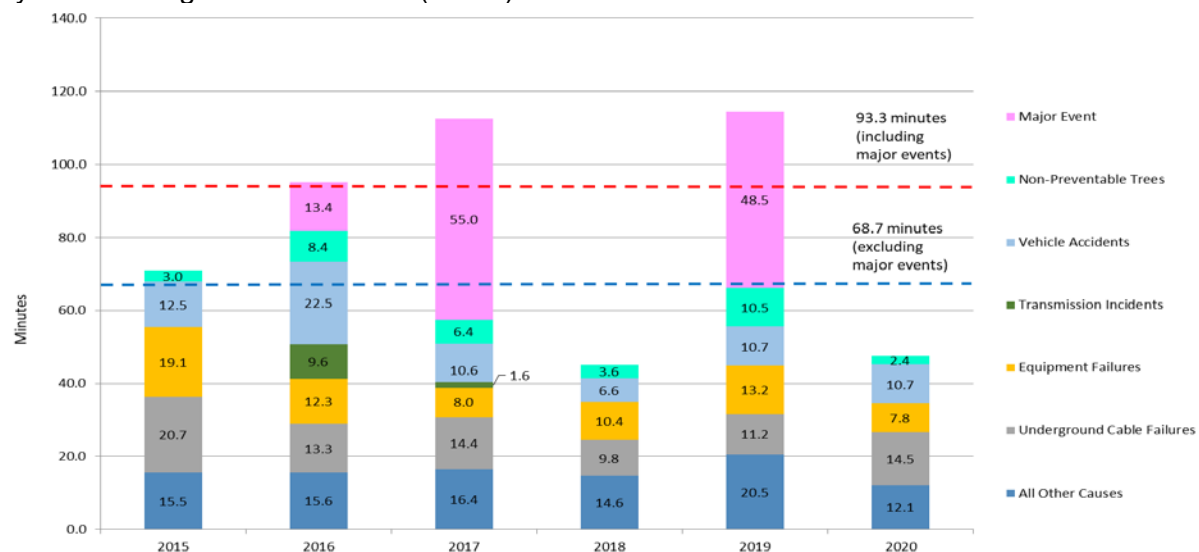
Appendix 2: Graphs

The graphs below show a decreasing trend in the SAIDI and SAIFI impact of vehicle accidents, tree outages, and bulk substation incidents from 2016 to 2018. There was an increase in these outage causes in 2019 followed by a drop in 2020. Underground cable failure SAIDI and SAIFI impact has been rising from 2018 to 2020. Contrarily, equipment failures and their SAIDI and SAIFI impacts increased slightly in 2019 and fell in 2020.

Graph 1: Multi-Year Comparison
System Average Frequency Index (SAIFI)



Graph 2: Multi-Year Comparison
System Average Duration Index (SAIDI)



Appendix 3: Reliability Comparison

Table 2 below provides a comparison between SMUD's average distribution system performance compared to that of Pacific Gas and Electric's (PG&E)'s distribution systems. PG&E defines its distribution system as line voltage less than 60kV, while SMUD includes the 69kV line voltage as part of the distribution system. The information regarding PG&E's system average performance was obtained from the 2019 reliability report posted on the California Public Utilities Commission (CPUC) website. PG&E's 2020 Reliability Report has not been posted on the CPUC website.

Table 2: Distribution System Reliability Comparison (excluding major events)

Year	SAIDI (minutes)		SAIFI	
	SMUD	PG&E	SMUD	PG&E
2016	80.3	83.1	1.36	0.82
2017	58.0	90.0	1.10	0.79
2018	44.7	90.7	0.80	0.84
2019	66.0	102.9	1.04	0.88
2020	47.6	N/A	0.90	N/A
Notes: 1. Listed SAIFI and SAIDI numbers are based on outages greater than 5 minutes (CPUC criteria).				

Appendix 4: Year-to-Date 2021 Reliability Update

Table 3: 2021 Year-to-Date Distribution System Reliability Performance

	Excluding Major Events			Including Major Events		
	SD-4 Limit	Jan.1 – March 31, 2021	2021 YE Projection	SD-4 Limit	Jan.1 – March 31, 2021	2021 YE Projection
SAIFI	1.14	0.30	1.06	1.33	0.69	1.46
SAIDI (minutes)	68.7	12.4	55.8	93.3	170.8	214.2

The reliability index for underground cable failures decreased from 2020 to 2021, SAIFI from 0.04 to 0.02 and SAIDI from 1.9 to 1.3 minutes. The reliability index for vehicle accidents almost tripled in terms of SAIFI from 0.04 to 0.11. SAIDI for vehicle accidents increased significantly from the first quarter of 2020 (3.1 minutes) to the first quarter of 2021 (5.2 minutes). The reliability indices for failed equipment increased greatly for 2021 with SAIFI from increasing from 0.01 to 0.06 and SAIDI increasing from 0.5 minutes to 2.3 minutes. The reliability indices for tree-related outages are almost the same for 2021 SAIFI at 0.01, and a SAIDI decrease from 0.6 to 0.5 minutes.

RESOLUTION NO. 21-06-04

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

This Board approves the revisions to **Board-Staff Linkage BL-12, Delegation to the General Manager for Transmission, Wholesale Electricity and Natural Gas Transactions**, substantially in the form set forth in **Attachment D.**

Approved: June 17, 2021

INTRODUCED: DIRECTOR FISHMAN				
SECONDED: DIRECTOR KERTH				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
BUI-THOMPSON	X			
ROSE	X			
FISHMAN	X			
HERBER	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

**Attachment D
to Resolution No. 21-06-04**

SMUD BOARD POLICY	
Category: Board-Staff Linkage	Title: Delegation to the Chief Executive Officer/General Manager with Respect to Transactions Involving Transmission and Wholesale Energy, Fuel, and Environmental Attributes
	Policy Number: BL-12
Date of Adoption: February 18, 2010	Resolution No. 10-02-12
Revision: August 4, 2011	Resolution No. 11-08-04
Revision: August 21, 2014	Resolution No. 14-08-03
Revision: June 17, 2021	Resolution No. 21-06-04

As part of prudently managing energy related risks, providing retail rate stability and serving customers, SMUD is required to enter into: (i) contracts to purchase and sell wholesale electricity, electric capacity and storage, natural gas and clean and emissions-free fuel, and environmental attributes; (ii) contracts for transmission, fuel transportation and fuel storage; and (iii) contracts to financially hedge or mitigate pricing, supply and market risks associated with the transactions above.

Delegation of Authority: The Chief Executive Officer/General Manager is delegated decision making authority consistent with the Energy Risk Management and Energy Trading Standards adopted by this Board.

Monitoring Method: GM Report
Frequency: Annual

RESOLUTION NO. 21-06-05

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

Section 1. This Board approves the revisions to the **Energy Risk Management and Energy Trading Standards**, substantially in the form set forth in **Attachment E** hereto and made a part hereof.

Section 2. Resolution No. 14-08-04 is superseded in its entirety.

Approved: June 17, 2021

INTRODUCED: DIRECTOR FISHMAN				
SECONDED: DIRECTOR KERTH				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
BUI-THOMPSON	X			
ROSE	X			
FISHMAN	X			
HERBER	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

**ENERGY RISK MANAGEMENT AND ENERGY TRADING STANDARDS
SACRAMENTO MUNICIPAL UTILITY DISTRICT**

PURPOSE

The wholesale energy markets are exposed to numerous risks including, but not limited to, market price risk, supply risk, credit risk and regulatory risk. The purpose of the Energy Risk Management and Energy Trading Standards (the “Standards”) is to establish protocols for prudent risk mitigation and management.

SCOPE

The Standards apply to:

- The operation of SMUD-owned or controlled generation, transmission, natural gas and other fuel reserves and pipeline assets;
- Contracts for and related to the purchase and sale of wholesale electricity, electric capacity and storage, natural gas and clean and emissions-free fuel, and environmental products;
- Contracts for and related to transmission, natural gas and clean or emissions-free fuel transportation, and storage; and
- Contracts for and related to financially hedging or mitigating risks associated with wholesale electricity, electric capacity and natural gas and other fuel prices, supplies and markets.

PRIORITIES

The Chief Executive Officer/General Manager (CEO/GM) implement the Standards in accordance with Board policies and with the following priorities, listed in order of importance:

Priority 1. Manage resource mix to comply with Board Strategic Direction (SD-4) Reliability.

Priority 2. Minimize net commodity energy purchase costs while operating within the targets established in Board Strategic Direction (SD-3) Access to Credit Markets.

Priority 3. Optimize SMUD-owned or controlled assets, including but not limited to, generation, transmission, fuel reserves, pipeline assets, fuel storage and contract resources to create additional value for SMUD and its customers, while complying with Board policies and all applicable laws and regulations.

Priority 4. Provide our customers and community with a sustainable power supply in accordance with Board Strategic Direction (SD-9) Resource Planning.

DIVERSIFICATION AND PORTFOLIO MIX

SMUD will maintain a diverse portfolio of generation, transmission, fuel-related assets and contracts to reasonably mitigate risk and to support its clean energy goals. Risks associated with wholesale contracts will be mitigated through diversified terms and conditions, contract periods and durations, delivery points, counter-parties, and product types.

PORTFOLIO RISK MANAGEMENT PROCEDURES

The CEO/GM will develop and maintain written procedures to implement the Standards and will ensure that appropriate internal controls and limits are in place to ensure compliance with Board policies, the Standards and applicable laws and regulations. Consistent with Board policies and the Standards, the CEO/GM will analyze and implement risk mitigation measures, as appropriate. For illustrative purposes, examples of identified risks and risk mitigation tools are as follows:

<u>Risks</u>	<u>Risk Description</u>	<u>Risk Identification/Mitigation Tools</u>
Market Price Risk	The risk that the absolute price of a given commodity (power, gas) will fluctuate, thereby exposing the District to potential financial losses.	<ul style="list-style-type: none">• Market and volatility analysis• Forward price curve development• Net position and financial exposure analysis• Mark-to-market analysis• Net income-at-risk analysis• Diversification of product purchases• Dollar-average over time by programmatic purchases
Weather/Volumetric Risk	The potential adverse economic impact of anticipated changes in supply and/or demand. For example, the risk of having less than average generation from SMUD's hydro project due to a drier than normal year, or less than anticipated retail sales due to a cooler than normal summer.	<ul style="list-style-type: none">• Frequent snow surveys• Runoff forecast update• Diversification of volumetric hedging programs• Temperature vs. load analysis• Frequent hydro spill risk assessment• Maintain Hydro Stabilization Fund• Diversification of product purchases

<u>Risks</u>	<u>Risk Description</u>	<u>Risk Identification/Mitigation Tools</u>
Credit/Counter-party Risk	The potential financial loss resulting from a counter-party's failure to honor its obligations, including the obligation to settle on a timely basis. For example, a bankrupt counter-party may force SMUD to cover the contracted obligation from the market at a higher price than originally contracted.	<ul style="list-style-type: none"> • Credit Analysis • Credit Limits • Minimum rating levels • Diversification of counter-parties • Guarantees and financial assurances • Netting Agreements
Supply/Delivery Risk	The risk of loss due to non-delivery of power and/or fuel; which could decrease SMUD's system reliability and/or increase financial exposure.	<ul style="list-style-type: none"> • Diversification of delivery points • Retain delivery point flexibility/optionality when practicable • Transmission and pipeline capacity outage duration risk analysis • Natural gas and other fuel storage
Unplanned Outage Risk	The risk of under-supply due to unexpected plant outages, which may increase SMUD's system reliability and/or financial exposure.	<ul style="list-style-type: none"> • Historical plant performance risk analysis • Plant Outage Insurance • Planning and Operating Reserve Analysis • 24-hour trading desk to balance system needs on real-time basis

<u>Risks</u>	<u>Risk Description</u>	<u>Risk Identification/Mitigation Tools</u>
Operational/Human Risk	The risk of human error or fraud, or the risk that the system of controls will fail to adequately record, monitor, and account for transactions or positions.	<ul style="list-style-type: none"> • Develop written trading rules and limits • Establish procedures and standards • Establish system of controls for transaction approval, scheduling and payment • Minimize manual hand-off and multiple input of transaction information • Standardize software applications as appropriate • Implement cross-functional training • Implement structured area expertise training • Conduct periodic audits
Regulatory Risk	Market structure and operational risks associated with shifting state and federal regulatory policies, rules and regulations.	<ul style="list-style-type: none"> • Analysis of regulatory, regional and industry trends • Participation in regulatory forums
Extreme Event Risk	The potential financial risk and or reliability risk created by extreme events such as the 2000-2001 energy crisis and the summer 2020 western heat wave.	<ul style="list-style-type: none"> • Portfolio stress testing • Scenario/sensitivity analysis • Maintain Rate Stabilization Fund
Legislative Risk	Risks associated with actions by international, federal and state legislative bodies.	<ul style="list-style-type: none"> • Legislative analysis and monitor industry wide initiatives • Advocacy of issues consistent with Board established policies.

PROHIBITED TRANSACTIONS

SMUD will not engage in the following prohibited transactions:

- Any transaction that is not related to serving load and/or reducing financial exposure;
- Sale of any **uncovered** financial “Put” and/or “Call” options on electric energy, gas, electric transmission or gas pipeline capacity;
- Sale of any other **uncovered** Financial Options;
- Unless adequate credit support is provided, transactions with any counter-party of: (i) longer than one year in duration, with a credit rating less than investment grade; or (ii) one year or less in duration, with a credit rating less than the Standard and Poors equivalent of BB, except for the following transactions with counter-parties having a credit rating equivalent to Standard and Poors B: (a) purchases which are within the next seven days; and (b) sales which are within the current calendar month that do not present at anytime, payment risk to SMUD (i.e., no associated receivable after exercising netting rights which apply offsetting purchases; this transaction restriction does not apply to sales of ancillary services to the California Independent System Operator;
- Any deceptive transactions, including but not limited to transactions that: (i) are intended to manipulate the market; (ii) circumvent market rules; (iii) manipulate market prices; or (iv) inflate volumes traded or available in any region or market; or
- Any transactions prohibited by federal and/or state laws and regulations.

AUTHORIZED TRANSACTIONS

Any transaction or contract entered into by the CEO/GM that is consistent with the Standards and the Delegation of Authority will be deemed authorized and approved by the Board at the time of execution by the CEO/GM or his/her designee.

DELEGATION OF AUTHORITY

Consistent with the Board policies and the Standards, the CEO/GM or his/her designee is delegated the following authority:

Section 1. Transactional Authority. To negotiate and execute on behalf of SMUD the types of contracts and transactions listed below, provided that: (i) such agreement(s) do not have a term greater than three (3) years, as measured from the commencement of performance by either party (e.g., the first date of delivery of

electricity, transmission capacity, fuel, or pipeline capacity); (ii) the commencement of performance is no longer than three (3) years from the date of execution; and (iii) the prices paid under such agreements are at or below prevailing market rates for similar products at the time the contract is made.

- * Purchases, sales and exchanges of electricity, electric capacity and storage, natural gas and clean and emissions-free fuel commodity.
- * Purchases and sales of transmission capacity.
- * Purchase and sales of ancillary services including, but not limited to, spinning reserve, non-spinning reserve, and regulation.
- * Purchase of put and/or call options for electricity and natural gas commodity.
- * Purchase and sale of natural gas and other fuel pipeline capacity.
- * Purchase and sale of natural gas and other fuel storage capacity.
- * Sales of covered call and put options.
- * Purchase and sale of Renewable Energy Credits evidencing the renewable attribute associated with Renewable Energy.
- * Contracts for financial fixed-for-floating or floating-for-fixed price swaps, options and other financially settled energy derivative transactions for purposes of hedging and/or mitigating the price risk of: (i) an underlying physical position in electricity, natural gas or other energy used for the production of District electricity matching a retail load obligation; or (ii) embedded in the pricing formula of a Power Purchase and Sale Agreement; or (iii) for purposes of hedging against the potential financial impact of unpredictable weather conditions, such as heat storms in the District's service territory and/or below average precipitation in the District's Upper American River Project.
- * Purchases and sale of carbon allowances, offsets, and other GHG related products, including both physical and financial transactions.
- * Purchase and sale of low carbon fuel standard credits.

Section 2. Long-term Fuel and Power Transactional Authority. To negotiate and execute on behalf of SMUD long-term natural gas, clean and emissions-free fuel, and power supply agreements to purchase discounted tax-exempt fuel and power subject to the following parameters: (i) total purchases from all suppliers shall not exceed 80,000 average dekatherms per day for fuel and 500,000 MWh annually for power; (ii) supplier diversification under this authority shall be maintained by requiring no single supplier

provides more than 30,000 average dekatherms per day for fuel or 200,000 MWh annually for power; (iii) contract durations shall not exceed thirty years; (iv) prices paid to suppliers must have expected market discounts at least 75 percent as great as otherwise achievable from a SMUD-sponsored pre-paid transaction; and (v) suppliers must have a proven track record in successfully executing similar transactions.

Section 3. Ancillary Services Transactional Authority. Notwithstanding the credit support restrictions set forth in “Prohibited Transactions,” to make sales of ancillary services to the California Independent System Operator.

Section 4. Enabling Agreement Authority. To negotiate and execute on behalf of SMUD enabling agreements, irrespective of term, including but not limited to the agreements sponsored by the Western Systems Power Pool (“WSPP”), Edison Electric Institute (“EII”), North America Energy Standards Board (“NAESB”), Gas Industry Standards Board (“GISB”), International Swap Dealers Association (“ISDA”) and other prevailing industry form agreements for purposes of facilitating the negotiation of future transactions specified in Section 1, above. An Enabling Agreement does not commit SMUD to any specific transaction; rather it is an agreement setting forth standard terms and conditions (other than terms and conditions for transaction specific agreements, such as, price, quantity, term and delivery point), which will apply to future transactions entered into under the respective Enabling Agreement. All transactions entered into under any Enabling Agreement will be subject to the limits set forth in Section 1, above.

Section 5. Tariff Related Agreement Authority. To negotiate and execute on behalf of SMUD transmission, facilities, distribution, generator and scheduling agreements, irrespective of term, pursuant to approved tariffs.

Section 6. Transmission Planning Agreement Authority. To negotiate and execute on behalf of SMUD agreements intended to facilitate regional transmission planning, irrespective of term; provided the agreement does not commit SMUD to the development, support for or funding of any particular transmission project or projects.

Section 7. GHG Market-Based Compliance Program Related Authority. To transact in, and to negotiate and execute on behalf of SMUD all agreements necessary to participate in, the auctions administered by the California Air Resources Board or successor entity as part of California’s greenhouse gas market-based compliance program.

Section 8. Advance Funding Authority. To negotiate and execute on behalf of SMUD revisions to Exhibit C of the Agreement for the Funding of Operation and Maintenance for the Central Valley Project Power Facilities for the purposes of establishing SMUD’s advance funding contribution to the Western Area Power Administration (Western) in an amount no greater than the estimated annual power deliveries from Western.

Section 9. Purchase, Sale, or Exchange of Air Emission Reduction Credits (ERCs). To negotiate and execute on behalf of SMUD agreements for the:

- i) Purchase of ERCs (a) that are needed or anticipated to be needed for SMUD operations; (b) that are priced at or below fair market value and (c) that do not exceed \$10 million.
- ii) Sale of ERCs that are (a) are surplus to SMUD's actual or anticipated needs; (b) are for use within the SMUD service territory; (c) are priced at or above fair market value; and (d) do not exceed \$100,000.
- iii) Exchange of ERCs that (a) provide present or future operational flexibility; (b) are of equal or superior quality and value; and (c) do not exceed a fair market value of \$100,000.

REPORTING

The CEO/GM will report to the Board of Directors as follows:

Annually - Submit a five (5) year commodity budget forecast report.

Monthly - Submit a report to include: (i) a current year commodity budget update; and (ii) a current and next year commodity financial exposure update.

Monthly – Report on any new multi-year contracts entered into under the Delegation of Authority for wholesale energy, fuel and environmental attribute transactions and contracts.

RESOLUTION NO. 21-06-06

WHEREAS, the Chief Executive Officer and General Manager filed with this Board the **Chief Executive Officer and General Manager's Report and Recommendation (CEO & GM Report) on Rates and Services (Volumes 1 and 2)** dated June 17, 2021, and the **CEO & GM Report on Open Access Transmission Tariff (Volume 1)** dated June 17, 2021; and

WHEREAS, section 14403 of the Public Utilities Code requires that within ninety (90) days after the **CEO & GM Report** is filed, this Board shall hold a public hearing on said **CEO & GM Report**; **NOW, THEREFORE**,

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

A public hearing date of August 31, 2021, is hereby scheduled to consider the **Chief Executive Officer and General Manager's Report and Recommendation (CEO & GM Report) on Rates and Services (Volumes 1 and 2)** dated June 17, 2021, and the **CEO & GM Report on Open Access Transmission Tariff (Volume 1)** dated June 17, 2021.

Approved: June 17, 2021

INTRODUCED: DIRECTOR FISHMAN				
SECONDED: DIRECTOR KERTH				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
BUI-THOMPSON	X			
ROSE	X			
FISHMAN	X			
HERBER	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

RESOLUTION NO. 21-06-07

WHEREAS, Contract No. 4500116398 with **Stantec Consulting Services, Inc.**, Contract No. 4500116399 with **HDR Engineering, Inc.**, Contract No. 4500116400 with **Mesa Associates, Inc.**, and Contract No. 4500116401 with **Black & Veatch Corporation** (collectively, the **Contracts**) were awarded on a competitive basis in June 2019 to provide hydroelectric engineering services for the period from June 1, 2019, to March 31, 2022, for an aggregate not-to-exceed amount of \$2 million with one optional three-year extension; and

WHEREAS, the spending rate under the **Contracts** has accelerated in the past two years to assist with engineering consultant activities related to increased regulatory activity for post-Oroville Dam safety, emergency exercise planning, efficiency improvements for generator rewinds, and regular infrastructure maintenance; and

WHEREAS, additional consultant work is anticipated with regard to i) SMUD's **2030 Zero Carbon Plan**, ii) addressing regional flood studies promulgated by the **Sacramento Area Flood Control Agency (SAFCA)** and regulatory bodies that are aligned with changing outlooks on climate, and iii) ensuring sufficient services are available to scenarios in accordance with SMUD's Dam Safety Program; and

WHEREAS, increasing the aggregate contract amount for the **Contracts** will allow SMUD to continue forward without jeopardizing the ability to meet its 2030 goals; **NOW, THEREFORE**,

BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:

Section 1. That this Board hereby authorizes the Chief Executive Officer and General Manager, or his designee, to increase the aggregate contract not-to-exceed amount for hydroelectric engineering services by \$4 million, from \$2 million to \$6 million, for Contract No. 4500116398 with **Stantec Consulting Services, Inc.**, Contract No. 4500116399 with **HDR Engineering, Inc.**, Contract No. 4500116400 with **Mesa Associates, Inc.**, and Contract No. 4500116401 with **Black & Veatch Corporation**.

Section 2. The Chief Executive Officer and General Manager, or his designee, is authorized to make future changes to the terms and conditions of the Contracts that, in his prudent judgment: (a) further the primary purpose of the Contracts; (b) are intended to provide a net benefit to SMUD; and (c) do not exceed the authorized contract amounts and applicable contingencies.

Approved: June 17, 2021

INTRODUCED: DIRECTOR FISHMAN				
SECONDED: DIRECTOR KERTH				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
BUI-THOMPSON	X			
ROSE	X			
FISHMAN	X			
HERBER	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

RESOLUTION NO. 21-06-08

WHEREAS, in 2020, SMUD received a competitive offer from **DE Shaw Renewables Investment Company (DESRI)** for the **Sacramento Valley Energy Center LLC (SVEC)** project for 200 MW of solar photovoltaic power (Solar PV) and 100 MW of battery storage; and

WHEREAS, SMUD performed an evaluation of the market and determined that the **SVEC** project provided superior value; and

WHEREAS, SMUD and **DESRI** negotiated a mutually beneficial **Power Purchase Agreement (PPA)** under which SMUD will purchase the energy, capacity and environmental attributes, including Portfolio Content Category 1 Renewable Energy Credits (PCC1 RECs), for 200 MW at a fixed price of \$33.20/MWh plus 100 MW/4-hour battery storage at a fixed price of \$8.48 per kilowatt-month with a combined maximum output of 250 MW at the Point of Interconnection to SMUD's transmission system, for a term of 27 years with an optional three-year extension for a total of 30 years; and

WHEREAS, the project's scheduled commercial operation date is December 31, 2023, and will be located in the eastern portion of SMUD's service territory with SMUD having the option to purchase the facility after year 10; and

WHEREAS, the price and other terms proposed in the **PPA** are commercially reasonable and benefit SMUD's ratepayers; **NOW, THEREFORE**,

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

Section 1. The Chief Executive Officer and General Manager, or his delegate, is authorized to negotiate and execute the **Sacramento Valley Energy Center LLC (SVEC) Power Purchase Agreement (PPA)** with a 27-year (with an option to extend for an additional 3 years for a total of 30 years) term, substantially in the form of **Attachment F**, and all other agreements necessary to facilitate the **SVEC** project for 200 MW of solar photovoltaic power (Solar PV) and 100 MW of battery storage.

Section 2. The Chief Executive Officer and General Manager, or his delegate, is authorized to make future changes to the terms and conditions of

the contract that, in his prudent judgment: (a) further the primary purpose of the contract; (b) are intended to provide a net benefit to SMUD; and (c) do not exceed the authorized contract amounts and applicable contingencies.

Approved: June 17, 2021

INTRODUCED: DIRECTOR FISHMAN				
SECONDED: DIRECTOR KERTH				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
BUI-THOMPSON	X			
ROSE	X			
FISHMAN	X			
HERBER	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

**POWER PURCHASE AGREEMENT
BETWEEN
SACRAMENTO MUNICIPAL UTILITY DISTRICT
AND
SACRAMENTO VALLEY ENERGY CENTER, LLC
DATED []**

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This POWER PURCHASE AGREEMENT (the "Agreement") for an Eligible Renewable Energy Resource is made and entered into this _____ day of _____, 2021, ("Effective Date"), by and between the Sacramento Municipal Utility District ("SMUD"), and Sacramento Valley Energy Center, LLC ("Seller"). SMUD and Seller are sometimes referred to in this Agreement individually as a "Party" and collectively as the "Parties."

- A. Seller desires to interconnect and operate a fully integrated solar photovoltaic generation plus battery storage facility (the "Project"), as described in Exhibit A, to be located within SMUD's service territory and interconnected to SMUD's 230 kV transmission line, in parallel with the SMUD Transmission System.
- B. The Parties wish to enter into a power purchase agreement for the sale and purchase of all Energy, Capacity, Capacity Attributes, and Environmental Attributes from the Project directly to SMUD.
- C. In conjunction with this Agreement, the Parties wish to execute a Large Generator Interconnection Agreement (together the two agreements are referred to as the "Definitive Agreements").
- D. This Agreement requires the Seller to be a retail customer and to obtain retail electrical service from SMUD to serve certain electrical loads at the premises identified in Exhibit A, except as otherwise permitted under SMUD's tariffs. This Agreement does not constitute an agreement by SMUD to provide retail electrical service to Seller. Such arrangements must be made separately between SMUD and Seller.
- E. An affiliate of Navajo Tribal Utility Authority may provide development assistance to the Project alongside the Seller, and as such, a portion of the Project proceeds may go to support electrification on the Navajo Nation.

NOW THEREFORE, in consideration of the mutual covenants contained in this Agreement, and of other good and valuable considerations, the sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. DEFINITION OF TERMS; RULES OF INTERPRETATION

1.1 DEFINITION OF TERMS

10-year Purchase Option: Has the meaning set forth in Section 19.1.

Accepted Compliance Expenditures: Has the meaning set forth in Section 3.4.3.

Actual Annual Solar Insolation: The actual amount of solar insolation at the Project site for each Contract Year, as reflected in the Solar Irradiance Data obtained from Solar Anywhere or other mutually agreeable third party, or as derived using another mutually agreeable mechanism.

Adjusted EAEP (AEAEP): The Expected Annual Energy Production adjusted for Actual Annual Solar Insolation according to the formula set forth in the definition of Expected Annual Energy Production (EAEP).

Adjusted MAEP (AMAEP): The Minimum Annual Energy Production adjusted for Actual Annual Solar Insolation according to the formula set forth in the definition of Minimum Annual Energy Production (MAEP).

Affiliate: Has the meaning set forth in Section 17.1.2.

Agreement: Has the meaning set forth in the Preamble.

Annual Availability Liquidated Damages: Has the meaning set forth in Exhibit O.

Annual Average Storage Availability: Has the meaning set forth in Exhibit O.

Annual Energy Production (AEP): For any particular Contract Year, is equal to the total MWh generated by the Solar Project and delivered to SMUD measured at the Solar Meter. Any impact on production due to Force Majeure, SMUD Curtailment or SMUD's breach of this Agreement or the Interconnection Agreement that prevents or excuses Seller from delivering Energy to the Delivery Point, and Dispatch Down Periods, shall adjust the AEP according to the AAEP formula.

Adjusted Annual Energy Production (AAEP) =

AEP + Deemed Delivered Energy that could have been generated by the Project and delivered to SMUD but for (i) Force Majeure, (ii) SMUD Curtailment, (iii) SMUD's breach of this Agreement or the Interconnection Agreement that prevents or excuses Seller from delivering Energy to the Delivery Point, or (iv) Dispatch Down Periods.

Pre-COD Index Price: The applicable hourly Locational Marginal Price "LMP" for the Project, or if the LMP has not been established for the Project, the applicable hourly NP-15 EZ Gen Hub Price.

Available PV Capacity: The power output from the Solar Project, expressed in megawatts (AC), that is available to generate Energy.

Balancing Authority: Entity responsible for the reliable planning and operation of the bulk power system in a defined area.

Bank: Has the meaning set forth in Section 9.2.

Bankrupt: Means with respect to any entity, such entity that (a) files a petition or otherwise commences, authorizes or acquiesces in the commencement of a proceeding or cause of action under any bankruptcy, insolvency, reorganization or similar Law, (b) has any such petition filed or commenced against it which remains unstayed or undismissed for a period of ninety (90) days, (c) makes an assignment or any general arrangement for the benefit of creditors, (d) otherwise becomes bankrupt or insolvent (however evidenced), (e) has a liquidator, administrator, receiver, trustee, conservator or similar official appointed with respect to it or any substantial portion of its property or assets, or (f) is generally unable to pay its debts as they fall due.

Bid: Has the meaning set forth in the CAISO Tariff.

Business Day: Any Monday through Friday, inclusive, but excluding days that are observed as business holidays by either Party or days that are NERC Holidays.

CAISO: The California Independent System Operator Corporation or its successor.

CAISO Balancing Authority Area: The system of transmission lines and associated facilities that is operated by the CAISO and for which the CAISO has operational control and responsibility for grid reliability.

CAISO Tariff: The California Independent System Operator Corporation Agreement and Tariff, Business Practice Manuals (BPMs), and Operating Restrictions, including the rules, protocols, procedures and standards attached thereto, as the same may be amended or modified from time-to-time and approved by FERC.

California Energy Commission (CEC): The agency responsible for certifying eligible renewable resources and tracking the procurement of such resources.

California Renewables Portfolio Standard (RPS): The standard, codified in Public Utilities Code (PUC) Sections 399.11 through 399.20, and Public Resources Code Sections 25740 through 25751, as may be amended from time to time.

Capacity: The instantaneous ability of a generator to produce Energy (real power) at a specified output. Capacity is measured in megawatts (“MW”) AC or kilowatts (“kW”) AC.

Capacity Attributes: Any current or future defined characteristic, status, certificate, tag, credit, or ancillary service attribute, whether general in nature or specific as to the location or any other attribute of the Project, intended to value any aspect of the capacity of the Project to produce energy, charge and discharge energy or provide ancillary services, including, but not limited to, any accounting construct so that the full output of the Project may be counted toward a Resource Adequacy requirement or any other measure by an entity invested with the authority under federal or state law, to require SMUD to procure, or to procure at SMUD’s expense, Resource Adequacy or other such products. For the avoidance of doubt, Capacity Attributes shall not include, and Seller shall have the right in its sole discretion to seek compensation for, reactive power and/or reactive power capability of the Project, and any such compensation shall be the sole property of Seller.

Change of Control: Any circumstance in which Ultimate Parent ceases (i) to retain the ability to control, directly or indirectly, the decision-making of Seller, or (ii) to own, directly or indirectly through one or more intermediate entities, more than fifty percent (50%) of the outstanding equity interests (measured by either voting power or economic interests) in Seller; provided that in calculating ownership percentages for all purposes of the foregoing:

- a) any ownership interest in Seller held by Ultimate Parent indirectly through one or more intermediate entities shall not be counted towards Ultimate Parent’s ownership interest in Seller unless Ultimate Parent directly or indirectly owns more than fifty percent (50%) of the outstanding equity interests (measured by either voting power or economic interests) in each such intermediate entity; and
- b) ownership interests in Seller owned directly or indirectly by any lender (including any tax equity provider and any agent acting for or on behalf of such lender) shall be excluded from the total outstanding equity interests in Seller;

Provided that any Permitted Transfer shall not constitute or be deemed a “Change of Control.” Furthermore, a foreclosure by any lender on the direct or indirect ownership interests in Seller (including a transfer in lieu of foreclosure or any transfer to a Permitted Transferee) shall not constitute or be deemed a “Change of Control”.

Charging Energy: means (i) during the Compliance Period, solely Solar Charging Energy, and (ii) following the Compliance Period, both Solar Charging Energy and Grid Charging Energy.

Charging Notice: The operating instruction, and any subsequent updates, given by SMUD to Seller, (i) directing the Storage Project to charge at a specific MW rate to a specified Stored Energy Level and (ii) identifying the quantity of Solar Charging Energy (and/or following the Compliance Period, Grid Charging Energy), when the Solar Project and Storage Project are operated under Independent Control Mode as specified in LGIA, provided that any such operating instruction or updates shall be in compliance with Section 5.4 and the Operating Restrictions. For the avoidance of doubt, any SMUD request to initiate a Storage Capacity Test shall not be considered a Charging Notice. For the avoidance of doubt, (a) when the Solar Project and Storage Project are operated under Combined Control Mode as specified in LGIA, no Charging Notice will be issued by SMUD to the Storage Project and (b) Project Plant Controller shall automatically determine the amount of Charging Energy based on the MW setpoint for the combined total output of the Solar Project and Storage Project given by SMUD.

Clear Sky Model Report: A document which will contain agreed-upon irradiance and energy parameters for use in connection with Section 6.8 of this Agreement, and which has been acknowledged by the Parties as of the date hereof and is incorporated herein by reference; provided, however, that the Parties agree to amend and update the Clear Sky Model Report to the extent necessary to reflect the final equipment selection and actual size of the Project as of 180 days after the Commercial Operation Date. This document shall include an 8760 hourly representation of solar insolation at the Project, and shall include one minute data for every hour.

Closing: Has the meaning set forth in Section 19.3.

Closing Date: Has the meaning set forth in Section 19.3.

COD Conditions: Has the meaning set forth in Section 2.3.4.

COD Notice: Has the meaning set forth in Section 2.3.4.

Co-located Resource: Has the meaning as defined in the CAISO Tariff.

Commercial Operation: The period of operation of the Project once the Commercial Operation Date has occurred.

Commercial Operation Date (COD): The date specified in the Commercial Operation Date Confirmation Letter on which the Project shall conform to the requirements for Commercial Operation.

Commercial Operation Date Confirmation Letter: A letter that the Parties execute and exchange in accordance with this Agreement, the form of which is attached as Exhibit E.

Compliance Expenditure Cap: Has the meaning set forth in Section 3.4.1.

Compliance Expenditure(s): Has the meaning set forth in Section 3.4.1.

Compliance Period: The date commencing on the date hereof and ending on the date that is six (6) years after the Storage Project achieves Commercial Operation.

Contract Price: Each of the Solar Price and the Storage Price, as set forth on Exhibit B, as may be adjusted in accordance with this Agreement.

Contract Year: Any of the one-year periods during the Delivery Term, with the first Contract Year commencing on the COD and ending on the last day of the twelfth (12th) full month thereafter and each subsequent Contract Year commencing on the applicable anniversary of such date.

Costs: Has the meaning set forth in Section 8.5.1(c).

Day-Ahead Market: Has the meaning set forth in the CAISO Tariff.

Deemed Delivered Energy: The amount of Energy expressed in MWh that the Project would have produced and delivered to the Delivery Point, but that is not produced by the Project and delivered to the Delivery Point during a SMUD Curtailment, Dispatch Down Period, Force Majeure period or otherwise due to SMUD's breach of this Agreement or the Interconnection Agreement that prevents or excuses Seller from delivering Energy to the Delivery Point, which amount shall be calculated as set forth in Section 6.8 Determination of Deemed Delivered Energy.

Defaulting Party: Has the meaning set forth in Section 8.2.1.

Deficit Damages: Has the meaning set forth in Section 2.3.8(b).

Definitive Agreements: Has the meaning set forth in the Preamble.

Delay Damages: The compensation paid by Seller to SMUD due to a failure of Seller to meet the Scheduled Commercial Operation Date.

Delay LD Start Date: Has the meaning set forth in Section 2.3.7.

Delivery Point: The interconnection location of the Project on the high-side of the step-up transformer that interconnects to the SMUD Transmission System, where SMUD accepts title to the Product and associated attributes as described herein. The Delivery Point is identified in Exhibit A and is the same location as the Point of Interconnection.

Delivery Term: Has the meaning set forth in Section 2.3.1.

Delivery Term Security: Has the meaning set forth in Section 9.2.

Development Security: Has the meaning set forth in Section 9.1.

Discharging Energy: All Energy delivered to the Delivery Point from the Storage Project, net of the transformation and transmission losses, if any, as measured by the Storage Meter. For the avoidance of doubt, all Discharging Energy will have originally been delivered to the Storage Project as Charging Energy.

Discharging Notice: The operating instruction, and any subsequent updates, given by SMUD to Seller, directing the Storage Project to discharge Discharging Energy at a specific MW rate or to a specified Stored Energy Level, when the Solar Project and Storage Project are operated under Independent Control Mode as specified in LGIA,; provided that (a) any such operating instruction or update shall be in accordance with Section 5.4 and the Operating Restrictions, and (b) if, during a period when the Storage Project is instructed by SMUD to be discharging, the sum of PV Energy and Discharging Energy would exceed the Interconnection Capacity Limit, such "Discharging Notice" shall (for purposes of this PPA) be deemed to be automatically adjusted to reduce the amount of Discharging Energy so that the sum of Discharging Energy and PV Energy does not exceed the Interconnection Capacity Limit, until such time as SMUD issues a further modified Discharging Notice. Note: For the avoidance of doubt, (a) when the Solar Project and Storage Project are operated under Combined Control Mode as specified in LGIA, no Discharging Notice will be issued by SMUD and (b) the Project Plant Controller shall automatically determine the amount of Discharging Energy based on the MW setpoint for the combined total output of the Solar Project and Storage Project given by SMUD.

Dispatch; Dispatchability: The ability of a generating unit to increase or decrease generation, or to be brought on line or shut down at the request of a utility's system operator.

Dispatch Down Instruction: Any direction, instruction or order to reduce the generation or delivery of PV Energy for the following reasons:

- a) An Emergency Condition;
- b) Any abnormal situation or condition that in the reasonable judgment of Seller, is imminently likely to cause a material adverse effect on the security of, or damage to, the Project or Seller's interconnection facilities. System restoration or black start shall be considered an Emergency Condition; provided, however, that the Project shall not be obligated to possess black start capability;
- c) Any direction, instruction, or order given by RC West Reliability Coordinator or its successor (whether through the scheduling coordinator, Balancing Area Authority, or Host Electric Utility) for warnings of an Emergency Condition, or imminent condition or situation, which jeopardizes SMUD's Electric System or other Electric System integrity

or the integrity of other systems to which they are connected; such direction, instruction, or order may result from a warning or forecast of overgeneration conditions but only to the extent such overgeneration is an imminent reliability issue. To the extent practicable under the circumstances and consistent with Prudent Utility Practice, any such curtailment of the Project shall be on an equitable, non-discriminatory basis. For purposes of clarity, any direction instruction, or order for overgeneration resulting from any economic scheduling or bidding of the Project is not a Dispatch Down Instruction and is a SMUD Curtailment.

- d) Any direction, instruction or order given by the Host Electric Utility, or any Transmission Provider (including SMUD, in its function as a Host Electric Utility, Balancing Authority or Transmission Provider) for reasons to prevent equipment damage, loss of load, abnormal voltage conditions, or any warning, forecast or anticipation of conditions or situations that jeopardize the Host Electric Utility or Transmission Provider's system integrity or due to scheduled or unscheduled maintenance or construction on the Host Electric Utility or Transmission Provider's transmission or distribution facilities that prevent SMUD from receiving or the Seller from delivering Energy at the Delivery Point; such direction, instruction, or order may result from a warning or forecast of overgeneration conditions but only to the extent such overgeneration is an imminent reliability issue. To the extent practicable under the circumstances and consistent with Prudent Utility Practice, any such curtailment of the Project shall be on an equitable, non-discriminatory basis. For purposes of clarity, any direction instruction, or order for overgeneration resulting from any economic scheduling or bidding of the Project is not a Dispatch Down Instruction and is a SMUD Curtailment;

provided, however, Dispatch Down Instructions shall not include any SMUD Curtailment.

Dispatch Down Period: Any period of reduction of the Project output or its generation of Products arising out of a Dispatch Down Instruction, including any ramp up and ramp down periods.

Distribution System: The relatively low voltage wires, transformers and related equipment generally used by an electric utility to deliver electric power to retail customers (as opposed to using it to move bulk quantities of power between different electric utilities or from large electric generators to a Distribution System).

Early Termination Date: Has the meaning set forth in Section 8.4.

Effective Date: Has the meaning set forth in the Preamble.

EIM: Shall mean the Western Energy Imbalance Market.

EIM Participating Resource: has the meaning set forth in the CAISO Tariff.

Electric System: The integrated electric generation, transmission, and distribution facilities owned or controlled by an electric utility.

Electrical Losses: All transmission or transformation losses between the Project and the Delivery Point, including losses associated with (i) delivery of Energy to the Delivery Point, (ii) delivery of Charging Energy to the Storage Project and (iii) delivery of Discharging Energy to the Delivery Point.

Eligible Renewable Energy Resource (ERR): An Eligible Renewable Energy Resource as defined in California Public Utilities Code Section 399.12 and California Public Resources Code Section 25471, as either code may be amended or supplemented from time to time, as defined in the CEC Renewables Portfolio Standard Eligibility Guidebook, as may be amended or supplemented from time to time.

Emergency Condition: A condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of a Transmission Provider, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect, on the security of, or damage to Transmission Provider's Transmission System, Transmission Provider's Interconnection Facilities or the electric systems of others to which the Transmission Provider's Transmission System is directly connected; including the conditions of System Operating Limit (SOL) (as defined in the LGIA) exceedance where the pre-contingency or post-contingency mitigation actions are required by NERC or WECC Reliability Standards; or (3) that, in the case of Seller, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Facility or Seller's Interconnection Facilities (as defined in the LGIA).

EMS: Has the meaning set forth in Section 5.5.

Energy: Electrical energy produced by the Solar Project and delivered with the voltage and quality required by SMUD in accordance with the LGIA, and measured in megawatt-hours (MWh) or kilowatt-hours (kWh).

Energy Deviation: Has the meaning set forth in Section 7.4.

Environmental Attributes: All Environmental Attributes, as that term is defined in D.08-08-028 of the California Public Utilities Commission, as may be amended, and all renewable energy credits as that term is defined under section 399.12 of the California Public Utilities Code, as may be amended, all Renewable and Environmental Attributes as defined by WREGIS, as well as any credits, carbon benefits, carbon emission reductions, carbon offsets or allowances, howsoever entitled, attributed to the Energy produced at the Solar Project and delivered to the Delivery Point recognized under Assembly Bill 32 Global Warming Solutions Act of 2006, as may be amended.

ETR: Has the meaning set forth in Section 7.6.

Event of Default: Has the meaning set forth in Section 8.2.1.

Excusable Delay: Any delay that is caused by one or more of the following: (i) an event of Force Majeure, (ii) breach of this Agreement by SMUD or other material action or inaction on the part of SMUD that prevents the Seller from fulfilling its obligations, in whole or in part, under this Agreement, (iii) an unforeseen delay in the Permitting process (including any delay by a Governmental Authority in the issuance or maintenance of a Permit) or any other challenge to a Permit that is not a result of any breach by Seller, (iv) a breach by SMUD under the Interconnection Agreement, or (v) a delay in completion of any interconnection or transmission facilities or upgrades related to the Project.

Expected Annual Energy Production (EAEP): The Energy that the Project can be expected to produce during a typical year of operation, factoring in typical weather patterns, expected solar irradiance, etc.

The EAEP for each Contract Year is set forth in Exhibit C. Any variance in the Actual Annual Solar Insolation from typical (up or down) shall adjust the EAEP according to the following formula:

Adjusted Expected Annual Energy Production (AEAEP) =

EAEP * (Actual Annual Solar Insolation/Typical Annual Solar Insolation)

Expected PV Capacity: Is as specified in Exhibit A.

Expected Storage Capacity: Has the meaning set forth in Exhibit A.

Extended Term: Has the meaning set forth in Section 2.3.1.

Facility Debt: Means the obligations of Seller or its Affiliates to any lender or tax equity investor pursuant to the Financing Documents, including principal of, premium and interest on indebtedness, fees, expenses or penalties, amounts due upon acceleration, prepayment or restructuring, swap or interest rate hedging breakage costs and any fees or interest due with respect to any of the foregoing plus an amount sufficient to ensure that the tax equity investor recovers the greater of (1) its investment balance under generally accepted accounting principles (as determined immediately prior to exercise of the applicable purchase option) and any investment tax credit recaptured as result of such exercise and (2) the amount necessary to allow all tax equity investors to achieve their hurdle rate required for the partnership flip to occur under any tax equity financing (or if any tax equity financing has a fixed date as the flip date, the amount necessary to allow all tax equity investors to achieve a rate of return equal to the rate of return used to determine the flip date under such tax equity financing).

Fair Market Value: Has the meaning set forth in Section 19.6.

FERC: The Federal Energy Regulatory Commission or any successor government agency.

Final Purchase Option: Has the meaning set forth in Section 19.1.

Force Majeure: An event or circumstance occurring after the Effective Date that prevents or delays the ability of one Party from performing obligations under this Agreement, and which is not in the reasonable control of, or the result of negligence of, the Party claiming Force Majeure, and which the claiming Party is unable to overcome or cause to be avoided by the exercise of due diligence. Force Majeure shall include the following events, to the extent consistent with the prior sentence: (a) An act of nature, riot, insurrection, war, explosion, labor dispute, fire, flood, earthquake, volcanic eruption, storm, lightning, tsunami, backwater caused by flood, act of the public enemy, terrorism, or epidemic; (b) Interruption of transmission or generation services as a result of a physical Emergency Condition (and not SMUD Curtailment) not caused by the fault or negligence of the Party claiming Force Majeure and reasonably relied upon and without a reasonable source of substitution to make or receive deliveries hereunder, civil disturbances, strike, labor disturbances, labor or material shortage, national emergency, court order or other action by a Governmental Authority that prevents a Party from fulfilling its obligations under this Agreement (excluding, with respect to any claim by SMUD, any action or inaction of the SMUD Board of Directors or any person with the authority to bind SMUD); (c) any delays in obtaining any permits, authorizations, or entitlements to construct or operate the Project beyond the date as set forth in Exhibit N Project Milestone Schedule, except to the extent caused by the affected Party, and the requirement to obtain any additional permit, authorization or entitlement to construct or operate the Project that is not included in Exhibit N Project Milestone Scheduled that arises after the Effective Date if the timeline for obtaining such permit, authorization and entitlement affects Seller's ability to achieve any milestone hereunder. Under no circumstances shall either Party's financial incapacity, Seller's ability to sell Solar Products or Storage Products at a more favorable price or under more favorable conditions or SMUD's ability to acquire Solar Products or Storage Products at a more favorable price or under more favorable conditions or other economic reasons constitute an event of Force Majeure. The term "Force Majeure" does not include Forced Outages to the extent such are not caused or exacerbated by an event of Force Majeure as described above, nor does it include Seller's inability to obtain financing or other equipment and instruments necessary to plan for, construct, or operate the Project.

Forced Outage: Means an unplanned outage of one or more of the Project's components that results in a reduction of the ability of the Project to produce Energy, and that is not the result of a Force Majeure event and specifically excludes any planned maintenance or Planned Outage.

Forced Outage Notification Procedures: Means the procedures set forth in Exhibits G and I with respect to notification of Forced Outages and return to service.

Full Access: Has the meaning set forth in Section 19.2.

GHG: Means greenhouse gas.

Governmental Authority: The federal government of the United States, and any state, county, municipal or local government or regulatory department, body, political subdivision, commission, agency, instrumentality, ministry, court, judicial or administrative body, taxing authority, or other authority thereof (including any corporation or other entity owned or controlled by any of the foregoing) having jurisdiction over any Party, the Project, the site of the Project, or the rights or obligations of any Party under this Agreement, whether acting under actual or assumed authority, provided, however, that SMUD and Seller shall not be considered a Governmental Authority hereunder. The CAISO shall be considered a Governmental Authority.

Green-e: The national independent certification and verification program for renewable energy. Green-e developed the Green-e Renewable Energy Standard of Canada and the United States, as may be amended from time to time, or replacement verification program.

Green-e Standard: The Green-e Energy Tracking Attestation Form for generators participating in a tracking system, currently available at <https://www.tfaforms.com/4652008> as such form may be updated from time to time, with Seller electing WREGIS on such form.

Grid Charging Energy: Energy withdrawn from Interconnection Provider's or Transmission Provider's electrical system and delivered at the Delivery Point and any energy from any source other than the solar photovoltaic electric energy produced by the Solar Project used to charge the Storage Project and discharged at a later time.

Guaranteed Commercial Operation Date or Guaranteed COD: The date that is nine (9) months after the Scheduled Commercial Operation Date, as specified in Exhibit A and subject to day-for-day extension to the extent the Scheduled Commercial Operation Date is extended as provided in Section 2.3.7.

Guaranteed Round Trip Efficiency: Has the meaning set forth in Exhibit O.

Guaranteed Storage Availability: Ninety-seven percent (97%).

Host Electric Utility: An electric utility that provides, at the general location of the Project, any of the following: electric transmission service, distribution service and/or retail electricity sales.

Hybrid Resource: Has the meaning as defined in the CAISO Tariff.

Integral Station Service Load: That subset of station service load that is so integrated with the Project design that it is not feasible for SMUD to meter and serve such demand during Project operations on a stand-alone basis.

Interconnection Agreement or LGIA: The Large Generator Interconnection Agreement (LGIA) between SMUD and Seller specific to the interconnection of the Project to the SMUD Transmission System.

Interconnection Capacity Limit: the maximum instantaneous amount of Energy that is permitted to be delivered to the Point of Interconnection, in the amount of 250 MW.

Interest Rate: Shall be the lesser of (a) 4% plus the "prime rate" of interest as published on that date in the Wall Street Journal, and generally defined therein as "the base rate on corporate loans posted by at least 75% of the nation's 30 largest banks," or if the Wall Street Journal is not published on a date for which such interest rate must be determined, the "prime rate" published in the Wall Street Journal on the nearest-preceding date on which the Wall Street Journal was published, or if the Wall Street Journal is no longer in publication, such other similar interest rate reasonably agreed to by the Parties, and (b) the highest rate permitted under applicable law.

ITC or Investment Tax Credit: The investment tax credit established pursuant to Section 48 of the United States Internal Revenue Code of 1986, as it may be amended from time to time.

ITC Recapture Amount: The amount payable (determined on an after-tax basis) to the IRS by Seller (or its Affiliate or tax equity investor) under Code §50(a) due to Seller's ineligibility for all or a portion of ITC after such time as Seller or its Affiliate or tax equity investor has claimed the ITC.

J. Aron: Has the meaning set forth in Section 17.2.

Law: Any statute, law, treaty, rule, regulation, ordinance, code, enactment, injunction, order, writ, decision, authorization, judgment, decree or other written legal or regulatory determination or restriction by a court or Governmental Authority of competent jurisdiction.

Letter of Credit: One or more irrevocable, standby letters of credit issued by a Qualified Issuer in substantially the form set forth in Exhibit Q.

Loss: Has the meaning set forth in Section 8.5.1(a).

Maximum Hourly Energy Delivery: The maximum energy (MW) that SMUD will make payment for in any delivery hour, which is equal to Expected PV Capacity * 1 hour.

Measurement Period: Any two consecutive Contract Year periods during the Delivery Term.

Minimum Annual Energy Production (MAEP): For the first Contract Year, an amount equal to 90% of the Expected Annual Energy Production (EAEP) amount for such Contract Year and thereafter, the amount equal to 90% of the sum of the two Expected Annual Energy Production (EAEP) amounts during a Measurement Period, as set forth in Exhibit C. Any variance in the Actual Annual Solar Insolation from typical (up or down) shall adjust the MAEP according to the following formula.

Adjusted Minimum Annual Energy Production (AMAEP) =

MAEP * (Sum of Actual Annual Solar Insolation amounts for the two Contract Years in the Measurement Period / Sum of the Typical Annual Solar Insolation amounts for the two Contract Years in the Measurement Period)

Monthly Settlement Amount: On and after COD, the monthly settlement amount will equal (a) the Energy delivered to and metered at the Solar Meter (in MWh) plus Deemed Delivered Energy during SMUD Curtailment or SMUD's breach of the Agreement or the Interconnection Agreement that prevents or excuses Seller from delivering Energy to the Delivery Point, times (b) the Solar Price, subject to adjustment as set forth in Section 2.4.2(b) for REC delivery shortfalls.

Moody's: Moody's Investors Service, Inc., or any successor organization thereto.

MW: Megawatt(s) of alternating current.

MWh (Megawatt-hours): A unit of energy measurement corresponding to 1,000 kilowatt-hours.

NERC: The North American Electric Reliability Corporation, or any successor organization.

NERC Holidays: Days that NERC establishes as holidays for electric energy trading.

Non-Defaulting Party: Has the meaning set forth in Section 8.2.2(a).

NP-15: The zone within the CAISO Balancing Authority area designated as North of Path 15 by the CAISO for congestion settlement purposes.

NP-15 EZ Gen Hub Price: The day-ahead hourly locational marginal price as published by the CAISO for generator transactions in the NP-15 zone of the CAISO.

Operating Restrictions: Those rules, requirements and procedures set forth in Exhibit J.

Option Notice: Has the meaning set forth in Section 19.1.

Outage Notification Procedure: The outage notification procedure outlined in Exhibit G.

Party/Parties: SMUD and Seller are referred to individually as a “Party” and collectively as “Parties.”

PCC1 REC Price: Has the meaning set forth in Section 2.4.2(b).

Performance Tolerance Band: Has the meaning set forth in Section 7.4.

Permits: Permits, licenses, certificates, concessions, consents, waivers, exemptions, variances, franchises, orders, decrees, rights, registrations, submissions, determinations, authorizations, approvals, registrations, orders, and filings.

Permitted Transfer: Means

- a) Foreclosure by any lender on the direct or indirect ownership interests in Seller (including a transfer in lieu of foreclosure or any transfer to a Qualified Transferee);
- b) Any direct or indirect transfer of equity interests in Seller in connection with a tax equity financing (for purposes of clarity, this does not prohibit or otherwise restrict any transfer of interests in the Solar Project or the Storage Project);
- c) Any direct or indirect transfer of this Agreement or equity interests in Seller to an Affiliate of Seller (including any investment fund or partnership for which an Affiliate of Seller is the managing member), provided that in the case of a transfer of this Agreement only, such Affiliate’s creditworthiness is equal to or better than that of Seller;
- d) Any direct or indirect transfer of this Agreement or any equity interests in Seller to a person succeeding to all or substantially all of the assets of Seller; or
- e) Any direct or indirect transfer of this Agreement or any equity interests in Seller to a Qualified Transferee.

PG Damages: Has the meaning set forth in Section 2.4.8.

PG Shortfall: Has the meaning set forth in Section 2.4.8.

Planned Outage: An outage that has been scheduled in advance pursuant to the provisions of Section 7.5 of one or more of the Project’s components that results in a reduction of the ability of the Project to produce Energy.

Plant Controller: Device or compilation of devices used to take inputs either directly or indirectly from transmission provider, power system operator, or other affiliated group and provide outputs or feedback in the implementation of controls of the Solar Project and Storage Project. Plant controller must be capable to interface with Supervisory Control and Data Acquisition System SCADA using industry standard protocol such as DNP3.0.

Point of Interconnection: The specific location at the 230kV side of the disconnect switch inside the Sacramento Valley Energy Center Switching Station.

Portfolio Content Category 1 (PCC1): Renewable energy comprised of Energy and Environmental Attributes meeting the criteria defined by the CEC Renewables Portfolio Standard Eligibility Guidebook, for

Portfolio Content Category 1, as may be amended or supplemented from time to time, and meeting any applicable regulations promulgated by the CEC.

Product: Collectively, all of the Storage Product and the Solar Product. Product includes, but is not limited to, all Energy and energy-related products and energy-related attributes currently defined as Energy, Capacity, Capacity rights, flexibility, Frequency Response, ancillary services, and green attributes. Any energy product or feature that can be valued intrinsically or extrinsically is included in Product. For the avoidance of doubt, there are no products or energy-related products or energy-related attributes retained by Seller.

Project: Has the meaning provided in the recitals and shall include the Solar Project and the Storage Project.

Proposed Purchase Notice: Has the meaning provided in Section 2.3.2.

Proposed Sale Notice: Has the meaning provided in Section 2.3.2.

Prudent Utility Practice: Those practices, methods and acts that would be implemented and followed by prudent operators of solar photovoltaic electric energy generating facilities and battery storage facilities in the Western United States, similar to the Project, during the relevant time period, which practices, methods and acts, in the exercise of prudent and responsible professional judgment in the light of the facts known at the time the decision was made, could reasonably have been expected to accomplish the desired result consistent with prudent business practices, reliability, and safety. Seller acknowledges that the use of Prudent Utility Practice by Seller does not exempt Seller from any obligations set forth in this Agreement.

Prudent Utility Practice includes, at a minimum, those professionally responsible practices, methods and acts described in the preceding paragraph that comply with manufacturers' warranties, restrictions in this Agreement, the LGIA, the requirements of Governmental Authorities, and WECC and NERC standards. Prudent Utility Practice is not required to be the optimum practice, method or act to the exclusion of all others.

Prudent Utility Practice also includes taking reasonable steps in accordance with the first sentence of this definition to ensure that:

- a) Equipment, materials, resources, and supplies, including spare parts inventories, are available to meet the Project's needs;
- b) Sufficient operating personnel are available at all times and are adequately experienced and trained and licensed as necessary to operate the Project properly and efficiently, and are capable of responding to reasonably foreseeable emergency conditions at the Project and emergencies whether caused by events on or off the Project site;
- c) Preventive, routine, and non-routine maintenance and repairs are performed on a basis that ensures reliable, long-term and safe operation of the Project, and are performed by knowledgeable, trained, and experienced personnel utilizing proper equipment and tools;
- d) Appropriate monitoring and testing are performed to ensure equipment is functioning as designed;
- e) Equipment is not operated in a reckless manner, in violation of manufacturer's guidelines, warranty requirements, or in a manner unsafe to workers, the general public, or the connecting utility's Electric System or contrary to environmental laws, permits or regulations or without regard to defined limitations such as, flood conditions,

safety inspection requirements, operating voltage, current, volt ampere reactive (VAR) loading, frequency, rotational speed, polarity, synchronization, and control system limits; and

- f) Equipment and components are designed and manufactured to meet or exceed the standard of durability that is generally used for hybrid solar photovoltaic electric energy generating plus battery storage facilities operating in the Western United States and will function properly over the full range of ambient temperature and weather conditions reasonably expected to occur at the Project site and under both normal and emergency conditions.

Purchase Option: Has the meaning set forth in Section 19.1.

Purchase Option Due Diligence Period: Has the meaning set forth in Section 19.2.

Purchase Price: Has the meaning set forth in Section 19.1.

PV: Photovoltaic.

PV Capacity: The PV Capacity (MWac) is the maximum amount of Capacity that shall be provided from the Solar Project to SMUD at the Delivery Point. PV Capacity is measured at the Delivery Point, after any applicable Project step-up transformer losses, and where applicable, transmission and distribution losses up to the Delivery Point.

PV Capacity Shortfall: The Expected PV Capacity of the Solar Project less the PV Capacity of the Solar Project that has been commissioned and is capable of reliably delivering Energy and meeting minimum functionality requirements under Section 2.3.7.

PV Deficit Damages: Has the meaning set forth in Section 2.3.8(a).

PV Energy: That portion of Energy that is delivered directly from the Solar Project to the Delivery Point, as measured at the Solar Meter, and is not Discharging Energy.

Qualified Issuer: Has the meaning set forth in Section 9.2.

Qualified Transferee: Means a person that (a) for the three (3) preceding years, has owned or operated (or had access to the expertise required to operate through committed management agreements with its Affiliates or through a committed operations and maintenance agreement with any person) at least 100 MWs of renewable energy generation facilities and (b) either itself or its direct or indirect parent, has (i) a tangible net worth of at least \$50,000,000 or (ii) a credit rating of “BBB-” or higher by S&P or “Baa3” or higher by Moody’s.

RC West Reliability Coordinator: The entity that fulfills the duties of the Reliability Coordinator, as defined by NERC, and as delegated by the WECC, for its Reliability Coordinator Area in the western United States and western Canada, or CAISO Reliability Coordinator or any successor organization.

Real-Time Market: Has the meaning as defined in the CAISO Tariff.

Real-Time Price: The CAISO LMP at the Project as defined in the CAISO Tariff. If there is more than one applicable Real-Time Price for the same period of time, Real-Time Price shall mean the price associated with the shortest time interval.

Reimbursement Agreement: means that certain Reimbursement and Waiver Agreement entered into between the Parties as of the date hereof.

Renewable Energy Credit (REC): A certificate of proof issued by WREGIS that an Eligible Renewable Energy Resource (ERR) has generated one megawatt hour (MWh or 1,000 kWh) of electricity. A REC shall also have the same meaning as in California Public Utilities Code Section 399.12(h). Currently RECs are used to convey Environmental Attributes associated with electricity production by a renewable energy resource. For purposes of this Agreement, the term REC shall be synonymous with bundled or unbundled renewable energy credit, tradable renewable energy certificates, WREGIS certificate, or any other term used to describe the documentation that evidences the renewable and Environmental Attributes associated with electricity production by an Eligible Renewable Energy Resource.

Required Percentage: The Required Percentage shall be (i) with respect to the Solar Project, ninety percent (90%) of the Expected PV Capacity, and (ii) with respect to the Storage Project, ninety percent (90%) of the Expected Storage Capacity.

Resource Adequacy: A requirement by a Governmental Authority or in accordance with its FERC-approved tariff, or a policy approved by a local regulatory authority, that is binding upon either Party and that requires such Party procure a certain amount of electric generating Capacity.

Resource ID: Has the meaning set forth in the CAISO Tariff.

Round Trip Efficiency: Has the meaning set forth in Exhibit O.

Round Trip Efficiency Liquidated Damages: Has the meaning set forth in Exhibit O.

RPS Certification: A certification by the CEC that the Project is eligible for the purposes of the California Renewable Portfolio Standard, and that all Energy produced by the Project, qualifies as generation from an Eligible Renewable Energy Resource.

RPS Pre-Certification: A pre-certification by the CEC, obtained by Seller that the Project is eligible for purposes of the California Renewables Portfolio Standard.

RTU: Has the meaning set forth in Section 6.5.1.

S&P: Standard & Poor's Financial Services, LLC (a subsidiary of McGraw-Hill Companies), or any successor organization thereto.

Scheduled Commercial Operation Date: The planned Commercial Operation Date of the Project set forth in Exhibit A, as such date may be extended as provided in Section 2.3.7.

Scheduling: The act of producing, or relating to the production of, a schedule for the delivery, production or use of Energy, Capacity, and/or transmission that is in compliance with NERC Scheduling (NERC tagging) requirements.

Scheduling Coordinator: Has the meaning set forth in the CAISO Tariff.

Scheduling Penalties: Has the meaning set forth in Section 7.4.

Seller: The Party so identified in the preamble of this Agreement, and its successors and permitted assigns.

Settlement Interval: Has the meaning set forth in Section 7.4.

Settlement Period: Has the meaning set forth in Section 2.4.7(a).

SMUD: The Sacramento Municipal Utility District

SMUD Curtailment: Any curtailments, interruptions, or reductions of Solar Project output that are not due to a Dispatch Down Instruction, as further described in Section 6.7. For the avoidance of doubt, SMUD Curtailment includes (i) any discretionary curtailment ordered by or arising from SMUD. (ii) any economic curtailments, including any curtailment arising out of any pre-scheduling, scheduling, bidding or offering activities with respect to the Project, and (iii) any curtailments that are deemed SMUD Curtailment under Section 7.6.

SMUD Revenue Meter: A revenue meter operated by SMUD that determines the amount of Energy measured at the applicable meter location.

SMUD Service Territory: The geographical area in which SMUD is the provider of distribution service. This includes virtually all of Sacramento County and a small part of neighboring Placer County.

Solar Charging Energy: All solar photovoltaic Energy produced by the Solar Project, less transformation and transmission losses, if any, delivered to the Storage Project in accordance with a Charging Notice pursuant to Section 5.4.

Solar Irradiance Data: Data used for measuring solar insolation comprising global horizontal irradiance (GHI, W/m²), diffuse horizontal irradiance (DHI, W/m²), and direct normal irradiance (DNI, W/m²), and as otherwise agreed upon by the Parties.

Solar Meter: The bi-directional revenue quality meter or meters, along with a compatible data processing gateway or remote intelligence gateway, telemetering equipment and data acquisition services sufficient for monitoring, recording and reporting, in real time, the amount of Energy produced by the Solar Project. For clarity, (i) the Project will contain multiple measurement devices that will make up the Solar Meter, and, unless otherwise indicated, references to the Solar Meter shall mean all such measurement devices and the aggregated data of all such measurement devices, taken together, and (ii) the Solar Meter will be located, and the Energy will be measured, at the low voltage side of the main step up transformer and will be subject to adjustment in accordance with any meter requirements of SMUD and Prudent Utility Practices to account for the applicable Electrical Losses and station service load.

Solar Price: Has the meaning set forth on Exhibit B.

Solar Product: All Energy, Environmental Attributes (including but not limited to Renewable Energy Certificates (RECs)), PV Capacity, and Capacity Attributes of the Solar Project, in each case which are or can be produced by or associated with generation from the Solar Project. Solar Product must count in SMUD's Renewables Portfolio Standard (RPS) portfolio as a Portfolio Content Category One (PCC 1) resource, as defined by the CEC RPS Eligibility Guidebook, as may be amended or supplemented from time to time or otherwise consistent with applicable regulations promulgated by the CEC as generated by the Project and delivered to the Delivery Point under this Agreement.

Solar Project: Means the solar panels, buildings, collection lines, substation, and other improvements related thereto owned by Seller for the generation of Energy by Seller for delivery to SMUD hereunder and more particularly described on Exhibit A attached hereto.

Station Service Load Letter of Agreement: That certain Station Service Load Letter of Agreement by and between Seller and SMUD, entered into after the Effective Date of this Agreement.

Storage Capacity: The maximum dependable operating capability of the Storage Project to charge or discharge electric energy.

Storage Capacity Shortfall: The Expected Storage Capacity of the Storage Project less the Capacity of the Storage Project that has been commissioned and is capable of reliably charging and discharging Energy.

Storage Capacity Test: Any test or retest of the Storage Capacity conducted in accordance with the testing procedures, requirements and protocols set forth in Exhibit M.

Storage Commercial Operation Test: Has the meaning set forth in Section 2.3.10.

Storage Contract Capacity: The total capacity (in MW) of the Storage Project determined in accordance with Section 2.3.8, Section 2.3.10 and Exhibit M, as the same may be adjusted from time to time pursuant to Section 2.3.10 to reflect the results of the most recently performed Storage Capacity Test.

Storage Deficit Damages: Has the meaning set forth in Section 2.3.8(b).

Storage Meter: The bi-directional revenue quality meter or meters, along with a compatible data processing gateway or remote intelligence gateway, telemetering equipment and data acquisition services sufficient for monitoring, recording and reporting, in real time, the amount of Charging Energy delivered to the Storage Project and the amount of Discharging Energy discharged from the Storage Project to the Delivery Point. For clarity, (i) the Project will contain multiple measurement devices that will make up the Storage Meter, and, unless otherwise indicated, references to the Storage Meter shall mean all such measurement devices and the aggregated data of all such measurement devices, taken together, and (ii) the Storage Meter will be located, and the Energy will be measured, at the low voltage side of the main step up transformer and will be subject to adjustment in accordance with any meter requirements of SMUD and Prudent Utility Practices to account for applicable Electrical Losses and station service load.

Storage Payment: Has the meaning set forth in Section 2.4.3.

Storage Price: Has the meaning set forth on Exhibit B.

Storage Product: (a) Discharging Energy, (b) Capacity Attributes of the Storage Project, if any, (c) Storage Capacity, and (d) ancillary services, if any, in each case arising from or relating to the Storage Project.

Storage Project: Seller's energy storage project described in Exhibit A, located at the Project site and including the mechanical equipment and associated facilities and equipment required to deliver Storage Product, as such Storage Project may be modified from time to time in accordance with the terms hereof.

Stored Energy Level: At a particular time, the amount of electric energy stored in the Storage Project, expressed in MWh.

Surety Bond: A surety bond issued for the benefit of the SMUD that (i) is duly licensed or authorized in the State of California to issue bonds for the limits required and (ii) is otherwise mutually agreed to by Seller and Buyer.

Suspension Date: Has the meaning set forth in Section 8.2.2(b)(ii).

Term: Has the meaning set forth in Section 8.1.

Termination Event: Has the meaning set forth in Section 8.3.

Termination Payment: Has the meaning set forth in Section 8.5.

Test Energy: The Solar Product produced by the Solar Project, delivered to SMUD at the Delivery Point, and purchased by SMUD pursuant to Section 2.4.1 of this Agreement, prior to the Commercial Operation Date.

Third-Party SC: Has the meaning set forth in Section 7.2

Transfer: Has the meaning set forth in Section 17.1.

Transmission Provider: An entity that directs the operation of a Transmission System and provides transmission service.

Transmission System: The relatively high voltage wires, transformers and related equipment owned or controlled by a particular electric utility or grid operator, and generally used to move bulk quantities of power between different electric utilities or from large electric generators to a utility's Distribution System; as opposed to being used to make final delivery of electric power to retail customers.

Typical Annual Solar Insolation: The typical annual solar insolation at the Project site, derived from Solar Irradiance Data provided from 3rd Party source as mutually agreed by the Parties. The Typical Annual Solar Insolation is set forth in Exhibit D.

Ultimate Parent: DESRI Holdings, L.P.

VER Forecast: The CAISO or SMUD process covering variable energy resources scheduling in Day Ahead and forward markets where automated forecast updates displace placeholder energy schedules at the fifteen-minute and five-minute intervals of each hour.

WECC: The Western Electricity Coordinating Council, which is the regional entity responsible for coordinating and promoting bulk electric system reliability in the western United States and western Canada, or any successor organization.

WREGIS: Has the meaning set forth in Exhibit H.

WREGIS Certificate: Has the meaning set forth in Exhibit H.

WREGIS Operating Rules: Has the meaning set forth in Exhibit H.

WREGIS Shortfall: Has the meaning set forth in Section 2.4.2(b).

1.2 RULES OF INTERPRETATION

In this Agreement, except as expressly stated otherwise or unless the context otherwise requires:

1.2.1 headings and the rendering of text in bold and italics are for convenience and reference purposes only and do not affect the meaning or interpretation of this Agreement;

1.2.2 words importing the singular include the plural and vice versa and the masculine, feminine and neuter genders include all genders;

1.2.3 the words "hereof", "herein", and "hereunder" and words of similar import shall refer to this Agreement as a whole and not to any particular provision of this Agreement;

1.2.4 a reference to an Article, Section, paragraph, clause, Party, or Exhibit is a reference to that Section, paragraph, clause of, or that Party or Exhibit to, this Agreement unless otherwise specified;

1.2.5 a reference to a document or agreement, including this Agreement shall mean such document, agreement or this Agreement including any amendment or supplement to, or replacement, novation or modification of this Agreement, but disregarding any amendment, supplement, replacement, novation or modification made in breach of such document, agreement or this Agreement;

1.2.6 a reference to a person or entity includes that person's or entity's successors and permitted assigns;

1.2.7 the term “including” means “including without limitation” and any list of examples following such term shall in no way restrict or limit the generality of the word or provision in respect of which such examples are provided;

1.2.8 references to any statute, code or statutory provision are to be construed as a reference to the same as it may have been, or may from time to time be, amended, modified or reenacted, and include references to all bylaws, instruments, orders and regulations for the time being made thereunder or deriving validity therefrom unless the context otherwise requires;

1.2.9 in the event of a conflict, a mathematical formula or other precise description of a concept or a term shall prevail over words providing a more general description of a concept or a term;

1.2.10 references to any amount of money shall mean a reference to the amount in United States Dollars;

1.2.11 the expression “and/or” when used as a conjunction shall connote “any or all of”;

1.2.12 words, phrases or expressions not otherwise defined herein that (i) have a generally accepted meaning in Prudent Utility Practice shall have such meaning in this Agreement or (ii) do not have well known and generally accepted meaning in Prudent Utility Practice but that have well known and generally accepted technical or trade meanings, shall have such recognized meanings; and

1.2.13 each Party acknowledges that it was represented by counsel in connection with this Agreement and that it or its counsel reviewed this Agreement and that any rule of construction to the effect that ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of this Agreement.

2. PROJECT; PURCHASE AND SALE OF PRODUCTS

2.1 Project and Expected PV Capacity

This Agreement governs SMUD’s purchase of the Product from the Project as described in Exhibit A.

2.1.1 The Expected PV Capacity and the Expected Storage Capacity are shown in Exhibit A. Seller shall be permitted to modify, augment and/or replace the Project and its equipment and components with other equipment and components, at any time prior to or following Commercial Operation, so long as the Expected PV Capacity and the Expected Storage Capacity, in each case as measured at the Delivery Point, are not modified. Notwithstanding the foregoing, at least ninety (90) days prior to the date on which Seller reasonably anticipates that Commercial Operation will occur, Seller will provide SMUD with a written notice that sets forth the Expected PV Capacity and the Expected Storage Capacity based on the final design of the Project and a final version of Exhibit A, which shall identify any updates or changes to certain of the equipment and components set forth in Exhibit A as attached to this Agreement. During the Delivery Term, Seller may modify the Project and its equipment and components from time to time so long as Seller provides SMUD with reasonably prompt written notice setting forth any modifications to Exhibit A. Once provided by Seller, this Agreement shall be deemed amended to include such final or modified version of Exhibit A.

2.1.2 The Parties agree that the Project configuration will be initially two (2) Co-located Resources with separate CAISO Resource IDs for each of the Storage Project and Solar Project. If requested by SMUD in writing not later than June 30, 2022, or during the Delivery

Period following reasonable notice by SMUD to Seller, which notice shall be a minimum of three (3) months, and commensurate with the CAISO process for implementing the conversion from Co-located Resource to Hybrid Resource, or vice-versa, Seller shall exercise commercially reasonable efforts to convert the Project from a storage facility co-located with solar to a Hybrid Resource with a single CAISO Resource ID in accordance with the CAISO Tariff, provided that such efforts and conversion (a) do not require Seller to incur any additional actual or potential obligations, liabilities or non-administrative expenses above a cap of \$10,000 (administrative expenses include staff time and overhead), (b) do not reduce Seller's actual or expected compensation under this Agreement, and (c) are subject to the Parties' mutual agreement on amendments to this Agreement that may be required to effectuate such conversion.

2.2 Products Purchased

During the Delivery Term, Seller shall sell and deliver, or cause to be delivered, and SMUD shall purchase and receive, or cause to be received, (i) all Solar Products at the Solar Price, and (ii) all Storage Product at the Storage Price. All Products shall be supplied only from the Project, and shall be supplied from the Project only to SMUD and all Products are supplied "as-available". Seller may not interrupt deliveries for economic reasons, unless directed by SMUD pursuant to Section 6.7. Notwithstanding the foregoing, Seller may interrupt or reduce deliveries due to Force Majeure, Planned Outages, Forced Outages, Dispatch Down Instructions, SMUD Curtailments, reduced solar insolation, and in mitigation of a SMUD breach of this Agreement preventing or excusing Seller from delivering Product at the Delivery Point.

As of the Effective Date and during the Delivery Term and except as otherwise provided in Section 3.4, Seller, and, if applicable, its successors, represents and warrants that throughout the Delivery Term of this Agreement that the Solar Project's output delivered to SMUD qualified under the requirements of California Public Utilities Code 399.16(b)(1) of the Public Utilities Code for a Portfolio Content Category 1 transaction.

2.3 Delivery Term, Delivery Point, and Commercial Operation

2.3.1 Delivery Term

The "**Delivery Term**" shall commence at the start of the hour ending 01:00 PST on the COD and shall expire at the completion of the hour ending 24:00 PST on the last day of the twenty-seventh (27th) Contract Year thereafter unless terminated earlier as set forth herein, including for exercise of the Project Purchase Option, or extended pursuant to this Section 2.3.1; provided, that either Party may extend the Delivery Term beyond the initial 27 Contract Years for three (3) additional Contract Years (the "**Extended Term**") by providing notice to the other Party within twelve (12) months prior to the end of the 27th Contract Year; provided that an independent, licensed appraisal and valuation consultant that is mutually agreed upon by SMUD and Seller has determined that the Delivery Term and the Extended Term shall not extend for more than eighty percent (80%) of the estimated useful life of the Project and the estimated remaining residual value of the Project at the conclusion of the Extended Term shall be equal to at least twenty percent (20%) of the original cost of the Project.

2.3.2 Right of First Refusal for Project Energy after Delivery Term

No later than twelve (12) months prior to the end of the thirtieth (30th) Contract Year, if Seller chooses to sell Energy from the Project to any third party, Seller shall first provide notice of such intended sale to SMUD ("**Proposed Sale Notice**"). Upon receipt of such Proposed Sale Notice, SMUD will have thirty (30) days in which to provide notice to Seller indicating SMUD's interest in negotiating with Seller to purchase Solar Products and Storage Products from the Project, which notice shall include SMUD's proposed contract price for such continued purchase ("**Proposed Purchase Notice**"). If SMUD provides such Proposed Purchase Notice to Seller, then the Parties shall undertake for a period of sixty (60) days from the date of SMUD's Proposed Purchase Notice to determine if they are able to reach mutual agreement on the terms and conditions of a sale under a separate agreement of the Products to SMUD after the end of the thirtieth

(30th) Contract Year. If SMUD does not timely provide a Proposed Purchase Notice to Seller or if the Parties are unable to agree upon the terms and conditions of any sale of Products to SMUD within such 60-day negotiation period set forth above, then Seller shall be free to negotiate for the sale of energy and other products from the Project to any third party thereafter. For the avoidance of doubt, Seller is not obligated to provide such Proposed Sale Notice if it does not intend to make third party sales after the end of the Delivery Term or if Seller determines in its reasonable discretion that sales to SMUD after the thirtieth (30th) Contract Year would negatively impact its ability to qualify for the Investment Tax Credit, due to extension of the Term for more than eighty percent (80%) of the estimated useful life of the Project, or the estimated remaining residual value of the Project at the conclusion of the extended Term would be less than twenty percent (20%) of the original cost of the Project; and neither Party is obligated to enter into any agreement as a result of any negotiations after the Proposed Purchase Notice is provided.

2.3.3 Scheduled Commercial Operation Date

The Scheduled Commercial Operation Date of the Project is shown in Exhibit A.

2.3.4 Requirements for Commercial Operation

Commercial Operation shall have been achieved when each of the following conditions have been satisfied or waived by the Parties ("**COD Conditions**"):

- a) The Required Percentage of the Expected PV Capacity of the Solar Project and the Required Percentage of the Expected Storage Capacity of the Storage Project has been installed, fully commissioned, and satisfactorily completed all startup testing;
- b) An independent engineer, that is a registered professional engineer in California, has provided a certificate with a PE stamp, certifying that testing pursuant to ASTM E2848-13 (2018) (Standard Test Method for Reporting Photovoltaic Non-Concentrator System Performance) over a data collection period of seven days or once the minimum quantity of data has been collected if such minimum quantity of data is collected over less than seven days has (i) reported the PV Capacity of the Solar Project and such PV Capacity is capable of delivering the Required Percentage of the Expected PV Capacity at the Delivery Point, in accordance with Prudent Utility Practice, on a reliable and a continuous basis without operator intervention, with the exception of normal daily shut-down during hours of insufficient solar irradiation, as demonstrated through a 168-hour continuous operation test of the Solar Project (taking into account the photovoltaic nature of the Solar Project), (ii) the Storage Capacity of the Storage Project is installed and capable of charging and discharging Energy and (iii) Seller has completed the Storage Commercial Operation Test in accordance with Section 2.3.10;
- c) Seller has provided for and SMUD has successfully completed Pre-Commercial Operation Date Testing and Modifications as specified in the LGIA Section 6 and Appendix G and Appendix H;
- d) Meteorological and any other site data as specified in LGIA Appendix H are capable of being received by SMUD and/or a third party for the purposes of creating a generation forecast;
- e) The Control Facilities (as defined in the LGIA) required pursuant to the LGIA are operational;
- f) Seller has provided documentation demonstrating a NERC Generator Owner (GO) registration and a NERC Generator Operator (GOP) registration are in progress or

have completed for the Project, such as a screenshot of the registration request demonstrating that the pertinent NERC registration is in progress.

- g) Seller has provided official contact information, including direct telephone numbers and email addresses for the Project GOP's Control Center personnel and the corresponding Supervisor/Manager/Director responsible for the Control Center operations;
- h) A Permission To Operate (PTO) letter has been signed and executed by SMUD's Director of Grid Operations (consistent with Prudent Utility Practice and LGIA requirements), not to be unreasonably withheld, conditioned or delayed (it being understood and agreed that this condition shall be deemed to be achieved upon issuance of the permission to operate notice in accordance with Section 6 of the LGIA); and
- i) Seller has issued the notice of Commercial Operation.

Seller shall issue a notice of Commercial Operation to SMUD when it believes that the Project has satisfied all COD Conditions (a "**COD Notice**"). A COD Notice shall include all necessary supporting documentation of the satisfaction or occurrence of all COD Conditions. SMUD shall have ten (10) days to review the COD Notice and raise any reasonable objections to Seller's satisfaction of any COD Conditions; provided, however, that Seller's COD Notice shall be deemed accepted by SMUD if SMUD fails to object within such time period. The Commercial Operation Date will be the date upon which Seller submits its COD Notice to SMUD, unless SMUD timely objects to Seller's evidence of the COD Conditions, then the Commercial Operation Date will be the date upon which such evidence is provided to SMUD's reasonable satisfaction or is deemed to have been accepted by SMUD.

2.3.5 [Reserved]

2.3.6 Commercial Operation Date Confirmation Letter

Upon satisfaction of the COD Conditions, SMUD shall execute and then provide to Seller for execution, the "Commercial Operation Date Confirmation Letter." The fully executed version shall be attached as Exhibit E to this Agreement.

2.3.7 Payment for Delay of Commercial Operation; Extension of Scheduled COD

If (a) the Solar Project fails to achieve Commercial Operation of the Required Percentage of the Expected PV Capacity or (b) the Storage Project fails to achieve Commercial Operation of the Required Percentage of the Expected Storage Capacity, in each case, on or before the date that is three (3) months after the Scheduled Commercial Operation Date (as such date may be extended as provided herein) (the "**Delay LD Start Date**"), then Seller shall pay SMUD Delay Damages of \$74/MW/day for each day following the Delay LD Start Date for each MW or portion thereof by which (i) the Capacity of the Solar Project that has been commissioned and is capable of reliably delivering Energy and minimum functionality for such capacity consistent with Appendices G and H of the Interconnection Agreement (provided that SMUD's inability to receive data shall not be deemed the Project's inability to satisfy the minimum functionality requirement) to the Delivery Point is less than the full Expected PV Capacity of the Solar Project, to be adjusted daily for as additional parts of the Solar Project are commissioned and become capable of reliably delivering Energy to the Delivery Point and (ii) the Capacity of the Storage Project that has been commissioned and capable of charging and discharging Energy is less than the full Expected Storage Capacity, until the earlier of (A) Commercial Operation, or (B) the Guaranteed Commercial Operation Date. The Parties agree that SMUD's receipt of Delay Damages shall be SMUD's sole and exclusive remedy for any default prior to the Commercial Operation Date, but shall not be construed as SMUD's declaration that an Event of Default or Termination Event has occurred under any provision of Article 8.

The Scheduled Commercial Operation Date shall be extended on a day-for day basis and Seller shall not owe SMUD Delay Damages for any Excusable Delay.

2.3.8 Payment for PV Deficit Damages or Storage Deficit Damages

- a) If Seller achieves Commercial Operation with less than the Expected PV Capacity, then Seller shall use commercially reasonable efforts following the Commercial Operation Date to cause the remaining portion of the Expected PV Capacity to achieve Commercial Operation. If Seller has not caused the PV Capacity Shortfall to achieve Commercial Operation on or before one hundred eighty (180) days after the COD, then Seller shall pay SMUD damages equal to the PV Capacity Shortfall multiplied by \$320,000/MW ("**PV Deficit Damages**"). However, if the reason for the PV Capacity Shortfall is the result of permitting or local fire jurisdiction restrictions (e.g. reduced site size), not due to the breach of Seller, then Seller shall not be obligated to pay any PV Deficit Damages associated directly with the portion of PV Capacity not built because of such restrictions. The Expected Annual Energy Production and Minimum Annual Energy Production will be reduced proportionately to account for the final PV Capacity at the end of such one hundred eighty (180)-day period, and thereafter, the Capacity of the Solar Project will be equal to such final amount for all purposes under this Agreement.
- b) If Seller achieves Commercial Operation with less than the Expected Storage Capacity, then Seller shall use commercially reasonable efforts following the Commercial Operation Date to cause the remaining portion of the Expected Storage Capacity to achieve Commercial Operation. If Seller has not caused the delayed Capacity to achieve Commercial Operation on or before three hundred sixty five (365) days after the COD, then Seller shall pay SMUD damages equal to the Storage Capacity Shortfall or multiplied by \$320,000/MW ("**Storage Deficit Damages**") and together with the PV Deficit Damages, the "**Deficit Damages**"). However, if the reason for the Storage Capacity Shortfall is the result of permitting or local fire jurisdiction restrictions (e.g. reduced site size), not due to the breach of Seller, then Seller shall not be obligated to pay any Storage Deficit Damages associated directly with the portion of Storage Capacity not built because of such restrictions. The Storage Contract Capacity will be reduced proportionately to account for the final Storage Capacity at the end of such three hundred-sixty five (365)-day period for all purposes under this Agreement.
- c) Parties agree that SMUD's receipt of Deficit Damages shall be SMUD's sole and exclusive remedy for failure to achieve Commercial Operation with less than one hundred percent (100%) of the Expected PV Capacity or Expected Storage Capacity, as applicable. Parties further agree that (i) payment of any PV Deficit Damages and any corresponding decrease in the PV Capacity shall not in any way affect the Expected Storage Capacity or final Storage Capacity and (ii) payment of any Storage Deficit Damages and any corresponding decrease in the Storage Capacity shall not in any way affect the Expected PV Capacity or final PV Capacity.

2.3.9 Cap on Damages.

Notwithstanding anything in this Agreement to the contrary, Delay Damages owed by Seller to SMUD hereunder together with any Deficit Damages shall not exceed the Development Security provided by Seller pursuant to Section 9.1.

2.3.10 Storage Project Testing.

Prior to the Commercial Operation Date, Seller shall schedule and complete a performance test (the "**Storage Commercial Operation Test**"). Subject to this Section 2.3.10, such

Storage Commercial Operation Test shall be performed in accordance with Exhibit M and shall establish the initial Storage Contract Capacity. Thereafter, Seller and SMUD shall have the right to run retests of the Storage Capacity Test in accordance with Exhibit M.

2.4 Payment for Products Purchased

2.4.1 Pre-Commercial Energy Price

If the Pre-COD Index Price is greater than zero dollars (\$0) prior to the Commercial Operation Date, SMUD will pay (a) for Test Energy produced by the Solar Project, by multiplying (i) 70% of the Pre-COD Index Price by (ii) the applicable hourly Energy quantity (in MWh) as measured by the Solar Meter and (b) \$10 for each REC associated with the Test Energy that is confirmed to be a valid PCC-1 REC and is transferred into Buyer's WREGIS subaccount. If the Pre-COD Index Price is less than zero dollars (\$0) prior to the Commercial Operation Date, SMUD will pay (A) for Test Energy produced by the Solar Project by multiplying (1) 100% of the Pre-COD Index Price by (2) the applicable hourly Energy quantity (in MWh) as measured by the Solar Meter, and (B) \$10 for each REC associated with the Test Energy that is confirmed to be a valid PCC-1 REC and is transferred into Buyer's WREGIS subaccount.

2.4.2 Solar Price after Commercial Operation Date

- a) Subject to Sections 2.4.2(b) and 2.4.2(c), once the Project has achieved Commercial Operation, SMUD shall pay Seller the Monthly Settlement Amount.
- b) In the event that Seller fails to transfer to SMUD WREGIS Certificates associated with the amount of PV Energy delivered to the Delivery Point within one hundred ten (110) days after the end of the month that the Energy was generated and delivered to SMUD at the Delivery Point and the cause of such failure is due to Seller's actions or inactions inconsistent with its obligations under this Agreement ("**WREGIS Shortfall**"), then the Solar Price associated with such Energy previously delivered at the Delivery Point and paid for by SMUD will be discounted by an amount equal to the PCC1 REC Price. The "**PCC1 REC Price**" means the market value as determined by SMUD using commercially reasonable efforts for PCC1 RECs based on the average of 3 broker quotes for NP-15 Solar PV CEC RPS PCC-1 RECs but in no event more than \$15/MWh. SMUD will provide notice to Seller of any WREGIS Shortfall, including SMUD's calculation and supporting evidence for the PCC1 REC Price and volume of Energy for which Seller owes SMUD a refund. Any WREGIS Shortfall will be presumed to be due to Seller's actions or inactions inconsistent with the requirements of this Agreement unless Seller demonstrates to SMUD's commercially reasonable satisfaction that such shortfall was not the result of Seller's actions or inactions inconsistent with its obligations under this Agreement. Any disputes with respect to the cause of a WREGIS Shortfall or the calculation of the PCC1 REC Price will be resolved pursuant to the provisions of Section 21. Seller shall provide a true-up payment to SMUD or SMUD may offset its payment to Seller in the next regular settlement for any amounts owed by Seller to SMUD pursuant to this Section 2.4.2(b). If Seller cures a WREGIS Shortfall within thirty (30) days after Seller has refunded the PCC 1 REC Price to SMUD, then SMUD shall refund all or part of the true-up amounts associated with such cure to Seller in the next invoice after such WREGIS shortfall is cured. If, within the six (6) month period the REC is not delivered, Seller shall provide a true-up settlement to reflect the discounted Solar Price.

2.4.3 Storage Price after Commercial Operation Date

From and after the Commercial Operation Date, SMUD shall pay Seller the Storage Price for the Storage Product based on the Storage Contract Capacity of the Storage Project, as

such Storage Contract Capacity may be adjusted from time to time in accordance with Section 2.3.10 ("**Storage Payment**").

2.4.4 Energy in Excess of PV Capacity

Seller shall not receive payment for Solar Products delivered in any hour to SMUD in excess of the Maximum Hourly Energy Delivery.

2.4.5 System Losses

Energy produced by this Project, which is interconnected to the SMUD Transmission System, shall be measured using a SMUD Revenue Meter at the Point of Interconnection as defined in the LGIA.

2.4.6 Title and Risk of Loss

Title to and risk of loss related to the Products produced from the Solar Project shall transfer from Seller to SMUD at the Delivery Point. Except as provided hereunder, Seller warrants that it will deliver to SMUD all Products from the Solar Project free and clear of all liens, security interests, claims and encumbrances, or any interest therein or thereto by any person arising prior to the Delivery Point.

2.4.7 Settlement Payments

- a) Following the end of each calendar month ("**Settlement Period**"), Seller shall deliver to SMUD Seller's calculation of Deemed Delivered Energy within ten (10) calendar days after the end of such Settlement Period. SMUD shall deliver to Seller a settlement checkout statement which shall include (i) a calculation of the Monthly Settlement Amount, (ii) the Storage Payment amount with respect to such month, (iii) a summary of Energy produced by the Solar Project as measured by the Solar Meter in each hour of the Settlement Period, the amount of Solar Charging Energy and Grid Charging Energy charged by the Storage Project in each hour of the Settlement Period as measured by the Storage Meter, and the amount of Discharging Energy delivered from the Storage Project in each hour of the Settlement Period as measured by the Storage Meter, by the 25th of each month. SMUD shall pay the Monthly Settlement Amount and the the Storage Payment amount with respect to such month on the last day of the month, subject to the provisions of Section 2.4.7(b).
- b) A Party may in good faith, dispute the correctness or absence of any settlement or adjustment to a settlement rendered under this Agreement or adjust any settlement for any arithmetic or computational error within twenty-four (24) months of the end of the Contract Year of which the subject settlement was rendered. In the event a settlement or portion thereof, or any other claim or adjustment arising hereunder is disputed, payment of the undisputed portion of the settlement shall be required to be made when due in accordance with this Section 2.4.7, with notice of the objection given to the Party issuing such settlement. Any billing dispute or billing adjustment shall be in writing and shall state the basis for such dispute or adjustment. Payment of the disputed amount shall not be required until the dispute is resolved, however the Party in receipt of the dispute notice is required to respond to such dispute notice with reasonable supporting documentation no later than ten (10) Business Days following delivery of such notice. If it is determined that an adjustment to the settlement is appropriate or an underpayment was made, then such payment shall be required to be made within ten (10) Business Days of such determination along with interest accrued at the Interest Rate from and including the due date to but excluding the date paid. Overpayments by a Party shall, at the option of the Party making such overpayment, be returned upon request or deducted by the Party receiving such overpayment from subsequent payments,

with interest accrued at the Interest Rate from and including the date of such overpayment to but excluding the date repaid or deducted by the Party receiving such overpayment. Any dispute with respect to a settlement is waived unless the other Party is notified in accordance with this Section 2.4.7 within twenty-four (24) months after the settlement is rendered or any specific adjustment to the settlement is made.

SMUD shall have the right, but not the obligation, to read the Project's meter on a daily basis.

2.4.8 Production Guarantee (PG); Solar Project Performance; PG Damages

Seller shall make any necessary and commercially reasonable repairs with the intent of optimizing (to the extent commercially reasonable) the availability of Energy from the Project to SMUD.

Within thirty (30) days after the end of each Contract Year, Seller shall submit (i) its calculation of the AAEP for the previous Contract Year based on Seller's records related to Project generation, Dispatch Down Periods, SMUD Curtailment, Force Majeure and any SMUD breach and (ii) an annual report of actual annual solar insolation data for SMUD's review and use in calculating the AAEP and the Minimum Annual Energy Production for the previous Measurement Period.

If, at the end of any Measurement Period, the sum of the Adjusted AEP amounts for the two Contract Years in the Measurement Period is less than the AMAEP for such Measurement Period (such shortfall, if any, the "**PG Shortfall**"), then Seller shall pay SMUD PG Damages for each MWh of PG Shortfall for such Measurement Period. The "**PG Damages**" shall equal the market price for shortfall energy at CAISO NP-15 EZ Gen Hub Price and RECs as determined by SMUD using commercially reasonable efforts based on the average of three broker quotes for NP-15 Solar PV CEC RPS PCC1 RECs but in no event shall the PG Damages rate exceed the Solar Price.

The PG Damages provided above shall be Seller's sole obligation and SMUD's sole remedy in the event of a failure by Seller to meet the Measurement Period production guarantee under this Agreement.

2.4.9 Storage Availability

Within forty-five (45) days after the end of each Contract Year, Seller shall submit its calculation of the Annual Average Storage Availability in accordance with Exhibit O. During the Delivery Term, the Storage Project shall maintain an Annual Average Storage Availability during each Contract Year of no less than the Guaranteed Storage Availability, which Annual Average Storage Availability shall be calculated in accordance with Exhibit O. If the Annual Average Storage Availability during any Contract Year is less than the Guaranteed Storage Availability, then Seller shall pay Annual Availability Liquidated Damages, as defined in and determined in accordance with Exhibit O. The Annual Availability Liquidated Damages shall be SMUD's sole and exclusive remedy for Seller's failure to satisfy the Guaranteed Storage Availability.

2.4.10 Round Trip Efficiency

Within forty-five (45) days after the end of each Contract Year, Seller shall submit its calculation of the Round Trip Efficiency in accordance with Exhibit O. During the Delivery Term, the Storage Project shall maintain a Round Trip Efficiency of no less than the Guaranteed Round Trip Efficiency. If the Round Trip Efficiency following any Storage Capacity Test is less than the Guaranteed Round Trip Efficiency, then Seller shall pay Round Trip Efficiency Liquidated Damages, as defined and determined in accordance with Exhibit O. Such Round Trip Efficiency Liquidated Damages shall be SMUD's sole and exclusive remedy for Seller's failure to satisfy the Guaranteed Round Trip Efficiency.

3. CERTIFICATION AS AN ELIGIBLE RENEWABLE ENERGY RESOURCE

3.1 CEC RPS and Green-e Certifications

Subject to Section 3.4, SMUD requires that all renewable energy sold under this Agreement will meet the RPS requirements. At its own expense but subject to Section 3.4, Seller shall comply with the following:

- a) Commensurate with the Commercial Operation Date or as soon as reasonably practicable thereafter, Seller shall also provide a completed Green-e generator registration and attestation form (under the Green-e Standard) to SMUD and the Center for Resource Solutions, and Seller shall provide evidence of Green-e eligibility.
- b) Seller shall file an application with the CEC for RPS Pre-Certification as soon as possible after the Effective Date and shall obtain CEC Pre-Certification no later than the start of construction of the Project.
- c) In no event later than thirty (30) business days after the Commercial Operation Date (COD), Seller shall file for full RPS Certification of the Project with the CEC.
- d) Seller shall respond to inquiries from the CEC related to its applications for CEC Pre-Certification and RPS Certification within five (5) Business Days of receipt of such inquiry.
- e) Except as otherwise provided in Section 3.4, Seller shall maintain such RPS Certification throughout the Delivery Term at its own expense.
- f) Seller shall ensure that throughout the Delivery Term, Energy and Environmental Attributes from the Project delivered to the Delivery Point (not including Energy and Environmental Attributes associated with any Energy that is not PV Energy delivered to the Delivery Point) meet the criteria of California Public Utilities Code 399.16(b)(1); and ensure that the electricity and RECs from the Project are bundled according to the applicable CEC RPS Eligibility Guidebook.

3.2 Environmental Attribute Delivery Obligation

Seller shall sell and deliver, and SMUD shall receive and purchase from Seller, all rights, title, and interest in all Environmental Attributes associated with Energy produced by the Project and delivered to SMUD at the Delivery Point whether now existing or that hereafter come into existence prior to and including the Delivery Term. Seller agrees to sell to SMUD all such Environmental Attributes to the fullest extent allowable by applicable Law, and convey the same to SMUD in accordance with the procedures in Exhibit H. Seller warrants that all Environmental Attributes provided to SMUD shall be free and clear of all liens, security interests, claims and encumbrances.

3.3 WREGIS Registration

Documentation of Environmental Attributes associated with the Energy produced under this Agreement shall be tracked through WREGIS. Seller shall assign rights to register the Project in WREGIS to SMUD, such that RECs are deposited directly into SMUD's WREGIS account. Subject to Exhibit H and Section 3.4, Seller shall be responsible for all WREGIS costs and fees associated with the issuance/creation of WREGIS RECs for the Project, and SMUD shall be responsible for any fees associated with the transfer and/or retirement of such WREGIS RECs to SMUD. WREGIS REC identification information shall support both CEC RPS and Green-e Standard REC retirements. At least forty-five (45) days before the end of the Term, or as soon as practicable before the date of any early termination of this Agreement before the end

of the Term, SMUD shall take all actions necessary to terminate the assignment of registration rights in WREGIS associated with the Project as of the last day of the Term.

3.4 Change in Law

3.4.1 The Parties agree that expenditures to comply with the requirements of this Agreement (“**Compliance Expenditures**”) that Seller shall be required to bear during the term of this Agreement shall be capped at a total of \$100,000 per Contract Year and \$1,500,000 in the aggregate over the Term (“**Compliance Expenditure Cap**”). Compliance Expenditures does not include non-administrative costs up to the \$10,000 cap associated with switching from a Co-located Resource to Hybrid Resource, or vice-versa, under Section 2.1.2.

3.4.2 If a change in Law occurs after the Effective Date that affects Seller's compliance with its obligations under this Section 3, Seller shall not be in breach of such obligations if Seller has used commercially reasonable efforts to comply with such change in Law as it pertains to such obligations. For purposes of this Section 3.4.2, the term “commercially reasonable efforts” shall not require additional out-of-pocket expenditures in the aggregate in excess of the Compliance Expenditure Cap in complying with the changes in Law described in this Section 3 unless SMUD and Seller have agreed in writing for SMUD to reimburse Seller for or to pay directly such excess expenditures.

3.4.3 Within thirty (30) calendar days after the end of each calendar quarter during the Term, Seller shall provide SMUD with a report describing the Compliance Expenditures that Seller incurred during that calendar quarter and the total Compliance Expenditures incurred during the Contract Year that includes such calendar quarter. Prior to incurring Compliance Expenditures that are anticipated to exceed \$25,000, Seller shall notify SMUD of the expected Compliance Expenditures. Following such notice, the Parties shall attempt to agree to limit such Compliance Expenditures to the extent practicable; provided, however, that nothing herein limits Seller's right to incur Compliance Expenditures that Seller believes in good faith must be incurred for Seller to comply with its obligations under this Agreement, as long as the above notification provisions are met. If Seller determines that costs in excess of the Compliance Expenditure Cap will have to be incurred, then Seller shall notify SMUD and provide documentation and calculations to support the expected excess costs. SMUD may then: (1) approve the expected excess costs and notify Seller of such approval, and Seller shall comply upon receipt of notice of SMUD's approval and SMUD's payment for the expected excess costs (such costs, “**Accepted Compliance Expenditures**”); or (2) elect not to pay Seller for the expected excess costs and notify Seller of such decision, in which case this Agreement shall continue in full force and effect and Seller shall continue to be excused from performing any obligation that causes, or would cause, the incurrence of such Compliance Expenditures in excess of the Compliance Expenditure Cap. SMUD is not required to reimburse Seller for any Compliance Expenditures unless and until SMUD agrees to the expected Compliance Expenditures in excess of the Compliance Expenditure Cap. To the extent that SMUD has not agreed to reimburse, or has not reimbursed, Seller for any Accepted Compliance Expenditures, then SMUD is deemed to have waived Seller's obligation that causes, or would cause, the incurrence of such Compliance Expenditures in excess of the Compliance Expenditure Cap and (x) Seller will not be in default under this Agreement for failure to satisfy any such obligation and (y) payments to Seller under this Agreement during the entirety of the Delivery Term will not decrease as a result of such change in Law and will be maintained as if all such obligations were taken.

3.5 Additional Evidence of Environmental Attribute Conveyance

At SMUD's reasonable request, Seller shall provide additional reasonable evidence to SMUD or to third parties of SMUD's right, title, and interest in Environmental Attributes and information with respect to

Environmental Attributes; provided that no such request may impose any material (non-administrative) additional costs on the Seller.

3.6 Modification of Environmental Attribute Reporting and Conveyance Procedure

The Parties shall revise Exhibit H as appropriate and issue a new Exhibit H which shall then become part of the Agreement, subject to Seller acceptance of any changes impacting costs, in order to reflect changes necessary in the Environmental Attribute conveyance procedure for SMUD to be able to receive and report the Environmental Attributes purchased under the Agreement as belonging to SMUD, in the event that:

- a) WREGIS changes the WREGIS Operating Rules after the Effective Date or applies the WREGIS Operating Rules in a manner inconsistent with Exhibit H after the Effective Date; or,
- b) WREGIS is replaced as the primary method that SMUD uses for conveyance of Environmental Attributes, or additional methods to convey all Environmental Attributes are required.

In no event will such revised Exhibit H cause Seller to incur any category of cost for which it is not already otherwise responsible under this Agreement, without prior notice by SMUD and agreement of the Parties as to the appropriateness of such cost belonging with the Seller and subject to Section 3.4.

3.7 Reporting of Ownership of Environmental Attributes

Seller shall not report to any person or entity that the Environmental Attributes sold and conveyed hereunder to SMUD belong to anyone other than SMUD, and SMUD may report under any such program that such Environmental Attributes purchased hereunder belong to SMUD.

3.8 Greenhouse Gas (GHG) Emissions

Seller shall bear all liability for reporting any and all GHG emissions from the Project, and for any compliance obligations under federal, state (including AB 32) and local laws for such emissions.

4. CONVEYANCE OF CAPACITY ATTRIBUTES

4.1 Conveyance of Capacity Attributes

Seller shall provide to SMUD any attestation SMUD requires in order for SMUD to show evidence that it has procured the Capacity Attributes associated with the Project in accordance with the procedure in Exhibit F. At SMUD's reasonable request, provided that no such request may impose any material (non-administrative) additional costs on the Seller, Seller shall execute such documents and instruments as may be reasonably required to affect recognition and transfer of the Capacity Attributes.

4.2 Reporting of Ownership of Capacity Attributes

Seller shall not report to any person or entity that the Capacity Attributes sold and conveyed hereunder to SMUD belong to anyone other than SMUD, and SMUD may report under any such program that such Capacity Attributes purchased hereunder belong to it.

4.3 Modification of Capacity Attribute Conveyance Procedure

SMUD may revise Exhibit F as appropriate, give written notice to Seller regarding the revision, and issue a new Exhibit F which shall then become part of the Agreement, provided that no such modification may impose any material (non-administrative) additional costs or obligations on the Seller, or reduce Seller's compensation hereunder, in order to reflect changes necessary in the Capacity Attribute conveyance

procedure for SMUD to be able to receive and report the Capacity Attributes purchased under the Agreement as belonging to SMUD.

In no event will such revised Exhibit F cause Seller to incur any category of cost for which it is not already otherwise responsible under this Agreement without prior notice by SMUD and agreement of the Parties as to the appropriateness of such cost belonging with the Seller.

4.4 Energy Market Participation

The Parties acknowledge and agree that as of the date hereof, SMUD is participating in the EIM and/or other energy markets. The Parties have agreed to a structure in this Agreement to facilitate SMUD's use of the Project to participate in such markets. Notwithstanding, SMUD's joining or continued participation in such markets shall not require Seller to perform any additional measures or incur any additional or increased cost, liability or obligation, in each case other than what Seller is already otherwise expressly obligated under this Agreement, unless compensated by SMUD. If in the future, market rules or policies change, then without limiting Seller's and SMUD's rights under Section 3.4, the Parties shall meet and confer to discuss the new market rules and whether updates to the scheduling, settlements, or other procedures are required and to preserve the economic "benefit of the bargain" to both Parties to this Agreement.

5. INTERCONNECTION; TELEMETERING; STORAGE DISPATCH

5.1 Interconnection Agreement

Seller shall execute a LGIA with SMUD at the same time as execution of this Agreement. The LGIA specifies the obligations of the parties thereto with respect to the construction, operation and maintenance of certain interconnection facilities.

5.2 Station Service Load

Station service load for the Project shall be governed by the Station Service Load Letter of Agreement; provided, that Seller may service Integral Station Service Load of the Storage Product with output of the Solar Project. For the avoidance of doubt, the use of Storage Energy for Seller's Station Service Load is prohibited as this energy has already been sold and received by SMUD.

5.3 No Additional Loads

Seller shall not connect any loads not associated with Integral Station Service Loads at the location of the Project in a manner that would reduce the Energy provided from the Project to SMUD hereunder. Seller shall obtain separate retail electric service under existing SMUD tariffs for the service of any such additional loads.

5.4 Charging Energy Management

5.4.1 Upon receipt of a valid Charging Notice, Seller shall take all actions necessary to deliver Charging Energy to the Storage Project in order to deliver the Storage Product in accordance with the terms of this Agreement. SMUD shall be responsible for arranging, managing, purchasing, scheduling and paying all costs and charges (including all CAISO costs and charges) associated with all of the Charging Energy for the Storage Project in accordance with the terms of this Section 5.4 and the Operating Restrictions. Seller will be responsible for delivery of Solar Charging Energy from the Solar Project to the Storage Project. SMUD shall be responsible for delivery of, and shall be deemed in control of, Grid Charging Energy to and at the Delivery Point, and Seller shall be responsible for accepting and transferring, and shall be deemed in control of, Grid Charging Energy from the Delivery Point to the Storage Project. Seller shall be responsible for delivering all Discharging

Energy up to the Delivery Point. SMUD shall be responsible for accepting and transferring all Discharging Energy at and from the Delivery Point.

5.4.2 SMUD will have the right to charge the Storage Project seven (7) days per week and twenty-four (24) hours per day (including holidays), subject to, for the avoidance of doubt, Solar Charging Energy being available during the Compliance Period, by providing Charging Notices to Seller electronically, subject to the requirements and limitations set forth in this Agreement, including the Operating Restrictions and the provisions of Section 5.4.1. Each Charging Notice issued in accordance with this Agreement will be effective unless and until SMUD modifies such Charging Notice by providing Seller with an updated Charging Notice.

5.4.3 Seller shall not charge the Storage Project during the Delivery Term other than (a) pursuant to a valid Charging Notice, (b) in connection with a Storage Capacity Test, (c) following the MW setpoint given by SMUD for the combined total output of the Solar Project and Storage Project when the Solar Project and Storage Project are operated under Combined Control Mode as specified in LGIA in accordance with Section 5.4.6, or (d) pursuant to a notice from SMUD under the LGIA, or any Governmental Authority. If, during the Delivery Term, Seller (i) charges the Storage Project to a Stored Energy Level greater than the Stored Energy Level provided for in the Charging Notice or (ii) charges the Storage Project in violation of the first sentence of this Section 5.4.3, then (A) Seller shall be responsible for all energy costs associated with such charging of the Storage Project, (B) SMUD shall not be required to pay for the charging of such energy (i.e., Charging Energy), and (C) SMUD shall be entitled to discharge such energy and entitled to all of the benefits (including Storage Product) associated with such discharge.

5.4.4 SMUD will have the right to discharge the Storage Project seven (7) days per week and twenty-four (24) hours per day (including holidays), by providing Discharging Notices to Seller electronically, subject to the requirements and limitations set forth in this Agreement, including the Operating Restrictions. Each Discharging Notice issued in accordance with this Agreement will be effective unless and until SMUD modifies such Discharging Notice by providing Seller with an updated Discharging Notice.

5.4.5 When the Solar Project and Storage Project are operated under Combined Control Mode as specified in LGIA, no Charging Notice or Discharging Notice will be issued by SMUD. The Project Plant Controller shall automatically determine the amount of Charging Energy or Discharging Energy based on the MW setpoint for the combined total output of the Solar Project and Storage Project given by SMUD.

5.4.6 Notwithstanding any other provision of this Agreement,

a) during the Compliance Period:

i) the Storage Project shall not be charged using Grid Charging Energy;

ii) the Storage Project shall only be charged using Solar Charging Energy and Seller shall not be required to charge the Storage Project during any period if Solar Charging Energy is unavailable; and

iii) SMUD shall not issue any instruction, order, Charging Notice, Discharging Notice or other communication requesting or requiring the Storage Project to be charged from any source other than the Solar Project.

b) at any and all times:

i) the Storage Project may not be, and SMUD shall not issue any instruction, order, Charging Notice, Discharging Notice or other communication requesting or requiring the Storage Project to be, charged, discharged or operated in any manner which results in, or gives rise to:

A.any reduction in PV Energy or Energy generated from the Solar Project;

B.any inconsistency with the Operating Restrictions; or

C.any inconsistency with or breach of the Interconnection Agreement; and

ii) in the event of any conflict or inconsistency between or among this Section 5.4.6, the Operating Restrictions or the other terms of this Agreement, the terms and conditions of this Section 5.4.6 will prevail.

5.4.7 Prior to January 30, 2022, if requested by SMUD, Seller and SMUD shall enter into good faith discussions to amend this PPA to permit the Storage Project to be charged with Grid Charging Energy during the Compliance Period and to make any related amendments, including any change to the Storage Price required to accommodate Grid Charging Energy during the Compliance Period. Each Party acknowledges and agrees that this Section 5.4.7 does not create any legally binding obligation on either Party to enter into such amendment.

5.5 Telemetry

The Project will require telemetry equipment connected to SMUD's energy management system ("EMS") including the automated dispatch system (ADS) as provided in LGIA Appendix H, Data Points List.

6. PERMITTING; STANDARD OF CARE; OPERATIONS; CURTAILMENT

6.1 Permitting

Seller shall be responsible for securing all land use and building permits and any other regulatory approvals required for the Project, including but not limited to those required for the interconnection facilities. Milestones for permitting shall be provided to the Seller to support the expected construction schedule for all of the facilities to meet the COD and Seller shall be responsible for ensuring milestones are met.

6.2 Standard of Care

Seller shall pay and be responsible for designing, installing, operating, and maintaining the Project in accordance with all applicable Laws and Prudent Utility Practice.

Seller shall: (a) operate and maintain the Project in a safe manner in accordance with Prudent Utility Practice and (b) maintain any governmental authorizations and permits required for the construction and operation thereof.

SMUD shall: (a) operate and maintain its Transmission System in a safe manner in accordance with Prudent Utility Practice and all applicable Laws, as such Laws may be amended from time to time; and (b) maintain any governmental authorizations and permits required for the construction and operation thereof.

Seller shall provide SMUD a mitigation plan, which shall include a grazing plan developed in consultation with SMUD specifying grazing as a method of vegetation management at the Project site.

6.3 Curtailment - Notice Following Outage or Curtailment

In the monthly settlements process, following any outage by Transmission Provider or any curtailment SMUD will provide Seller a notice describing whether such curtailment was due to a Dispatch Down Instruction (uncompensated in accordance with Section 6.6) versus SMUD Curtailment (compensated in accordance with Section 6.7), SMUD shall provide such additional information concerning any curtailment claimed to be due to Dispatch Down Instruction as Seller may reasonably request.

6.4 SMUD Performance Excuse

SMUD shall not be obligated to accept or pay for Energy produced by or Capacity provided from the Project during a Force Majeure event that prevents SMUD's ability to accept Energy from the Project, unless the failure to accept such Energy is also a curtailment under Sections 6.6 or 6.7, in which case the terms of Sections 6.6 or 6.7, as applicable, shall apply.

6.5 Dispatchability

Seller shall respond to Dispatch signals from SMUD as required pursuant to Dispatch Down Instructions in accordance with Section 6.6 or SMUD Curtailments in accordance with Section 6.7. Dispatch signals issued pursuant to Section 6.6 or 6.7 are to curtail the generation or deliveries from the Project or to terminate (in whole or in part) any such curtailment. SMUD's communication to Seller in advance of a curtailment need not be greater than that required to support the dispatch interval in the Real-Time Market.

6.5.1 SMUD will have the ability to Dispatch the output of the Solar Project and to curtail the Solar Project in full or in part from 0% to 100% of nominal capability up to the PV Capacity and, subject to the Operating Restrictions, the ability to Dispatch the charging or discharging of the Storage Project from 0% to 100% of nominal capability up to the Storage Capacity, by sending a control signal to the Project's Plant Controller for a set level of power generation (MW) at any time. The MW control signal can be one combined output of the Solar Project and Storage Project when the Project is operated under Combined Control Mode as specified in LGIA or the two separate outputs for the Solar Project and the Storage Project when the Project is operated under Independent Control Mode as specified in LGIA. Seller shall install a Plant Controller with the ability to accept a control signal from SMUD's Energy Management System (EMS) through a local SMUD remote terminal unit (RTU) to curtail the Project. The Plant Controller must be able to control both the solar generation and battery storage as one integrated system with requisite metering and controls necessary to bifurcate energy delivered from each subsystem (panels and battery storage). The Plant Controller shall run in mutually exclusive local or remote control modes. In local control mode, controller modes and setpoints can be selected by an operator from the plant SCADA. In remote control mode, controller modes and setpoints are selected via the SMUD remote terminal unit. Transition between local and remote modes shall be initiated by the SMUD operator via SMUD's EMS. In remote control mode the controller shall track remote setpoints and provide seamless transitioning from remote to local control mode.

6.5.2 The Plant Controller shall have a "No Grid Charging" control flag.

- a) When this "No Grid Charging" flag is turned "On", the Plant Controller shall take automatic action to immediately stop charging the Storage Project upon detecting that the Charging Energy of the Storage Project is from the Transmission Provider's transmission grid, not from the Solar Project.

- b) When this “No Grid Charging” flag is turned “Off”, the Plant Controller shall take no action regarding grid charging.

6.5.3 The Plant Controller shall have the capability to limit the total combined instantaneous energy delivered to the Point of Interconnection (POI) by the Solar Project and Storage Project to not higher than the Interconnection Capacity Limit. When the Plant Controller detects that the instantaneous total combined energy delivered to POI is higher than the Interconnection Capacity Limit, the Plant Controller shall take automatic action to immediately reduce the Discharging Energy from the Storage Project such that the total combined instantaneous energy delivered to POI is no more than the Interconnection Capacity Limit. The Plant Controller shall also have the capability to limit PV Energy to the low side of the GSU transformer to an amount equal to the PV Capacity plus estimated delivery losses plus estimated station service load.

6.5.4 Active power ramp rate control shall provide for the transition between generation levels at a controlled ramp rate. The controller shall support a power generation ramp rate in compliance with LGIA requirements (currently 5% to 20% of Pmax per minute).

6.5.5 Dispatchability control accuracy shall be better than a +/- 2 MW average over a five (5) minute interval. Seller shall provide SMUD evidence of this accuracy upon SMUD's request.

6.5.6 Any documented costs, penalties, and CAISO imbalance charges reasonably incurred by SMUD due to Seller's failure to respond to Dispatch signals (including Dispatch Down Instruction and SMUD Curtailment) in accordance with the terms and conditions of this Agreement and in compliance with the Operating Restrictions shall be the responsibility of Seller; provided that SMUD shall provide Seller with notice of the incurrence of any such documented costs, penalties and/or charges reasonably incurred by SMUD in the next relevant settlement period .

6.5.7 Notwithstanding any other provision of this Agreement, the Storage Project shall not be required to comply with any instructions, requests or directions for the Storage Project to perform or operate in a manner inconsistent with the Operating Restrictions.

6.6 Dispatch Down Instruction

6.6.1 SMUD may require Seller to interrupt or reduce deliveries of Energy pursuant to a Dispatch Down Instruction. SMUD will not compensate Seller for Deemed Delivered Energy during a Dispatch Down Period.

6.6.2 In the event of a Dispatch Down Instruction, SMUD shall, whenever possible, give Seller reasonable notice of the possibility that the interruption or reduction of deliveries may be required, and shall use commercially reasonable efforts to minimize the impact thereon on Project operations and to minimize the duration of the Dispatch Down Period.

6.6.3 Seller shall have the right, upon reasonable notice, to examine SMUD's records relating to any Dispatch Down Instructions to determine whether any such curtailment meets the criteria set forth in the definition of “Dispatch Down Instruction”.

6.7 SMUD Curtailment

6.7.1 Subject to the remainder of this Section 6.7, SMUD shall have the right to instruct Seller to curtail production on an economic basis.

6.7.2 Without limiting SMUD's obligations under Section 6.7.5, for SMUD Curtailments, SMUD will pay the Seller the Solar Price for Energy that would have been generated had it not been curtailed due to SMUD Curtailments.

6.7.3 [Reserved]

6.7.4 SMUD will pay Seller the Solar Price for Deemed Delivered Energy due to a SMUD Curtailment, or a breach by SMUD of this Agreement or the Interconnection Agreement. Deemed Delivered Energy due to SMUD Curtailment or a breach by SMUD of this Agreement or the Interconnection Agreement will be included in the calculation of that month's payment to Seller for Energy generated, as described by Exhibit K – Deemed Delivered Energy Calculation Procedure. For the avoidance of doubt, any curtailment as a result of SMUD's economic bidding shall be deemed a SMUD Curtailment.

6.8 Determination of Deemed Delivered Energy

Deemed Delivered Energy Shall be equal to the result of the equation below calculated and provided by Seller, as described in Exhibit K, to reflect the potential generation from the Project, and such calculation shall be validated by Buyer

$$E_{Deemed} = E_{Scaled} * (1 - D) * EA - E_{Measured}$$

Where:

- (a) D = Degradation of 0.5%/year beginning on the first day of the second full Contract Year of this Agreement, and annually thereafter;
- (b) EA = Effective availability of 99%; provided that SMUD reserves the right to request from Seller and review data related to a particular Contract Year, and Seller agrees to adjustment of EA to an appropriate value for any Contract Year in which an unusual generation pattern results in a reduced level of generation.
- (c) E_{Deemed} = Deemed Delivered Energy (kWh);
- (d) $E_{Measured}$ = Actual Energy measured at the Solar Meter in kWh

$$(e) E_{Scaled} = \sum_{i=1}^n \left[\frac{POA_{Measured-i}}{POA_{Modeled-i}} * E_{Modeled-i} \right] \text{ limited to Maximum Hourly Energy Delivery kWh for any given hour.}$$

Where:

- i. $E_{Modeled-i}$ = AC energy produced by the PVSyst clear sky model as shown in the Clear Sky Model Report Parameters (kWh), as adjusted each year to reflect differences in local time as a result of daylight savings time;
- ii. $POA_{Measured-i}$ = The average of the measured plane-of-array irradiance for the i^{th} hour (W/m^2);
- iii. $POA_{Modeled-i}$ = Modeled plane-of-array irradiance produced by the PVSyst clear sky model for the i^{th} hour (W/m^2) as shown in the Clear

Sky Model Report, as adjusted each year to reflect differences in local time as a result of daylight savings time.

- iv. Seller must provide PVsyst clear sky modeled data, with 5 minute granularity, for POA irradiance and AC energy used in calculation to Buyer each year

Note that Parties may mutually agree to select alternate model report to provide more accurate settlement data. The alternative models include, without limitation, an AWS True Power or VER Forecast Model.

7. SCHEDULING AND FORECASTING; OUTAGES; ACCESS RIGHTS

7.1 Scheduling and Forecasting

The Project is located within the SMUD Service Territory, and SMUD will make its own forecasts or contract with a third party for forecasting of Project Energy production for use in its Scheduling process. SMUD shall (1) be responsible for all costs, charges and penalties associated with SMUD's bidding and scheduling rights under this Agreement for scheduling of the Project's Products, and any SMUD Curtailment and all imbalance energy costs, charges and penalties and (2) be entitled to all revenues assessed or provided associated with SMUD's bidding and scheduling of the Project's Products, and any SMUD Curtailment.

Seller shall comply with Exhibit G – Available PV Capacity Notification Requirements and Outage Notification Procedure.

7.2 Scheduling Coordinator; CAISO Settlements

SMUD shall be the Scheduling Coordinator for scheduling services for the Project, and for both the delivery and receipt of the Product at the Delivery Point, or contract with a third party for Scheduling Coordinator responsibilities (any such third party, a "**Third-Party SC**"). Seller shall pay SMUD an annual fee of \$56,000 with a 2% annual escalator factor during the Term for Scheduling coordination and settlement service. The Scheduling Coordinator requirements include the SMUD's EIM or other energy market resource portfolio. As between Seller and SMUD, SMUD is responsible for all acts and omissions of any Third-Party SC and for all cost, charges and liabilities incurred by Third-Party SC to the same extent that SMUD would be responsible under this Agreement for such acts, omissions, costs, charges and liabilities if taken, omitted or incurred by SMUD directly. Seller shall have no liability to a Third-Party SC for any reason under this Agreement. SMUD (as the Scheduling Coordinator) shall be responsible for all settlement functions with the CAISO related to the Project, and shall submit bids to the CAISO in accordance with this PPA, the applicable CAISO Tariff, protocols and scheduling practices for Product on a day-ahead, hour-ahead, fifteen-minute market, real-time or other market basis that may develop after the Effective Date, as determined by Buyer consistent with the CAISO Tariff.

7.3 Energy Imbalance Market – EIM or other

SMUD participates in the EIM, and the Parties acknowledge that the Project will be an EIM Participating Resource and such participation will incur imbalance deviation charges. Extensions of the EIM into the Day-Ahead Market may result in additional imbalance deviations, the responsibility for which shall be governed by Section 7.1

7.4 Seller Available PV Capacity Notification Requirements; Penalties

Seller shall comply with the Available PV Capacity notification requirements as defined in Exhibit G as it relates to a schedule of the hourly Available PV Capacity. If in any hour of any month during the Delivery Term both (a) Seller fails to comply with the notification procedures requirements, and (b) the sum of Energy Deviations (defined below) for each of the 12 Settlement Intervals (defined below) in that hour exceed the

Performance Tolerance Band (defined below), then Seller is liable for scheduling penalties (“**Scheduling Penalties**”) equal to the greater of (i) one hundred fifty percent (150%) of the Solar Price (expressed in \$ / kWh) or (ii) the absolute value of the Real-Time Price, in each case for each kWh of Energy Deviation outside the Performance Tolerance Band. The term “**Energy Deviation**” means the absolute value of the difference, in kWh, in any Settlement Interval between (i) the final accepted Bid (as defined in the CAISO Tariff) submitted for the Project for the hour of the Settlement Interval divided by the number of Settlement Intervals in the hour; and (ii) energy actually delivered from the Project, measured in kWh, such Settlement Interval. The term “**Performance Tolerance Band**” means, in kWh, is equal to: (i) three percent (3%) times; (ii) forecasted Available PV Capacity times; (iii) one (1) hour; and (c) the term “**Settlement Interval**” means any one of the twelve (12) five (5) minute time intervals beginning on any hour and ending on the next hour.

7.5 Planned Outages

For the purposes of this Agreement a maintenance outage shall constitute a Planned Outage. Planned Outages may only be taken upon thirty (30) days written notice to SMUD. Seller shall use commercially reasonable efforts to not schedule or take any Planned Outages from 6:00 a.m. through 10:00 p.m. Pacific Prevailing Time during the months of May through September unless required by Prudent Utility Practice or applicable Law. Seller shall use commercially reasonable efforts in accordance with Prudent Utility Practice to minimize the frequency and actual duration of Planned Outages and optimize the availability of Energy from the Project. Seller shall provide Planned Outage notifications in accordance with the Outage Notification Procedure detailed in Exhibit G.

7.6 Forced Outages

Seller shall provide Forced Outage notifications in accordance with the Outage Notification Procedures detailed in Exhibit G and I, which notification shall include the expected duration of the Forced Outage and the estimated time of return (“**ETR**”) of the Project. When Seller desires to return the Project to service, Seller shall notify SMUD of the same. SMUD shall use commercially reasonable efforts to accommodate the return to service as soon as practicable after such request; provided that SMUD shall permit the Project to return to service no later than the ETR. If Seller’s notice to return the Project to service occurs prior to the ETR, the following will occur: (i) SMUD will permit the Project to return to service, or (ii) if SMUD is not able to accommodate all or a portion of the Project’s Energy due to SMUD’s scheduling of replacement energy prior to the ETR, SMUD may deny or reduce such Energy until the occurrence of the ETR on a non-compensable basis, or (iii) if SMUD is not able to accommodate all or a portion of the Project’s Energy due to SMUD’s scheduling of replacement energy or any other economic reason at or following the ETR, SMUD may curtail such Energy and such curtailment shall be considered a SMUD Curtailment. However, notwithstanding the prior sentence, SMUD may require Seller to interrupt or reduce deliveries of Energy pursuant to a Dispatch Down Instruction due to an event or circumstance at or following the ETR.

7.7 Modification of Outage Notification Procedure

Upon mutual consent of both Parties, SMUD shall modify Exhibit G to reflect changes necessary in the Outage Notification Procedure, give written notice to Seller regarding the revision, and issue a new Exhibit G which shall then become part of the Agreement to reflect changes in the Outage Notification Procedure.

7.8 Access Rights

SMUD, its authorized agents, employees and inspectors, upon advance notice to Seller and at their own cost and expense and subject to Section 12.2, shall have the right to reasonably, periodically visit the Project site and inspect the Project in accordance with the Definitive Agreements.

8. TERM, TERMINATION EVENT AND TERMINATION

8.1 Term

The term of this Agreement (the “**Term**”) shall commence upon the last execution by the duly authorized representatives of each of SMUD and Seller, and shall remain in effect until the conclusion of the Delivery Term, unless terminated sooner pursuant to the terms of this Agreement. All indemnity rights shall survive the termination of this Agreement for twelve (12) months.

8.2 Events of Default; Remedies

8.2.1 An “**Event of Default**” shall mean, with respect to a Party (a “**Defaulting Party**”), the occurrence of any of the following:

- a) the Defaulting Party fails to make, when due, any payment required under this Agreement if such failure is not remedied within ten (10) calendar days after receipt of notice from the Non-Defaulting Party;
- b) any representation or warranty made by such Defaulting Party herein is false or misleading in any material respect when made, and such failure is not cured within thirty (30) calendar days after receipt of notice from the Non-Defaulting Party, or such longer period not to exceed sixty (60) days if the failure is not capable of being cured within such thirty (30) days with the exercise of reasonable diligence, so long as the Defaulting Party has commenced and is diligently pursuing a cure during such initial thirty (30)-day period;
- c) the Defaulting Party fails to perform any material covenant or obligation set forth in this Agreement (except to the extent constituting a separate default under this Section 8.2.1 or otherwise has a specific remedy provided in this Agreement), if such failure is not remedied within thirty (30) days of receipt of notice from the Non-Defaulting Party, or such longer period not to exceed ninety (90) days if the failure is not capable of being cured within such thirty (30) days with the exercise of reasonable diligence, so long as the Defaulting Party has commenced and is diligently pursuing a cure during such initial thirty (30)-day period; and/or
- d) the Defaulting Party becomes Bankrupt.

8.2.2 Remedies

- a) Termination for Default. Except as otherwise expressly provided in this Agreement, an Event of Default by a Defaulting Party, the other Party (the “**Non-Defaulting Party**”) shall have the right to (a) terminate this Agreement by providing notice of such termination to the Defaulting Party, which termination shall be effective on a day no earlier than five (5) days after such notice is deemed to be received (as provided in Section 15) and no later than twenty (20) days after such notice is deemed to be received (as provided in Section 15) and, except as provided in Section 8.3 to the contrary, the Defaulting Party shall pay the Non-Defaulting Party a Termination Payment calculated in accordance with Section 8.5, or (b) pursue any other remedies available at law or in equity, including where appropriate, specific performance or injunctive relief, except to the extent such remedies are expressly limited under this Agreement. If the Non-Defaulting Party fails to terminate this Agreement under clause (a) of this paragraph by notice to the Defaulting Party within six (6) months following the Non-Defaulting Party's declaration of an Event of Default, then the Non-Defaulting Party shall be deemed to have waived its rights to terminate this Agreement pursuant to clause (a) of this

paragraph with respect to such Event of Default. If the Non-Defaulting Party elects to terminate this Agreement under clause (a) of this paragraph, then the sole and exclusive remedy available to the Non-Defaulting Party shall be the Termination Payment calculated in accordance with Section 8.5. Notwithstanding any provision herein to the contrary, if Seller commits an Event of Default under this Agreement prior to the Commercial Operation Date, SMUD's sole and exclusive remedy in respect of such Event of Default shall be to terminate this Agreement and retain the Development Security then-held by SMUD pursuant to Section 9.1 of this Agreement (less any Delay Damages already paid by Seller).

b) Suspension.

- i) **Duty to Mitigate Damages.** In addition to (and without limiting) the remedies for an Event of Default otherwise available at law or in equity, during the existence of an Event of Default, the Non-Defaulting Party shall use commercially reasonable efforts to mitigate the damages incurred as a result of such Event of Default.
 - ii) **Right to Suspend.** In addition, during the existence of an Event of Default, the Non-Defaulting Party may, by notice to the Defaulting Party, suspend (the date of such notice, the "**Suspension Date**") in whole or in part its payment (excluding accrued payment obligations prior to such Suspension Date) or performance under this Agreement.
 - iii) **Responsibility for damages during Suspension.** Such suspension shall not relieve the Defaulting Party of its obligations to pay damages arising out of such Event of Default.
 - iv) **Resumption of Performance Following Suspension.** After the Defaulting Party's cure of such Event of Default, and provided there is no other Event of Default by such Defaulting Party then occurring and this Agreement has not been terminated, the Non-Defaulting Party will resume performance of its obligations under this Agreement.
- c) **Termination or Suspension without Cause.** Except for the rights to terminate and suspend expressly set forth in this Agreement, neither Party shall have any right to terminate this Agreement or suspend its performance for any reason.

8.3 Termination Rights

SMUD shall have the right but not the obligation to terminate this Agreement if any of the following occur, each of which is a "**Termination Event**":

8.3.1 Failure to achieve Commercial Operation

In the event Seller fails to achieve Commercial Operation of the Required Percentage of the Expected PV Capacity by the Guaranteed COD, as that date may be extended by Seller in accordance with the terms and conditions, then SMUD shall have the right, but not the obligation, to terminate this Agreement. To exercise this right, SMUD shall provide Seller with a ten (10) day advance written notice. If Seller achieves the Commercial Operation Date prior to the end of the ten (10) day notice period, SMUD shall not exercise its right to terminate the Agreement. This deadline shall be extended on a day for day basis if Seller's failure to achieve Commercial Operation in the designated timeframe was caused by an Excusable Delay.

8.3.2 Failure to sell or deliver Energy

If, after the Commercial Operation Date, Seller has not sold or delivered Energy and Environmental Attributes from the Project to SMUD for a period of twelve (12) consecutive months, except due to Force Majeure events, Dispatch Down Periods, SMUD Curtailments and/or SMUD breaches that prevents or excuses Seller from delivering Energy at the Delivery Point, then SMUD shall have the right to terminate this Agreement.

8.3.3 Failure to meet the Minimum Annual Energy Production

If the Adjusted AEP is less than ninety percent (90%) of the Adjusted MAEP, as decreased by one half of one percent ($MAEP \times .005$) beginning on the first day of the second full Contract Year of this Agreement, and annually thereafter, and as adjusted for the Actual Annual Solar Insolation, for any two consecutive Contract Years.

Notice of such termination for this Event of Default shall be given in writing a minimum of sixty (60) calendar days prior to the effectiveness of such termination and within one hundred twenty (120) calendar days following the end of the second of the applicable two Contract Years. SMUD's ability to exercise such termination right in respect of any two consecutive Contract Years shall be deferred for up to one year if Seller has reasonably demonstrated to SMUD, and is actively implementing in good faith, a cure plan for any such failure as described below.

A cure plan may include, but is not limited to, the addition of solar modules to the system at Seller's sole expense. A cure plan that reasonably shows the Project's ability to achieve 90% of the Adjusted MAEP in that current two consecutive Contract Year period (i.e. the cure plan Contract Year and the preceding Contract Year) must be submitted to SMUD in writing within fifteen (15) calendar days of Seller's receipt of SMUD's notice of termination. SMUD shall then have fifteen (15) calendar days after receipt of the cure plan to inform Seller in writing of any reasonable objections to the cure plan. SMUD's non-objection to, or requested modifications to, Seller's cure plan does not waive SMUD's termination rights in the event that the cure plan is not ultimately effective to cause the Adjusted MAEP for the two consecutive Contract Year period of which it is a part to equal or exceed 90%. Any disagreements regarding the cure plan will be resolved in accordance with the dispute resolution provisions in Section 21 hereof.

8.3.4 Failure to Comply with RPS Covenants

Except as otherwise provided in Section 3.4, in which case, for the avoidance of doubt there will be no termination right if the cause of such non-compliance is SMUD's choice to not pay costs in excess of the Compliance Expenditure Cap:

- a) (Seller fails to obtain RPS Certification for the Project within six (6) months after COD, except if failure to obtain RPS Certification within this six (6) month period is not due to Seller's action or inaction, then Seller shall be provided a day-for-day delay right to obtain RPS Certification up to an additional of six (6) months for a total of no more that twelve (12) months after COD as long as such day-for-day delay is not due to Seller's action or inaction. Seller shall present to SMUD a reasonable plan of action laying out those steps that Seller shall take in order to obtain such certification as quickly as possible, for acceptance by SMUD, which acceptance shall not be unreasonably withheld; or
- b) Subject to Section 3.4, Seller's failure to maintain RPS Certification for the Project, if such failure is not cured within thirty (30) days after written notice; provided that during any period where Seller has not maintained RPS Certification for the Project, whether before or after written notice, SMUD shall not be obligated to purchase any Energy or other Products from Seller hereunder, but Seller may sell such Energy and other Products to third parties.

8.4 Declaration of a Termination Event

If a Termination Event has occurred, SMUD shall have the right to: (a) send notice, designating a day, no earlier than five (5) days after such notice is deemed to be received (as provided in Section 15) and no later than twenty (20) days after such notice is deemed to be received (as provided in Section 15) (unless, in each case, a longer notice period is set forth in Section 8.3), as an early termination date of this Agreement ("**Early Termination Date**") unless the Parties have agreed to resolve the circumstances giving rise to the Termination Event; (b) except for a termination pursuant to Section 8.3.1 or as elsewhere provided in this Agreement to the contrary, calculate the Termination Payment in accordance with Section 8.5 owed in connection with such Termination Event; and (c) terminate this Agreement and end the Delivery Term effective as of the Early Termination Date. With respect to any Termination Event prior to the Commercial Operation Date, including pursuant to Section 8.3.1, Seller's sole and exclusive liability and SMUD's sole and exclusive remedy aside from terminating this Agreement shall be the forfeiture of Seller's Development Security to SMUD less any Delay Damages already paid by Seller.

8.5 Termination Payment Calculation

If a Termination Event occurs or if this Agreement is terminated following a breach or default as provided in Section 8.2 of this Agreement, in each case ultimately resulting in termination of the Agreement, a "**Termination Payment**" shall be determined in accordance with this Section 8.5. Notwithstanding any provision herein to the contrary, prior to the Commercial Operation Date, the Termination Payment shall be zero dollars (\$0.00).

8.5.1 The Termination Payment payable by the Defaulting Party to the Non-Defaulting Party shall equal: (i) Non-Defaulting Party's Loss as calculated under Section 8.5.1(a) below and discounted to present value as set forth under Section 8.5.1(b) below; plus (ii) Non-Defaulting Party's Cost as calculated under Section 8.5.1(c) below; which will then be aggregated with any amounts owed to the Non-Defaulting Party as of the Early Termination Date, and any set-offs to which Defaulting Party is entitled as set forth under Section 8.5.1(d) below. If the Termination Payment as so calculated would be less than zero, it shall be deemed to be zero.

- a) The Parties intend that Non-Defaulting Party's "**Loss**" shall be the net economic loss (exclusive of Costs), if any, resulting from the termination of the Agreement, determined in a commercially reasonable manner as calculated in accordance with this Section 8.5. The Loss, if any, suffered by Non-Defaulting Party shall be determined by comparing the value of the remaining Term, applying the lesser of (i) the Adjusted AEP for the most recently completed Contract Year, or (ii) the Minimum Annual Energy Production, and the Solar Price, and Storage Price (loss is computed separately for Solar Project and Storage Project) for each year of the remaining Term under the Agreement had it not been terminated to the equivalent quantity with each party obtaining, in good faith and from non-affiliated market participants in the relevant market, two quotes for prices of CA RPS PCC 1 bundled renewable energy and RECs for the affected period of a similar quality and quantity in the geographical location closest in proximity to the Delivery Point and averaging the four quotes. If either Party fails to provide two quotes, then the average of the other Party's two quotes shall determine the replacement price. For clarity, if SMUD is the Non-Defaulting Party, the Non-Defaulting Party's Loss equals the amount by which the market price of replacement Products exceeds the Contract Price therefor, and if the Seller is the Non-Defaulting Party, the Non-Defaulting Party's Loss equals the amount by which the Contract Price hereunder exceeds the market price of such replacement Products, less the expenses saved by Seller due to SMUD's default (if any), which includes, but is not limited to, the cost of production of the Products. To ascertain the market price of a replacement contract, Non-Defaulting Party may consider, among other valuations, quotations from leading dealers in ERR contracts, and other bona fide third party offers, all

adjusted for the length of the remaining Term and differences in transmission. It is expressly agreed that Non-Defaulting Party shall not be required to enter into replacement transactions in order to determine the Termination Payment. For the avoidance of doubt, if this Agreement is terminated as a result of a SMUD Event of Default and the Interconnection Agreement is also terminated, then the Parties agree it shall be reasonable for Seller to assume no replacement sales will occur in calculating the Termination Payment and therefore, in calculating Seller's Loss, the "market price of replacement Products" shall be deemed to be zero.

- b) The Loss calculated under paragraph (a) shall be discounted to present value using a discount rate of six percent (6%) as of the time of termination (to take into account the period between the time notice of termination was effective and when such amount would have otherwise been due pursuant to this Agreement).
- c) Non-Defaulting Party's "**Costs**" shall be calculated as the sum of the brokerage fees, commissions and other similar transaction costs and expenses reasonably incurred in terminating and replacing the Agreement, including, reasonable transmission costs associated with any replacement contract, if any, incurred in connection with Non-Defaulting Party enforcing its rights with regard to the Agreement. Non-Defaulting shall use reasonable efforts to mitigate or eliminate Costs. Consistent with Section 21.2, each Party shall pay and be responsible for their own attorney fees.
- d) Non-Defaulting Party shall add any amounts owed by the Defaulting Party to the Non-Defaulting Party as of the Early Termination Date to, and shall set-off any amounts owing by the Non-Defaulting Party to the Defaulting Party as of the Early Termination Date against, the Termination Payment so that all such amounts are aggregated and/or netted to a single amount. The net amount due shall be paid within thirty (30) Business Days following the effective date of termination, or, if the Parties disagree regarding the calculation of the Termination Payment, the date that the calculation of the Termination Payment is resolved pursuant to Section 8.5.2 below.
- e) In no event, however, shall the calculation of Loss or Costs include any penalties or similar charges imposed by the Non-Defaulting Party.

8.5.2 If the Defaulting Party reasonably disagrees with the calculation of the Termination Payment and the Parties cannot otherwise resolve their differences, the calculation issue shall be resolved in accordance with Section 21 of this Agreement

9. CREDITWORTHINESS

9.1 Project Development Security

Within thirty (30) days of the Effective Date, Seller shall provide project development security in the amount equal to the sum of (a) the product of (i) \$30/kWac multiplied by (ii) two hundred fifty (250) MWac plus (b) \$250,000, in the form of cash, Letter of Credit, Surety Bond or guaranty acceptable to SMUD ("**Development Security**"); to be maintained until the start of the Delivery Term.

9.2 Delivery Term Security

Prior to commencement of the Delivery Term, Seller to provide Delivery Term Security in the amount equal to the product of (a) \$75/kWac multiplied by (b) two hundred fifty (250) MWac in the form of cash, Surety Bond, Letter of Credit, or guaranty acceptable to SMUD; for the duration of the Delivery Term ("**Delivery**

Term Security") and SMUD shall return the Development Security provided pursuant to Section 9.1 to Seller. Seller shall maintain the Delivery Term Security for the duration of the Delivery Term.

No lien or other security will be required and SMUD's recourse against Seller shall be limited to the security provided.

"Qualified Issuer" is a major U.S. commercial bank or a U.S. branch of a foreign bank ("**Bank**") that, at the time of delivery of a letter of credit, (i) has a combined capital surplus of \$10,000,000,000 and (ii) has a senior unsecured long-term credit rating of at least "A-" by S&P or "A3" by Moody's. If Qualified Issuer fails to meet the foregoing capital surplus and unsecured long-term credit rating requirements, Seller must replace credit support with another Bank.

10. [RESERVED]

11. FORCE MAJEURE

11.1 Effect of Force Majeure

Buyer or Seller, as the case may be, shall be excused from performance under this Agreement to the extent, but only to the extent, that performance hereunder is prevented by an act or event of Force Majeure. The Party invoking Force Majeure shall exercise due diligence to overcome or mitigate the effects of such an act or event of Force Majeure; *provided*, however, that nothing in this Agreement shall be deemed to obligate the Party invoking Force Majeure (a) to forestall or settle any strike, lock-out or other labor dispute against its will; or (b) for Force Majeure affecting Seller only, to purchase electric power to cure the event of Force Majeure.

11.2 Notice of Force Majeure

In the event of any delay or nonperformance resulting from an event of Force Majeure, the Party invoking Force Majeure shall, as soon as practicable under the circumstances, notify the other Party in writing of the nature, cause, date of commencement thereof and the anticipated extent of any delay or interruption in performance.

11.3 Termination Due to Force Majeure Event

If a Party is prevented from performing its material obligations under this Agreement for a period of twelve (12) consecutive months or longer due to Force Majeure, the unaffected Party may terminate this Agreement, without liability of either Party to the other, upon thirty (30) days written notice at any time during the Force Majeure event.

12. INDEMNITY

12.1 Indemnity by Seller

Seller shall defend, release, indemnify and hold harmless SMUD, its directors, officers, employees, agents, and representatives against and from any and all losses, claims, demands, liabilities and expenses, actions or suits, including reasonable costs and attorney's fees, resulting from, or arising out of or in any way connected with claims by third parties associated with the acts or omissions of Seller, its directors, officers, employees, agents and representatives relating to: (i) the Energy delivered at the Delivery Point; (ii) Seller's operation and/or maintenance of the Project; or (iii) this Agreement; excepting only such loss, claim, action or suit to the extent caused by the willful misconduct or gross negligence of SMUD, its agents, employees, directors or officers.

12.2 Indemnity by SMUD

SMUD shall defend, release, indemnify and hold harmless Seller, its directors, officers, employees, agents, and representatives against and from any and all losses, claims, demands, liabilities and expenses, actions or suits, including reasonable costs and attorney's fees resulting from, or arising out of or in any way connected with claims by third parties associated with acts or omissions of SMUD, its directors, officers, employees, agents, and representatives, relating to: (i) the Energy delivered by Seller under this Agreement after the Delivery Point, (ii) SMUD's operation and/or maintenance of its Electric System; or (iii) this Agreement; excepting only such loss, claim, action or suit to the extent caused by the willful misconduct or gross negligence of Seller, its agents, employees, directors or officers.

13. LIMITATION OF DAMAGES

EXCEPT AS OTHERWISE PROVIDED IN THIS AGREEMENT THERE IS NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND ANY AND ALL IMPLIED WARRANTIES ARE DISCLAIMED. LIABILITY SHALL BE LIMITED TO DIRECT ACTUAL DAMAGES ONLY; SUCH DIRECT ACTUAL DAMAGES SHALL BE THE SOLE AND EXCLUSIVE REMEDY AND ALL OTHER REMEDIES OR DAMAGES AT LAW OR IN EQUITY ARE WAIVED UNLESS EXPRESSLY HEREIN PROVIDED. EXCEPT WITH REGARD TO INDEMNIFICATION OF THIRD PARTY CLAIMS IN ACCORDANCE WITH SECTION 12, NEITHER PARTY SHALL BE LIABLE TO THE OTHER PARTY FOR CONSEQUENTIAL, INCIDENTAL, PUNITIVE, EXEMPLARY OR INDIRECT DAMAGES, LOST PROFITS OR OTHER BUSINESS INTERRUPTION DAMAGES, BY STATUTE, IN TORT OR CONTRACT, OR OTHERWISE. UNLESS EXPRESSLY HEREIN PROVIDED, AND SUBJECT TO THE PROVISIONS OF SECTION 12, IT IS THE INTENT OF THE PARTIES THAT THE LIMITATIONS HEREIN IMPOSED ON REMEDIES AND THE MEASURE OF DAMAGES BE WITHOUT REGARD TO THE CAUSE OR CAUSES RELATED THERETO, INCLUDING THE NEGLIGENCE OF ANY PARTY, WHETHER SUCH NEGLIGENCE BE SOLE, JOINT OR CONCURRENT, OR ACTIVE OR PASSIVE. THE TERMINATION PAYMENT UNDER SECTION 8.5.1 IS NOT SUBJECT TO THE LIMITATION OF DAMAGES PROVISION SET FORTH IN THIS SECTION 13. THE PARTIES EXPRESSLY ACKNOWLEDGE AND AGREE THAT THE LIMITATION OF DAMAGES PROVISIONS CONTAINED IN THIS SECTION 13 WILL NOT LIMIT THE RECOVERY BY SELLER OF DAMAGES BASED ON THE VALUE OF ANY ITC (AS DEFINED IN DEFINITIONS) OR OTHER TAX BENEFITS THAT ARE LOST, UNAVAILABLE, DISALLOWED, REDUCED OR RECAPTURED AND ITC RECAPTURE AMOUNTS (AS DEFINED IN DEFINITIONS) THAT ARE REQUIRED TO BE REPAID, DETERMINED ON AN AFTER-TAX BASIS, BY SELLER, SELLER'S DIRECT OR INDIRECT OWNERS, A LENDER, A TAX EQUITY INVESTOR OR ANY OF THEIR AFFILIATES DUE TO AN EVENT OF DEFAULT BY SMUD THAT SELLER HAS NOT BEEN ABLE TO MITIGATE AFTER USE OF COMMERCIALY REASONABLE EFFORTS (WHICH SUCH AMOUNTS WILL BE DEEMED TO BE DIRECT DAMAGES RECOVERABLE BY SELLER).

14. REPRESENTATION AND WARRANTIES; COVENANTS

14.1 Representations and Warranties

On the Effective Date, each Party represents and warrants to the other Party that:

14.1.1 It is duly organized, validly existing and in good standing under the laws of the jurisdiction of its formation;

14.1.2 The execution, delivery and performance of this Agreement is within its powers, have been duly authorized by all necessary action and do not violate any of the terms and conditions in its governing documents, any contracts to which it is a party or any law, rule, regulation, order or the like applicable to it;

14.1.3 This Agreement and each other document executed and delivered in accordance with this Agreement constitutes its legally valid and binding obligation enforceable against it in accordance with its terms;

14.1.4 It is not Bankrupt and there are no proceedings pending or being contemplated by it or, to its actual knowledge, threatened against it which would result in it being or becoming Bankrupt;

14.1.5 There are not pending or to its actual knowledge threatened legal proceedings against it or any of its affiliates that could materially adversely affect its ability to perform its obligations under this Agreement; and

14.1.6 It is acting for its own account, has made its own independent decision to enter into this Agreement and as to whether this Agreement is appropriate or proper for it based upon its own judgment, is not relying upon the advice or recommendations of the other Party in so doing, and is capable of assessing the merits of, and understands and accepts, the terms, conditions and risks of this Agreement.

14.2 General Covenants

Each Party covenants that throughout the Term of this Agreement:

14.2.1 It shall continue to be duly organized, validly existing and in good standing under the laws of the jurisdiction of its formation;

14.2.2 It shall maintain (or obtain from time to time as required, including through renewal, as applicable) all regulatory authorizations necessary for it to legally perform its obligations under this Agreement; and

14.2.3 It shall perform its obligations under this Agreement in a manner that does not violate any of the terms and conditions in its governing documents, any contracts to which it is a party or any law, rule, regulation, order or the like applicable to it.

14.3 SMUD Representations and Warranties

14.3.1 As of the Effective Date and throughout the Delivery Term, SMUD represents and warrants to Seller that:

14.3.2 SMUD is subject to claims and to suit for damages in connection with its obligations under this Agreement pursuant to and in accordance with the laws of the State of California applicable to municipal utility districts;

14.3.3 SMUD is a "local public entity" as defined in Section 900.4 of the Government Code of the State of California.

15. NOTICES

Notices shall, unless otherwise specified herein, be in writing and may be delivered by hand delivery, United States mail, overnight courier service, facsimile or electronic messaging (e-mail). Whenever this Agreement requires or permits delivery of a "notice" (or requires a Party to "notify"), the Party with such right or obligation shall provide a written communication in the manner specified below. A notice sent by facsimile transmission or email will be recognized and shall be deemed received on the Business Day on which such notice was transmitted if received before 5 p.m. Pacific prevailing time (and if received after 5 p.m., on the next Business Day) and a notice by overnight mail or courier shall be deemed to have been received two (2) Business Days after it was sent or such earlier time as is confirmed by the receiving Party

unless it confirms a prior oral communication, in which case any such notice shall be deemed received on the day sent. A Party may change its addresses by providing notice of same in accordance with this provision. All written notices shall be directed as shown in Exhibit I. Either Party may request a change to Exhibit I as necessary to keep the Exhibit I information current without amendment to this Agreement.

16. SET OFF

Each Party shall be entitled to offset amounts owed by the other Party under this Agreement from the amounts owed to it under the Agreement.

17. ASSIGNMENT

17.1 There shall be no Change of Control of any interest in the Project or sale, transfer or assignment of this Agreement (collectively, a “**Transfer**”) without the prior written consent of the other Party, which consent shall not be unreasonably withheld; provided, however;

17.1.1 A Transfer of (i) this Agreement or (ii) any direct or indirect ownership interests in Seller, in each case to any lender or its designee as collateral for any financing or refinancing of the Project, shall not constitute an assignment, Change of Control or Transfer requiring the consent of SMUD under this Agreement. Any such Transfer shall not relieve Seller of its obligations under this Agreement arising prior to the effective date of such Transfer. To facilitate Seller’s obtaining of financing in connection with the Project, SMUD shall provide such consents to assignments, certifications, estoppels, opinions, representations, information or other documents as may be reasonably requested by Seller or the lenders in connection with the debt or tax equity financing of the Project, as applicable; provided that in responding to any such request, SMUD shall have no obligation to (a) provide any consent, certification, representation, information or other document, or enter into any agreement, that materially and adversely affects, or that could reasonably be expected to have or result in a material adverse effect on, any of SMUD’s rights, benefits, risks and/or obligations under this Agreement (other than terms customary in connection with the applicable financing) or (b) incur any unreimbursed third-party expense. Seller shall reimburse, or shall cause the lender(s) to reimburse, SMUD for the incremental direct third party expenses (including the reasonably documented fees and expenses of SMUD’s counsel) incurred by SMUD in the preparation, negotiation, execution and/or delivery of any documents requested by Seller or the lenders, and provided by SMUD, pursuant to this Section 17.1.1. Upon written request of Seller, SMUD will negotiate a Consent and Agreement between Seller and Seller’s lender and/or tax equity investor in the form reasonably acceptable to SMUD, substantially in the form attached herein as Exhibit L.

17.1.2 Without limitation as to other reasonable grounds for withholding consent, the Parties hereby agree that it shall be reasonable under this Agreement and under any applicable Law for SMUD to withhold consent to any proposed Transfer, where at the time of the Assignment, the assignee is not concurrently assuming all of the future obligations under the LGIA as well as the future obligations under this Agreement; provided that if the Seller is not in default under the this Agreement and notwithstanding the foregoing, no consent shall be required for any Permitted Transfer. Any such Transfer shall not relieve Seller of its obligations under this Agreement arising prior to the effective date of such Transfer. Notwithstanding the foregoing, Seller shall, within thirty (30) days prior to such Transfer, provide SMUD with written notice of any Transfer permitted under this Section, which notice shall identify the transferee and contain evidence that the transferee has assumed or will assume all of the obligations under this Agreement arising after the date of the Transfer, and reasonable proof that the Transfer qualifies as an exempt transfer under this Section. The term “Affiliate” as used herein means, with respect to Seller, any

corporation or limited liability company that directly or indirectly controls, is controlled by, or is under common control with, Seller.

17.2 SMUD may request that Seller enter negotiations to permit SMUD's limited assignment of a portion of SMUD's rights and obligations under this Agreement to J. Aron and Company, LLC ("J. Aron") at any time upon not less than 30 days' notice by delivering a written request for such assignment. Following any such request by SMUD, (a) Seller, SMUD and J. Aron shall negotiate in good faith the execution of a limited assignment agreement based on the form attached hereto as Exhibit R, and (b) if requested by Seller, Seller and SMUD shall negotiate in good faith an indemnity and/or a legal opinion, to be provided by SMUD for the benefit of Seller, in form and substance satisfactory to Seller.

18. SMUD CLEAN ENERGY COMMUNITY LEADERS – MARK GALL MEMORIAL SCHOLARSHIP.

Seller shall pay SMUD twenty thousand dollars (\$20,000) in each of Contract Years 1 through 6, for SMUD to use for the purposes of administering a scholarship program for high school seniors attending post-secondary two- or four-year colleges in SMUD partner communities who have a demonstrated interest in renewable energy development in the greater Sacramento area.

19. PROJECT PURCHASE OPTION

Seller hereby grants to SMUD the right and option to purchase all of Seller's right, title and interest in and to the Project and Products the terms set forth herein.

19.1 SMUD shall have the option (the "**Purchase Option**") to terminate this Agreement and purchase from Seller the Project and Products for the greater of (a) the Fair Market Value of the Project and Products, as described in Section 19.6 and (b) the amount of Facility Debt as of the date of the issuance of the Purchase Option, (the higher of (a) and (b), the "**Purchase Price**"), in accordance with this Section 19. SMUD may exercise the Purchase Option upon (i) the tenth (10th) anniversary of the Commercial Operation Date, or (ii) the expiration of the Delivery Term. In the event SMUD desires to exercise the Purchase Option, SMUD shall deliver to Seller a notice indicating SMUD's intent to exercise the Purchase Option (an "**Option Notice**") on or before the date which is no less than six (6) months prior to the no less than six (6) months prior to the tenth (10th) anniversary of the Commercial Operation Date (the "**10-year Purchase Option**"), or no less than six (6) months prior to the end of the Delivery Term (the "**Final Purchase Option**").

19.2 For a period of six (6) months following delivery of the Option Notice with respect to the 10-year Purchase Option, and the Final Purchase Option (the "**Purchase Option Due Diligence Period**"), SMUD and its representatives shall have the right to conduct any and all due diligence which SMUD may reasonably deem necessary with respect to the Project and Products. Seller shall during the Purchase Option Due Diligence Period make available to SMUD and its representatives full access to the Project, related title work, surveys, contracts, data and records and operating personnel ("**Full Access**"). The Purchase Option Due Diligence Period will be extended day-for-day to the extent that, due to Seller's default, Force Majeure or any other reason not attributable to Seller, Full Access cannot be provided.

19.3 SMUD and Seller shall execute a Purchase and Sale Agreement under which Seller will sell and SMUD, or its assign, will purchase the Project at a closing for the purchase and sale of the Project (the "**Closing**") to be held on a date which is within six (6) months following the 12-year Purchase Option or the Final Purchase Option, as applicable, (the "**Closing Date**") at a location selected by SMUD.

19.4 Between the date of the Option Notice and the Closing Date, Seller may not take any actions that would materially adversely affect the Project site, the Project and Products or SMUD's

interest in purchasing the Project and Products. Under this Agreement, among other standard provisions, effective as of the Closing:

19.4.1 Seller shall transfer the Project and Products to SMUD on an as-is, where-is basis, and Seller shall not be required to make any representations or warranties with regard to the Project and Products; *provided, however*, that Seller shall remove any encumbrances placed on the Project and Products by Seller at Seller's expense. No such transfer shall relieve Seller of any liability whatsoever arising from the violation, breach or default by Seller of this Agreement, any transferred contract, transferred permit, transferred intellectual property or other transferred asset, or resulting from any act or omission by Seller that occurred prior to the Closing Date.

19.4.2 Seller shall transfer the Project and Products to SMUD, free and clear of all liens and encumbrances. Seller shall assign and transfer to SMUD all of its right, title and interest in the following: (a) all raw materials, consumables and spare parts, in each case, to the extent relating to the Project and Products; (b) all tangible personal property to the extent relating to the Project and Products; (c) all intangible personal property, including permits, patents, patent licenses, patent applications, trade names, trademarks, trademark registrations and applications therefore, trade secrets, copyrights, know-how, secret formulae and any other intellectual property rights, in each case, to the extent exclusively used by Seller in the operation of the Project and Products; (d) all buildings and fixtures to the extent relating to the Project and Products; (e) computerized and non-computerized records, reports, data, files, and information, in each case, to the extent exclusively used by Seller in the operation of the Project and Products; (f) all design, construction and equipment warranties and guarantees related to the Project and Products in which Seller has any remaining rights against engineers, contractors, suppliers, equipment manufacturers or other persons; and (g) all permits and entitlements. Notwithstanding this Section 19.4.2, Seller shall have the right to retain copies of, and shall have the right to use, any and all records, reports, data, files and information assigned and transferred by Seller to SMUD pursuant to Section 19.4.2(e) for its internal business use, which may include by way of illustration and not be way of limitation: (i) use in accordance with Seller's standard document retention policies; (ii) responding to or otherwise complying with regulatory audits or requests; (iii) responding to third party due diligence requests; (iv) complying with applicable Laws; (v) responding to or defending third party claims or allegations; or (vi) enforcing, defending or interpreting Seller's rights, claims or remedies under this Agreement.

19.4.3 All items relating to the ownership and operation of the Project and Products, which are customarily prorated, shall be prorated as of the Closing Date. Seller shall be liable with respect to items or obligations that relate to any time period prior to the Closing Date and SMUD shall be liable with respect to items or obligations relating to time periods after the Closing Date, and to the extent practicable, shall be credited to Seller's settlement account.

19.5 This and the other Definitive Agreements shall terminate upon the Closing Date and (a) the payment in full to Seller of the Purchase Price and (b) the satisfaction or payment of all other obligations due to either Party under this Agreement.

19.6 The "**Fair Market Value**" of the Project and Products shall be the value determined by the mutual agreement of SMUD and Seller after receipt by Seller of SMUD's Option Notice requesting a determination of the Fair Market Value, or if there is no such agreement, the value determined by an independent appraiser as provided under this Section 19.6. Within ten (10) days of Seller's receipt of an Option Notice, SMUD and Seller shall jointly select a recognized independent appraiser, with experience and expertise in the solar photovoltaic and energy storage industry to value such Project and Products with whom the Parties will discuss methods and assumptions. Such appraiser shall act reasonably and in good faith to determine the Fair Market Value and shall

set forth such determination in a written opinion delivered to the Parties within a timeframe established upon appointment of the appraiser, aspirationally no later than thirty (30) days after the date of appointment. The valuation made by the appraiser shall be the Fair Market Value in the absence of fraud or manifest error. The costs of the appraisal shall be borne by SMUD. If the Parties are unable to agree on the selection of an appraiser, such appraiser shall be jointly selected by the appraiser firm proposed by SMUD and the appraiser firm proposed by the Seller. The appraiser shall determine the Fair Market Value as the amount a willing buyer would pay for the Project and Products and all rights and interests associated therewith, in an arm's-length transaction, to a willing seller under no compulsion to sell, assuming that this Agreement remains in full force and effect, and that the Project is able to generate revenue for the then-remaining Term at the prices set forth in this Agreement, assuming that thereafter the Project is able to generate revenue at a rate equal to the then fair market rates for the Products and any other products and services associated with and/or produced by the Project, and assuming that the Project will remain in place on the site for the remaining useful life of the Project.

20. APPLICABLE LAW

THIS AGREEMENT AND THE RIGHTS AND DUTIES OF THE PARTIES HEREUNDER SHALL BE GOVERNED BY AND CONSTRUED, ENFORCED AND PERFORMED IN ACCORDANCE WITH THE LAWS OF THE STATE OF CALIFORNIA, WITHOUT REGARD TO PRINCIPLES OF CONFLICTS OF LAW.

21. DISPUTE RESOLUTION

21.1 Trial; Venue

The Parties agree that any suit, action or other legal proceeding by or against any party (or its affiliates or designees) with respect to or arising out of this Agreement shall be brought in the courts of the State of California sitting in the County of Sacramento, California.

21.2 Dispute Resolution

If the Parties are unable to resolve a dispute with respect to this Agreement, either Party shall send a notice to the other requesting a meeting at which senior officers or officials of the Parties shall attempt to resolve the dispute. If the Parties are unable to resolve the dispute within ten (10) calendar days after the meeting notice is received by the Party to whom it is directed, or such longer period as the Parties may agree, then either Party may elect to resolve such dispute in the courts of the State of California. The venue shall be the Superior Court in Sacramento County. Each Party shall pay and be responsible for their own attorney fees.

22. SEVERABILITY

If any provision in this Agreement is determined to be invalid, void or unenforceable by any court or arbitration panel having jurisdiction, such determination shall not invalidate, void, or make unenforceable any other provision, agreement or covenant of this Agreement and the Parties shall use commercially reasonable efforts to modify this Agreement to give effect to the original intention of the Parties.

23. COUNTERPARTS

This Agreement may be executed in one or more counterparts each of which shall be deemed an original and all of which shall be deemed one and the same Agreement. Delivery of an executed counterpart of this Agreement by facsimile or PDF transmission will be deemed as effective as delivery of an originally executed counterpart. Each Party delivering an executed counterpart of this Agreement by facsimile or PDF transmission will also deliver an originally executed counterpart, but the failure of any Party to deliver

an originally executed counterpart of this Agreement will not affect the validity or effectiveness of this Agreement.

24. GENERAL

No amendment to, modification of, or waiver under this Agreement shall be enforceable unless reduced to writing and executed by both Parties. This Agreement shall not impart any rights enforceable by any third party other than a permitted successor or assignee bound to this Agreement. Waiver by a Party of any default by the other Party shall not be construed as a waiver of any other default. The term “including” when used in this Agreement shall be by way of example only and shall not be considered in any way to be in limitation. The headings used herein are for convenience and reference purposes only.

25. MOBILE SIERRA

Notwithstanding any provision of this Agreement, neither Party shall seek, nor shall they support any third party in seeking, to prospectively or retroactively revise the rates, terms or conditions of service of this Agreement through application or complaint to FERC pursuant to the provisions of Section 205, 206 or 306 of the Federal Power Act, or any other provisions of the Federal Power Act, absent prior written agreement of the Parties. Further, absent the prior agreement in writing by both Parties, the standard of review for changes to the rates, terms or conditions of service of this Agreement proposed by a Party, a non-Party or the FERC acting *sua sponte* shall be the “public interest” application of the “just and reasonable” standard of review set forth in *United Gas Pipe Line Co. v. Mobile Gas Service Corp.*, 350 US 332 (1956) and *Federal Power Commission v. Sierra Pacific Power Co.*, 350 US 348 (1956) and clarified by *Morgan Stanley Capital Group, Inc. v. Pub. Util. Dist. No. 1 of Snohomish*, 554 U.S. 527, 128 S. Ct. 2733 (2008) and *NRG Power Mktg., LLC v. Maine Pub. Util. Comm’n*, 130 S. Ct. 503 (2010).

26. SERVICE CONTRACT; FORWARD AGREEMENT

The Parties intend that this Agreement will be treated as a service contract pursuant to Section 7701(e)(3) of the Internal Revenue Code for the sale to SMUD of energy produced at an alternative energy Project, and the Parties shall not file any tax returns inconsistent with such treatment. The Parties agree that this Agreement constitutes a ‘forward contract’ as defined in the United States Bankruptcy Code and that each Party is a “Forward Contract Merchant” within the meaning of the United States Bankruptcy Code.

27. ENTIRE AGREEMENT

This Agreement, together with the LGIA, the Reimbursement Agreement, and the Station Service Load Letter of Agreement constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter hereof and thereof. Other than the LGIA, the Reimbursement Agreement, and the Station Service Load Letter of Agreement there are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, either Party’s compliance with its obligations under this Agreement.

IN WITNESS WHEREOF, each Party has caused this Agreement to be duly executed by its authorized representative as of the date of last signature provided below.

**SACRAMENTO
DISTRICT**

MUNICIPAL

UTILITY

**SACRAMENTO VALLEY ENERGY CENTER,
LLC**

By: _____

Name:
Title:

By: _____

Name:
Title:

Date: _____

Date: _____

EXHIBITS

Exhibit A – Description and Location of Project

Exhibit B – Contract Price

Exhibit C – Project Performance Benchmarks

Exhibit D – Average Solar Irradiance by Month

Exhibit E – Commercial Operation Date Confirmation Letter

Exhibit F – Capacity Attribute Reporting and Conveyance Procedure

Exhibit G – Available PV Capacity Notification Requirements and Outage Notification Procedure

Exhibit H – Environmental Attribute Reporting and Conveyance Procedure

Exhibit I – Notices

Exhibit J – Operating Restrictions

Exhibit K – Deemed Delivered Energy Calculation Procedure

Exhibit L – Form of Consent and Agreement to Collateral Assignment

Exhibit M – Storage Capacity Testing

Exhibit N – Project Milestone Schedule

Exhibit O – Storage Guarantees

Exhibit P – Metering Diagram

Exhibit Q – Form of Letter of Credit

Exhibit R – Form of Limited Assignment Agreement

Exhibit A

DESCRIPTION AND LOCATION OF PROJECT

- A.1 The Project is described as a fully integrated PV system plus battery storage facility, comprised of PV arrays, inverters, battery cells, and associated facilities and equipment. Final inverter count to be provided after commissioning testing.
- A.2 The Project is located in Sacramento County approximately near the following coordinates 38°35'30.5"N 121°09'54.6"W .
- A.3 The Project's primary fuel is solar.
- A.4 The Expected PV Capacity is 200 MW AC at the Delivery Point, or such lesser amount as calculated pursuant to PPA Section 2.3.8(a).
- The Expected Storage Capacity is 100MW AC at the Delivery Point, or such lesser amount as calculated pursuant to Section 2.3.8(b).
- A.5 The PV Capacity is 200 MWac measured at the Delivery Point. The Storage Capacity is 100 MWac measured at the Delivery Point. Final capacity to be reported by Seller to SMUD in accordance with Sections 2.3.4 and 2.3.8, but shall not exceed 200 MWac PV Capacity and 100 MWac Storage Capacity.
- A.6 The Delivery Point is the location of the interconnection of the Project on the high-side of the step-up transformer that interconnects to the SMUD Transmission System, as shown in Exhibit C to the LGIA.
- A.7 The Scheduled Commercial Operation Date is December 31, 2023.
- A.8 The Guaranteed COD for Commercial Operation is twelve (12) months after the Scheduled COD; i.e., December 31, 2024, subject to day-for-day extension to the extent the Scheduled COD is extended.
- A.9 The Operating Characteristics of Storage Project:
- a. Maximum Charging Capacity: See Exhibit J
 - b. Maximum Discharging Capacity: See Exhibit J
 - c. Maximum Stored Energy Level: See Exhibit J
- A.10 Operating Restrictions of Storage Project: See Exhibit J
- A.11 Meters
- a. Solar Meter: See Exhibit P
 - b. Storage Meter: See Exhibit P
 - c. SMUD Revenue Meter: See Exhibit P
- A.12 Design Standards
- Electrical subsystems, including but not limited to the solar array equipment, medium voltage collection system, and solar 230kV substation, shall comply with relevant IEEE, NESC, NEC, ANSI, NFPA, ASCE, IBC, ASTM, CPUC General Orders, and SMUD specific design standards set forth in **the SVEC Large Generator Interconnect Agreement (LGIA)**. Operator shall operate the Project as required by its registration as NERC Generator Owner and Generator Operator under the NERC Functional Model or successor models.

[Effective Date]

Upon issuance of a new Exhibit, the Parties will insert a new effective date for this Exhibit, which will replace the prior Exhibit.

Month, Day, Year

Signature of Seller

Signature of SMUD

Exhibit B

Contract Price

Solar Price

The “Solar Price” with respect to each Contract Year is set forth in the table immediately below:

Contract Year	Solar Price
1 – 27	\$33.20/MWh (flat) with no escalation,
28 – 30 (if the Delivery Term is extended hereunder)	\$33.20/MWh (flat) with no escalation,

The “Storage Price” with respect to each Contract Year is set forth in the table immediately below:

Contract Year	Storage Price
1 – 27	\$8.48/kW-mo. (flat) with no escalation
28 – 30 (if the Delivery Term is extended hereunder)	\$8.48/kW-mo. (flat) with no escalation

Exhibit C

PROJECT PERFORMANCE BENCHMARKS

Year of Term	Expected Annual Energy Production (MWh)	Minimum Annual Energy Production (MWh)
1	524,426	471,983.40
2	521,804	469,623.48
3	519,182	467,263.57
4	516,560	464,903.65
5	513,937	462,543.73
6	511,315	460,183.82
7	508,693	457,823.90
8	506,071	455,463.98
9	503,449	453,104.06
10	500,827	450,744.15
11	498,205	448,384.23
12	495,583	446,024.31
13	492,960	443,664.40
14	490,338	441,304.48
15	487,716	438,944.56
16	485,094	436,584.65
17	482,472	434,224.73
18	479,850	431,864.81

19	477,228	429,504.89
20	474,606	427,144.98
21	471,983	424,785.06
22	469,361	422,425.14
23	466,739	420,065.23
24	464,117	417,705.31
25	461,495	415,345.39
26	458,873	412,985.48
27	456,251	410,625.56
28	453,628	408,265.64
29	451,006	405,905.72
30	448,384	403,545.81

Both the Expected Annual Energy Production (EAEP) and Minimum Annual Energy Production (MAEP) include an annual degradation rate of 0.5%.

The Expected Annual Energy Production and Minimum Annual Energy Production will be updated by Seller to account for the final equipment selection of the Project and the Parties will revise this Exhibit to update such values and issue a new Exhibit which shall then become part of the Agreement. No formal amendment of the Agreement is required to update this Exhibit.

Effective Date

Upon issuance of a new Exhibit, the Parties will insert a new effective date for this Exhibit, which will replace the prior Exhibit.

Month, Day, Year

Signature of Seller

Signature of SMUD

Exhibit D
AVERAGE SOLAR IRRADIANCE BY MONTH

To be updated within 180 days prior to the Commercial Operation Date.

For Typical Weather Year Energy Calculation

Month	Solar Irradiance (kWh/m ² /day)
January	60.90
February	86.00
March	142.30
April	182.60
May	226.00
June	240.60
July	246.70
August	220.00
September	172.80
October	128.50
November	77.30
December	58.90
Annual Average	153.55
Annual Total	1842.50

Source of data: Clean Power Research – Solar Anywhere 1 km grid, Typical GHI/DNI year, V3.2, average values, 60-minute resolution reviewed, scaled and rebalanced by AWS Truepower on 04/20/18.

The Parties will revise this Exhibit as appropriate and issue a new Exhibit which shall then become part of the Agreement. No formal amendment of the Agreement is required to update this Exhibit.

Effective Date

Upon issuance of a new Exhibit, the Parties will insert a new effective date for this Exhibit, which will replace the prior Exhibit.

Month, Day, Year

Signature of Seller

Signature of SMUD

Exhibit E

COMMERCIAL OPERATION DATE CONFIRMATION LETTER

In accordance with the terms of that certain Power Purchase Agreement dated _____ ("Agreement") by and between the Sacramento Municipal Utility District ("SMUD") and Sacramento Valley Energy Center, LLC ("Seller"), this letter serves to document the parties further agreement that (i) the COD Conditions for the occurrence of the Commercial Operation Date have been satisfied, and (ii) SMUD has received the energy, as specified in the Agreement, as of this ____ day of ____.

This letter shall confirm the Commercial Operation Date, as defined in the Agreement, as the date referenced in the preceding sentence.

IN WITNESS WHEREOF, each Party has caused this Agreement to be duly executed by its authorized representative as of the date of last signature provided below:

SELLER

Sacramento Municipal Utility
District

By: _____

By: _____

Name:

Name:

Title:

Title: Director, Energy Trading &
Contracts

Date: _____

Date: _____

Exhibit F

CAPACITY ATTRIBUTE REPORTING AND CONVEYANCE PROCEDURE

F.1 Additional Definitions for the Conveyance of Capacity:

None.

F.2 Reporting of Capacity Attributes. SMUD will report the Capacity Attributes acquired herein in any regulatory filing that SMUD is required to make in order to declare the Capacity of the Solar Project (or any portion thereof) and the Storage Contract Capacity as meeting SMUD's Capacity planning requirement (also known as Resource Adequacy).

F.3 Changes in Capacity Attribute Conveyance Procedure. Subject to Section 4.3, SMUD may revise this Exhibit F as appropriate, give written notice to Seller regarding the revision, and issue a new Exhibit F, which shall then become part of the Agreement in the event that the method for reporting and conveying Capacity Attributes changes from the process described herein provided that no update to this Exhibit F shall be permitted to impose any material (non-administrative) additional costs on Seller.

Exhibit G

AVAILABLE PV CAPACITY NOTIFICATION

REQUIREMENTS AND OUTAGE NOTIFICATION PROCEDURE

G.1 Additional Definitions for the Outage Notification Procedure: None.

G.2 Available PV Capacity Notification Requirements.

G.2.1 No later than (a) three (3) months prior to the Commercial Operation Date, and (b) on or before July 1 for each calendar year thereafter for every subsequent Contract Year during the Delivery Term, Seller shall provide to SMUD a schedule of the hourly Available PV Capacity for each day in each month of the following calendar year in a form reasonably acceptable to SMUD.

G.2.2 Ten (10) Business Days before the beginning of each month during the Delivery Term, Seller shall provide to SMUD a schedule of the hourly Available PV Capacity for each day of the following month in a form reasonably acceptable to SMUD.

G.2.3 Weekly Notification of Available PV Capacity

G.2.3.1 The SELLER will contact the SMUD Day Ahead Trading Desk, as provided in Exhibit I Notices, on a weekly basis in order to provide information on expected plant usage during the following week.

G.2.3.2 The information shall include the available capacity, by hour, expected for the Generating.

G.2.3.3 SELLER shall provide such information on the Wednesday prior to the affected week which begins on Monday and shall be communicated in an agreed upon format by email (primary) or fax (secondary), and confirmed by phone.

G.2.3.4 A sample Schedule is shown in Section G.2.6, herein.

G.2.4 Day Ahead Notification of Available PV Capacity (Prescheduling)

G.2.4.1 Preschedule days are days when the SMUD Day Ahead Trader plans for the resources and generation necessary to serve SMUD load for a day or number of days subsequent to the day of prescheduling. The following is the current typical prescheduling pattern followed by SMUD Day Ahead Traders: on Monday for Tuesday, On Tuesday for Wednesday, on Wednesday for Thursday, on Thursday for Friday and Saturday, and on Friday for Sunday and Monday. This pattern will change periodically to accommodate WECC stipulated designated holidays, and may change due to changes in WECC scheduling practices or adoption by SMUD of the prevailing Regional Transmission Organization/Independent System Operator, or its replacement's scheduling protocols. Said changes shall be communicated telephonically to the SELLER by SMUD and confirmed by email or fax. The WECC preschedule days can be found on the WECC web site at <https://www.wecc.biz>.

G.2.4.2 No later than 0600 of each preschedule day, the SELLER shall provide the SMUD Day Ahead Trader with an Available PV Capacity schedule. The information shall include the available capacity, by hour, expected for the Solar Project ("Day-Ahead Notification of Available PV Capacity").

G.2.4.3 If Seller fails to provide SMUD with a Day-Ahead Notification of Available PV Capacity Notification as required in Section G.2.4.2, then, (a) until Seller provides a Day-Ahead Available PV Capacity Notification, SMUD may rely on the most recent Day-Ahead Available PV Capacity Notification submitted by Seller to SMUD and (b) Seller shall be subject to Scheduling Penalties as provided in Section 7.2 of the Agreement to the extent incurred by SMUD.

G.2.5 Active Day Notification of Available PV Capacity

G.2.5.1 In the event of a change of at least 1 MW of Available PV Capacity that may be expected by the SELLER from the pre-scheduled quantities of power, such as for unplanned Project outages, the SELLER will provide the SMUD Real Time Trader with the changes in hourly power quantities provided during pre-scheduling ("Active Day Notification").

G.2.5.2 If Seller fails to provide SMUD with an Active Day Notification of Available PV Capacity as required in Section G.2.5.1, then, (a) until Seller provides an Active Day Available PV Capacity Notification, SMUD may rely on the most recent Day-Ahead Notification of Available PV Capacity submitted by Seller to SMUD and (b) Seller shall be subject to Scheduling Penalties as provided in Section 7.4 of the Agreement to the extent incurred by SMUD.

G.2.6 Sample Prescheduling Table

Date: ____/____/____							
Weekly Preschedule Template			Prepared & Sent By:				
	Monday ____/____/____	Tuesday ____/____/____	Wednesday ____/____/____	Thursday ____/____/____	Friday ____/____/____	Saturday ____/____/____	Sunday ____/____/____
Hour Ending	Day Ahead Schedule (MW)	Day Ahead Schedule (MW)	Day Ahead Schedule (MW)	Day Ahead Schedule (MW)	Day Ahead Schedule (MW)	Day Ahead Schedule (MW)	Day Ahead Schedule (MW)
1							
2							
3							
4							
5							
6							
7							
8							
9							
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23							
24							
AVG.							

- G.3 Planned Outage Notifications. In addition to the 30 days advance written notice in regard to a Planned Outage as per Section 7.5, Seller shall notify SMUD at least 72 hours in advance of Planned Outages that result in a reduction in the effective output of the Project during period over which the Planned Outage is scheduled. Notification should be by email to the addresses shown in the Outages section of the Notices, Exhibit I.
- G.4 Notification of PV Array Cleaning. If Seller has scheduled cleaning for PV arrays, Seller shall notify SMUD at least 72 hours in advance of scheduled cleaning, and should include details of the cleaning plan. Seller shall also follow-up with SMUD after cleaning of the Project in order to verify the actual cleaning dates and times. Notification should be made by email to the addresses shown in the Planned Outages section of the Notices, Exhibit I.
- G.5 Forced Outage Notifications. Pursuant to Section 7.6, as soon as reasonably practicable after Seller is aware of a Forced Outage of the Project that impacts the ability of the Project to produce Energy in excess of 1 MW_{AC} of the Expected PV Capacity, Seller shall notify SMUD of the Forced Outage, including the Capacity of the Project that is impacted, and the expected duration of the Forced Outage. As soon as is possible, but not less than two (2) hours prior to the return of the Project to service following such Forced Outage Seller shall notify SMUD of the return to service details. Notification shall be made in accordance with the Outages section of the Notices, Exhibit I.
- G.6 Changes in Outage Notification Procedure. Upon mutual consent of both Parties, SMUD shall revise this Exhibit G as appropriate, give written notice to Seller regarding the revision, and issue a new Exhibit G, which shall then become part of the Agreement to reflect changes in the Outage Notification Procedure.
- G.7 Automated Data Reporting: Seller's LGIA specifies automatic data reporting requirement (LGIA Appendix H).

Exhibit H

ENVIRONMENTAL ATTRIBUTE REPORTING AND CONVEYANCE PROCEDURE

H.1 Additional Definitions for the Conveyance of Environmental Attributes:

“Certificate Transfers” means the process, as described in the WREGIS Operating Rules whereby a WREGIS account holder may request that WREGIS Certificates from a specific generating unit be directly deposited into another WREGIS account.

“WREGIS” means the Western Renewable Energy Generation Information System, sponsored by the WECC and utilized by the CEC and Green-e for tracking the generation and transfer of RECs. The URL for WREGIS is www.WREGIS.org.

“WREGIS Certificates” means a certificate created within the WREGIS system that represents all Renewable and Environmental Attributes from one MWh of electricity generation from an Eligible Renewable Energy Resource that is registered with WREGIS.

“WREGIS Operating Rules” means the document published by WREGIS that govern the operation of the WREGIS system for registering, tracking, conveying, etc. Renewable Energy Credits produced from Eligible Renewable Energy Resources that are registered with WREGIS.

H.2 Renewable Energy Credits. Environmental Attributes shall be conveyed by Seller to SMUD through Renewable Energy Credits (“RECs”) which shall be registered tracked and conveyed to SMUD using WREGIS.

H.3 WREGIS Registration. Prior to the Commercial Operation Date, SMUD will initiate registration of the Project in SMUD’s WREGIS account on behalf of Seller. Final acceptance by WREGIS requires submittal by SMUD of Exhibit E, “Commercial Operation Date Confirmation Letter.” SMUD shall charge back to Seller any costs for issuance or creation of WREGIS Certificates for the Project.

H.4 SMUD’s WREGIS Account. SMUD shall, at its sole expense, establish and maintain SMUD’s WREGIS account sufficient to accommodate the WREGIS Certificates produced by the output of the Project. SMUD shall be responsible for all expenses associated with (A) establishing and maintaining SMUD’s WREGIS Account, and (B) subsequently transferring or retiring WREGIS Certificates.

H.5 Qualified Reporting Entity. SMUD shall be the Qualified Reporting Entity for Project, and shall be responsible for providing metered Project output data to WREGIS in accordance with WREGIS reporting guidelines

H.6 Reporting of Environmental Attributes. In lieu of Seller transferring the WREGIS Certificates using Certificate Transfers from Seller’s WREGIS account to the WREGIS account of SMUD, SMUD shall report the Project as being directly in its WREGIS account, which will preclude Seller from reporting the Project in its own WREGIS account.

H.6.1 By avoiding the use of Certificate Transfers, there will be no transaction costs to Seller or SMUD for the Certificate Transfers that would otherwise be used.

H.6.2 WREGIS Certificates for the Project will be created on a calendar month basis in accordance with the certification procedure established by the WREGIS Operating Rules in an amount equal to the Energy generated by the Project and delivered to SMUD in the same calendar month.

H.6.3 WREGIS Certificates will only be created for whole MWh amounts of energy generated. Any fractional MWh amounts (*i.e.*, kWh) will be carried forward until sufficient generation is accumulated for the creation of a WREGIS Certificate and all such accumulated MWh of Environmental Attributes will then be available to SMUD.

H.6.4 Should a WREGIS Certificate Modification be required to reflect any errors or omissions regarding the Environmental Attributes from the Project SMUD will manage the submission of the WREGIS Certificate Modification.

H.6.5 Due to the expected delay in the creation of WREGIS Certificates relative to the timing of settlement payments under Section 2.4, SMUD shall make a settlement payment for a given month in accordance with Section 2.4 before the WREGIS Certificates for such month may be created in SMUD's WREGIS account. Notwithstanding this delay, SMUD shall have all right and title to all such WREGIS Certificates upon payment to Seller in accordance with Section 2.4.

H.7 Changes in Environmental Attributes Reporting and Conveyance Procedure. Subject to Sections 3.4 and 3.6, SMUD may revise this Exhibit H as appropriate, give written notice Seller regarding the revision, and issue a new Exhibit H which shall then become part of the Agreement, in order to reflect changes necessary in the Environmental Attribute conveyance procedure for SMUD to be able to receive and report the Environmental Attributes purchased under this Agreement as belonging to SMUD provided that no such updated Exhibit H may impose new material (non-administrative) additional costs on Seller.

Exhibit I

NOTICES

All notices shall be directed as follows:

I.1 For Contract Administration

To SMUD:

Sacramento Municipal Utility District
Power Contracts Administration

6301 S Street
Sacramento, CA 95817-1899

Or,

P.O. Box 15830
Sacramento, CA 95852-1830

Phone: (916) 732-6244

Email: PowerContractsAdministration@smud.org

To Seller:

Sacramento Valley Energy Center, LLC
1166 Avenue of the Americas, Ninth Floor
New York, NY 10036
c/o D. E. Shaw Renewable Investments
Attn: Hy Martin, Chief Development Officer
Phone: 212-478-0000

Fax: 212-478-0100

Email: desri-notices@world.deshaw.com, hy.martin@deshaw.com

I.2 For Billing and Settlements

To SMUD:

Energy Settlements

Phone: (916) 732-6312

Email: EnergySettlements@smud.org

To Seller:

Sacramento Valley Energy Center, LLC
1166 Avenue of the Americas, Ninth Floor
New York, NY 10036
c/o D. E. Shaw Renewable Investments
Attn: Hy Martin, Chief Development Officer
Phone: 212-478-0000

Fax: 212-478-0100

Email: desri-notices@world.deshaw.com, hy.martin@deshaw.com

I.3 For Scheduling

To SMUD:

Day Ahead Trading Desk

Phone: (916) 732-5669

Email: dayaheadtrading@smud.org;

To Seller:

Sacramento Valley Energy Center, LLC

1166 Avenue of the Americas, Ninth Floor

New York, NY 10036

c/o D. E. Shaw Renewable Investments

Attn: Hy Martin, Chief Development Officer

Phone: 212-478-0000

Fax: 212-478-0100

Email: desri-notices@world.deshaw.com, hy.martin@deshaw.com

I.4 For Planned Outages

To SMUD:

Day Ahead Trading Desk

Phone: (916) 732-5669

Email: psoc@smud.org, rtt1@smud.org, rtt2@smud.org, dayaheadtrading@smud.org

Power System Operations Outage Coordination

Phone: (916) 732-5242

To Seller:

Sacramento Valley Energy Center, LLC

1166 Avenue of the Americas, Ninth Floor

New York, NY 10036

c/o D. E. Shaw Renewable Investments

Attn: Hy Martin, Chief Development Officer

Phone: 212-478-0000

Fax: 212-478-0100

Email: desri-notices@world.deshaw.com, hy.martin@deshaw.com

I.5 For Forced Outages

To SMUD:

Real Time Scheduling Desks

Phone: (916) 732-5177

And

Power System Grid Operations

916-732-6225 (Generation Desk), or 916-732-6730 (Shift Senior Power System Operator)

Email: psoc@smud.org, rtt1@smud.org, rtt2@smud.org, dayaheadtrading@smud.org

To Seller:

Sacramento Valley Energy Center, LLC

1166 Avenue of the Americas, Ninth Floor

New York, NY 10036

c/o D. E. Shaw Renewable Investments

Attn: Hy Martin, Chief Development Officer

Phone: 212-478-0000

Fax: 212-478-0100
Email: desri-notices@world.deshaw.com, hy.martin@deshaw.com

I.6 Same-day Phone Notification of Outages

In addition to the email distribution, phone notification is required for planned or forced outages, or requests for energization, as follows:

To SMUD:

Distribution System Operations
Phone: 916-455-1671. Call first thing in the morning with regard to outages.

And

Power System Grid Operations
916-732-6225 (Generation Desk), or 916-732-6730 (Shift Senior Power System Operator)

To Seller:

Sacramento Valley Energy Center, LLC
1166 Avenue of the Americas, Ninth Floor
New York, NY 10036
c/o D. E. Shaw Renewable Investments
Attn: Hy Martin, Chief Development Officer
Phone: 212-478-0000
Fax: 212-478-0100
Email: desri-notices@world.deshaw.com, hy.martin@deshaw.com

I.7 Notification Requirements for Start/Completion of Planned Outages & Normal Start-up/Shutdown

Prior to starting, and at the completion of, a Planned Outage, contact the Power System Operator to report and coordinate the start or completion time of the Planned Outage.

Prior to paralleling or after disconnection from the SMUD transmission system, always contact the Power System Operator with the following as applicable:

- Intent to parallel before any start-up,
- After the unit has paralleled, report the parallel time and intended unit output,
- After any separation, report the separation time as well as the date and time estimated for return to service.

Power System Operations

916-732-6225 (Generation Desk) or 916-732-6730 (Shift Senior Power System Operator)

I.8 Changes to Exhibit I

Either Party may request a change to Exhibit I as necessary to keep the information current. Such changes to Notices generally do not require a PPA amendment

I.9 General Requirements for Forced and Scheduled Outages – SMUD coordination process

These general requirements are incorporated into this PPA and are extracted from SMUD Standard Practice SP-116 entitled “Solar Operating Process” as may be amended or replaced from time to time. Updates to relevant procedural documents are to be incorporated herein upon effectiveness of the Standard Practice (when approved by SMUD management) without a requirement to amend this PPA; *provided that*

no such updates shall be effective under this PPA unless and until such updates have been provided in writing to Seller. Notwithstanding anything herein to the contrary, to the extent of any conflict between Section 7.6 and this Section 1.9 (as modified), Section 7.6 shall control.

Planned Outages including the ETR are to be scheduled and logged in iTOA (integrated Tools for Operations Application) as other generating resources in compliance with SP-116 and ETC 15-046. The Seller's operator will send planned outage requests to SMUD [Power Generation department] who will input the data into iTOA for processing. SMUD Outage Coordination will process the requests as outlined in SP-116 and ETC 15-046. SMUD planned outages of facilities that limit or restrict the output of the generator shall be coordinated with the Seller's operator to the extent practicable[, provided that in the event that the parties cannot agree, SMUD may establish the outage times and return dates].

Seller shall notify SMUD [Power Generation department] of all planned outages at least thirty (30) days in advance of outage with an email containing the outage start date and time and return date and time, emergency restoration time and description of the planned maintenance or other work that curtails the energy output to SMUD. SMUD [Power Generation department] will create an iTOA request and provide SVEC via email confirmation of the Planned Outage.

Rescheduling Planned Outages

In the event that the Planned Outage period (either start or end date & time) of the Project is revised the Seller's operator shall:

(a) Prior to Outage Start

- (i) Greater than 6 days prior to start of outage advise SMUD [Power Generation] department via email with the new start or end date & time
- (ii) Less than 6 days and greater than 48 hours prior to start of outage advise SMUD [Power Generation] department and [Energy Trading & Contracts] via email and phone notification
- (iii) Less than 48 hours prior to start of outage advise SMUD [Power Generation] department via phone notification followed up with email to also include [Energy Trading & Contracts]

(b) Active Outage (after planned start date & time)

- (i) Advise SMUD [PSO]; who will promptly review the request, coordinate internally with other SMUD departments
- (ii) Seller may revise the ETR [so long as the request can be accommodated without creating a reliability concern for SMUD].
- (iii) Once the revised ETR is logged into iTOA it becomes the new ETR for the Project.

In any case SMUD requires a minimum of 2 hours' prior notice of ETR (end date & time) changes to allow SMUD sufficient time to coordinate internally and effectuate the power market processes. SMUD has the discretion to allow an early return or retain the scheduled return time.

SMUD will endeavor to accommodate changes to the Project's ETR as described in Section 7.6. In the event that the return date is modified by SMUD, SMUD shall promptly advise the Seller's operator accordingly.

Real-Time Outage Management

[The SMUD PSO is responsible for the bulk electric system connected to the Project and to ensure changes in generation do not create an adverse impact to the safe operation of the SMUD bulk electric system. The SMUD PSO is also responsible for ensuring that Project's generating facilities data is input into EMS for energy and capacity purposes, iTOA and external market outage management system is updated and to keep track of the photovoltaic facilities status so that after-the-fact accounting may take place. SMUD shall give Seller reasonable notice of the possibility that interruption or reduction of deliveries may be required.

The SVEC operator shall communicate real-time operating details to the PSO. This includes parallel, separation times, coordinating planned maintenance to start, planned or forced maintenance start and end date and times changes and any issues relating to AGC, voltage control or protection systems.

Forced Outages

The Seller's operator is obligated to report Forced Outages to the SMUD [PSO] as soon as reasonably practicable but not more than 1 hour after Seller is aware of a Forced Outage that impacts the ability of the Project to produce Energy in excess of 5 MWAC. This does not include limitations associated with solar radiance.

Forced Outage notification to SMUD PSO via phone notification shall include

- (a) Start date and time the outage occurred,
- (b) Estimated capability or availability,
- (c) Expected end date and time of the outage or estimated time of return (ETR),
- (d) Cause or any outage details if known, such as impacted equipment.

The SMUD PSO will create a Forced Outage card in iTOA, update external outage management system and notify the [Real-Time Energy Traders] with the details including the ETR as logged in iTOA.

Active Outages

The Seller's operator is obligated to report any material change in outage status to the SMUD [PSO], as soon as reasonably practicable but not more than 1 hour after Seller is aware of a Forced Outage that impacts the ability of the Project to produce Energy in excess of a 5 MWAC.

Rescheduled Forced or Active Outages

In the event that Forced Outage [or Active Outage] period (during outage, until ETR) or currently reported capability of the facility is revised the Seller's operator shall:

- (a) Greater than 6 days before ETR:
 - (i) Advise SMUD [Power Generation department] via email who will communicate changes internally to SMUD PSO and [Energy Trading & Contracts].
 - (ii) SMUD [PSO] will update iTOA and external outage management system for the new ETR.
 - (iii) SMUD [Power Generation department] to provide confirmation of new ETR
- (b) Less than 6 days, but greater than 48-hours before ETR
 - (i) Contact SMUD [PSO] via phone
 - (ii) Email SMUD [Power Generation department and Energy Trading & Contracts]
- (c) Less than 48-hour notification before ETR
 - (i) Contact SMUD [PSO] via phone

In any case SMUD requires a minimum of 2 hours' notice to allow SMUD sufficient time to coordinate internally and effectuate the power market process. SMUD has the discretion to allow an early return or retain the scheduled return time.

SMUD PSO will promptly review the request, coordinate internally with other SMUD departments, revise the ETR and update external outage management systems so long as the request can be accommodated without creating a reliability concern for SMUD. Once the revised ETR is logged into iTOA it becomes the new ETR for the generator.

SMUD will endeavor to accommodate changes to the generator's ETR as described in PPA Section 7.6 Forced Outages. In the event that the return date is modified SMUD, SMUD shall promptly advise the Seller's operator accordingly.

When a bulk electric system disturbance impacts Seller the SMUD PSO will notify the Seller's operator with necessary information and then create a forced iTOA card to document the outage and then shall notify the SMUD Real-Time Energy Trader.

Exhibit J

Operating Restrictions

The Operating Restrictions include the limitations, conditions and restrictions set forth in this Exhibit J. Prior to the Commercial Operation Date and from time to time during the Delivery Term, Seller may update these Operating Restrictions by written notice to SMUD.

The operation of the Storage Project shall be subject to the following limitations:

- a. If the year-to-date average State of Charge exceeds 50% at any time during the second half of a Contract Year, then the maximum allowed State of Charge shall be limited to the State of Charge that, if held for the rest of the Contract Year, would equal an annual averaged State of Charge of 50%. If the allowable State of Charge has been limited, the State of Charge limitation will be released once the year-to-date State of Charge is less than 49%. At any time following the Compliance Period throughout the remainder of the Delivery Term, the State of Charge is permitted to be less than five percent (5%) for up to four (4) hours in any twenty-four (24) hour period.
- b. The limitations set forth in the chart below ***[Bracketed items in chart to be provided.]***

#	OPERATING PARAMETER	VALUES	OPERATING RESTRICTIONS
1	Charging method	Constant Power (CP)-Constant Voltage (CV)	Except during real-time dispatch signals, in which case charging rates should follow real time dispatch command
2	Discharging method	Constant Power (CP)	Except during real-time dispatch signals, in which case discharging rates should follow real time dispatch command
3	Maximum CP-rate for Charging and Discharging the Storage Facility	100 MW, which can be adjusted accordingly, as reasonably agreed upon by the Parties, based up on the final design of the Storage Project	
4	Charging source	Solar Project is the only charging source until the expiration of the Compliance Period.	If Seller or SMUD curtails the Solar Project due to grid charging or Storage Project discharging, such curtailment shall constitute SMUD Curtailment.
5	Operational State of Charge (SOC) limits	0%-100%	As defined in the Energy Management System. The 100% SOC represents the amount of Storage Capacity available to SMUD.
6	Maximum State of Charge (SOC) during Charging	100 %	In the event State of Charge during charging exceeds the Maximum State of Charge, then []
7	Minimum State of Charge (SOC) during Discharging	0 %	In the event State of Charge during charging is less than the Minimum State of Charge, then []
8	Maximum number of Cycles per Contract Year	365	Notwithstanding any other provision of this Agreement, (i) SMUD will not be permitted to utilize more than Cycles per Contract Year

9	Daily Dispatch Limits	Two cycles per operating day	One (1) cycle is equal to 1 kWh throughput per kWh calculated by the product of the Storage Contract Capacity and discharge hours Not to exceed the stated value
10	Maximum Cycles Per Year	365 Cycles	
11	Maximum charging capacity (MW)	When charging from the Solar Project, the lesser of, as-available generation (MW) from the Solar Project that could be delivered to the Storage Meter or the charge capacity 100 MW as defined in the Operating Restrictions	
12	Minimum Charging Capacity	0 MW	
13	Maximum discharging capacity [MW]	Net Energy dispatched directly to the grid plus Discharging Energy shall not exceed the Interconnection Capacity Limit	Discharging the Storage Project shall not curtail the as-available generation from the Solar Project
14	Maximum Continuous Discharging Energy (MWh)	400 MWh	As measured at the Delivery Point
15	Minimum Discharging Capacity	0 MW	
16	Maximum Stored Energy Level	400 MWh	
17	Minimum Stored Energy Level	0 MWh	
18	Ramp rate	0-3,000 MW/min	Maximum Discharging Capacity in 2 seconds
19	Maximum ambient operating temperature with de-rate	De-rate above 43C	The rated power of the Storage Project will be reduced by 78 kVA per each Degree C above 43 Degrees C, up to 50 C, at which point the Storage Project may shut down in Seller's discretion; <i>provided</i> , any such de-rate or Storage Project shut down shall not be considered in calculating any Annual Average Storage Availability under <u>Exhibit O</u>

20	Minimum ambient operating temperature with de-rate	De-rate below -20C	Below – 20 C, the Storage Project may shut down in Seller's discretion; <i>provided</i> , any such de-rate or Storage Project shut down shall not be considered in calculating any Annual Average Storage Availability under <u>Exhibit O</u>
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As used in this Exhibit J,

“Cycle” means the Storage Project is charged, then discharged at a MWh quantity equal to the energy capacity in MWh. For example, SOC starts at 1%, the Storage Facility is charged to 100% and then discharged to 1%.

Exhibit K

DEEMED DELIVERED ENERGY CALCULATION PROCEDURE

K.1 Additional Definitions for this Procedure:

None.

K.2 Calculation of Deemed Delivered Energy. Following a curtailment that is caused by (i) Force Majeure, (ii) SMUD Curtailment, (iii) SMUD's breach of this Agreement or the Interconnection Agreement that prevents or excuses Seller from delivering Energy to the Delivery Point, (iv) Forced Outages or Planned Outages and (v) Dispatch Down Periods, Seller shall submit to SMUD calculation of the hourly energy that would have been generated in accordance with Section 6.8.

K.3 Verification of Deemed Delivered Energy. SMUD may perform a verification of Deemed Delivered Energy utilizing data from either 1) SMUD's POA sensor mounted on a tracking arrays; or 2) data received directly from Seller's POA sensor mounted on a tracking array.

K.4 Changes in Exhibit K Procedure. Upon mutual consent of both Parties, SMUD shall revise this Exhibit K as appropriate, give written notice to Seller regarding the revision, and issue a new Exhibit K, which shall then become part of the Agreement to reflect changes in this Procedure.

Exhibit L

FORM OF CONSENT AND AGREEMENT TO COLLATERAL ASSIGNMENT

This CONSENT AND AGREEMENT (this "Consent"), dated as of _____, 20____, is entered into by and among the Sacramento Municipal Utility District, a California Municipal Utility District formed and existing under the laws of the State of California (together with its successors and permitted assigns, "SMUD") ("Buyer"), _____ (together with its successors, designees and assigns in its capacity, "Lender"), Sacramento Valley Energy Center, LLC, a limited liability company formed and existing under the laws of the State of XX (together with its successors and permitted assigns, "Seller"). Unless otherwise defined, all capitalized terms have the meaning given in the Power Purchase Agreement (as hereinafter defined).

RECITALS

A. Seller intends to develop, construct, install, test, own, operate and use (i) an approximately 200MW_{ac} photovoltaic electric Solar Project (the "Solar Project"), and (ii) an approximately 100MW_{ac} battery energy storage system (the "Storage Project", together with the Solar Project, the "Project"), both located in Sacramento County XXXX.

B. In order to partially finance the development, construction, installation, testing, operation and use of the Project, the Seller and/or one or more of its Affiliates has entered into that certain **[Financing Agreement,]** dated as of _____ (as amended, amended and restated, supplemented or otherwise modified from time to time, the "Financing Agreement"), among Seller and/or one or more of its Affiliates, the financial institutions from time to time parties thereto as lenders and/or issuing banks, and Lender as agent on behalf of such financial institutions, pursuant to which, among other things, such financial institutions have extended commitments to make loans and other financial accommodations to, and for the benefit of, Seller.

C. Buyer and Seller have entered into that certain Power Purchase Agreement, dated as of _____ (attached hereto and incorporated herein by reference, as amended, amended and restated, supplemented or otherwise modified from time to time in accordance with the terms thereof and hereof, the "Power Purchase Agreement").

D. Pursuant to a [security agreement] executed by Seller and Lender (as amended, amended and restated, supplemented or otherwise modified from time to time, the "Security Agreement"), Seller has agreed, among other things, to assign, as collateral security for [its] [their] obligations under the Financing Agreement and related documents (collectively, the "Financing Documents"), all of its right, title and interest in, to and under the Power Purchase Agreement [and the Project PPA] to Lender for the benefit of Lender and each other entity or person providing collateral security under the Financing Documents.

E. It is a requirement under the Financing Agreement that SMUD and the other parties hereto execute this Consent.

AGREEMENT

NOW THEREFORE, for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, and intending to be legally bound, the parties hereto hereby agree as follows:

1. CONSENT TO ASSIGNMENT. Subject to the terms and conditions below, SMUD consents to a complete assignment of all rights and obligations of the Power Purchase Agreement by Seller to Lender pursuant to the Financing Documents.

2. LIMITATIONS ON ASSIGNMENT.

(a) Lender shall be entitled (but not obligated) to exercise all rights and to cure any defaults of Seller under the Power Purchase Agreement, subject to applicable notice and cure periods provided in the Power Purchase Agreement and as set forth herein. Upon receipt of notice from Lender, SMUD agrees to accept such exercise and cure by Lender if timely made by Lender under the Power Purchase Agreement and this Consent. Upon receipt of Lender's written instructions and to the extent allowed by law, SMUD agrees to make directly to such account as Lender may direct SMUD in writing from time to time, all payments to be made by SMUD to Seller under the Power Purchase Agreement from and after SMUD's receipt of such instructions, and Seller consents to any such action. SMUD shall have no liability to Seller under the Power Purchase Agreement or this Consent for directing such payments to Lender in accordance with this subsection (a).

(b) SMUD agrees to deliver duplicates or copies of all notices of default delivered by SMUD under or pursuant to the Power Purchase Agreement to Lender in accordance with the notice provisions of this Consent. SMUD shall deliver any such notices concurrently with delivery of the notice to Seller under the Power Purchase Agreement. In the event of a default or breach by Seller in the performance of any of its obligations under the Power Purchase Agreement, or upon the occurrence or non-occurrence of any event or condition under the Power Purchase Agreement which would immediately or with the passage of any applicable grace period or the giving of notice, or both, enable Buyer to terminate the Power Purchase Agreement or to suspend performance of its obligations thereunder (hereinafter, a "Default"), Buyer shall not terminate the Power Purchase Agreement or suspend performance of its obligations thereunder until it first gives written notice of such Default to Lender and affords Lender a period of time until (i) the expiration of the Seller's cure period under the Power Purchase Agreement, if any, plus (ii) (x) thirty (30) days after expiration of such cure period if such Default is the failure to pay amounts to Buyer which are due and payable under the Power Purchase Agreement, or (y) sixty (60) days after expiration of such cure period if such Default is a non-payment Default, in each such case, to cure such Default (provided that during the applicable cure period Lender or Seller continues to perform each of Seller's other obligations under the Power Purchase Agreement). If (i) possession of the Project is necessary to cure such Default or (ii) if the Default can only be cured by the Seller and is not curable by Lender, such as the insolvency, bankruptcy, general assignment for the benefit of the secured parties under the Financing Agreement, or appointment of a receiver, trustee, custodian or liquidator of the Seller or its properties, and, in each such case, Lender or its successor(s), assignee(s) and/or designee(s) declares an "Event of Default" under the Financing Agreement and Lender commences foreclosure proceedings or any other proceedings necessary to take possession of the Project, Lender or its successors(s), assignee(s) and/or designee(s) will be allowed a reasonable period to complete such proceedings; provided that, once commenced, Lender, or its successor(s), assignee(s) and/or designee(s) shall pursue such proceedings with due dispatch; and provided further, that if the Default can only be cured by the Seller and is not curable by Lender, such as the insolvency, bankruptcy, general assignment for the benefit of the secured parties under the Financing Agreement, or appointment of a receiver, trustee, custodian or liquidator of the Seller or its properties, Lender shall be entitled to assume in writing the rights and obligations of Seller under the Power Purchase Agreement and provided such assumption occurs, Buyer shall not be entitled to terminate the Power Purchase Agreement or suspend its performance thereunder as a result of such Default so long as Lender or its successor(s), assignee(s) and/or designee(s) continue to perform all of Seller's obligations (other than those that can only be performed by Seller). If either the Lender or its successor(s), assignee(s) and/or designee(s) is prohibited by any court order or bankruptcy or insolvency proceedings of Seller from curing the Default or from commencing or prosecuting such proceedings, the foregoing time periods shall be extended by the period of such prohibition, provided that Lender or its successor(s), assignee(s) and/or designee(s) is pursuing relief from such prohibition with due dispatch. SMUD shall recognize the Lenders or their designee(s) or assignee(s) as the applicable party under the Power Purchase Agreement provided that such Lender or their designee(s) or assignee(s) assume in writing the obligations of Seller under the Power Purchase Agreement, including, without limitation, satisfaction and compliance with all credit provisions of the Power Purchase Agreement and provided further that such Lender or their designee(s) or assignee(s) has a creditworthiness and total credit support at least equal to that of Seller as of the date hereof. Seller shall pay Buyer \$20,000 per assignment of PPA and/or LGIA to cover Buyer's internal and external costs associated with such assignment. For the avoidance of doubt, Seller's payment of \$20,000 is the full reimbursement of expenses for assignment of both the PPA and LGIA.

I In the event that the Agreement is rejected by a trustee or debtor-in-possession in any bankruptcy or insolvency proceeding, and if, within thirty (30) days after such rejection, the Lender shall so request, SMUD will execute and deliver to Lender a new power purchase agreement, which shall be on the same terms and conditions as the original Agreement for the remaining term of the original Power Purchase Agreement before giving effect to such rejection, and which shall require Lender to cure any defaults then existing under the original Power Purchase Agreement. Notwithstanding the foregoing, the execution of any new power purchase agreement will be subject to approval by SMUD's Board of Directors to the extent required by SMUD's policies and receipt of all regulatory approvals required by law, including those associated with any renewable energy or environmental objectives met by, or required of, the original Power Purchase Agreement. SMUD will use good faith efforts to promptly obtain (if applicable) such Board approval and any necessary regulatory approvals.

(d) In the event Lender or its designee(s) or assignee(s) elect(s) to perform Seller's obligations under the Agreement, succeed to Seller's interest under the Power Purchase Agreement, or enter into a new power purchase agreement as provided in subparagraph 2I above, the recourse of SMUD against Lender or its designee(s) and assignee(s) shall be limited to such party or parties' interests in the Project, the credit support required under the Power Purchase Agreement, and any currently existing guaranties made to the benefit of SMUD by Seller, Seller's Affiliates or Seller's insurers to the extent such guaranties have not been exhausted at the time of assignment.

I In the event Lender or its designee(s) or assignee(s) succeed to Seller's interest under the Power Purchase Agreement, Lender or its designee(s) or assignee(s) shall cure any then-existing payment and performance defaults under the Power Purchase Agreement, except any performance defaults of Seller itself, which by their nature are not susceptible of being cured. Lender and its designee(s) or assignee(s) shall have the right to assign their interest in the Power Purchase Agreement to a person or entity to whom Seller's interest in the Project is transferred, provided such transferee assumes in writing the obligations of Seller under the Power Purchase Agreement and has a creditworthiness and total credit support at least equal to that of Seller as of the date hereof. Upon such assignment and assumption in writing, Lender and its designee(s) or assignee(s) (including their agents and employees) shall be released from any further liability thereunder accruing from and after the date of such assignment, to the extent of the interest assigned.

3. REPRESENTATIONS AND WARRANTIES.

- (a) SMUD hereby represents and warrants that as of the date of this Consent:
- i. It (1) is duly formed and validly existing under the laws of the State of California, and (2) has all requisite power and authority to enter into and to perform its obligations hereunder and under the Power Purchase Agreement, and to carry out the terms hereof and thereof and the transactions contemplated hereby and thereby;
 - ii. the execution, delivery and performance of this Consent and the Power Purchase Agreement have been duly authorized by all necessary action on its part and do not require any approvals, material filings with, or consents of any entity or person which have not previously been obtained or made;
 - iii. this Consent and the Power Purchase Agreement are in full force and effect;
 - iv. this Consent and the Power Purchase Agreement have been duly executed and delivered on its behalf and constitutes its legal, valid and binding obligation, enforceable against it in accordance with its terms, except as the enforceability thereof may be limited by (1) bankruptcy,

insolvency, reorganization or other similar laws affecting the enforcement of creditors' rights generally and (2) general equitable principles (whether considered in a proceeding in equity or at law);

- v. there is no litigation, investigation or other proceeding pending for which SMUD has received service of process or, to SMUD's actual knowledge, threatened against SMUD relating solely to this Consent, the Power Purchase Agreement and the transactions contemplated hereby and thereby;
- vi. the execution, delivery and performance by it of this Consent, the Agreement, and the consummation of the transactions contemplated hereby, will not result in any violation of, breach of or default under any term of any material contract or material agreement to which it is a party or by which it or its property is bound, or of any material requirements of law presently in effect having applicability to it, the violation, breach or default of which could have a material adverse effect on its ability to perform its obligations under this Consent;
- vii. neither SMUD nor, to SMUD's actual knowledge, any other party to the Power Purchase Agreement, is in default of any of its obligations thereunder, and no disputes exist between Buyer and Seller thereunder; and
- viii. to SMUD's actual knowledge, (1) no Force Majeure event exists under, and as defined in, the Power Purchase Agreement and (2) no event or condition exists which would either immediately or with the passage of any applicable grace period or giving of notice, or both, enable either SMUD or Seller to terminate or suspend its obligations under the Power Purchase Agreement.

4. CONFIRMATION. SMUD will not, without the prior written consent of Lender (such consent not to be unreasonably withheld), (i) cancel or terminate the Power Purchase Agreement, or consent to or accept any cancellation, termination or suspension thereof by Seller, (ii) sell, assign or otherwise dispose (by operation of law or otherwise) of any part of its interest in the Power Purchase Agreement, except as provided in the Power Purchase Agreement, or (iii) amend or modify the Power Purchase Agreement.

5. NOTICES. All notices required or permitted hereunder shall be in writing and shall be effective (a) upon receipt if hand delivered, (b) upon telephonic verification of receipt if sent by facsimile and (c) if otherwise delivered, upon the earlier of receipt or seven (7) Business Days after being sent registered or certified mail, return receipt requested, with proper postage affixed thereto, or by private courier or delivery service with charges prepaid, and addressed as specified below:

If to SMUD:

[_____]

[_____]

[_____]

Telephone No.: [_____]

Telecopy No.: [_____]

Attn: [_____]

If to Lender:

[_____]

[_____]

[_____]

Telephone No.: [_____]

Telecopy No.: [_____]

Attn: [_____]

If to Seller:

[_____]

[_____]

[_____]

Telephone No.: [_____]

Telecopy No.: [_____]

Attn: [_____]

Any party shall have the right to change its address for notice hereunder to any other location within the United States by giving thirty (30) days' written notice to the other parties in the manner set forth above.

6. ASSIGNMENT, TERMINATION, AMENDMENT. This Consent shall be binding upon and benefit the successors and assigns of the parties hereto and their respective successors, transferees and assigns (including without limitation, any entity that refinances all or any portion of the obligations under the Financing Agreement). SMUD agrees (a) to confirm such continuing obligation in writing upon the reasonable request of (and at the expense of) Seller, Lender or any of their respective successors, transferees or assigns, and (b) to cause any successor-in-interest to SMUD with respect to its interest in the Power Purchase Agreement to assume, in writing in form and substance reasonably satisfactory to Lender, the obligations of SMUD hereunder. Any purported assignment or transfer of the Power Purchase Agreement not in conjunction with the written instrument of assumption contemplated by the foregoing clause (b) shall be null and void. No termination, amendment, or variation of any provisions of this Consent shall be effective unless in writing and signed by the parties hereto. No waiver of any provisions of this Consent shall be effective unless in writing and signed by the party waiving any of its rights hereunder.

7 **GOVERNING LAW.** This Consent shall be governed by the laws of the State of California applicable to contracts made and to be performed in such State. THE STATE COURTS SITUATED IN THE STATE OF CALIFORNIA SHALL HAVE EXCLUSIVE JURISDICTION TO RESOLVE ANY DISPUTES WITH RESPECT TO THIS CONSENT AND AGREEMENT WITH SMUD, SELLER, ASSIGNOR, AND LENDER IRREVOCABLY CONSENTING TO THE JURISDICTION THEREOF FOR ANY ACTIONS, SUITS, OR PROCEEDINGS ARISING OUT OF OR RELATING TO THIS CONSENT.

8 **COUNTERPARTS.** This Consent may be executed in one or more duplicate counterparts, and when executed and delivered by all the parties listed below, shall constitute a single binding agreement.

9 **SEVERABILITY.** In case any provision of this Consent or the obligations of any of the parties hereto, shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions, or the obligations of the other parties hereto, shall not in any way be affected or impaired thereby.

10. **ACKNOWLEDGMENTS BY SELLER.** Seller, by its execution hereof, acknowledges and agrees that neither the execution of this Consent, the performance by SMUD of any of the obligations of SMUD hereunder, the exercise of any of the rights of SMUD hereunder, or the acceptance by SMUD of performance of the Power Purchase Agreement by any party other than Seller shall (1) release Seller from any obligation of Seller under the Power Purchase Agreement, (2) constitute a consent by SMUD to, or impute knowledge to SMUD of, any specific terms or conditions of the Financing Agreement, the Security Agreement or any of the other Financing Documents, or (3) except as expressly set forth in this Consent, constitute a waiver by SMUD of any of its rights under the Power Purchase Agreement. Seller and Lender acknowledge hereby for the benefit of SMUD that this Consent does not alter, amend, modify or impair (or purport to alter, amend, modify or impair) any provisions of the Power Purchase Agreement except as provided herein.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

[SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, the parties hereto by their officers thereunto duly authorized, have duly executed this Consent as of the date first set forth above.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By: _____

Name: _____

Title: _____,

a _____

[LENDER]

By: _____

Name: _____

Title: _____, as Lender

Sacramento Valley Energy Center, LLC

By: _____

Name: _____

Title: _____

Exhibit M

Storage Capacity Testing

This Exhibit M sets forth the Performance Criteria and protocols for testing of the Storage Project under this Agreement, including the Storage Commercial Operation Test and subsequent Storage Capacity Tests (“**Test**” or “**Tests**”).

I. OVERVIEW

A. Commercial Operation Date Storage Capacity Test.

- i. Test Dates. Seller shall schedule and complete a Storage Commercial Operation Test prior to the Commercial Operation Date. Seller shall provide SMUD with at least five (5) Business Days’ notice of Seller’s proposed dates for the Storage Commercial Operation Test. SMUD shall confirm the dates in writing prior to the first date of the Test.
- ii. Test Plan. Such Storage Commercial Operation Test shall be performed in accordance with the Storage Capacity Test procedures set forth in this Exhibit M and shall establish the initial Storage Contract Capacity hereunder based on the actual capacity of the Storage Project determined by such Storage Commercial Operation Test.
- iii. Costs. Responsibility for the costs for testing are as set forth in Section B(iii) below.

B. Subsequent Storage Capacity Tests.

- i. Test Dates. Following the Commercial Operation Date, but not more than once per Contract Year, SMUD shall have the right to require Seller to schedule and complete a Storage Capacity Test. Seller shall have the right to run a retest of any Storage Capacity Test upon five (5) Business Days’ prior written notice to SMUD (or any shorter period reasonably acceptable to SMUD consistent with Prudent Utility Practice). Seller is responsible for scheduling each Storage Capacity Test. The date of any such Storage Capacity Test shall be confirmed in writing by SMUD to Seller prior to the date of the Test. The Parties should attempt but are not required to schedule such Test on days that SMUD will or is likely to dispatch the Storage Project.
- ii. Test Plan. Such Storage Capacity Test shall be performed in accordance with the Storage Capacity Test procedures set forth in this Exhibit M and shall establish the current Storage Contract Capacity hereunder based on the actual capacity of the Storage Project determined by such Storage Capacity Test.
- iii. Costs. Any testing of the Storage Project requested by SMUD pursuant to Section B(i) of this Exhibit O shall be deemed Buyer-instructed dispatches of the Storage Project (“SMUD Dispatched Test”). Any test of the Storage Project that is not a SMUD Dispatched Test (including all tests conducted prior to Commercial Operation, the Storage Commercial Operation Tests and other Seller-requested discretionary tests or dispatches, at times and for durations reasonably agreed to by SMUD, that Seller deems necessary for purposes of reliably operating or maintaining the Storage Project or for re-performing a required test within a reasonable number of days of the initial required test (considering the circumstances that led to the need for a retest)) shall be deemed a “Seller Initiated Test”. For all SMUD Dispatched

Tests, SMUD shall direct only PV Charging Energy to be used to charge the Storage Project, SMUD shall be entitled to all revenues associated with a Storage Project discharge during a SMUD Dispatched Test, and for the avoidance of doubt, SMUD shall pay all PV Charging Energy costs and pay Seller the Price for all PV Energy used as Charging Energy. For all Seller Initiated Tests, (1) Seller shall reimburse SMUD the amount of SMUD's payment of the Solar Price to Seller for all PV Charging Energy for such Seller Initiated Test, and (2) Seller shall be entitled to all CAISO revenues associated with the discharge of such Energy, but all Environmental Attributes associated therewith shall be for SMUD's account at no additional cost to SMUD. SMUD shall be responsible for all costs, expenses and fees payable or reimbursable to its representative(s) witnessing any test. Except as set forth in this clause (iii) all other costs of any testing of the Storage Facility shall be borne by Seller.

C. **Test Results and Resetting of Storage Contract Capacity.**

No later than ten (10) days following any Storage Capacity Test, Seller shall submit a testing report detailing results and findings of the Test. The report shall include meter readings and plant log sheets verifying the operating conditions and output of the Storage Project.

II. **REQUIREMENTS AND DEFINITIONS**

A. **General.**

- i. Each Storage Capacity Test (including the Storage Commercial Operation Test and all subsequent Storage Capacity Tests) shall be conducted in accordance with Prudent Utility Practices and the provisions of this Exhibit M. SMUD or its representative may be present for the Storage Capacity Test and may, for informational purposes only, use its own metering equipment (at SMUD's sole cost).
- ii. This document provides the procedure for Storage Capacity Test and evaluation of the Storage Project. This document shall be the template to develop the final Storage Capacity Test procedures as mutually agreed to between the Parties. The complete final Storage Capacity Test procedure shall be provided by Seller to SMUD sixty (60) days prior to the Test
- iii. The sole purpose of the Storage Capacity Test will be the determination of Maximum Charging Rate, Maximum Discharging Rate, Minimum Discharging Time, Minimum Charging Time, Storage Capacity, and Round Trip Efficiency of the Storage Project for comparison to the Guaranteed Performance values set forth in Part IV. Uncertainties and test tolerance of 0.5% will be applied to any guarantee.
- iv. Prior to each Test, a pre-test meeting shall be held and recorded. The meeting shall review the applicable approved Test procedure, the applicable requirements of such Storage Capacity Test, as well as all instrumentation locations, calibration sheets, and other relevant topics including safety requirements.
- v. Data shall be recorded by the SCADA/EWIS system data logging functions. The use of alternative means for data acquisition shall be used only with prior written consent of Seller. SMUD shall supply all raw data from the SCADA/EWIS system, daily during pre-test activities and during testing phase.

- vi. Prior to the start of testing the Storage Project, the control settings (tuning and constants) shall be verified.
- vii. Any alteration or modifications to test measurement devices, or to the Storage Project, which could reasonably be expected to influence the outcome of the applicable Storage Capacity Test, shall not be permitted, without prior written consent of SMUD, and if accepted by SMUD, shall be fully documented by Seller and SMUD.
- viii. "Enterprise Wide Information System" ("EWIS") means the SMUD supplied OSI/PI Servers and software used by the Storage Project to record historical operations parameters or compatible replacement.
- ix. "Battery Management System" or "BMS" is defined as the electronic control and communication system that manages and protects the Storage Project.

B. **Responsibilities**. Specific responsibilities for this Storage Capacity Test program are as follows:

- i. Seller:
 - a. Perform commissioning.
 - b. Manage the application of proper commissioning procedures until the Tests have been completed.
 - c. Support SMUD with testing and interface with SMUD as required to schedule and perform testing.
- ii. SMUD:
 - a. Support Seller with testing as required to schedule and perform testing.
 - b. Witness energy testing and/or review test documentation.

C. Provide energy for the Test. **Required Performance Criteria**. Tests conducted pursuant to this Exhibit M shall include the following elements (the "Performance Criteria"), with guaranteed levels for relevant items set forth in Part IV below (unless SMUD otherwise agrees in writing in its sole discretion):

- i. "Grid Charging Capability" means the ability for the Storage Project to charge and store Grid Charging Energy delivered from an offsite source by the Transmission Provider's electrical system.
- ii. Storage Capacity (as defined in the Agreement).
- iii. "Minimum Charging Time" is defined as the amount of time between a measurement of 0% State of Charge (SOC) to reaching full Storage Capacity (expressed in units of time).
- iv. "Minimum Discharging Time" is defined as the amount of time between full Storage Capacity to reaching a measurement of 0% SOC (expressed in units of time).

- v. "Maximum Charging Rate" is defined as the maximum rate of charging (expressed in MW).
- vi. "Maximum Discharging Rate" is defined as the maximum rate of discharging (expressed in MW).
- vii. "Round Trip Efficiency" is defined as the amount of Discharging Energy discharged by the Storage Project and delivered to the Delivery Point relative to the amount of Charging Energy, measured at the Storage Meter, calculated as shown below, and with formula inputs as described further below.

$$\text{Round Trip Efficiency (RTE)} = \frac{\text{Discharging Energy (WhD)}}{\text{Charging Energy (WhI)}}$$

- viii. "Ramp Rate" shall have the meaning set forth in the CAISO Tariff.
- ix. "Response Time" is defined as the amount of time for the Storage Project to dispatch instructions from SMUD's SCADA.

D. Test Parameters.

- i. During any Test, at a minimum, the following parameters shall be measured and recorded simultaneously for the Storage Project at the level of granularity necessary to assess the measured criteria and at least every four (4) seconds:
 - a. Time;
 - b. Net electrical energy output to the Delivery Point (kWh);
 - c. Net electrical energy input from the Delivery Point (kWh);
 - d. Reactive power (VARS);
 - e. State of Charge (%);
- ii. During any Test, at a minimum, the following parameters shall be measured and recorded simultaneously for the Storage Project at least every thirty (30) minutes:
 - a. Relative humidity (%);
 - b. Ambient temperature (°F); and
 - c. Max, min, average, and stdev battery temperature (°F).

E. Test Showing. Seller must demonstrate to SMUD's reasonable satisfaction, that the Storage Project:

- i. is capable of storing and delivering the MW and MWh amount identified by Seller as the maximum rated power and energy;

- ii. can deliver full rated power (MW) to the Delivery Point for four (4) consecutive hours, with the sum of MWh delivered over this test period totaling to the Storage Capacity, inclusive of identified Round Trip Efficiency losses.

F. Equipment Definition.

The test configuration will consist of the Storage Project and its associated equipment.

G. Measurement and Instrumentation.

- i. Instrumentation for the Storage Capacity Test will consist of Storage Project instruments. Calibration certificates will be provided with the instruments.
- ii. The State of Charge during all tests shall be read from the Battery Management System.
- iii. The charge rate and discharge rates shall be measured using the Storage Project Storage Meter and concurrently at the SMUD Revenue Meter.

H. For purposes of testing the Round Trip Efficiency, the Charging Energy and Discharging Energy shall be measured by the Storage Meter without normalizing for electrical losses between the Storage Meter and the SMUD Revenue Meter located at the Delivery Point.

I. Data Collection.

- i. All measurements of charge rate, discharge rate, input current and voltage, output current and voltage, thermal output, system temperatures, ambient conditions, and other parameters that must be measured shall be collected simultaneously at a temporal resolution applicable to the function of the system application and system metrics to which they are being applied and in accordance with recognized standards applicable to the measurements being taken.
- ii. Data collection rate shall be 4 seconds or faster for all tests.

J. Cancellation or cessation of testing under certain circumstances

In connection with any of the acceptance and other testing pursuant to this Agreement, including the Storage Capacity Tests, Seller shall have the unilateral right to cease such tests if Seller determines that a matter or event is occurring that may damage or adversely affect the equipment or system. Seller shall promptly remedy such condition and shall thereafter promptly reschedule the testing.

III. TEST PROCEDURES

Definitions/Acronyms

BMS	Battery Management System
CT	Current Transformer
CT Error	Current Transformer Error
CPR	Cardio Pulmonary Resuscitation

Performance Metrics; Guaranteed Values	The specific requirements for each Test identify certain performance metrics (each, a “Performance Metric”) and a guaranteed value for each Performance Metric (each, a “Guaranteed Value”).
Point of Guarantee	Point where the Guaranteed Value for each Performance Metric is required to be achieved
Point of Measurement	Point where the meter used to measure each Performance Metric is located
Loss Adjustment Factor	If the Point of Measurement is different from the Point of Guarantee, then the Specific Requirements for the Test shall identify an agreed “Loss Adjustment Factor” which shall be applied when determining whether the Guaranteed Value for the relevant Performance Metric has been achieved.
JHA	Job Hazard Analysis
LOTO	Lock Out / Tag Out
Meter Error	Battery system metering error at the MV switchgear
Metering System Error	The error of all meters i.e. Meter Error, CT Error and PT Error involved in the test for measuring the performance metrics is identified as the “Metering System Error”
PCS	Power Conversion System, i.e. bi-directional grid connected power converter
Plant Controller	Plant Controller is the prime controller responsible for coordinating the combined Facility (solar and BESS) operating functions.
BESS Controller	Master controller for the BESS System
PPE	Personal Protective Equipment
PT	Potential Transformer
PT Error	Potential Transformer Error
PU	Power Unit; a combination of PCS modules with associated battery modules, and associated control system
Reference Meter	Calibrated meter such as Fluke 435
RTAC	Real Time Automation Controller – SEL 3530 device or equivalent
SCADA	Supervisory Control And Data Acquisition
SOC	State of Charge
SOH	State of Health

1. ENCLOSURE UNIT SMOKE DETECTION

Fire protection system will be verified after installation. Detailed test items will include heat sensor, smoke sensor, releasing system, battery system and fuse.

- Purpose: Verify smoke detection circuit operates correctly and shuts down the PCS Units when smoke is introduced in the enclosure. The fire suppression agent tank will be temporarily disconnected from the firing pin assembly during this test. It will be reconnected for normal operations once the entire Storage Project has been commissioned.
- Procedure:

Step	Description	Comments/Notes	Initials	
			Own	Con
A	Verify all PCS are running as appropriately demonstrated on the HMI.			
B	Locate the smoke detector.			

C	Use canned smoke sprayed on the smoke detector to activate the detector.			
D	Verify the PCSs have shutdown, only in tested Enclosure and not in the other Enclosures.			
E	Verify that the fire suppression tank pin has fired out of its housing.			
F	Verify that the alarm has been reported with a Fire Suppression Alarm to the HMI.			
G	Open the Enclosure doors to clear out the smoke.			
H	Reset the firing pin for the fire suppression tank.			
I	Reset the system fault from the HMI.			

Pass/Fail Criteria					
All fire suppression systems performed as stated in steps D, E, & F of this procedure.					
Unit	Passed	Failed	Date	Initial	
1					
2					
Test Performed by:					
Test Witnessed by:					

Notes/Test Conditions:

2. POWER TEST

- Purpose: This test will demonstrate the real power dispatch capability of the BESS Facility; the requirement is to achieve Guaranteed Power of output within 1s and hold for 10 minutes. This capability is representative of the maximum active power levels.
- Pre-test conditions:
 - A. Prior to the commencement of the test, if the ambient temperature is below 10°C or above 50°C, the test shall be rescheduled.
 - B. Owner is responsible for facilitating the test conditions such that the Storage Project can discharge at the [Contracted Discharge Power].
- Procedure:
 - A. Storage Project Starting State: The Storage Project will be in the on-line state with each Storage Project subsystem at approximately 50% usable SOC and at an initial active power level of 0 MW and reactive power level of 0 MVAR.
 - B. Record the Storage Project active power level at the Storage Project Meter.
 - C. Command the Storage Project to charge at the [Guaranteed Charge Power]
 - D. Hold the command for 10 minutes after completing the ramp.
 - E. Command the Storage Project to discharge at the [Guaranteed Discharge Power]
 - F. Hold the command for 10 minutes after completing the ramp.

- G. Command the Storage Project to 0 MW and 0 MVAR.
- H. Record and store the Storage Project power responses. Measurements will be made at the Storage Project Meter and by the BESS control system with a recording in the Owner's Storage Project historian.
- I. System End State: The Storage Project will be in the on-line state and at a commanded power level of 0 MW and 0 MVAR.

- A. Recorded Values: The lesser of the absolute value of (the "Qualified Power Capacity (MW)"):
 - a. The Average Real Charging Power, in MW measured during charge portion of the test, or
 - b. The Average Real Discharge Power, in MW measured during discharge portion of the test
- B. The Average Apparent Power, in MVA measured during both charge and discharge portion of the test

Pass/Fail Criteria		
<p>The difference between the BESS active power response and the commanded level shall be no more than $\pm 2\%$.</p> <p>Except in cases where Owner elects to define a ramp rate, the time to full output shall be less than 1s.</p> <p>The Response Time (seconds) is measured as the time between the Storage Project Controller receiving a command (when the Storage Project Controller Modbus values are updated) and the Storage Project charge/discharge power output first reaching within 2% of the commanded power. The command is read from the Storage Project Controller Modbus interface and the power output is read directly from the Storage Project Meter.</p>		
Passed	Failed	Date:
Test Performed by:		
Test Witnessed by:		

Notes/Test Conditions:

3. ROUND-TRIP EFFICIENCY AND DISCHARGE ENERGY CAPACITY TEST

- Pre-test conditions:
 - A. Prior to the commencement of the test, if the ambient temperature is below 10°C or above 50°C, the test shall be rescheduled.
 - B. Owner is responsible for facilitating the test conditions such that the Storage Project can discharge at the [Contracted Discharge Power.]

- Procedure:
 - C. Storage Project Starting State: The Storage Project will be in the on-line state with each Storage Project subsystem at 0% SOE with a commanded power level of 0 MW and 0 MVAR.
 - D. Allow the Storage Project to idle at 0% SOE for 5 minutes. The Storage Project shall remain grid-connected.
 - E. Record the [Battery Import Energy], start value (as read by the Storage Project Meter)
 - F. Send a charge command equal to the [Guaranteed Charge Power.]
 - G. Hold the charge command until the input power drops below 2% of the command for more than one minute or six (6) hours have elapsed, then command a power level of 0 MW and 0 MVAR. Record the [Battery Import Energy], end (as reported by the Storage Project Meter).
 - H. Allow the system to idle for five (5) minutes. The Storage Project shall remain grid-connected during the rest period.
 - I. Record the [Battery Export Energy], start value (as reported by the Storage Project Meter).
 - J. Send a discharge command equal to the [Guaranteed Discharge Power]. If the grid operator requires a ramp rate, the energy discharged during the ramp shall be included in the calculation of [Discharge Energy Capacity].
 - K. Hold the discharge command until the Storage Project power drops below 2% of the command for more than one minute, then command a power level of 0 MW and 0 MVAR.
 - L. Record the [Battery Export Energy], end value (as reported by the Storage Project Meter).
- Recorded Values (via Storage Project Meter):
 - A. Battery Real Power (MW) and Reactive Power (MVAR) for each timestamp
 - B. Battery Export Energy (MWh) End and Start values
 - C. Battery Import Energy (MWh) End and Start values

Pass/Fail Criteria		
$\text{Measured RTE} = 100\% * \frac{\text{Qualified Energy Capacity (MWh)}}{\text{Battery Import Energy (MWh)}}$ <p>The measured Round-Trip Efficiency is greater than or equal to the Guaranteed Round-Trip Efficiency. The Qualified Energy Capacity is greater than or equal to the Guaranteed Energy Capacity.</p> <ul style="list-style-type: none"> Qualified Energy Capacity is calculated as (Battery Export Energy, End) minus (Battery Export Energy, Start) Battery Import Energy is calculated as (Battery Import Energy, End) minus (Battery Import Energy, Start) Storage Contract Capacity is the Qualified Energy Capacity divided by four (4) hours 		
Passed	Failed	Date:
Test Performed by:		
Test Witnessed by:		

Notes/Test Conditions:

Exhibit N

PROJECT MILESTONE SCHEDULE

Below is a list of key project milestones and the targeted completion date for each.

Milestone	Responsible Party	Completion Date	Contract
Secured Real Estate and provide option for SMUD ownership of transmission assets location	Seller	10/1/2022	PPA
Secure Real Estate to build the project	Seller	12/31/21	
Completed Environmental Review (CEQA/NEPA)	Seller	6/1/2022	PPA
Secure Land Use/Environmental Permits	Seller	6/1/2022	PPA
PV Plant 100% Construction Documents	Seller	10/1/2022	LGIA
Substation 100% Construction Documents	Seller	10/1/2022	LGIA
Issue for construction loop in line 100% Documents	Seller	11/1/2022	LGIA
Construction Permitting	Seller	11/1/2022	PPA
Start Construction	Seller	11/1/2022	LGIA
Energization—indoor/outdoor Equipment Testing	SMUD/Seller	7/1/2023	LGIA
Return of SMUD Transmission Line to operations (230kV line outage)	SMUD	8/1/2023	LGIA
Pre-commercial Operation Data Testing, LGIA Sec.6/Appendixes G-H (Start six months prior to completion date)	Seller	8/1/2023	LGIA
COD	Seller	12/31/2023	PPA
GCOD	Seller	12/31/2024	PPA

Exhibit O
Storage Guarantees

Performance Guarantee:

- A. Guaranteed Storage Availability means 97%
- B. Guaranteed Power means 100 MW
- C. Guaranteed Energy means 400 MWh
- D. Guaranteed Round Trip Efficiency means the Round Trip Efficiency Guarantee Table found below

1. **Availability:**

A. Annual Average Storage Availability: The “Annual Average Storage Availability” of the Storage Project for a Contract Year is calculated by dividing the sum of the minimum of the Available Energy Measured (AEM) and the Available Power Measured (APM) of every hour of the Contract Year by the total number of hours in the Contract Year. All Excused Event Hours are removed from the calculation. This calculation is illustrated in the following formula:

$$\text{Annual Average Storage Availability} = \frac{1}{HM - HE} * \sum_{h=1}^{HM - HE} \text{MIN}[(AEM(h)), (APM(h))]$$

- B. Where the following terms have the following meanings:

$H_M(h)$ = The number of Hours in the Contract Year.

$H_E(h)$ = The number of Excused Event Hours in the Contract Year.

$AEM(h)$ = For any Hour (h), AEM is calculated in accordance with the following formula.

$$AEM = \text{MIN}\left[1, \frac{\text{Available Energy}(h)}{\text{Guaranteed Energy}(h)}\right]$$

$APM(h)$ = For any Hour (h), APM is calculated in accordance with the following formula.

$$APM = \text{MIN}\left[1, \frac{\text{Available Power}(h)}{\text{Guaranteed Power}(h)}\right]$$

Excused Event Hours means, with respect to a Contract Year, the sum of all Hours during which the Storage Project is operating below one hundred percent (100%) of Storage Contract Capacity as result of (a) Planned Outages; (b) Forced Outages; (c) Force Majeure; (c) SMUD Curtailment; (d) Dispatch Down Instructions; (e) SMUD’s energy charging management; (f) the Operating Restrictions; or (g) SMUD’s breach of the Agreement.

Hour = The consecutive sixty-minute period commencing on the hour, every hour, using local time at the Project.

Available Power (h) = For any Hour (h), the lesser of (i) the average percentage of available inverters multiplied by the Qualified Power Capacity or (ii) the [Guaranteed Power Capacity].

Available Energy (h) = For any Hour (h), the lesser of (i) the average percentage of available racks multiplied by the Qualified Energy Capacity, or (ii) the [Guaranteed Energy Capacity].

Qualified Power Capacity shall be assessed annually pursuant to a Storage Capacity Test in accordance with Exhibit M and is the lesser, in absolute value, of the [Discharge Capacity Test] or [Charge Capacity Test].

Qualified Energy Capacity shall be assessed at least annually and is performed according to the "Round-Trip Efficiency and Discharge Energy Capacity Test" described in Exhibit M.

- C. Annual Availability Liquidated Damages: If, for any Contract Year, the Annual Availability is less than the Guaranteed Storage Availability, the following liquidated damages will apply:

"Infraction Days" shall be calculated on an annual basis, if Annual Availability is less than Guaranteed Storage Availability, using the following formula: $[(HM - HE) / 24] * [Guaranteed Storage Availability - Annual Availability]$

"Annual Availability Liquidated Damages" shall be calculated on an annual basis using the following formula: $[Infraction Days] * [(\$25/MWh) * (Guaranteed Energy)]$. For example, if in a Contract Year the Storage had the following: Days in Contract Year = 365 days

- HM (h) = 8760
- Planned Outages = 80 hours
 - HE (h) = 80
- Forced Outages = 1000 hours
 - 50% Partially Available during Unscheduled Maintenance
- Annual Availability = $[1 / (8760 - 80)] * [(50\% * 1000) + (100\% * 7680)] = 95.25\%$
- Infraction Days = $[8680 / 24] * (97\% - 95.25\%) = 9.982$
- Monthly Availability Liquidated Damages = $9.982 * [(\$25/MWh) * (400 MWh)] = \$99,820$

2. **Round Trip Efficiency:**

- A. Round Trip Efficiency:

$$\text{Round Trip Efficiency} = \frac{\text{Discharging Energy}}{\text{Charging Enregy}}$$

- B. "**Guaranteed Round Trip Efficiency**" for any Contract Year has the following meaning:

Round Trip Efficiency Guarantee Table	
Contract Year	Guaranteed Round Trip Efficiency (%)
0	84.00%
1	84.00%
2	84.00%
3	83.50%
4	83.50%
5	83.50%
6	83.00%
7	83.00%
8	83.00%
9	82.50%
10	82.50%
11	82.50%

12	82.00%
13	82.00%
14	82.00%
15	81.50%
16	81.50%
17	81.50%
18	81.00%
19	81.00%
20	81.00%
21	80.50%
22	80.50%
23	80.00%
24	80.00%
25	79.50%
26	79.50%
27	79.00%
28	79.00%
29	78.50%
30	78.50%

C. Round Trip Efficiency Liquidated Damages: If, for any Contract Year, the Round Trip Efficiency determined by the annual Storage Capacity Test conducted for such Contract Year is less than the corresponding Guaranteed Round Trip Efficiency or such Contract Year, the following liquidated damages will apply on an annual basis:

a) **(the simple average of the Locational Marginal Price for the hours the Storage Project is dispatched during the period x Round-Trip Efficiency Shortfall x the amount of Charging Energy used to charge the Storage Project during the period), where**

Round-Trip Efficiency Shortfall = Guaranteed Round-Trip Efficiency *minus* the Round Trip Efficiency determined by the relevant annual Storage Capacity Test

EXHIBIT P METERING DIAGRAM

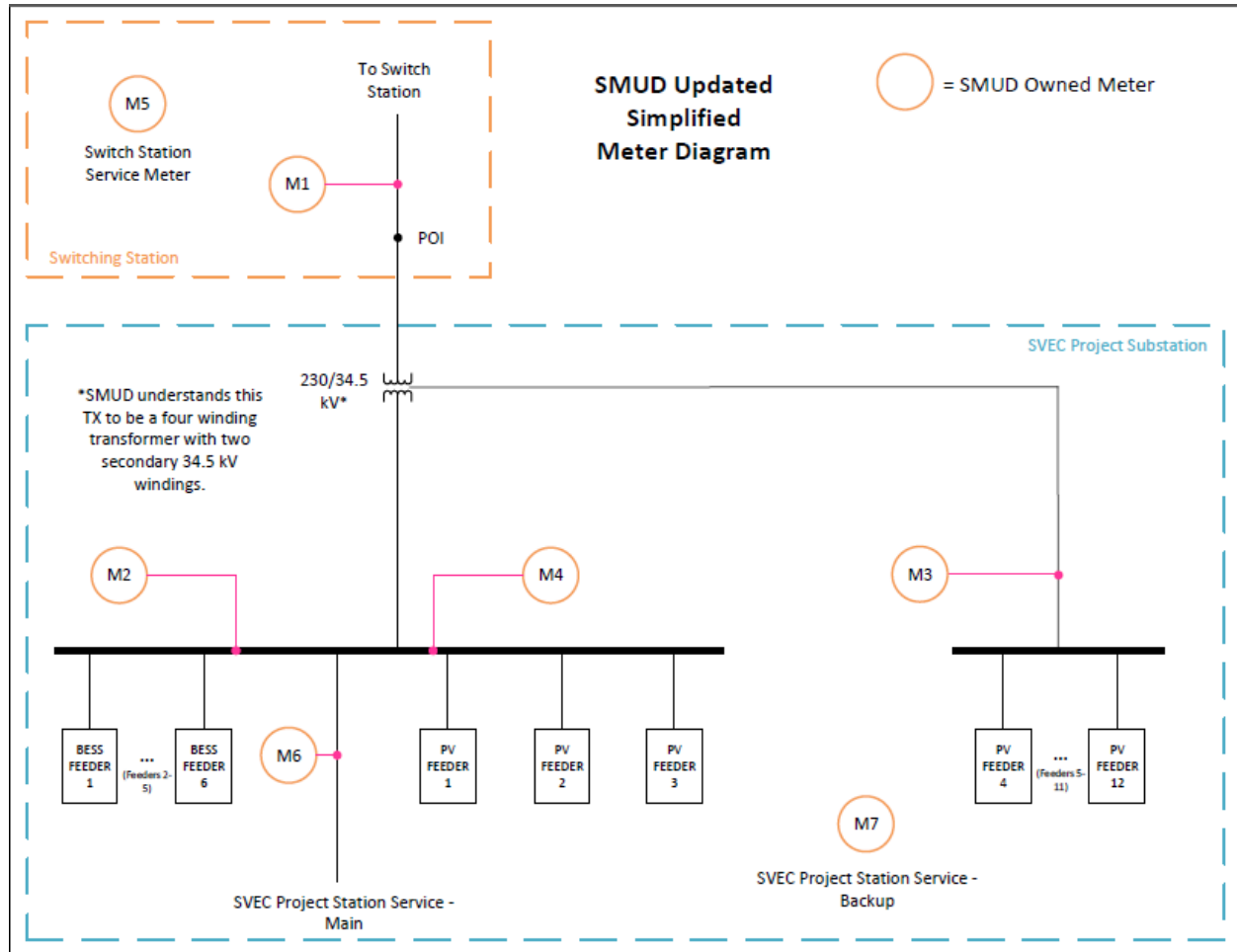


EXHIBIT Q
FORM OF LETTER OF CREDIT

LETTER OF CREDIT

To: Sacramento Municipal Utility District
Energy Contracts Administration
6301 S Street, MS A404
Sacramento, CA 95817-1899

Re: Our Irrevocable Standby Letter of Credit No. [_____]
In the Amount of US\$ [_____] ([_____] and xx/100 U.S. Dollars)

Gentlemen:

We hereby open our irrevocable standby Letter of Credit Number No.[_____] in favor of the Sacramento Municipal Utility District ("Beneficiary"), by order and for account of Sacramento Valley Energy Center, LLC ("Account Party"), 1166 Avenue of the Americas, Third Floor, New York, NY 10036, c/o D. E. Shaw Renewable Investments, L.L.C, available at sight upon demand at our counters, at [_____] , or upon presentation by facsimile transmission at [_____] , for an amount of US\$ [_____] ([_____] and xx/100 U.S. Dollars) and against presentation one of the following documents:

1- Statement signed by a person purported to be an authorized representative of Beneficiary stating that: Sacramento Valley Energy Center, LLC (the "Seller") is in default under the agreement between Beneficiary and Seller, dated [_____] , or under any transaction contemplated thereby (whether by failure to perform or pay any obligation thereunder or by occurrence of a "default", "event of default" or similar term as defined in such agreement, any other agreement between Beneficiary and Seller, or otherwise). The amount due to Beneficiary is US \$_____."

Or

2. Statement signed by a person purported to be an authorized representative of Beneficiary stating that: "Sacramento Valley Energy Center, LLC ("Seller") has terminated the agreement between Beneficiary and Seller dated [_____] pursuant to such agreement. The amount due to Beneficiary is US \$_____."

Or

3. Statement signed by a person purported to be an authorized representative of Beneficiary stating that: "as of the close of business on _____[insert date, which is less than forty-five (45) days prior to the expiration date of the Letter of Credit] you have provided written notice to us indicating your election not to permit extension of this Letter of Credit beyond its current expiry date. The amount due to Beneficiary, whether or not a default has occurred, is U.S. \$_____."

Special Conditions:

- All costs and banking charges pertaining to this Letter of Credit are for the account of Account Party.
- Partial and multiple drawings are permitted.
- Presentation of the Letter of Credit and Documents 1, 2 or 3 above may be made (i) in person, (ii) by first class certified and registered U.S. mail, by (iii) overnight mail on or before the expiration date or (iv) by facsimile transmission.

This Letter of Credit expires on [one year anniversary of date of issuance] at our counters.

We hereby engage with Beneficiary that upon presentation or facsimile transmission of a document as specified under and in compliance with the terms of this Letter of Credit, this Letter of Credit will be duly honored in the amount stated in Document 1, 2 or 3 above. If presentation is made by facsimile transaction, original documents are not required. If a document or facsimile transmission is so presented by 1:00 pm New York time on any banking day, we will honor the same in full in immediately available funds on the next banking day and, if so presented after 1:00 pm New York time on a banking day, we will honor the same in full in immediately available funds by noon on the second succeeding banking day.

It is a condition of this Letter of Credit that it shall be deemed automatically extended without an amendment for a one year period beginning on the present expiry date hereof and upon each anniversary of such date, unless at least ninety (90) days prior to any such expiry date we have sent you written notice by registered mail or overnight courier service that we elect not to permit this Letter of Credit to be so extended beyond the then current expiry date, and it will expire on its then current expiry date. No presentation made under this Letter of Credit after such expiry date will be honored.

Except as stated herein, this letter of credit is not subject to any condition or qualification and is our individual obligation which is in no way contingent upon reimbursement or any right of subrogation. We irrevocably waive any and all rights of subrogation, whether as provided by statute or otherwise, now or hereafter that might, but for such waiver exist, in respect to this letter of credit or any payment we make under it, as to the Applicant, Beneficiary, or the transaction between Beneficiary and Sacramento Valley Energy Center, LLC. We further give irrevocable notice that we are not now and will not be the secondary obligor or co-obligor of Sacramento Valley Energy Center, LLC's obligation and liabilities to Beneficiary for any purpose. Our obligations to Beneficiary under this letter of credit are our primary obligations and are strictly as stated herein

We agree that if this Letter of Credit would otherwise expire during, or within 30 days after, an interruption of our business caused by an act of god, riot, civil commotion, insurrection, act of terrorism, war or any other cause beyond our control or by any strike or lockout, then this Letter of Credit shall expire on the 30th day following the day on which we resume our business after the cause of such interruption has been removed or eliminated and any drawing on this Letter of Credit which could properly have been made but for such interruption shall be permitted during such extended period.

This Letter of Credit shall be governed by the International Standby Practices 1998, International Chamber of Commerce Publication No. 590 ("ISP98"), except to the extent that the terms hereof are inconsistent with the provisions of the ISP98, in which case the terms of this Letter of Credit shall govern.

[____], a [_____]

Authorized Signature(s)

EXHIBIT R
FORM OF LIMITED ASSIGNMENT

This Limited Assignment Agreement (this “**Assignment Agreement**” or “**Agreement**”) is entered into as of [] (the “**Effective Date**”) by and among _____, LLC, a Delaware limited liability company (“**PPA Seller**”), _____, a California municipal utility district (“**PPA Buyer**” or “**SMUD**”), and J. Aron & Company LLC, a New York limited liability company (“**J. Aron**”), and relates to that certain power purchase agreement (the “**PPA**”) between PPA Buyer and PPA Seller as described on Appendix 1. Unless the context otherwise specifies or requires, capitalized terms used but not defined in this Agreement have the meanings set forth in the PPA.

In consideration of the premises above and the mutual covenants and agreements herein set forth, PPA Seller, PPA Buyer and J. Aron (the “**Parties**” hereto; each is a “**Party**”) agree as follows:

1. Limited Assignment and Delegation.

- (a) PPA Buyer hereby assigns, transfers and conveys to J. Aron all right, title and interest in and to the rights of PPA Buyer under the PPA to purchase and accept delivery of the products described on Appendix 1 (the “**Assigned Products**”) in accordance with the terms of the PPA during the Assignment Period (as defined in Appendix 1), as such rights may be limited or further described in the “Further Information” section on [Appendix 1] (the “**Assigned Product Rights**”). All other rights of PPA Buyer under the PPA are expressly reserved for PPA Buyer.
- (b) PPA Buyer hereby delegates to J. Aron the obligation to pay for all Assigned Products that are actually purchased and delivered to J. Aron pursuant to the Assigned Product Rights during the Assignment Period (the “**Delivered Product Payment Obligation**”) and together with the Assigned Product Rights, collectively the “**Assigned Rights and Obligations**”). Notwithstanding the foregoing, all obligations of PPA Buyer under the PPA (including all Delivered Product Payment Obligations) are expressly retained by PPA Buyer, and remain an obligation of PPA Buyer notwithstanding the assignment of the Assigned Products or the delegation to J. Aron of any Delivered Product Payment Obligations. To the extent J. Aron fails to make any payment under the PPA for the Assigned Products under and in accordance with the PPA by the applicable due date for set forth in the PPA, PPA Buyer agrees that it will remain responsible for such payment and shall make such payment to PPA Seller within five (5) Business Days (as defined in the PPA) of receiving notice of such non-payment from PPA Seller.
- (c) J. Aron hereby accepts and PPA Seller hereby consents and agrees to the assignment, transfer, conveyance and delegation described in clauses (a) and (b) above, subject to PPA Buyer's retention and assumption of all obligations of the PPA Buyer under the PPA.
- (d) All rights to dispatch and schedule the Project and the Assigned Products shall be retained by PPA Buyer and, for avoidance of doubt, J. Aron shall not have any such rights. All dispatch and scheduling of the Project and the Assigned Products and other communications related to the PPA shall take place between PPA Buyer and PPA Seller pursuant to the terms of the PPA; provided that (i) PPA Buyer will provide to J. Aron copies of all scheduling communications, billing statements, generation reports and other notices delivered under the PPA during the Assignment Period contemporaneously upon delivery thereof to the other party to the PPA; (ii) title to Assigned Product will pass to J. Aron upon delivery by PPA Seller in accordance with the PPA; and (iii) PPA Buyer is hereby authorized by J. Aron to and shall act as J. Aron's agent with regard to exercising any and all rights under the PPA relating to dispatching the Project and scheduling Assigned Product.
- (e) PPA Seller acknowledges that J. Aron has the right to purchase receivables due from PPA Buyer for any Assigned Products purchased and delivered under the PPA. To the extent J. Aron purchases any such receivables due from PPA Buyer, J. Aron may transfer such receivables to

PPA Seller and apply the face amount thereof as a reduction to any Delivered Product Payment Obligation. Notwithstanding the foregoing, (i) PPA Buyer shall ensure that all payments due to PPA Seller under the terms of the PPA are made to PPA Seller in accordance with the terms of the PPA and (ii) to the extent either (x) J. Aron does not pay PPA Seller for any Delivered Product Payment Obligation, or (y) any Delivered Product Payment Obligation is reduced as described in the preceding sentence, PPA Buyer shall pay PPA Seller for any such failure to pay or reduction, such that PPA Seller receives all payments due to PPA Seller in accordance with the terms of the PPA.

2. Assignment Early Termination.

(a) The Assignment Period may be terminated early upon the occurrence of any of the following:

- (1) delivery of a written notice of termination by either J. Aron or PPA Buyer to each of the other Parties hereto;
- (2) delivery of a written notice of termination by PPA Seller to each of J. Aron and PPA Buyer following J. Aron's failure to pay when due any amounts owed to PPA Seller in respect of any Delivered Product Payment Obligation and such failure continues for one business day following receipt by J. Aron of written notice thereof;
- (3) delivery of a written notice of termination by PPA Seller to each of J. Aron and PPA Buyer following (i) J. Aron's breach of any term of this Assignment or (ii) PPA Buyer's breach of any term of this Assignment;
- (4) delivery of a written notice of termination by PPA Seller to each of J. Aron and PPA Buyer following PPA Buyer's failure to pay when due any amounts owed to PPA Seller in respect of any receivables due from PPA Buyer for any Assigned Products;
- (5) delivery of a written notice of termination by PPA Seller to each of J. Aron and PPA Buyer following (i) PPA Buyer's breach of the PPA or (ii) J. Aron's breach of the PPA; or
- (6) delivery of a written notice of termination by PPA Seller to each of J. Aron and PPA Buyer following PPA Buyer's breach of the [Indemnity Agreement].

(b) The Assignment Period will end as of the date specified in the termination notice, which date shall not be earlier than the end of the last day of the calendar month in which such notice is delivered if termination is pursuant to clauses (a)(1) or (a)(2).

(c) All Assigned Rights and Obligations shall revert from J. Aron to PPA Buyer upon the expiration of or early termination of the Assignment Period, provided that (i) J. Aron shall remain responsible for the Delivered Product Payment Obligation with respect to any Assigned Product delivered to J. Aron prior to the end of the Assignment Period, and (ii) any legal restrictions on the effectiveness of such reversion (whether arising under bankruptcy law or otherwise) shall not affect the expiration or early termination of the Assignment Period. Notwithstanding anything herein to the contrary, PPA Buyer's obligations under the second and third sentence of Section 1(b) and the last sentence of Section 1(e) shall survive any termination of this Assignment.

3. Representations and Warranties. The PPA Buyer represents and warrants to J. Aron that (a) the PPA is in full force and effect; (b) no event or circumstance exists (or would exist with the passage of time or the giving of notice) that would give either Party the right to terminate the PPA or suspend performance thereunder; and (c) all of its obligations under the PPA required to be performed on or before the Assignment Period Start Date have been fulfilled.

4. Notices. Any notice, demand, or request required or authorized by this Assignment Agreement to be given by one Party to another Party shall be delivered in accordance with Article 15 and Exhibit I of the PPA

and to the addresses of each of PPA Seller and PPA Buyer specified in the PPA. PPA Seller and PPA Buyer agree to notify J. Aron of any updates to such notice information. Notices to J. Aron shall be provided to the following address, as such address may be updated by J. Aron from time to time by notice to the other Parties:

J. Aron & Company LLC
200 West Street
New York, New York 10282-2198
Email: gs-prepay-notices@gs.com

5. Miscellaneous. Articles 1.2 (Rules of Interpretation), 22 (Severability), 23 (Counterparts), and 24 (General) of the PPA are incorporated by reference into this Agreement, *mutatis mutandis*, as if fully set forth herein.

6. Governing Law, Jurisdiction, Waiver of Jury Trial

(a) **Governing Law.** This Assignment Agreement and the rights and duties of the parties under this Assignment Agreement will be governed by and construed, enforced and performed in accordance with the laws of the state of [California], without reference to any conflicts of laws provisions that would direct the application of another jurisdiction's laws.

(b) **Jurisdiction.** Each party submits to the exclusive jurisdiction of the [state courts of California], or the federal courts of the United States of America for the Northern District of California, sitting in the city and county of San Francisco. Where a lawsuit arises under or in relation to the PPA, or [Indemnity Agreement], the PPA Seller may, at its option, consolidate the disputes, and PPA Buyer and J. Aron hereby consent to any such consolidation to the maximum extent permitted by applicable Law. PPA Buyer and J. Aron agree to join as defendants in any lawsuit or other legal action under or arising out of the PPA or [Indemnity Agreement].

(c) **Waiver of Right to Trial by Jury.** Each party waives, to the fullest extent permitted by applicable law, any right it may have to a trial by jury in respect of any suit, action or proceeding relating to this assignment agreement.

7. Assignment. PPA Buyer and J. Aron shall not assign, transfer or sell this Agreement without PPA Seller's prior written consent. PPA Seller may, without the consent of PPA Buyer or J. Aron, assign this Agreement (i) together with any permitted assignment of the PPA or (ii) as collateral to any financing party. In connection with any financing by PPA Seller for the Project, PPA Buyer and J. Aron shall each provide such consents to collateral assignments (which consent(s) from J. Aron shall not require any extended cure periods or any requirement for a replacement agreement), estoppels, opinions (which opinions may only be requested to be provided by PPA Buyer), information or other documents as may be reasonably requested, in accordance with market practice, by PPA Seller or the financing parties in connection with the execution of the debt, tax equity or other financing of the Project. Without limiting the foregoing, at the reasonable request of PPA Seller, PPA Buyer shall confirm in writing to the applicable financing parties under any such financing and J. Aron shall acknowledge, PPA Buyer's obligations under the second and third sentence of Section 1(b) and the last sentence of Section 1(e).

[Remainder of Page Intentionally Blank]

IN WITNESS WHEREOF, the Parties have executed this Assignment Agreement effective as of the date first set forth above.

[Add signature blocks]

Authorized Signature(s)

Vice President Rose then turned to Discussion Calendar Item 12, to approve the issuance of SMUD Series 2021 Series I Revenue Refunding Bonds, authorize the distribution of the Preliminary Official Statement, and authorize the Chief Executive Officer/General Manager to execute documents necessary to complete the refunding transaction, including the Bond Purchase Agreement.

Jon Anderson, Assistant Treasurer, provided a presentation on Item 12. A copy of the slides used in his presentation is attached hereto.

No public comment was received on agenda item 12.

There being no discussion, Director Kerth moved for approval of Discussion Calendar Item 12, Director Herber seconded, and Resolution Nos. 21-06-09 and 21-06-10 were unanimously approved.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

RESOLUTION NO. 21-06-09

SIXTY-FOURTH SUPPLEMENTAL RESOLUTION
AUTHORIZING THE ISSUANCE OF
ELECTRIC REVENUE REFUNDING BONDS, 2021 SERIES I

(Supplemental To Resolution No. 6649
Adopted January 7, 1971)

Adopted: June 17, 2021

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RESOLUTION NO. 21-06-09

**Sixty-Fourth Supplemental Resolution
(Supplemental To Resolution No. 6649,
Adopted January 7, 1971)
Authorizing the Issuance of
Electric Revenue Refunding Bonds, 2021 Series I**

WHEREAS, on January 7, 1971, the Board of Directors of the Sacramento Municipal Utility District (the “Board”) adopted its Resolution No. 6649 providing for the issuance of the Sacramento Municipal Utility District’s Electric Revenue Bonds (as supplemented and amended, herein called the “Master Resolution”);

WHEREAS, the Master Resolution provides that the Sacramento Municipal Utility District (the “District”) may issue bonds from time to time as the issuance thereof is authorized by the Board by a supplemental resolution;

WHEREAS, revenue bonds may be issued pursuant to the provisions of the Master Resolution and Article 6a of Chapter 6 of the Municipal Utility District Act (California Public Utilities Code Sections 12850 et seq.) and the Revenue Bond Law of 1941 (California Government Code Section 54300 et seq.) for the purpose of financing improvements and additions to the District’s Electric System;

WHEREAS, revenue bonds may be issued pursuant to the provisions of the Master Resolution and California Government Code Section 53580 et seq. for the purpose of refunding revenue bonds;

WHEREAS, the District previously authorized the issuance of its Electric Revenue Refunding Bonds, 2020 Series I (Federally Taxable) pursuant to the Master Resolution but such bonds were not issued;

WHEREAS, the District has determined to issue its 2021 Series I Bonds (as defined herein), in one or more series or subseries (as specified in the hereinafter defined Sales Certificate) and in an aggregate principal amount not to exceed the principal amount described herein, to (i) refund certain series and maturities of the District’s Electric Revenue Bonds (to be identified in the Sales Certificate) (the “Refunded Bonds”), (ii) pay costs of issuance (to the extent specified in the Sales Certificate), (iii) fund a termination payment for the termination of an interest rate swap agreement relating to the issuance of the 2021 Series I Bonds (to the extent specified in the Sales Certificate) and (iv) make deposits to the Reserve Fund or a separate debt service reserve fund (as and if specified in the Sales Certificate);

WHEREAS, the District anticipates that, if necessary or desirable in the judgment of the Treasurer, it may seek commitments from one or more bond insurers (each, a “Bond Insurer”) to issue one or more financial guaranty policies with respect to all or part of the 2021 Series I Bonds, each of which commitments is expected to be conditioned on certain terms and

conditions to be set forth in one or more insurance agreements among the applicable Bond Insurer, the Trustee and the District (each, an “Insurance Agreement”);

WHEREAS, Section 8.03 of the Master Resolution provides that the District may amend the Master Resolution by a supplemental resolution to be effective when there shall have been filed with the District or the Trustee the written consents of the holders and registered owners of 60% of the District’s Electric Revenue Bonds then outstanding; and

WHEREAS, the District has drafted proposed amendments to the Master Resolution which are described in Section 139.01 of this Sixty-Fourth Supplemental Resolution, and the District intends to issue the 2021 Series I Bonds with the provision that each holder of the 2021 Series I Bonds by purchasing the 2021 Series I Bonds is deemed to have consented to the proposed amendments, all as more fully described herein;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of Sacramento Municipal Utility District, as follows:

ARTICLE CXXXVII

2021 SERIES I BONDS

Section 137.01 Authorization and Terms of 2021 Series I Bonds.

(a) The Board hereby authorizes the issuance of revenue bonds of the District for the purpose of refunding outstanding revenue bonds of the District, in each case in accordance with the Master Resolution and the Sales Certificate. The authorization provided in this paragraph to issue revenue bonds shall include, in addition to the purposes mentioned above, the authorization to issue such bonds for the allocable portion of any original issue discount, underwriting discount, bond insurance premiums, costs of issuance, interest rate swap termination payments, deposits to the Reserve Fund or a separate debt service reserve fund, and other miscellaneous costs necessary or desirable, in the judgment of the Treasurer, to be financed by such bonds.

(b) A sixtieth series of bonds to be issued under the Master Resolution is hereby created. Said bonds shall be known as the “Sacramento Municipal Utility District Electric Revenue Refunding Bonds, 2021 Series I” (herein called the “2021 Series I Bonds”). The 2021 Series I Bonds may be issued in one or more series or subseries (as specified in the hereinafter defined Sales Certificate) only in fully registered form. The 2021 Series I Bonds shall be initially registered in the name of “Cede & Co.,” as nominee of The Depository Trust Company (“DTC”) and shall be numbered in consecutive order in such manner as is determined by the Trustee. Registered ownership of the 2021 Series I Bonds, or any portion thereof, may not thereafter be transferred except as set forth in Section 137.08.

(c) The 2021 Series I Bonds shall be issued in such aggregate principal amount (not to exceed \$140,000,000), shall be dated, shall bear interest at such rate or rates (payable on such dates), not exceeding the maximum rate permitted by law, shall mature and become payable as to principal on such maturity dates in the amounts and subject to such mandatory sinking fund payments on such mandatory sinking fund payment dates, if any, all as

set forth in a Sales Certificate to be executed and delivered concurrently with the sale of the 2021 Series I Bonds (the "Sales Certificate"). If all or any portion of the 2021 Series I Bonds are to bear interest at variable rates of interest, not exceeding the maximum rate permitted by law, the manner of determining such variable rates of interest shall be as set forth in the Sales Certificate. In addition to the provisions required pursuant to the terms of this Resolution to be specified in the Sales Certificate, the Chief Executive Officer and General Manager of the District, any Member of the Executive Committee of the District, the Treasurer of the District, the Secretary of the District, or the Chief Financial Officer of the District or the designee of any of them (each an "Authorized Officer"), on behalf of the District, may set forth in the Sales Certificate such provisions, in a form approved by its bond counsel and the District's counsel, as he or she may deem necessary or desirable and consistent with the purpose of this Resolution, including provisions (i) adding additional covenants and agreements to be observed by the District, (ii) curing, correcting, amending or supplementing any ambiguous, defective or ineffective provision contained in the Resolution, or (iii) amending or supplementing any provision contained herein to the extent necessary to obtain one or more bond insurance policies, to obtain a rating on any of the 2021 Series I Bonds, or to provide for the issuance of any of the 2021 Series I Bonds if, in the judgment of any Authorized Officer, after consulting with its financial advisor, bond counsel and District counsel, such insurance, rating or provision is reasonable. Any Authorized Officer, acting alone, is hereby authorized and instructed to execute and deliver the Sales Certificate and, upon execution and delivery thereof, the Sales Certificate shall be incorporated herein and in the Master Resolution by reference. The execution and delivery of the Sales Certificate shall be conclusive evidence that, where any judgment or determination of reasonableness is required to be made by the person signing said Sales Certificate, such judgment or determination has been made.

(d) Notwithstanding the foregoing, the Sales Certificate shall not specify (i) a true interest cost on all 2021 Series I Bonds bearing interest at fixed rates of interest in excess of 3.00%; or (ii) a maturity date for any 2021 Series I Bond later than forty (40) years after the dated date of such 2021 Series I Bond.

(e) Interest on the 2021 Series I Bonds shall be calculated on the basis and be payable on the dates set forth in the Sales Certificate, to the registered owners thereof as of the record dates specified in the Sales Certificate.

(f) Pursuant to Section 5.04 of the Master Resolution, the Sales Certificate shall specify whether the 2021 Series I Bonds or either series thereof are to be secured by (A) the Reserve Fund, (B) a separate debt service reserve fund, or (C) neither (A) nor (B). If the Sales Certificate provides that the 2021 Series I Bonds or either series thereof are to be secured by a separate debt service reserve fund, such Sales Certificate may provide for the creation of such funds or accounts in furtherance thereof as may be deemed appropriate in the Treasurer's discretion, and such funds or accounts shall be held in trust by the District or the Trustee, as specified in the Sales Certificate, solely for the benefit of the Holders of the 2021 Series I Bonds or applicable series thereof, and is hereby pledged solely to the payment of the 2021 Series I Bonds or applicable series thereof, subject to the application thereof for the purposes set forth in the Sales Certificate. If a separate debt service reserve fund is so created, the Sales Certificate may further specify such other terms and provision relating thereto, as in the Treasurer's discretion are appropriate, including, without implied limitation, the minimum balance required

to be maintained on deposit therein, the purposes for which moneys on deposit therein may or shall be applied, the terms on which any deficiencies therein are to be replenished, additional limitations concerning investment of moneys therein and the valuation thereof, and provisions concerning the deposit of credit instruments in lieu of cash therein.

(g) The Sales Certificate shall designate the series, amounts and maturity or sinking fund payment dates of the Refunded Bonds.

Section 137.02 Redemption of 2021 Series I Bonds. The 2021 Series I Bonds shall be subject to redemption on the terms set forth below and in the Sales Certificate (which may specify that some or all of the 2021 Series I Bonds will not be subject to redemption).

(a) Notice of Redemption. If any of the 2021 Series I Bonds are subject to redemption, then in addition to the notice of redemption required to be given pursuant to Article IV of the Master Resolution, the Trustee shall mail, by first class mail, postage prepaid, notice of redemption of any 2021 Series I Bond to the Securities Depositories. Failure of the Trustee to give notice of redemption to any Securities Depository, or any defect therein, however, shall not affect the sufficiency of the proceedings of redemption with respect to any 2021 Series I Bond. For purposes of this paragraph, the following term shall have the following meaning:

“Securities Depositories” means DTC, 55 Water Street, 50th Floor, New York, N.Y. 10041-0099 Attn. Call Notification Department, Fax (212) 855-7232; or, in accordance with the current guidelines of the Securities and Exchange Commission, to such other address and/or such other securities depositories as the District may designate to the Trustee in writing.

Notwithstanding any contrary provision of Article IV of the Master Resolution or this Sixty-Fourth Supplemental Resolution, (1) publication of any notice of redemption shall not be required with respect to the 2021 Series I Bonds, so long as such 2021 Series I Bonds are in full book-entry form, (2) any notice of redemption of the 2021 Series I Bonds shall be mailed not less than twenty (20) nor more than sixty (60) days prior to the redemption date, and (3) any notice of optional redemption may be made conditional on the receipt of money or any other condition.

(b) Redemption Otherwise Subject to Article IV. Except as in this Section and in the Sales Certificate otherwise provided, the redemption of 2021 Series I Bonds shall be subject to the provisions of Article IV of the Master Resolution.

Section 137.03 Deposits to Interest Fund and Principal Account. Notwithstanding any contrary provision of the Resolution, the Treasurer, out of Net Revenues received by the District, shall set aside in the Interest Fund and the Principal Account, respectively, such amounts as may be required so that an amount equal to the amount of principal and/or interest becoming due and payable on the 2021 Series I Bonds on each interest payment date and principal payment date is on deposit in the Interest Fund and the Principal Account, respectively, at such time on or prior to such interest payment date or principal payment date as shall be specified in the Sales Certificate.

Section 137.04 2021 Series I Sinking Fund.

(a) An account is hereby established within the Sinking Fund created by Section 5.02 of the Master Resolution to be designated the “2021 Series I Sinking Fund.” On or before each minimum sinking fund payment date for any 2021 Series I Bonds set forth in the Sales Certificate, the Treasurer shall deposit in the 2021 Series I Sinking Fund, out of Net Revenues received by the District, such amounts as may be required to cause the balance therein to be equal to the amount of the minimum sinking fund payment due and payable on the 2021 Series I Bonds on such minimum sinking fund payment date as set forth in the Sales Certificate.

(b) The District shall apply all such minimum sinking fund payments, as rapidly as practicable, to the purchase of 2021 Series I Bonds at public or private sale, as and when and at such prices (including brokerage and other expenses, but excluding accrued interest, which is payable from the Interest Fund) as the District may in its discretion determine.

(c) If on the first day of the month preceding the month in which a minimum sinking fund payment date occurs, as set forth in the Sales Certificate, the moneys in the 2021 Series I Sinking Fund equal or exceed \$25,000, such moneys shall be applied by the District to the redemption on such minimum sinking fund payment date of as many 2021 Series I Bonds as such moneys in the 2021 Series I Sinking Fund shall suffice to redeem at a redemption price equal to the principal amount thereof (except that accrued interest on such 2021 Series I Bonds so called for redemption shall be paid from the Interest Fund). All 2021 Series I Bonds purchased or redeemed under the provisions of this Section shall be delivered to, and canceled by, the Trustee and shall not be reissued.

(d) No application of any moneys to the retirement of 2021 Series I Bonds shall operate to impair or affect the obligation of the District to make minimum sinking fund payments for 2021 Series I Bonds in the amounts and at the times provided in this Section; however, the District shall not be deemed to be in default with respect to any 2021 Series I Bonds minimum sinking fund payment for any minimum sinking fund payment date if at all times prior to such minimum sinking fund payment date the District shall have fixed rates and charges as required by Section 6.08 of the Master Resolution, and if at such minimum sinking fund payment date the aggregate principal amount of all 2021 Series I Bonds theretofore purchased or redeemed through the operation of the 2021 Series I Sinking Fund or otherwise (together with any moneys then in the 2021 Series I Sinking Fund) equals or exceeds the aggregate amount of minimum sinking fund payments for 2021 Series I Bonds then and theretofore required to be made pursuant to this Section.

(e) Any moneys remaining in the 2021 Series I Sinking Fund after all 2021 Series I Bonds have been retired shall be returned to the District for any lawful District use.

Section 137.05 Form of 2021 Series I Bonds. The 2021 Series I Bonds, and the certificate of authentication and registration to be executed thereon, shall be in substantially the form set forth as Appendix A to this Sixty-Fourth Supplemental Resolution. The series or subseries designations, numbers, maturity dates, interest rates, redemption provisions and other terms of the 2021 Series I Bonds shall be inserted therein in conformity with the Sales Certificate.

Section 137.06 Issuance of 2021 Series I Bonds.

(a) At any time after the adoption of this Sixty-Fourth Supplemental Resolution and the execution and delivery of the Sales Certificate, the District may execute and deliver the 2021 Series I Bonds in the aggregate principal amount set forth in the Sales Certificate, but not to exceed the aggregate principal amount described in Section 137.01(c).

(b) The Trustee shall authenticate and deliver the 2021 Series I Bonds upon written order of the District.

(c) The proceeds of the sale of the 2021 Series I Bonds shall be set aside and applied by the Treasurer as set forth in the Sales Certificate.

Section 137.07 Refunding of 2021 Series I Bonds. If Refunding Bonds are issued for the purpose of refunding 2021 Series I Bonds, then, in addition to any other provisions of Section 3.05 of the Master Resolution, the District is authorized to apply proceeds of the sale of such Refunding Bonds to the payment of the purchase price of direct non-callable obligations of the United States of America ("Treasury Obligations") to be held by the Trustee to insure the payment or retirement at or before maturity of all or a portion of the outstanding 2021 Series I Bonds. Upon deposit with the Trustee, in trust, of money or Treasury Obligations (including, but not limited to, direct obligations of the United States of America issued in book-entry form on the books of the Department of the Treasury of the United States of America), or any combination thereof, sufficient, together with the interest to accrue on any such Treasury Obligations, to pay or redeem all or a portion of 2021 Series I Bonds then outstanding at or before their maturity date, provided that, in the case of 2021 Series I Bonds which are to be redeemed prior to maturity, notice of such redemption shall have been given as provided in Article IV of the Master Resolution or provision satisfactory to the Trustee shall have been made for the giving of such notice, all liability of the District in respect of such 2021 Series I Bonds shall cease, determine and be completely discharged, and the holders thereof shall thereafter be entitled only to payment by the District out of the money and Treasury Obligations deposited with the Trustee as aforesaid for their payment, subject, however, to the provisions of Section 10.03 of the Master Resolution. If the liability of the District shall cease and determine with respect to all or a portion of the 2021 Series I Bonds as above provided, then said 2021 Series I Bonds shall not be considered to be outstanding Bonds for any purpose of the Master Resolution or of this Sixty-Fourth Supplemental Resolution.

Section 137.08 Use of Depository. Notwithstanding any provision of the Master Resolution or this Sixty-Fourth Supplemental Resolution to the contrary:

(a) The 2021 Series I Bonds shall be initially issued as provided in Section 137.01. Registered ownership of the 2021 Series I Bonds, or any portion thereof, may not thereafter be transferred except:

(i) To any successor of DTC or its nominee, or to any substitute depository designated pursuant to clause (ii) of this subsection (a) ("substitute depository"); provided that any successor of DTC or substitute depository shall be qualified under any applicable laws to provide the service proposed to be provided by it;

(ii) To any substitute depository not objected to by the Trustee, upon (1) the resignation of DTC or its successor (or any substitute depository or its successor) from its functions as depository or (2) a determination by the District that DTC or its successor (or any substitute depository or its successor) is no longer able to carry out its functions as depository; provided that any such substitute depository shall be qualified under any applicable laws to provide the services proposed to be provided by it; or

(iii) To any person as provided below, upon (1) the resignation of DTC or its successor (or substitute depository or its successor) from its functions as depository; provided that no substitute depository which is not objected to by the Trustee can be obtained or (2) a determination by the District that it is in the best interests of the District to remove DTC or its successor (or any substitute depository or its successor) from its functions as depository.

(b) In the case of any transfer pursuant to clause (i) or clause (ii) of Section 137.08(a) hereof, upon receipt of all outstanding 2021 Series I Bonds by the Trustee, together with a Certificate of the District to the Trustee, a single new 2021 Series I Bond shall be executed and delivered for each maturity of each series of 2021 Series I Bonds then outstanding registered in the name of such successor or such substitute depository, or their nominees, as the case may be, all as specified in such Certificate of the District. In the case of any transfer pursuant to clause (iii) of Section 137.08(a) hereof, upon receipt of all outstanding 2021 Series I Bonds by the Trustee together with a Certificate of the District to the Trustee, new 2021 Series I Bonds shall be executed, authenticated and delivered in such denominations and registered in the names of such persons as are requested in such a Certificate of the District, subject to the limitations of Section 137.08(a) hereof, provided the Trustee shall not be required to deliver such new 2021 Series I Bonds within a period less than 60 days from the date of receipt of such a Certificate of the District. Subsequent to any transfer pursuant to clause (iii) of Section 137.08(a) hereof, the 2021 Series I Bonds shall be transferred as provided in Article II of the Master Resolution.

(c) In the case of partial redemption or refunding of the 2021 Series I Bonds of a series evidencing all or a portion of the principal maturing in a particular year, DTC shall make an appropriate notation on such 2021 Series I Bonds indicating the date and amounts of such reduction in principal. The Trustee shall incur no liability for the failure or any error by DTC in making such notation and the records of the Trustee shall be determinative of the outstanding principal amount of 2021 Series I Bonds.

(d) The District and the Trustee shall be entitled to treat the person in whose name any 2021 Series I Bond is registered as the Bondholder thereof for all purposes of the Master Resolution and any applicable laws, notwithstanding any notice to the contrary received by the Trustee or the District; and the District and the Trustee shall have no responsibility for transmitting payments to, communicating with, notifying, or otherwise dealing with, any beneficial owners of the 2021 Series I Bonds. Neither the District nor the Trustee will have any responsibility or obligations, legal or otherwise, to the beneficial owners or to any other party including DTC or its successor (or substitute depository or its successor), except for the holder of any 2021 Series I Bond.

(e) So long as the outstanding 2021 Series I Bonds are registered in the name of Cede & Co. or its registered assigns, the District and the Trustee (to the extent funds are provided to it by the District) shall cooperate with Cede & Co., as sole registered Bondholder, and its registered assigns, in effecting payment of the principal of and redemption premium, if any, and interest on the 2021 Series I Bonds by arranging for payment in such manner that funds for such payments are properly identified and are made immediately available on the date they are due.

Section 137.09 Tax Covenants.

(a) The District shall at all times do and perform all acts and things permitted by law which are necessary or desirable in order to assure that interest paid on the 2021 Series I Bonds (or any of them) will be excluded from gross income for federal income tax purposes and shall take no action that would result in such interest not being excluded from gross income for federal income tax purposes. Without limiting the generality of the foregoing, the District agrees to comply with the provisions of the Tax Certificate of the District, dated the date of issuance of the 2021 Series I Bonds, as amended from time to time in accordance with its terms (the "Tax Certificate"). This covenant shall survive payment in full or defeasance of the 2021 Series I Bonds.

(b) Without limiting the generality of the foregoing, the District agrees that there shall be paid from time to time all amounts required to be rebated to the United States of America pursuant to Section 148(f) of the Internal Revenue Code of 1986 (the "Code") and any temporary, proposed or final United States Treasury Regulations as may be applicable to the 2021 Series I Bonds from time to time (the "Rebate Requirement"). The District specifically covenants to pay or cause to be paid the Rebate Requirement as provided in the Tax Certificate to the United States of America from any Net Revenues lawfully available to the District. This covenant shall survive payment in full or defeasance of the 2021 Series I Bonds. Capitalized terms in this Section not otherwise defined in the Master Resolution or this Sixty-Fourth Supplemental Resolution shall have the meanings ascribed to them in the Tax Certificate.

(c) Notwithstanding any provision of this Section, if the District shall obtain an opinion of counsel of recognized national standing in the field of obligations the interest on which is excluded from gross income for purposes of federal income taxation to the effect that any specified action required under this Section is no longer required, or to the effect that some different action is required, to maintain the exclusion from gross income of the interest on the 2021 Series I Bonds under Section 103 of the Code, the District may rely conclusively on such opinion in complying with the provisions hereof, and the agreements and covenants hereunder shall be deemed to be modified to that extent without the necessity of an amendment of the Master Resolution or this Sixty-Fourth Supplemental Resolution or the consent at any time of the Bondholders.

(d) This Section 137.09 shall be inapplicable to the 2021 Series I Bonds, if any, issued bearing interest included in gross income for federal income tax purposes, as set forth in the Sales Certificate.

Section 137.10 Terms of 2021 Series I Bonds Subject to the Master Resolution.

(a) Except as in this Sixty-Fourth Supplemental Resolution expressly provided, every term and condition contained in the Master Resolution shall apply to this Sixty-Fourth Supplemental Resolution and to the 2021 Series I Bonds with the same force and effect as if the same were herein set forth at length, with such omissions, variations and modifications thereof as may be appropriate to make the same conform to this Sixty-Fourth Supplemental Resolution.

(b) This Sixty-Fourth Supplemental Resolution and all the terms and provisions herein contained shall form part of the Master Resolution as fully and with the same effect as if all such terms and provisions had been set forth in the Master Resolution. The Master Resolution is hereby ratified and confirmed and shall continue in full force and effect in accordance with the terms and provisions thereof, as supplemented and amended hereby.

Section 137.11 Continuing Disclosure. The District hereby covenants and agrees that it will comply with and carry out all of the provisions of the Continuing Disclosure Agreement dated the date of issuance of the 2021 Series I Bonds (the “Continuing Disclosure Agreement”). Notwithstanding any other provision of the Master Resolution or this Sixty-Fourth Supplemental Resolution, failure of the District or the Trustee to comply with the Continuing Disclosure Agreement shall not be considered an Event of Default; however, the Trustee shall, at the written request of any Participating Underwriter (as defined in the Continuing Disclosure Agreement) or the Holders of at least 25% aggregate principal amount of outstanding 2021 Series I Bonds upon receipt of indemnity satisfactory to the Trustee or any Holder of 2021 Series I Bonds or Beneficial Owner may take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the District to comply with its obligations under this Section. For purposes of this Section, “Beneficial Owner” means any person which has or shares the power, directly or indirectly, to make investment decisions concerning ownership of any 2021 Series I Bonds (including persons holding 2021 Series I Bonds through nominees, depositories or other intermediaries).

ARTICLE CXXXVIII

INSURANCE PROVISIONS

Section 138.01 Insurance Agreements. Each Insurance Agreement, if any, is hereby incorporated in this Sixty-Fourth Supplemental Resolution by this reference, and the District covenants and agrees to comply with the terms and conditions thereof. The District further declares, covenants and agrees that the terms and conditions of each Insurance Agreement, if any, shall govern, with respect to the applicable 2021 Series I Bonds, the rights and responsibilities of the District, the Trustee, the applicable Bond Insurer and the holders of the applicable 2021 Series I Bonds, to the extent such terms and conditions may be inconsistent with any other provision of the Master Resolution, as amended and supplemented, including as supplemented by this Sixty-Fourth Supplemental Resolution.

ARTICLE CXXXIX

AMENDMENT OF MASTER RESOLUTION

Section 139.01 Amendment of Master Resolution. The District intends to amend the Master Resolution substantially in the form of Appendix B to this Sixty-Fourth Supplemental Resolution (the “Proposed Amendments”). The purchasers of the 2021 Series I Bonds, by virtue of their purchase of the 2021 Series I Bonds, have consented to the Proposed Amendments. Pursuant to Section 8.03 of the Master Resolution, the Proposed Amendments shall become effective when the written consents of the holders and registered owners of 60% of the Bonds then outstanding have been filed with the District or the Trustee.

Approved: June 17, 2021

INTRODUCED: DIRECTOR KERTH				
SECONDED: DIRECTOR HERBER				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
BUI-THOMPSON	X			
ROSE	X			
FISHMAN	X			
HERBER	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

APPENDIX A
FORM OF BOND

No. R-_____

\$_____

**SACRAMENTO MUNICIPAL UTILITY DISTRICT
ELECTRIC REVENUE REFUNDING BOND
2021 SERIES I**

Maturity

Interest Per Annum

Date

CUSIP

REGISTERED OWNER: CEDE & CO.

PRINCIPAL AMOUNT:

SACRAMENTO MUNICIPAL UTILITY DISTRICT, a municipal utility district duly organized and existing under and pursuant to the laws of the State of California (hereinafter called the "District"), for value received, hereby promises to pay (but only out of the Net Revenues hereinafter referred to) to the registered owner named above or registered assigns, on the maturity date specified above, the principal sum specified above together with interest thereon from the date of initial delivery hereof, until the principal hereof shall have been paid, at the interest rate per annum specified above, payable on February 15 and August 15 of each year, commencing February 15, 2022. Interest hereon is payable in lawful money of the United States of America by check or draft mailed on each interest payment date to the registered owner as of the first day of the month (whether or not a business day) in which an interest payment date occurs. Interest hereon shall be calculated on the basis of a 360-day year consisting of twelve 30-day months. At the option of the owners of \$1,000,000 or more in aggregate principal amount of Bonds of this series, interest hereon is also payable in lawful money of the United States of America by wire transfer to such address as has been furnished to the Trustee in writing by the registered owner hereof at least 15 days prior to the interest payment date for which such payment by wire transfer is requested. The principal hereof is payable at the designated corporate trust office of U.S. Bank National Association, the Trustee, in lawful money of the United States of America.

This Bond is one of a duly authorized issue of Sacramento Municipal Utility District Electric Revenue Bonds (hereinafter called the "Bonds") of the series and designation indicated on the face hereof. Said authorized issue of Bonds is not limited in aggregate principal amount, except as otherwise provided in the Resolution hereinafter mentioned, and consists or may consist of one or more series of varying denominations, dates, maturities, interest rates and other provisions, as in said Resolution provided, all issued and to be issued pursuant to the provisions of the Revenue Bond Law of 1941 as made applicable by Article 6a of Chapter 6 of Division 6 of the California Public Utilities Code and Article 11 of Chapter 3 of Part 1 of Division 2 of Title 5 of the California Government Code (hereinafter called the "Act"). This

Bond is issued pursuant to a resolution of the Board of Directors of the District, adopted January 7, 1971, providing for the issuance of the Bonds, as amended and supplemented (the "Resolution"), including as amended and supplemented by a Sixty-Fourth Supplemental Resolution, adopted June 17, 2021, authorizing the issuance of the 2021 Series I Bonds. Reference is hereby made to the Resolution and the Act for a description of the terms on which the Bonds are issued and to be issued, the provisions with regard to the nature and extent of the Revenues, as that term is defined in the Resolution, and the rights of the registered owners of the Bonds; and all the terms of the Resolution and the Act are hereby incorporated herein and constitute a contract between the District and the registered owner from time to time of this Bond, and to all the provisions thereof the registered owner of this Bond, by its acceptance hereof, consents and agrees. Additional bonds may be issued on a parity with the Bonds of this authorized issue, but only subject to the conditions and limitations contained in the Resolution.

The Bonds and the interest thereon (to the extent set forth in the Resolution), together with the Parity Bonds (as defined in the Resolution) heretofore or hereafter issued by the District, and the interest thereon, are payable from, and are secured by a charge and lien on, the Net Revenues derived by the District from the Electric System (as those terms are defined in the Resolution). The District hereby covenants and warrants that for the payment of the Bonds and interest thereon, there have been created and will be maintained by the District special funds into which there shall be deposited from Net Revenues available for that purpose sums sufficient to pay the principal of, and interest on, all of the Bonds, as such principal and interest become due, and as an irrevocable charge the District has allocated Net Revenues to such payment, all in accordance with the Resolution.

The Bonds are special obligations of the District, and are payable, both as to principal and interest, out of the Net Revenues pertaining to the Electric System, and not out of any other fund or moneys of the District. No holder of this Bond shall ever have the right to compel any exercise of the taxing power of the District to pay this Bond or the interest hereon.

[The 2021 Series I Bonds are not subject to redemption.][**Redemption Terms to be Determined at Time of Sale and Conformed to Official Statement and Sales Certificate**]

This Bond is transferable by the registered owner hereof, in person or by the attorney of such owner duly authorized in writing, at the designated corporate trust office of the Trustee but only in the manner, subject to the limitations and upon payment of the charges provided in the Resolution, and upon surrender and cancellation of this Bond. Upon such transfer a new fully registered Bond or Bonds without coupons, of authorized denomination or denominations, for the same aggregate principal amount and maturity will be issued to the transferee in exchange herefor. No transfer of this Bond will be made during the 15 days next preceding each interest payment date.

The District, the Trustee and any paying agent may deem and treat the registered owner hereof as the absolute owner hereof for all purposes, and the District, the Trustee and any paying agent shall not be affected by any notice to the contrary.

The rights and obligations of the District and of the holders and registered owners of the Bonds may be modified or amended at any time in the manner, to the extent, and upon the

terms provided in the Resolution, provided that no such modification or amendment shall (i) extend the fixed maturity of any Bond, or reduce the principal amount thereof, or reduce the rate or extend the time of payment of interest thereon, or reduce the amount of any premium payable upon the redemption hereof, without the consent of the holder of each Bond so affected, or (ii) reduce the percentage of Bonds required for the affirmative vote or written consent to an amendment or modification, without the consent of the holders of all the Bonds then outstanding, or (iii) without its written consent thereto, modify any of the rights or obligations of the Trustee.

It is hereby certified and recited that any and all acts, conditions and things required to exist, to happen and to be performed, precedent to and in the incurring of the indebtedness evidenced by this Bond, and in the issuing of this Bond, do exist, have happened and have been performed in due time, form and manner, as required by the Constitution and statutes of the State of California, and that this Bond, together with all other indebtedness of the District pertaining to the Electric System, is within every debt and other limit prescribed by the Constitution and the statutes of the State of California, and is not in excess of the amount of Bonds permitted to be issued under the Resolution.

This Bond shall not be entitled to any benefit under the Resolution, or become valid or obligatory for any purpose, until the certificate of authentication hereon endorsed shall have been signed by the Trustee.

IN WITNESS WHEREOF, SACRAMENTO MUNICIPAL UTILITY DISTRICT has caused this Bond to be executed in its name and on its behalf by the facsimile signature of the President of its Board of Directors and by the facsimile signature of its Treasurer and countersigned by the facsimile signature of its Secretary, and the seal of the District to be reproduced hereon by facsimile, and this Bond to be dated as of the date first written above.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By _____
President of the Board of Directors

By _____
Treasurer of the District

(SEAL)

Countersigned:

Secretary of the District

CERTIFICATE OF AUTHENTICATION AND REGISTRATION

This is one of the Bonds described in the within-mentioned Resolution and registered on the date set forth below.

Dated: U.S. BANK NATIONAL ASSOCIATION,
as Trustee

By _____
Authorized Officer

ASSIGNMENT

For value received _____ hereby sell, assign and transfer unto _____ whose taxpayer identification number is _____ the within-mentioned Bond and hereby irrevocably constitute and appoint _____ attorney, to transfer the same on the books of the District at the office of the Trustee, with full power of substitution in the premises.

NOTE: The signature to this Assignment must correspond with the name on the face of the within Registered Bond in every particular, without alteration or enlargement or any change whatsoever.

Dated: _____

Signature Guaranteed by:

NOTE: Signature must be guaranteed by an eligible guarantor institution

APPENDIX B

FORM OF PROPOSED AMENDMENTS TO MASTER RESOLUTION

SACRAMENTO MUNICIPAL UTILITY DISTRICT

RESOLUTION NO. __-__-__

_____ SUPPLEMENTAL RESOLUTION

AMENDING RESOLUTION NO. 6649

(Supplemental to Resolution No. 6649
Adopted January 7, 1971)

Adopted: _____, 20__

RESOLUTION NO. __-__-__

**_____
Supplemental Resolution
(Supplemental to Resolution No. 6649,
Adopted January 7, 1971)
Amending Resolution No. 6649**

WHEREAS, the Board of Directors (the “Board”) of the Sacramento Municipal Utility District (the “District”), on January 7, 1971, adopted its Resolution No. 6649 (as previously supplemented and amended, herein called the “Master Resolution”) providing for the issuance of the District’s Electric Revenue Bonds (the “Bonds”);

WHEREAS, Section 8.03 of the Master Resolution provides that the District may amend the Master Resolution by a supplemental resolution to be effective when there shall have been filed with the District or the Trustee the written consents of the holders and registered owners of 60% of the Bonds then outstanding;

WHEREAS, the Board has determined to amend Sections 1.03, 3.02, 3.06, 5.04 and 6.08 of the Master Resolution, which amendments the Board deems necessary and desirable and not inconsistent with the Master Resolution;

WHEREAS, the District has obtained the consents of the holders and registered owners of 60% of the Bonds outstanding;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of Sacramento Municipal Utility District, as follows:

ARTICLE _____

AMENDMENT OF MASTER RESOLUTION

SECTION _____. Amendment of Section 1.03 of Master Resolution. A new definition of “Subsidy” shall be added to Section 1.03 of the Master Resolution in correct alphabetical order to read as follows:

‘Subsidy

“Subsidy” means any subsidy, reimbursement or other payment from the federal government of the United States of America under the American Recovery and Reinvestment Act of 2009 (or any similar legislation or regulation of the federal government of the United States of America or any other governmental entity or any extension of any of such legislation or regulation).’

SECTION _____. Amendment of Section 3.02 of Master Resolution. A new paragraph shall be added to the end of Section 3.02 of the Master Resolution to read as follows:

“For purposes of the calculations specified in this Section 3.02: (1) any calculation of principal of and interest on Parity Bonds for any period of time shall be reduced by the amount of any Subsidy that the District receives or expects to receive during such period of time relating to or in connection with such Parity Bonds; and (2) to the extent the calculation of principal of and interest on Parity Bonds is reduced by the Subsidy as provided in clause (1) of this paragraph, any calculation of Net Revenues for any period of time shall be reduced by the amount of any Subsidy received or expected to be received by the District with respect to or in connection with such Parity Bonds during such period of time.”

SECTION _____. Amendment of Section 3.06 of Master Resolution. A new paragraph shall be added to the end of Section 3.06 of the Master Resolution to read as follows:

“For purposes of the calculations specified in this Section 3.06: (1) any calculation of principal of and interest on Parity Bonds for any period of time shall be reduced by the amount of any Subsidy that the District receives or expects to receive during such period of time relating to or in connection with such Parity Bonds; and (2) to the extent the calculation of principal of and interest on Parity Bonds is reduced by the Subsidy as provided in clause (1) of this paragraph, any calculation of Net Revenues for any period of time shall be reduced by the amount of any Subsidy received or expected to be received by the District with respect to or in connection with such Parity Bonds during such period of time.”

SECTION _____. Amendment of Section 5.04 of Master Resolution. A new paragraph shall be added to the end of Section 5.04 of the Master Resolution to read as follows:

“For purposes of calculating the “debt service ratio” and, unless otherwise specified in a Supplemental Resolution providing for the issuance of a series of Parity Bonds, the amount required to be maintained in the Reserve Fund pursuant to this Section 5.04: (1) any calculation of principal of and interest on Parity Bonds for any period of time shall be reduced by the amount of any Subsidy that the District receives or expects to receive during such period of time relating to or in connection with such Parity Bonds; and (2) to the extent the calculation of principal of and interest on Parity Bonds is reduced by the Subsidy as provided in clause (1) of this paragraph, any calculation of Net Revenues for any period of time shall be reduced by the amount of any Subsidy received or expected to be received by the District with respect to or in connection with such Parity Bonds during such period of time.”

SECTION _____. Amendment of Section 6.08 of Master Resolution. A new paragraph shall be added to the end of Section 6.08 of the Master Resolution to read as follows:

“For purposes of the calculations specified in this Section 6.08: (1) any calculation of principal of and interest on Parity Bonds for any period of time shall be reduced by the amount of any Subsidy that the District receives or expects to receive during such period of time relating to or in connection with such Parity Bonds; and (2) to the extent the calculation of principal of and interest on Parity Bonds is reduced by the Subsidy as provided in clause (1) of this paragraph, any calculation of Revenues for any period of time shall be reduced by the amount of any Subsidy received or expected to be received by the District with respect to or in connection with such Parity Bonds during such period of time.”

Adopted: _____, 20__

INTRODUCED BY DIRECTOR				
SECONDED BY DIRECTOR				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT

**RESOLUTION NO. 21-06-10 OF
THE BOARD OF DIRECTORS OF
SACRAMENTO MUNICIPAL UTILITY DISTRICT
AUTHORIZING THE EXECUTION AND DELIVERY OF ONE OR MORE
CONTRACTS OF PURCHASE, OFFICIAL STATEMENTS AND CONTINUING
DISCLOSURE AGREEMENTS, DISTRIBUTION OF OFFICIAL STATEMENTS, AND
CERTAIN OTHER ACTIONS RELATING TO THE ISSUANCE AND SALE OF ONE
OR MORE SUBSERIES OF THE DISTRICT'S ELECTRIC REVENUE REFUNDING
BONDS, 2021 SERIES I, THE REFUNDING OF ALL OR A PORTION OF ONE OR
MORE SERIES OF THE DISTRICT'S ELECTRIC REVENUE BONDS, THE
TERMINATION OF ONE OR MORE INTEREST RATE SWAP AGREEMENTS AND
CERTAIN OTHER MATTERS RELATING THERETO**

BE IT RESOLVED, by the Board of Directors of the Sacramento Municipal Utility District (the "District"), as follows:

Section 1. Sale of Bonds. The District's Electric Revenue Refunding Bonds, 2021 Series I (the "Bonds"), in one or more subseries, shall be sold to the underwriters thereof in a negotiated sale at the prices and otherwise upon the terms and conditions determined on the sale date by the Chief Executive Officer and General Manager, any Member of the Executive Committee, the Treasurer, the Secretary or the Chief Financial Officer or the designee of any such officer (each an "Authorized Officer"), as specified in a Sales Certificate relating to the Bonds (the "Sales Certificate") authorized under the supplemental resolution authorizing the issuance of the Bonds adopted by the Board of Directors of the District on the date hereof.

Section 2. Contract of Purchase. The form of Contract of Purchase with respect to the Bonds (the "Contract of Purchase") between the District and the underwriters named therein (the "Underwriters"), in the form submitted to this meeting is hereby approved. Any Authorized Officer, acting alone, is authorized and directed to execute and deliver one or more Contracts of Purchase in substantially such form for the Bonds or any subseries thereof on behalf of the District, subject to such additions thereto and changes therein as any Authorized Officer shall approve after consultation with the District's counsel (such approval to be conclusively evidenced by the execution of such Contracts of Purchase).

Section 3. Official Statement. The Official Statement of the District relating to the Bonds (the "Official Statement") in substantially the form submitted to this meeting is hereby approved. Any Authorized Officer, acting alone, is authorized and directed to execute and deliver the Official Statement relating to the Bonds in substantially such form on behalf of the District, subject to such additions thereto and changes therein as any Authorized Officer shall approve after consultation with the District's counsel and subject to such further changes as may be consistent with the Sales Certificate (such approval to be conclusively evidenced by the execution of such Official Statements). The Underwriters are authorized to distribute the Official Statement in preliminary form to persons who may be interested in the purchase of the Bonds and the Official Statement in final form to purchasers of the Bonds.

Section 4. Continuing Disclosure Agreement. The form of Continuing Disclosure Agreement relating to the Bonds between the District and U.S. Bank National Association, as dissemination agent (the “Continuing Disclosure Agreement”) in the form attached to the Official Statement submitted to this meeting is hereby approved. Any Authorized Officer, acting alone, is authorized and directed to execute and deliver the Continuing Disclosure Agreement in substantially such form on behalf of the District, subject to such additions thereto and changes therein as any Authorized Officer shall approve after consultation with the District’s counsel (such approval to be conclusively evidenced by the execution of such Continuing Disclosure Agreements).

Section 5. Bond Insurance. Any Authorized Officer, acting alone, is hereby authorized to do any and all things and to negotiate, execute, deliver, and perform any and all agreements and documents which they deem necessary or advisable in order to procure bond insurance for all or any portion of the Bonds including without limitation one or more commitments for a bond insurance policy and one or more insurance agreements; provided that such insurance and such agreements and documents are determined by any Authorized Officer to be reasonable under the circumstances and to be consistent with the provisions and intent of this resolution. The power to make such determination is hereby delegated to each Authorized Officer and shall be conclusively evidenced by the execution and delivery of the insurance agreements and insurance commitments. Any actions heretofore taken by any Authorized Officer in furtherance of this Section are hereby ratified, confirmed and approved.

Section 6. Termination of Interest Rate Swap Agreement. The District previously entered into an interest rate swap agreement (the “Interest Rate Swap”) to hedge potential interest rate exposure relating to the refunding of its Electric Revenue Bonds anticipated to be refunded by the Bonds (the “Refunded Bonds”). Any Authorized Officer, acting alone, is hereby authorized to do any and all things and to negotiate, execute, deliver, and perform any and all agreements and documents which they deem necessary or advisable in order to terminate all or a portion of the Interest Rate Swap in connection with the issuance of the Bonds and the refunding of the Refunded Bonds. In the event that the Interest Rate Swap is terminated on the condition that the issuance of the Bonds has occurred (or will occur simultaneously with the settlement of the Interest Rate Swap termination) and/or the Refunded Bonds have been refunded (or will be refunded simultaneously with the settlement of the Interest Rate Swap termination) and such issuance and/or refunding does not occur, then any Authorized Officer, acting alone, is hereby authorized to do any and all things and to negotiate, execute, deliver, and perform any and all agreements and documents which they deem necessary or advisable in order to reinstate all or a portion of the terminated Interest Rate Swap; this authorization shall include, but not be limited to, adjusting any fixed rate specified in the Interest Rate Swap in connection with the reinstatement of all or a portion of the terminated Interest Rate Swap.

In the event that all or a portion of the Interest Rate Swap is reinstated and/or adjusted as described above, the Board of Directors of the District hereby finds and determines, pursuant to Section 5922 of the California Government Code, that due consideration has been given for the creditworthiness of the counterparty to such Interest Rate Swap, including any related guarantee of, or other credit support for, the obligations of such counterparty, if applicable, and that the Interest Rate Swap is designed to reduce the amount or duration of rate, spread or similar risk or

result in a lower cost of borrowing when used in combination with the issuance of the Bonds, the Refunded Bonds, and/or one or more series of other revenue bonds to be issued by the District in the future for the purpose of refunding all or a portion of the Refunded Bonds. To the extent that the Interest Rate Swap so reinstated and/or adjusted as described above is inconsistent or in conflict with the District's Resolution No. 99-12-14, adopted on December 16, 1999 (the "Swap Policy") or any other swap policies of the District, the inconsistent or conflicting provisions of the Swap Policy or such other swap policies of the District are hereby waived and shall not be applicable to the Interest Rate Swap reinstated and/or adjusted as described above.

Section 7. Other Related Actions. The Authorized Officers and other officers of the District are hereby authorized and directed to do any and all things and to negotiate, execute, deliver and perform any and all agreements and documents (including one or more escrow agreements for the purpose of refunding outstanding bonds) which they deem necessary or advisable in order to consummate the issuance, sale and delivery of the Bonds, to provide for credit enhancement of the Bonds, and to effectuate the purposes of this resolution and the transactions contemplated hereby and that any actions heretofore taken and any agreements and documents heretofore executed and delivered by the officers of the District to consummate the issuance, sale and delivery of the Bonds, to provide for credit enhancement of the Bonds, and to effect the purpose of these resolutions and the transactions contemplated thereby are hereby ratified and confirmed.

Approved: June 17, 2021

INTRODUCED: DIRECTOR KERTH				
SECONDED: DIRECTOR HERBER				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
BUI-THOMPSON	X			
ROSE	X			
FISHMAN	X			
HERBER	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

**SACRAMENTO MUNICIPAL UTILITY DISTRICT
\$[PAR] Electric Revenue Refunding Bonds, 2021 Series I**

CONTRACT OF PURCHASE

[SALE DATE]

Honorable Board of Directors
Sacramento Municipal Utility District
6201 S Street
Sacramento, California 95817-1899

Dear Directors:

The undersigned Goldman, Sachs & Co. LLC, BofA Securities, Inc., Barclays Capital Inc., Citigroup Global Markets Inc., JP Morgan Securities LLC, and Morgan Stanley & Co. LLC (herein collectively called the “Underwriters”), acting for and on behalf of themselves, offer to enter into this Contract of Purchase (the “Contract of Purchase”) with the Sacramento Municipal Utility District (the “District”) which, upon the District’s acceptance, will be binding upon the District and upon the Underwriters. Goldman, Sachs & Co. LLC, has been duly authorized to execute this Contract of Purchase and to act hereunder by and based on representations made to it under an Agreement Among Underwriters dated _____, 2021 on behalf of the Underwriters as the Senior Managing Underwriter (the “Senior Underwriter”). This offer is made subject to the District’s acceptance on or before 5:00 p.m., Sacramento time, on the date hereof, and if not so accepted, will be subject to withdrawal by the Underwriters upon notice delivered to the District at any time prior to the acceptance hereof by the District.

1. Purchase, Sale and Delivery of the Bonds. (a) Subject to the terms and conditions and in reliance upon the representations, warranties and agreements herein set forth, the Underwriters, jointly and severally, hereby agree to purchase from the District, and the District hereby agrees to sell to the Underwriters, all (but not less than all) of the \$[PAR] aggregate principal amount of the Sacramento Municipal Utility District Electric Revenue Refunding Bonds, 2021 Series I (the “Bonds”), dated [CLOSING DATE], bearing interest (payable on the dates set forth in the Official Statement (as hereinafter defined) of the District relating to the Bonds) in each year until maturity or earlier redemption at the rates per annum and maturing on the dates and in the amounts set forth in the Official Statement. The purchase price for the Bonds shall be

\$(PURCHASE PRICE) (consisting of the principal amount of the Bonds of \$(PAR) plus [net] original issue premium of \$(OIP) and minus an Underwriters' discount of \$(UWD)).

(b) The Bonds shall be substantially in the form described in, shall be issued and secured under the provisions of, and shall be payable as provided in, Resolution No. 6649, adopted by the Board of Directors of the District on January 7, 1971 (the "Master Resolution"), as heretofore amended and supplemented, including the amendments and supplements thereto made by Resolution No. [RESO NO.], adopted by the Board of Directors on [RESO DATE] (the "Sixty-Fourth Supplemental Resolution"). The Master Resolution, as supplemented and amended as described in this Contract of Purchase, is herein called the "Resolution." The Bonds are authorized to be issued pursuant to applicable California law, including the Municipal Utility District Act (Sections 12850 to 12860 of the Public Utilities Code), the Revenue Bond Law of 1941 (Government Code Section 54300 *et seq.*), Article 11 of Chapter 3 of Part 1 of Division 2 of Title 5 of the California Government Code (section 53580 *et seq.*) and the Resolution. The Bonds will be special obligations of the District payable exclusively from, and are secured by a pledge (effected in the manner and to the extent provided in the Resolution) of, the Net Revenues (as defined in the Resolution). The Bonds shall be payable and shall be subject to redemption as provided in the Resolution.

(c) The Bonds are being issued to (i) refund the Refunded Bonds (as defined in the Official Statement), and (ii) pay certain costs associated with the issuance of the Bonds. [A portion of] the proceeds of the Bonds, together with other available funds, will be deposited in an escrow fund established pursuant to an escrow agreement (the "Escrow Agreement") between the District and the Trustee, in its capacity as Escrow Agent (in such capacity, the "Escrow Agent").

(d) The District has heretofore delivered to the Underwriters copies of the Preliminary Official Statement dated [POS DATE], relating to the Bonds (the "Preliminary Official Statement") in connection with the public offering of the Bonds. The Preliminary Official Statement was deemed final by the District as of the date thereof in accordance with paragraph (b)(1) of Rule 15c2-12 of the Securities and Exchange Commission ("Rule 15c2-12"), except for the information not required to be included therein under Rule 15c2-12.

(e) The District shall prepare and deliver to the Underwriters, as promptly as practicable, but in any event not later than two business days prior to the Closing Date (as defined below) or seven business days from the date hereof, a final official statement, with such changes and amendments as may be agreed to by the Underwriters, in such quantities as the Underwriters may reasonably request in order to comply with paragraph (b)(4) of Rule 15c2-12 and the rules of the Municipal Securities Rulemaking Board ("MSRB") (such official statement, including the cover page and Appendices thereto, as the same may be supplemented or amended pursuant to paragraph (i) of Section 2 hereof, is herein referred to as the "Official Statement"). In addition, the District will provide, subject to customary disclaimers regarding the transmission of electronic copies, an electronic copy of the final Official Statement to the Underwriters in the currently required designated electronic format stated in MSRB Rule G-32 and the EMMA Dataport Manual (as defined below). The parties agree that the format in which the Preliminary Official Statement was delivered meets such electronic format requirements.

(f) Within one (1) business day after receipt of the Official Statement from the District, but by no later than the Closing Date, the Underwriters shall, at their own expense submit the Official Statement to EMMA (as defined below). The Underwriters will comply with the provisions of MSRB Rule G-32, including without limitation the submission of Form G-32 and the Official Statement and notify the District of the date on which the Official Statement has been filed with EMMA.

“EMMA” means the MSRB’s Electronic Municipal Market Access system, or any other electronic municipal securities information access system designated by the MSRB for collecting and disseminating primary offering documents and information.

“EMMA Dataport Manual” means the document(s) designated as such published by the MSRB from time to time setting forth the processes and procedures with respect to submissions to be made to the primary market disclosure service of EMMA by underwriters under Rule G-32(b).

(g) The District hereby ratifies, confirms and approves the use and distribution by the Underwriters prior to the date hereof of the Preliminary Official Statement and hereby authorizes the Underwriters to use and distribute the Official Statement, the Resolution, and this Contract of Purchase, and all information contained in each, and all other documents, certificates and statements furnished by the District to the Underwriters in connection with the transactions contemplated by this Contract of Purchase, in connection with the offer and sale of the Bonds.

The District will covenant pursuant to a Continuing Disclosure Agreement dated as of the date of the issuance of the Bonds (the “Undertaking”), between the District and U.S. Bank National Association (the “Trustee”), to provide annual reports and certain notices as described in Appendix F of the Official Statement.

(h) The District agrees and acknowledges that: (i) the purchase and sale of the Bonds pursuant to this Contract of Purchase is an arm’s-length commercial transaction between the District and the Underwriters, (ii) in connection therewith and with the discussions, undertakings and procedures leading up to the consummation of such transaction, the Underwriters are and have been acting solely as principals and are not acting as the agents or fiduciaries of the District, (iii) the Underwriters have not assumed an advisory or fiduciary responsibility in favor of the District with respect to the offering contemplated hereby or the discussions, undertakings and procedures leading thereto (irrespective of whether the Underwriters have provided other services or are currently providing other services to the District on other matters) and the Underwriters have no contractual obligation to the District with respect to the offering contemplated hereby except the contractual obligations expressly set forth in this Contract of Purchase and (iv) it has consulted its own legal, financial and other advisors to the extent it has deemed appropriate.

(i) At 8:00 A.M., Sacramento time, on [CLOSING DATE] or at such earlier or later time or date as shall be agreed upon by the Underwriters and the District (such time and date being herein referred to as the “Closing Date”), the District will deliver the Bonds to The Depository Trust Company, New York, New York (“DTC”), for the account of the Underwriters, duly executed by the District, and the other documents herein mentioned; and the Underwriters will (i) accept such delivery and pay the purchase price of the Bonds as set forth in paragraph (a) of this Section by wire transfer in San Francisco, California to the order of the District. Delivery

of the documents herein mentioned shall be made at the offices of Orrick, Herrington & Sutcliffe LLP, 400 Capitol Mall, Suite 3000, Sacramento, California 95814, or such other place as shall have been mutually agreed upon by the District and the Underwriters, except that the Bonds shall be delivered at the offices of DTC in New York, New York or at such other place and in such manner as shall have been mutually agreed upon by the District and the Underwriters.

The Bonds shall be issued initially in fully registered book-entry eligible form (which may be typewritten) in the form of a single registered bond for each maturity of the Bonds, shall bear CUSIP numbers and shall be registered in the name of Cede & Co., as nominee of DTC.

2. Representations, Warranties and Agreements of the District. The District hereby represents, warrants to and agrees with the Underwriters that:

(a) The District is a political subdivision of the State of California duly organized and validly existing pursuant to the Municipal Utility District Act as contained in Public Utilities Code Section 11501 *et seq.* (the “Act”) and has, and at the Closing Date will have, full legal right, power and authority (i) to enter into this Contract of Purchase, the Escrow Agreement, and the Undertaking, (ii) to adopt the Resolution, (iii) to pledge the Net Revenues as set forth in the Resolution, (iv) to issue, sell and deliver the Bonds to the Underwriters pursuant to the Resolution as provided herein, (v) to acquire, construct, operate, maintain, improve and finance and refinance its Electric System (as defined in the Resolution) and conduct the business thereof as set forth in and contemplated by the Preliminary Official Statement and the Official Statement, and (vi) to carry out, give effect to and consummate the transactions contemplated by this Contract of Purchase, the Escrow Agreement, the Undertaking, the Resolution, and the Preliminary Official Statement and the Official Statement;

(b) The District has complied, and will at the Closing Date be in compliance, in all material respects, with the Act, the Resolution, and with the obligations in connection with the issuance of the Bonds on its part contained in the Resolution, the Escrow Agreement, the Bonds, the Act, the Undertaking and this Contract of Purchase;

(c) The District has duly and validly adopted the Resolution, has duly authorized and approved the execution and delivery of the Bonds, this Contract of Purchase, the Escrow Agreement, the Undertaking and the Official Statement and has duly authorized and approved the performance by the District of its obligations contained in, and the taking of any and all action as may be necessary to carry out, give effect to and consummate the transactions contemplated by, each of said documents and, at the Closing Date, the Bonds will have been validly issued and delivered, the Resolution, the Escrow Agreement, the Undertaking and this Contract of Purchase will constitute the valid, legal and binding obligations of the District enforceable in accordance with their respective terms (subject to the effect of, and restrictions and limitations imposed by or resulting from, (i) bankruptcy, insolvency, debt adjustment, moratorium, reorganization or other similar laws affecting creditors’ rights, and (ii) judicial discretion) and the Resolution will be in full force and effect;

(d) The District is not in breach of or in default under any existing constitutional provision, applicable law or administrative rule or regulation of the State of California, the United States of America, or of any department, division, agency or instrumentality of either or any

applicable court or administrative decree or order, or any loan agreement, bond, note, ordinance, resolution, indenture, contract, agreement or other instrument to which the District is a party or to which the District is otherwise subject or bound which in any material way, directly or indirectly, affects the issuance of the Bonds or the validity thereof, the validity or adoption of the Resolution or the execution and delivery of the Bonds, this Contract of Purchase, the Escrow Agreement, the Undertaking or the other instruments contemplated by any of such documents to which the District is a party, and the adoption of the Resolution and compliance with the provisions of each will not, as of the date hereof and as of the Closing Date, conflict with or constitute a breach of or default in any material way under any existing constitutional provision, applicable law or administrative rule or regulation of the State of California, the United States, or of any department, division, agency or instrumentality of either or any applicable court or administrative judgment, decree or order, or any loan agreement, bond, note, ordinance, resolution, indenture, contract, agreement or other instrument to which the District is a party or to which the District or any of the property or assets of the Electric System (as defined in the Resolution) are otherwise subject or bound, and no event which would have a material and adverse effect upon the financial condition of the District has occurred and is continuing which constitutes or with the passage of time or the giving of notice, or both, would constitute a default or event of default by the District under any of the foregoing;

(e) All approvals, consents, authorizations, licenses and permits, elections and orders of or filings or registrations with any governmental authority, legislative body, board, agency or commission having jurisdiction which would constitute a condition precedent to, or the absence of which would materially adversely affect, the due performance by the District of its obligations in connection with the issuance of the Bonds under the Resolution, the Undertaking and this Contract of Purchase have been duly obtained or made and are in full force and effect, except for such approvals, consents and orders as may be required under the “Blue Sky” or other securities laws of any state in connection with the offering and sale of the Bonds; and, except as disclosed in the Preliminary Official Statement and the Official Statement, all authorizations, approvals, licenses, permits, consents and orders of any governmental authority, board, agency or commission having jurisdiction in the matters which are required for the due authorization of, which would constitute a condition precedent to, or the absence of which would materially adversely affect the due performance by the District of its respective obligations under, this Contract of Purchase, the Escrow Agreement, the Undertaking, the Bonds or the Resolution, or which are necessary to permit the District to carry out the transactions contemplated by the Preliminary Official Statement and the Official Statement to acquire, construct, operate, maintain, improve and finance the Electric System have been duly obtained or, where required for future performance, are expected to be obtained;

(f) The Bonds, when issued and delivered in accordance with the Resolution and this Contract of Purchase and paid for by the Underwriters on the Closing Date as provided herein, will be validly issued and outstanding special obligations of the District enforceable against the District in accordance with their terms and entitled to all the benefits and security of the Resolution; and, upon the issuance and delivery of the Bonds, the Resolution will provide, for the benefit of the holders from time to time of the Bonds, a legally valid and binding pledge of and lien on Net Revenues pledged under the Resolution, as provided in and contemplated by the Resolution;

(g) The Preliminary Official Statement, as of its date and as of the date hereof, did not and does not contain any untrue statement of a material fact or omit to state a material fact

required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(h) At the time of the District's acceptance hereof and (unless the Official Statement is amended or supplemented pursuant to paragraph (i) of Section 2 hereof) at all times subsequent to the date of delivery thereof up to and including the Closing Date, the Official Statement will be true, correct, complete and final in all material respects and will not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(i) If, after the date of this Contract of Purchase and until 25 days after the end of the "underwriting period" (as defined in Rule 15c2-12), any event shall occur that might cause the Official Statement to contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, the District hereby covenants and agrees, to the extent it has knowledge of such event, to notify the Underwriters (and for the purposes of this clause to provide the Underwriters with such information as they may from time to time reasonably request), and, if in the opinion of the Underwriters and their counsel such event requires the preparation and publication of a supplement or amendment to the Official Statement, at its expense to supplement or amend the Official Statement in a form and manner approved by the Underwriters and furnish to the Underwriters a reasonable number of copies of such supplement or amendment. For purposes of this Contract of Purchase, the District may assume that the end of the "underwriting period" has occurred on the Closing Date unless the District is otherwise notified by the Underwriters on or prior to the Closing Date. If the Underwriters notify the District that the Closing Date is not the end of the "underwriting period", then the Underwriters shall further notify the District of the date that is the end of the "underwriting period" (as defined in Rule 15c2-12);

(j) If the Official Statement is supplemented or amended pursuant to paragraph (i) of Section 2 of this Contract of Purchase, at the time of each supplement or amendment thereto and (unless subsequently again supplemented or amended pursuant to such paragraph) at all times subsequent thereto during the "underwriting period", the Official Statement as so supplemented or amended will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which made, not misleading;

(k) Except as disclosed in the Preliminary Official Statement and the Official Statement, no litigation, action, suit, proceeding, inquiry or investigation, at law or in equity, before or by any court, government agency, regulatory agency, public board or body, is pending or, to the knowledge of the officer of the District executing this Contract of Purchase after due investigation, threatened (i) in any way affecting the corporate existence of the District or the titles of its officers to their respective offices, (ii) affecting or seeking to prohibit, restrain or enjoin the issuance, sale or delivery of any of the Bonds, the application of the proceeds thereof in accordance with the Resolution, or the collection or application of Revenues (as defined in the Resolution) or the collection or application of the Net Revenues pledged to pay the principal of and interest on the Bonds under the Resolution or in any way contesting or affecting the validity or enforceability of any of the Bonds, the Escrow Agreement, the Resolution, the Undertaking, this Contract of Purchase or any action of the District contemplated by any of said documents, (iii) which may

result in any material adverse change relating to the District, other than routine litigation of the type which normally accompanies its operation of its generation, transmission and distribution facilities, (iv) contesting the completeness or accuracy of the Preliminary Official Statement or the Official Statement or the powers of the District or its authority with respect to the Bonds, the adoption of the Resolution, or the execution and delivery of the Undertaking, the Escrow Agreement, or this Contract of Purchase, or any action of the District contemplated by any of said documents, and (v) which would adversely affect the exclusion from gross income for federal income tax purposes of interest paid on the Bonds, nor to the knowledge of the officer of the District executing this Contract of Purchase is there any basis therefor;

(l) The District will furnish such information, execute such instruments and take such other action in cooperation with the Underwriters as the Underwriters may reasonably request (i) to qualify the Bonds for offer and sale under the “Blue Sky” or other securities laws and regulations of such states and other jurisdictions of the United States as the Senior Underwriter may designate, and (ii) to determine the eligibility of the Bonds for investment under the laws of such states and other jurisdictions and will use its best efforts to continue such qualifications in effect so long as required for the distribution of the Bonds; provided that in connection therewith the District shall not be required to execute or file a general or special consent to service of process or qualify to do business in any jurisdiction and will advise the Senior Underwriter promptly of receipt by the District of any written notification with respect to the suspension of the qualification of the Bonds for sale in any jurisdiction or written notification of the initiation or threat of any proceeding for that purpose;

(m) The audited financial statements of the District for the years ending December 31, 2020 and December 31, 2019 heretofore delivered to the Underwriters and incorporated by reference in the Preliminary Official Statement and the Official Statement as Appendix B fairly present the financial position of the District as of the dates indicated and such financial statements have been prepared in conformity with generally accepted accounting principles applied on a consistent basis;

(n) Between the date hereof and the Closing Date, the District will not, without the prior written consent of the Senior Underwriter, offer or issue any bonds, notes or other obligations for borrowed money, or incur any material liabilities, direct or contingent, nor will there be any adverse change of a material nature in the financial position, results of operations or condition, financial or otherwise, of the District, in either case other than in the ordinary course of its business or as disclosed in the Preliminary Official Statement or the Official Statement or as otherwise disclosed to the Senior Underwriter;

(o) The Bonds, the Escrow Agreement, the Resolution and the Undertaking conform to the descriptions thereof contained in the Preliminary Official Statement and the Official Statement;

(p) The District has the legal authority to apply and will apply, or cause to be applied, the proceeds from the sale of the Bonds as provided in and subject to all of the terms and provisions of the Resolution and as described in the Preliminary Official Statement and the Official Statement, including for payment of District expenses incurred in connection with the negotiation, marketing, issuance and delivery of the Bonds to the extent required by Section 7 (Expenses), and

will not take or omit to take any action which action or omission will adversely affect the exclusion from gross income for federal income tax purposes of the interest on the Bonds;

(q) Any certificate signed by any official of the District, and delivered to the Underwriters, shall be deemed a representation and warranty by the District to the Underwriters as to the statements made therein; and

(r) Except as disclosed in the Preliminary Official Statement and the Official Statement, during the last five years the District has complied in all material respects with all previous undertakings required by Rule 15c2-12.

3. Conditions to the Obligations of the Underwriters. The obligations of the Underwriters to accept delivery of and pay for the Bonds on the Closing Date shall be subject to the performance by the District of its obligations to be performed hereunder at or prior to the Closing Date and to the fulfillment of the following conditions:

(a) The representations, warranties and covenants of the District contained herein shall be true, complete and correct on the date hereof and as of the Closing Date as if made on the Closing Date;

(b) At the Closing Date, the Resolution shall have been duly adopted and shall be in full force and effect, and shall not have been repealed, amended, modified or supplemented, except as may have been agreed to in writing by the Underwriters, and there shall have been taken in connection therewith, with the issuance of the Bonds and with the transactions contemplated thereby and by this Contract of Purchase, all such actions as, in the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel (“Bond Counsel”), shall be necessary and appropriate;

(c) At the Closing Date, the Official Statement shall not have been amended, modified or supplemented, except as may have been agreed to in writing by the Underwriters;

(d) At or prior to the Closing Date, the Underwriters shall have received copies of the following documents, in each case satisfactory in form and substance to the Underwriters:

(1) The Official Statement executed on behalf of the District by its Chief Executive Officer and General Manager, any Member of its Executive Committee, its Treasurer, its Secretary or its Chief Financial Officer (each an “Authorized Representative”);

(2) The Undertaking executed on behalf of the District by an Authorized Representative;

(3) The Sixty-Fourth Supplemental Resolution, with only such supplements or amendments thereto as may have been agreed to by the Underwriters and certified by an authorized officer of the District under its seal as having been duly adopted by the District and as being in full force and effect, and the Resolution, certified by an authorized officer of the District as being in full force and effect, with such supplements and amendments thereto adopted after the date hereof as may have been agreed to by the Underwriters;

(4) An opinion or opinions relating to the Bonds, dated the Closing Date and addressed to the District, of Bond Counsel, in substantially the form included in the Official Statement as Appendix E, together with a letter or letters of such Bond Counsel, dated the Closing Date and addressed to the Underwriters, to the effect that the foregoing opinion or opinions addressed to the District may be relied upon by the Underwriters to the same extent as if such opinion or opinions were addressed to them;

(5) An opinion or opinions, dated the Closing Date and addressed to the Senior Underwriter, of Bond Counsel, in substantially the form attached hereto as Exhibit E;

(6) An opinion, dated the Closing Date and addressed to the Senior Underwriter, of General Counsel to the District, in substantially the form attached hereto as Exhibit C;

(7) An opinion, dated the Closing Date and addressed to the Underwriters, of Nixon Peabody LLP, as counsel for the Underwriters ("Underwriters' Counsel"), to the effect that (i) the Bonds are exempt from the registration requirements of the Securities Act of 1933, as amended, and the Resolution is exempt from qualification under the Trust Indenture Act of 1939, as amended; (ii) the Continuing Disclosure Agreement complies as to form in all material respects with the requirements of paragraph (b)(5) of the Rule applicable to the primary offering of the Bonds; and (iii) based upon the information made available to them in the course of their participation in the preparation of the Preliminary Official Statement and the Official Statement as counsel to the Underwriters and without having undertaken to determine independently, or assuming any responsibility for, the accuracy, completeness or fairness of the statements contained in the Preliminary Official Statement and the Official Statement, they do not believe that (A) the Preliminary Official Statement, as of its date and as of the date of the Contract of Purchase, and (B) the Official Statement as of its date and as of the Closing Date, contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading (except for the information relating to Cede & Co., DTC or the operation of the book-entry system, the Appendices to the Official Statement, except Appendices D, and F, and summaries thereof and references thereto, and other financial, accounting and statistical data included therein, as to all of which no view need be expressed); and (iii) with respect to such matters as the Underwriters may reasonably require;

(8) A certificate, dated the Closing Date, signed by an Authorized Representative of the District in substantially the form attached hereto as Exhibit D (but in lieu of or in conjunction with such certificate the Underwriters may, in its sole discretion, accept certificates or opinions of General Counsel to the District, or of other counsel acceptable to the Underwriters, that in the opinion of such counsel the issues raised in any pending or threatened litigation referred to in such certificate are without substance or that the contentions of all plaintiffs therein are without merit);

(9) The Escrow Agreement, executed by the District and the Escrow Agent;

(10) An acceptance of and agreement to the provisions of the Sixty-Fourth Supplemental Resolution executed by the Trustee under the Resolution in form and substance acceptable to the Underwriters;

(11) A tax certificate related to the Bonds in substance and form satisfactory to Bond Counsel;

(12) Ratings of the Bonds from S&P Global Ratings (“S&P”) of not less than “[__ (____ outlook)]” and from Fitch Ratings, Inc. (“Fitch”) of not less than “[__ (____ outlook)]”;

(13) [A report of _____, as verification agent (the “Verification Agent”) with respect to the sufficiency of amounts deposited pursuant to the Escrow Agreement][and][an opinion of Bond Counsel respecting the defeasance of the Refunded Bonds;]

(14) An opinion of counsel to the Trustee/Escrow Agent, dated the Closing Date, addressed to the Underwriters, to the effect that (i) the Trustee/Escrow Agent is a national banking association duly organized and validly existing under the laws of the United States of America having full power and being qualified to enter into, accept and agree to the provisions of the Resolution and to enter into and perform the Undertaking, (ii) the Undertaking and the Escrow Agreement have been duly authorized, executed and delivered by the Trustee/Escrow Agent and, assuming due authorization, execution and delivery by the other parties thereto, constitutes the valid and binding obligation of the Trustee/Escrow Agent enforceable in accordance with its terms, subject to laws relating to bankruptcy, insolvency, moratorium, reorganization or other similar laws affecting creditors’ rights generally, to the application of equitable principles and to the exercise of judicial discretion in appropriate cases, and to enter into and perform the Undertaking and the Escrow Agreement, (iii) all approvals, consents and orders of any governmental authority or agency having jurisdiction in this matter that would constitute a condition precedent to the performance by the Trustee/Escrow Agent of its duties and obligations under the Resolution, the Escrow Agreement, and the Undertaking have been obtained and are in full force and effect, and (iv) the acceptance of the duties and obligations of the Trustee/Escrow Agent under the Resolution, the Escrow Agreement, and the Undertaking and the consummation of the transactions on the part of the Trustee/Escrow Agent contemplated therein, and the compliance by the Trustee/Escrow Agent, as applicable, with the terms, conditions and provisions of such document do not contravene any provisions of applicable law or regulation or any order or decree, writ or injunction or the Articles of Association or Bylaws of the Trustee/Escrow Agent, and, to the best knowledge of such counsel, will not require the consent under or result in a breach of or a default under, any resolution, agreement or other instrument to which the Trustee/Escrow Agent is a party or by which it may be bound;

(15) A copy of the Blanket Letter of Representations to DTC relating to the Bonds signed by DTC and the District; and

(16) Such additional legal opinions, certificates, instruments and other documents as the Underwriters may reasonably request to evidence the truth and accuracy and completeness, as of the date hereof and as of the Closing Date, of the District's representations and warranties contained herein and of the statements and information contained in the Preliminary Official Statement or the Official Statement, and the due performance or satisfaction by the District at or prior to the Closing Date of all agreements then to be performed and all conditions then to be satisfied by the District in connection with the transactions contemplated hereby and by the Resolution and the Preliminary Official Statement or the Official Statement.

If any of the conditions to the obligations of the Underwriters contained in this Section or elsewhere in this Contract of Purchase with respect to the Bonds shall not have been satisfied when and as required herein, all obligations of the Underwriters hereunder with respect to the Bonds may be terminated by the Underwriters at, or at any time prior to, the Closing Date by written notice to the District.

4. Offering. The obligations of the District to sell and to deliver the Bonds on the Closing Date to the Underwriters shall be subject to the following conditions:

(a) The entire \$[PAR] aggregate principal amount of the Bonds shall be purchased, accepted and paid for by the Underwriters on the Closing Date; and

(b) The District shall receive an Issue Price Certificate of the Senior Underwriter substantially in the form attached hereto as Exhibit F with respect to the Bonds.

5. Issue Price of the Bonds.

(a) The Senior Underwriter, on behalf of the Underwriters, agrees to assist the District in establishing the issue price of the Bonds and shall execute and deliver to the District at Closing an "issue price" or similar certificate substantially in the form attached hereto as Exhibit F, together with the supporting pricing wires or equivalent communications, with modifications to such certificate as may be deemed appropriate or necessary, in the reasonable judgment of the Senior Underwriter, the District and Bond Counsel, to accurately reflect, as applicable, the sales price or prices or the initial offering price or prices to the public of the Bonds.

(b) [Except for the maturities set forth in Schedule A attached hereto,] the District will treat the first price at which 10% of each maturity of the Bonds (the "10% test") is sold to the public as the issue price of that maturity (if different interest rates apply within a maturity, each separate CUSIP number within that maturity will be subject to the 10% test).

(c) [The Senior Underwriter confirms that the Underwriters have offered the Bonds to the public on or before the date of this Contract of Purchase at the offering price or prices (the "initial offering price"), or at the corresponding yield or yields, set forth in the final Official Statement. Schedule A sets forth, as of the date of this Contract of Purchase, the maturities, if any, of the Bonds for which the 10% test has not been satisfied and for which the District and the Senior Underwriter, on behalf of the Underwriters, agree that (i) the Senior Underwriter will retain all unsold Bonds of each maturity for which the 10% test has not been satisfied and not allocate any

such Bonds to any other Underwriter and (ii) the restrictions set forth in the next sentence shall apply, which will allow the District to treat the initial offering price to the public of each such maturity as of the sale date as the issue price of that maturity (the “hold-the-offering-price rule”). So long as the hold-the-offering-price rule remains applicable to any maturity of the Bonds, the Senior Underwriter will neither offer nor sell unsold Bonds of that maturity to any person at a price that is higher than the initial offering price to the public during the period starting on the sale date and ending on the earlier of the following.

- (1) the close of the fifth (5th) business day after the sale date; or
- (2) the date on which the Underwriters have sold at least 10% of that maturity of the Bonds to the public at a price that is no higher than the initial offering price to the public.

The Senior Underwriter shall promptly advise the District or the District’s municipal advisor when the Underwriters have sold 10% of that maturity of the Bonds to the public at [a price] that is no higher than the initial offering price to the public, if that occurs prior to the close of the fifth (5th) business day after the sale date.

The District acknowledges that, in making the representation set forth in this subsection, the Senior Underwriter will rely on (i) the agreement of each Underwriter to comply with the hold-the-offering-price rule, as set forth in an agreement among underwriters and the related pricing wires, (ii) in the event a selling group has been created in connection with the initial sale of the Bonds to the public, the agreement of each dealer who is a member of the selling group to comply with the hold-the-offering-price rule, as set forth in a selling group agreement and the related pricing wires, and (iii) in the event that an Underwriter is a party to a retail distribution agreement that was employed in connection with the initial sale of the Bonds to the public, the agreement of each broker-dealer that is a party to such agreement to comply with the hold-the-offering-price rule, as set forth in the retail distribution agreement and the related pricing wires. The District further acknowledges that each Underwriter shall be solely liable for its failure to comply with its agreement regarding the hold the offering price rule and that no Underwriter shall be liable for the failure of any other Underwriter, or of any dealer who is a member of a selling group, or of any broker-dealer that is a party to a retail distribution agreement to comply with its agreement regarding the hold-the-offering-price rule as applicable to the Bonds.]

(d) The Senior Underwriter confirms that:

- (1) any agreement among underwriters, any selling group agreement and each retail distribution agreement (to which the Senior Underwriter is a party) relating to the initial sale of the Bonds to the public, together with the related pricing wires, contains or will contain language obligating each Underwriter, each dealer who is a member of the selling group, and each broker-dealer that is a party to such retail distribution agreement, as applicable, to (A)(ii) report the prices at which it sells to the public the unsold Bonds of each maturity allotted to it until it is notified by the Senior Underwriter that either the 10% test has been satisfied as to the Bonds of that maturity or all Bonds of that maturity have been sold to the public and (ii) comply with the hold-the-offering-price rule, if applicable, in each case if and for

so long as directed by the Senior Underwriter and as set forth in the related pricing wires, (B) promptly notify the Representative of any sales of the Bonds that, to its knowledge, are made to a purchaser who is a related party to an underwriter participating in the initial sale of the Bonds to the public (each such term being used as defined below) and (C) acknowledge that, unless otherwise advised by the Underwriter, dealer or broker-dealer, the Representative shall assume that each order submitted by the Underwriter, dealer or broker-dealer is a sale to the public; and

(2) any agreement among underwriters relating to the initial sale of the Bonds to the public, together with the related pricing wires, contains or will contain language obligating each Underwriter that is a party to a retail distribution agreement to be employed in connection with the initial sale of the Bonds to the public to require each broker-dealer that is a party to such retail distribution agreement to (A) report the prices at which it sells to the public the unsold Bonds of each maturity allotted to it until it is notified by the Senior Underwriter or the Underwriter that either the 10% test has been satisfied as to the Bonds of that maturity or all Bonds of that maturity have been sold to the public and (B) comply with the hold-the-offering-price rule, if applicable, in each case if and for so long as directed by the Senior Underwriter or the Underwriter and as set forth in the related pricing wires.

(e) The Underwriters acknowledge that sales of any Bonds to any person that is a related party to an Underwriter shall not constitute sales to the public for purposes of this section. Further, for purposes of this section:

(1) “public” means any person other than an underwriter or a related party,

(2) “underwriter” means (A) any person that agrees pursuant to a written contract with the District (or with the lead underwriter to form an underwriting syndicate) to participate in the initial sale of the Bonds to the public and (B) any person that agrees pursuant to a written contract directly or indirectly with a person described in clause (A) to participate in the initial sale of the Bonds to the public (including a member of a selling group or a party to a retail distribution agreement participating in the initial sale of the Bonds to the public),

(3) a purchaser of any of the Bonds is a “related party” to an underwriter if the underwriter and the purchaser are subject, directly or indirectly, to (i) more than 50% common ownership of the voting power or the total value of their stock, if both entities are corporations (including direct ownership by one corporation of another), (ii) more than 50% common ownership of their capital interests or profits interests, if both entities are partnerships (including direct ownership by one partnership of another), or (iii) more than 50% common ownership of the value of the outstanding stock of the corporation or the capital interests or profit interests of the partnership, as applicable, if one entity is a corporation and the other entity is a partnership (including direct ownership of the applicable stock or interests by one entity of the other), and

(4) “sale date” means the date of execution of this Contract of Purchase by all parties.

6. **Termination.** The Underwriters shall have the right to terminate their obligations under this Contract of Purchase to purchase, accept delivery of and to pay for the Bonds, if,

(a) between the date hereof and the Closing Date, the market price or marketability, or the ability of the Underwriters to enforce contracts for the sale, at the initial offering prices set forth in the Official Statement, of the Bonds have been materially adversely affected, in the judgment of the Underwriters, (evidenced by a written notice to the District terminating the obligation of the Underwriters to accept delivery of and pay for the Bonds), by reason of any of the following:

(1) (x) any legislation which is (A) enacted by Congress, (B) favorably reported for passage to either House of the Congress of the United States by any Committee of such House to which such legislation has been referred for consideration, or (C) recommended to the Congress for passage by the President of the United States or the Treasury Department, but only, however, if the occurrence of any of the foregoing events is generally accepted by the municipal bond market as potentially affecting the federal tax status of the District, its property or income or the interest on its bonds or notes (including the Bonds), (y) any decision rendered by a court established under Article III of the Constitution of the United States or the Tax Court of the United States, or (z) a final order, ruling, regulation or official statement issued or made by or on behalf of the Treasury Department of the United States or the Internal Revenue Service with the purpose or effect, directly or indirectly, of imposing federal income taxation upon such interest as would be received by the holders of the Bonds, or upon such revenues or other income of the general character expected to be received by the District; provided, however, that the enactment of legislation which only diminishes the value of, as opposed to eliminating the exclusion from gross income for federal income tax purposes will not give the Underwriters the right to terminate their obligations hereunder;

(2) Legislation enacted (or resolution passed) by the Congress or a final order, ruling, regulation or official statement is issued or made by or on behalf of the Securities and Exchange Commission, or any other governmental agency having jurisdiction of the subject matter, to the effect that obligations of the general character of the Bonds are not exempt from registration under or other requirements of the Securities Act of 1933, as amended, or are not exempt from qualification under, or other requirements of, the Trust Indenture Act of 1939, as amended, or that the issuance, offering or sale of the Bonds or obligations of the general character of the Bonds, including any or all underlying arrangements, as contemplated hereby or by the Preliminary Official Statement or the Official Statement, otherwise is or would be in violation of the federal securities laws as amended and then in effect;

(3) the outbreak or escalation of hostilities involving the United States or the declaration by the United States of a national emergency or war or the occurrence of any other local, national or international calamity, crisis or event relating to the effective operation of the government of or the financial community in the United States or an escalation thereof, including, without limitation, a downgrade of the sovereign debt rating of the United States by any major credit rating agency or payment default on United States Treasury obligations;

(4) the declaration of a general banking moratorium by federal, New York or California authorities, or the general suspension of trading on the New York Stock Exchange or any other national securities exchange, or any material disruption in commercial banking or securities settlement or clearing services;

(5) the imposition by the New York Stock Exchange or other national securities exchange, or any governmental authority, of any material restrictions not now in force with respect to the Bonds or obligations of the general character of the Bonds or securities generally, or the material increase of any such restrictions now in force, including those relating to the net capital requirements of, the Underwriters;

(6) the adoption of any amendment to the federal or California Constitution, decision by any federal or California court, or enactment by any federal or California legislative body materially adversely affecting (i) the District or the right of the District to receive or to pledge any of the Net Revenues, or (ii) the validity or enforceability of this Contract of Purchase, the Bonds or the Resolution;

(7) the adoption of any amendment to the California Constitution, decision by any California court, or enactment by any California legislative body adversely affecting the exemption of state or local income tax upon such interest as would be received by the holders of the Bonds, or

(8) (i) a downgrading or suspension of any rating (without regard to credit enhancement) by Moody's, S&P, or Fitch of any debt securities issued by the District, or (ii) there shall have been any official statement as to a possible downgrading (such as being placed on "credit watch" or "negative outlook" or any similar qualification) of any rating by Moody's, S&P or Fitch of any debt securities issued by the District, including the Bonds.

(b) an event occurs, or information becomes known, which, in the judgment of the Underwriters, makes untrue in any material respect any statement or information contained in the Official Statement, or has the effect that the Official Statement contains any untrue statement of material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

7. Expenses. (a) Except as set forth in paragraph (b) of this Section, the Underwriters shall be under no obligation to pay, and the District shall pay, or cause to be paid, all expenses incident to the performance of the District's obligations hereunder including, but not

limited to, the cost of word processing and reproducing, executing and delivering the Bonds to the Underwriters; the cost of preparation, printing (and/or word processing and reproducing), distribution and delivery of the Resolution; the cost of printing and distributing copies of the Preliminary Official Statement and the Official Statement in sufficient quantities for distribution in connection with the sale of the Bonds (including resales in the secondary market); the fees and disbursements of Bond Counsel; the fees and disbursements of Public Financial Management, Inc. for its services as Financial Advisor to the District; the fees and disbursements of any other engineers, accountants, and any other experts or consultants retained in connection with the issuance of the Bonds; the fees and disbursements of the Trustee/Escrow Agent [and Verification Agent]; fees charged by the rating agencies for rating the Bonds; any advertising expenses; filing fees; CUSIP charges; or fees and expenses of any credit enhancement; expenses incurred by the Underwriters on behalf of the District relating to food, transportation or lodging for District staff members attending the bond pricing are to be reimbursed by the District through proceeds of the Bonds or available funds of the District (the District's obligations in regard to these expenses survive if delivery of the Bonds fails due to one of the conditions set forth in Section 3 hereof or this Contract of Purchase is terminated pursuant to Section 6 hereof) and any other expenses not specifically enumerated in paragraph (b) of this Section incurred in connection with the issuance of the Bonds.

(b) The District shall be under no obligation to pay, and the Underwriters shall pay (from the expense component of the underwriting discount), the cost of preparation of the Agreement Among Underwriters and the letter of instructions relating thereto and this Contract of Purchase; the cost of wiring funds for the payment of the purchase prices of the Bonds; the fees and expenses of DTC incurred with respect to depositing the Bonds therewith; expenses to qualify the Bonds for sale under any "Blue Sky" laws; fees to the California Debt and Investment Advisory Commission; and all other expenses incurred by the Underwriters in connection with its public offering and distribution of the Bonds not specifically enumerated in paragraph (a) of this Section, including the fees and disbursements of Underwriters' Counsel and fees of Digital Assurance Certification, L.L.C. for a continuing disclosure undertaking compliance review. Notwithstanding that the fees to the California Debt and Investment Advisory Commission are solely the legal obligation of the Underwriters, the District agrees to reimburse the Underwriters for such fees.

8. **Notices.** Any notice or other communication to be given to the District under this Contract of Purchase may be given by delivering the same in writing to Sacramento Municipal Utility District, at 6201 S Street, Sacramento, California 95817-1899; and any notice or other communication to be given to the Underwriters under this Contract of Purchase may be given by delivering the same in writing to Goldman, Sachs & Co. LLC, 555 California St., Fl. 45, San Francisco, CA 94104, Attention: Joseph Natoli, Managing Director.

9. **Parties in Interest.** This Contract of Purchase is made solely for the benefit of the District and the Underwriters (including successors or assigns of any Underwriter) and no other person shall acquire or have any right hereunder or by virtue hereof. The term "successors and assigns" as used in this Section shall not include any purchaser of the Bonds, as such purchaser, from any of the several Underwriters.

10. **Survival of Representations and Warranties.** The representations and warranties of the District, set forth in or made pursuant to this Contract of Purchase, shall not be

deemed to have been discharged, satisfied or otherwise rendered void by reason of the closing or termination of this Contract of Purchase and regardless of any investigations or statements as to the results thereof made by or on behalf of the Underwriters and regardless of delivery of and payment for the Bonds.

11. Counterparts. This Contract of Purchase may be executed in several counterparts, which together shall constitute one and the same instrument.

12. California Law Governs; Venue. The validity, interpretation and performance of this Contract of Purchase shall be governed by the laws of the State of California. Any action or proceeding to enforce or interpret this Contract of Purchase shall be brought, commenced or prosecuted in the County of Sacramento, California.

[remainder of page intentionally left blank]

13. **Entire Agreement.** This Contract of Purchase when accepted by you in writing as heretofore specified shall constitute the entire agreement between us.

14. **Effectiveness.** This Contract of Purchase shall become effective and binding upon the respective parties hereto upon the execution of the acceptance hereof by an authorized officer of the District and shall be valid and enforceable as of the time of such acceptance.

Very truly yours,

GOLDMAN, SACHS & CO. LLC
BOFA SECURITIES, INC.,
BARCLAYS CAPITAL INC.
CITIGROUP GLOBAL MARKETS INC.
JP MORGAN SECURITIES LLC, and
MORGAN STANLEY & CO. LLC

BY: GOLDMAN, SACHS & CO. LLC, as Senior
Underwriter

Joseph Natoli
Managing Director

Accepted: [SALE DATE]

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By: _____
Russell Mills
Treasurer

[Signature page to Contract of Purchase]

Exhibit A

SACRAMENTO MUNICIPAL UTILITY DISTRICT

\$[PAR] Electric Revenue Refunding Bonds, 2021 Series I

<u>Maturity</u> <u>(August 15)</u>	<u>Principal</u> <u>Amount</u>	<u>Interest</u> <u>Rate</u>	<u>Yield</u>	<u>Price</u>	<u>Hold the</u> <u>Price</u> <u>Maturities</u>	<u>General</u> <u>Rule</u> <u>Maturities</u>
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* Term Bond

^c Priced to first call date of August 15, 20__.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

**Exhibit B to the Contract of Purchase
(Official Statement)**

SACRAMENTO MUNICIPAL UTILITY DISTRICT

**Exhibit C to the Contract of Purchase
(Opinion of General Counsel to the
Sacramento Municipal Utility District)**

[CLOSING DATE]

Goldman, Sachs & Co. LLC
555 California St., Fl. 45,
San Francisco, CA 94104

Re: Sacramento Municipal Utility District
\$[PAR] Electric Revenue Refunding Bonds, 2021 Series I

Ladies and Gentlemen:

This opinion is being delivered pursuant to Paragraph 3(d)(6) of the Contract of Purchase (the “Contract of Purchase”), dated [SALE DATE], between Goldman, Sachs & Co. LLC, Inc., as Senior Managing Underwriter named therein (the “Senior Underwriter”), and the Sacramento Municipal Utility District (the “District”) relating to the above-captioned bonds (the “Bonds”).

As counsel to the District, I have reviewed (i) Resolution No. 6649 of the District, adopted on January 7, 1971, as amended and supplemented to date, including as amended and supplemented by Resolution No. [RESO NO.], adopted on [RESO DATE] (as so amended and supplemented, the “Resolution”); (ii) the Continuing Disclosure Agreement, dated the date hereof (the “Undertaking”), between the District and U.S. Bank National Association, as trustee (in such capacity, the “Trustee”); (iii) the Official Statement of the District, dated [SALE DATE] (the “Official Statement”) (iv) the escrow agreement, dated the date hereof (the “Escrow Agreement”), between the District and U.S. Bank National Association, as escrow agent (in such capacity, the “Escrow Agent”), and (v) such other documents, opinions and matters to the extent I deemed necessary to provide the opinions set forth herein.

The opinions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. I have assumed the genuineness of all documents and signatures presented to me (whether as originals or as copies) and the due and legal execution and delivery by, and validity against, any parties other than the District. I have not undertaken to verify independently, and have assumed, the accuracy of the factual matters represented, warranted or certified in the documents referred to in the second paragraph hereof. I have further assumed compliance with all covenants and agreements contained in such documents.

I call attention to the fact that the rights and obligations under the Resolution, the Escrow Agreement, the Undertaking, and the Contract of Purchase may be subject to bankruptcy,

insolvency, reorganization, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors' rights, to the application of equitable principles, and to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against municipal utility districts in the State of California. I express no opinion with respect to any indemnification, contribution, choice of law, choice of forum or waiver provisions contained therein.

Based on and subject to the foregoing, and in reliance thereon, as of the date hereof, I am of the opinion that:

1. The District is a political subdivision of the State of California duly organized and validly existing under the Act, as amended, and has full legal right, power and authority to execute and deliver (or adopt, as the case may be), and to perform its obligations under, the Resolution, the Escrow Agreement, the Undertaking and the Contract of Purchase.

2. The Contract of Purchase, the Escrow Agreement, and the Undertaking have been duly authorized, executed and delivered by the District, and, assuming due authorization, execution and delivery by each of the parties thereto other than the District, constitute the legal, valid and binding obligations of the District, enforceable against the District in accordance with their respective terms.

3. The District is not in breach of or default under any existing constitutional provision, applicable law or administrative regulation of the State of California or the United States or any applicable judgment or decree or any loan agreement, indenture, bond, note, resolution, agreement or other instrument known to me after reasonable inquiry to which the District is a party or to which the District or any of its property or assets is otherwise subject which would have a material adverse effect on the financial condition or operations of the District, and no event has occurred and is continuing which with the passage of time or the giving of notice, or both, would constitute a default or event of default under any such instrument which would have a material adverse effect on the financial condition or operations of the District; and the execution and delivery of the Bonds, the Escrow Agreement, the Undertaking and the Contract of Purchase and the adoption of the Resolution, and compliance with any existing constitutional provision, law, administrative regulation, judgment, decree, loan agreement, indenture, bond, note, resolution, agreement or other instrument known to me after reasonable inquiry to which the District is a party or to which the District or any of its property or assets is otherwise subject will not, as of the date hereof, conflict with or constitute a breach of or default under any such instrument which would have a material adverse effect on the financial condition or operations of the District, nor will any such execution, delivery, adoption or compliance result in the creation or imposition of any lien, charge or other security interest or encumbrance of any nature whatsoever upon any of the property or assets of the District or under the terms of any such law, regulation or instrument, except as expressly provided by the Bonds and the Resolution.

4. The statements contained in the Official Statement which purport to describe certain provisions of the Bonds, the Escrow Agreement, the Undertaking, and the Resolution present a fair and accurate summary of such provisions for the purpose of use in the Official Statement.

5. Except as described or referred to in the Preliminary Official Statement and the Official Statement, as of the date hereof, there is no action, suit, proceeding, inquiry or investigation, at law or in equity, before or by any court, government agency, public board or body, pending or, to the best of my knowledge, threatened against the District affecting the corporate existence of the District or the titles of its officers to their respective offices, or affecting or seeking to prohibit, restrain or enjoin the sale, issuance or delivery of the Bonds or the collection of the Revenues (as defined in the Resolution) or the Net Revenues (as defined in the Resolution) pledged or to be pledged to pay the principal of and interest on the Bonds or contesting or affecting as to the District the validity or enforceability of the Act, the Bonds, the Resolution, the Escrow Agreement, the Contract of Purchase or the Undertaking, or contesting the tax exempt status of interest on the Bonds, or which may result in any material adverse change relating to the District, other than routine litigation of the type which normally accompanies its operation of its generation, transmission and distribution facilities, or contesting the completeness or accuracy of the Preliminary Official Statement or the Official Statement or any supplement or amendment thereto, or contesting the powers of the District or any authority for the issuance of the Bonds, the adoption of the Resolution, or the execution and delivery by the District of the Contract of Purchase, the Escrow Agreement, or the Undertaking, nor, to the best of my knowledge, is there any basis for any such action, suit, proceeding, inquiry or investigation wherein an unfavorable decision, ruling or finding would materially adversely affect the validity or enforceability of the Act or the authorization, execution, delivery or performance by the District of the Bonds, the Resolution, the Escrow Agreement, the Undertaking, or the Contract of Purchase.

6. Based upon my review of the Preliminary Official Statement and the Official Statement as General Counsel to the District and without having undertaken to determine independently the accuracy, completeness or fairness of the statements contained in the Preliminary Official Statement and the Official Statement (except as specifically set forth in paragraph 4 hereof), I have no reason to believe that the statements contained in the Preliminary Official Statement (except for information relating Cede & Co., DTC or the operation of the book-entry system, the Appendices (except Appendix A) to the Preliminary Official Statement, and other financial and statistical data included therein, as to all of which I express no view) as of its date and as of the date of the Contract of Purchase contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading and the Official Statement (except for information relating Cede & Co., DTC or the operation of the book-entry system, the Appendices (except Appendix A) to the Official Statement, and other financial and statistical data included therein, as to all of which I express no view) (A) as of the date of the Official Statement contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading or (B) as of the date hereof contains any untrue statement of a material fact or omits to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.

For purposes of the opinions expressed herein, I have assumed that an agreement or other document is “material” to the District if it involves amounts in excess of \$10,000,000 and that a matter would result in a “material adverse change” to the District if the financial consequences involved would exceed \$10,000,000.

I understand that you are relying upon the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel, with respect to the validity of the Bonds and the exclusion of interest on the Bonds from gross income for federal income tax purposes and the Bonds for purposes of State of California income taxation and, accordingly, render no opinion with respect thereto.

Very truly yours,

SACRAMENTO MUNICIPAL UTILITY DISTRICT

Exhibit D to the Contract of Purchase

CERTIFICATE

The Sacramento Municipal Utility District (the “District”), hereby certifies that:

(1) The representations and warranties of the District (excluding those representations and warranties contained in Section 2(e) and Section 2(k) of the hereinafter defined Contract of Purchase) contained in the Contract of Purchase, dated [SALE DATE], between the District and the Underwriters named therein (the “Contract of Purchase”) with respect to the sale by the District of \$[PAR] aggregate principal amount of its Electric Revenue Refunding Bonds, 2021 Series I (the “Bonds”), are true and correct on and as of the Closing Date as if made on the Closing Date.

(2) All approvals, consents, authorizations, licenses and permits, elections and orders of or filings or registrations with any governmental authority, legislative body, board, agency or commission having jurisdiction which would constitute a condition precedent to, or the absence of which would materially adversely affect, the due performance by the District of its obligations in connection with the issuance of the Bonds under the Resolution, the Escrow Agreement, the Undertaking, and the Contract of Purchase have been duly obtained or made and are in full force and effect, except for such approvals, consents and orders as may be required under the “Blue Sky” or other securities laws of any state in connection with the offering and sale of the Bonds; and, except as disclosed in the Preliminary Official Statement and the Official Statement, all authorizations, approvals, licenses, permits, consents and orders of any governmental authority, board, agency or commission having jurisdiction in the matters which are required for the due authorization of, which would constitute a condition precedent to, or the absence of which would materially adversely affect the due performance by the District of its respective obligations under, the Contract of Purchase, the Escrow Agreement, the Undertaking, the Bonds or the Resolution, or which are necessary to permit the District to carry out the transactions contemplated by the Preliminary Official Statement and the Official Statement to acquire, construct, operate, maintain, improve and finance the Electric System have been duly obtained or, where required for future performance, are expected to be obtained.

(3) Except as disclosed in the Preliminary Official Statement and the Official Statement, no litigation, action, suit, proceeding, inquiry or investigation, at law or in equity, before or by any court, government agency, regulatory agency, public board or body, is pending or, to the best of knowledge of the officer of the District executing this Contract of Purchase after due investigation, threatened against the District, in any way affecting the corporate existence of the District or the titles of its officers to their respective offices, or affecting or seeking to prohibit, restrain or enjoin the sale, issuance or delivery of any of the Bonds or the collection of the Revenues (as defined in the Resolution) or the Net Revenues (as defined in the Resolution) pledged or to be pledged to pay the principal of and interest on the Bonds, or in any way contesting or affecting as to the District the validity or enforceability of the Act, the Bonds, the Resolution, the

Contract of Purchase, the Escrow Agreement, the Undertaking, or any action of the District contemplated by any of said documents, or contesting the tax exempt status of interest on the Bonds, or which may result in any material adverse change relating to the District, other than routine litigation of the type which normally accompanies its operation of its generation, transmission and distribution system, or contesting the completeness or accuracy of the Preliminary Official Statement or the Official Statement or any supplement or amendment thereto, or contesting the powers of the District or any authority for the issuance of the Bonds, the adoption of the Resolution, or the execution and delivery by the District of the Contract of Purchase, or the Undertaking, nor, to the best of my knowledge, is there any basis for any such action, suit, proceeding, inquiry or investigation wherein an unfavorable decision, ruling or finding would materially adversely affect the validity or enforceability of the Act of the authorization, execution, delivery or performance by the District of the Bonds, the Resolution, the Escrow Agreement, the Undertaking, or the Contract of Purchase, or any action of the District contemplated by any of said documents, or which would adversely affect the exclusion from gross income for federal income tax purposes of interest paid on the Bonds, nor to the knowledge of the officer of the District executing this Contract of Purchase is there any basis therefor.

(4) No event affecting the District has occurred since the date of the Official Statement which should be disclosed in the Official Statement so that the Official Statement will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, and which has not been disclosed in a supplement or amendment to the Official Statement.

(5) The District has complied with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to the date hereof pursuant to the Contract of Purchase with respect to the issuance of the Bonds.

(6) All capitalized terms employed herein which are not otherwise defined shall have the same meanings as in the Contract of Purchase.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By: _____

Name:

Title:

Dated: [CLOSING DATE]

**Exhibit E to the Contract of Purchase
(Supplemental Opinion of Bond Counsel)**

[CLOSING DATE]

Goldman, Sachs & Co. LLC
555 California St., Fl. 45,
San Francisco, CA 94104

Sacramento Municipal Utility District
Electric Revenue Refunding Bonds, 2021 Series I
(Supplemental Opinion)

Ladies and Gentlemen:

This letter is addressed to you, as Senior Underwriter, pursuant to Section 3(d)(5) of the Contract of Purchase, dated [SALE DATE] (the “Purchase Contract”), between you and the other underwriters named therein and the Sacramento Municipal Utility District (“SMUD”), providing for the purchase of \$[PAR] principal amount of Sacramento Municipal Utility District Electric Revenue Refunding Bonds, 2021 Series I (the “Bonds”). The Bonds are being issued pursuant to Resolution No. 6649 of the Board of Directors of SMUD, adopted January 7, 1971, as supplemented and amended by later resolutions of said Board of Directors (as so supplemented and amended, the “Resolution”), including Resolution No. [RESO NO.], adopted on [RESO DATE]. Capitalized terms not otherwise defined herein shall have the meanings ascribed thereto in the Resolution or, if not defined in the Resolution, in the Purchase Contract.

In connection with our role as Bond Counsel to SMUD, we have reviewed the Purchase Contract; the Resolution; the Tax Certificate, dated the date hereof (the “Tax Certificate”), executed by SMUD; certain portions of the preliminary official statement of SMUD, dated [POS DATE], with respect to the Bonds (the “Preliminary Official Statement”) and of the official statement of SMUD, dated [SALE DATE], with respect to the Bonds (the “Official Statement”); opinions of counsel to SMUD and the Trustee; certificates of SMUD, the Trustee and others; and such other documents, opinions and matters to the extent we deemed necessary to provide the opinions or conclusions set forth herein.

The opinions and conclusions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. Such opinions or conclusions may be affected by actions taken or omitted or events occurring after the original delivery of the Bonds on the date hereof. We have not undertaken to determine, or to inform any person, whether any such actions are taken or omitted or events do occur or any other matters come to our attention after the original delivery of the Bonds on the date hereof. We have assumed the genuineness of all documents and signatures presented to us (whether as originals or as copies) and the due and legal execution and delivery thereof by, and

validity against, any parties other than SMUD. We have assumed, without undertaking to verify, the accuracy of the factual matters represented, warranted or certified in the documents, and of the legal conclusions contained in the opinions, referred to in the second paragraph hereof. We have further assumed compliance with all covenants and agreements contained in such documents. In addition, we call attention to the fact that the rights and obligations under the Bonds, the Resolution, the Tax Certificate and the Purchase Contract and their enforceability may be subject to bankruptcy, insolvency, reorganization, receivership, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors' rights, to the application of equitable principles, to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against municipal utility districts in the State of California. We express no opinion with respect to any indemnification, contribution, liquidated damages, penalty (including any remedy deemed to constitute or having the effect of a penalty), right of set-off, arbitration, judicial reference, choice of law, choice of forum, choice of venue, non-exclusivity of remedies, waiver or severability provisions contained in the foregoing documents, nor do we express any opinions with respect to the state or quality of title to or interest in any of the assets described in or as subject to the lien of the Resolution or the accuracy or sufficiency of the description contained therein of, or the remedies available to enforce liens on, any such assets.

Based on and subject to the foregoing, and in reliance thereon, as of the date hereof, we are of the following opinions or conclusions:

1. The Bonds are not subject to the registration requirements of the Securities Act of 1933, as amended, and the Resolution is exempt from qualification pursuant to the Trust Indenture Act of 1939, as amended.

2. The Purchase Contract has been duly executed and delivered by, and is a valid and binding agreement of, SMUD.

3. The statements contained in the Official Statement under the captions "THE 2021 BONDS" (except information relating to book-entry or The Depository Trust Company), "SECURITY FOR THE BONDS," "TAX MATTERS," and in APPENDIX D – "SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION" and APPENDIX E – "PROPOSED FORM OF LEGAL OPINIONS FOR THE BONDS," excluding any material that may be treated as included under such captions by cross-reference or reference to other documents or sources, insofar as such statements expressly summarize certain provisions of the Resolution or set out the form and content of our final legal opinion as Bond Counsel to SMUD concerning the validity of the Bonds and certain other matters, dated the date hereof and addressed to SMUD, are accurate in all material respects.

4. We are not passing upon and do not assume any responsibility for the accuracy, completeness or fairness of any of the statements contained in the Preliminary Official Statement or (except as explicitly stated in paragraph 3 above) in the Official Statement and make no representation that we have independently verified the accuracy, completeness or fairness of any such statements. We do not assume any responsibility for any electronic version of the Preliminary Official Statement or the Official Statement, and assume that any such version is identical in all respects to the printed version. In our capacity as Bond Counsel to SMUD in connection with issuance of the Bonds, we participated in conferences with your representatives,

your counsel, representatives of SMUD, its counsel, accountants, and others, during which the contents of the Preliminary Official Statement or the Official Statement and related matters were discussed. Based on our participation in the above-mentioned conferences (which, with respect to the Preliminary Official Statement, did not extend beyond the date of the Purchase Contract, and with respect to the Official Statement, did not extend beyond its date), and in reliance thereon, on oral and written statements and representations of SMUD and others and on the records, documents, certificates, opinions and matters herein mentioned, subject to the limitations on our role as Bond Counsel to SMUD, we advise you as a matter of fact and not opinion that (a) no facts had come to the attention of the attorneys in our firm rendering legal services with respect to the Preliminary Official Statement which caused us to believe as of the date of the Purchase Contract, based on the documents, drafts and facts in existence and reviewed as of that date, that the Preliminary Official Statement contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading (except any information marked as preliminary or subject to change, any information permitted to be omitted by Securities and Exchange Commission Rule 15c2-12 or otherwise left blank and any other differences with the information in the Official Statement), and (b) no facts had come to the attention of the attorneys in our firm rendering legal services with respect to the Official Statement which caused us to believe as of the date of the Official Statement and as of the date hereof that the Official Statement contained or contains any untrue statement of a material fact or omitted or omits to state any material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided that, we expressly exclude from the scope of this paragraph and express no view or opinion, with respect to both the Preliminary Official Statement and the Official Statement, about any CUSIP numbers, financial, accounting, statistical or economic, engineering or demographic data or forecasts, numbers, charts, tables, graphs, estimates, projections, assumptions or expressions of opinion, any statements about compliance with prior continuing disclosure undertakings, any management discussion and analysis, any information about Cede & Co., The Depository Trust Company or book-entry, ratings, rating agencies, underwriters, underwriting and the information contained in Appendices B, C and G included or referred to therein or omitted therefrom. No responsibility is undertaken or view expressed with respect to any other disclosure document, materials or activity, or as to any information from another document or source referred to by or incorporated by reference in the Preliminary Official Statement or the Official Statement.

This letter is furnished by us as Bond Counsel to SMUD. No attorney-client relationship has existed or exists between our firm and you in connection with the Bonds or by virtue of this letter. We disclaim any obligation to update this letter. This letter is delivered to you as Senior Underwriter of the Bonds, is solely for your benefit as such Senior Underwriter in connection with the original issuance of the Bonds on the date hereof, and is not to be used, circulated, quoted or otherwise referred to or relied upon for any other purpose or by any other person. This letter is not intended to, and may not, be relied upon by owners of Bonds or by any other party to whom it is not specifically addressed.

Very truly yours,

Exhibit F to the Contract of Purchase

(Form of Issue Price Certificate Of The Senior Underwriter Regarding Offering Prices)

SACRAMENTO MUNICIPAL UTILITY DISTRICT

\$[PAR] Electric Revenue Refunding Bonds, 2021 Series I

The undersigned, on behalf of Goldman, Sachs & Co. LLC, as representative (the “Representative”) of itself, BofA Securities, Inc., Barclays Capital Inc., Citigroup Global Markets Inc., JP Morgan Securities LLC, and Morgan Stanley & Co. LLC (together, the “Underwriting Group”), hereby certifies, on its own behalf and on behalf of the other members of the Underwriting Group on the basis of representations and warranties set forth in the agreement among underwriters, as set forth below with respect to the sale and issuance of the above-captioned obligations (the “Bonds”).

1. ***Sale of the [General Rule Maturities][Bonds].*** As of the date of this Certificate, for each Maturity of the [General Rule Maturities][Bonds], the first price at which at least 10% of such Maturity was sold to the Public is the respective price listed in Schedule A.

2. ***[Initial Offering Price of the Hold-the-Offering-Price-Maturities.***

(a) The Underwriting Group offered the Hold-the-Offering-Price Maturities to the Public for purchase at the respective initial offering prices listed in Schedule A (the “Initial Offering Prices”) on or before the Sale Date. A copy of the pricing wire or equivalent communication for the Bonds is attached to this Certificate as Schedule B.

(b) As set forth in the Bond Purchase Agreement for the Bonds, the Representative has agreed in writing that, (i) for each Maturity of the Hold-the-Offering-Price Maturities, it would neither offer nor sell any of the unsold Bonds of such Maturity to any person at a price that is higher than the Initial Offering Price for such Maturity during the Holding Period for such Maturity (the “hold-the-offering-price rule”), and (ii) unsold Bonds of the Hold-the-Offering-Price Maturities shall be retained by the Representative and not allocated to any of the other Underwriters. Pursuant to such agreement, the Representative has not offered or sold any unsold Bonds of any Maturity of the Hold-the-Offering-Price Maturities at a price that is higher than the respective Initial Offering Price for that Maturity of the Bonds during the Holding Period.]

3. ***Defined Terms.***

(a) [General Rule Maturities means those Maturities of the Bonds listed in Schedule A hereto as the “General Rule Maturities.”]

(b) [Hold-the-Offering-Price Maturities means those Maturities of the Bonds listed in Schedule A hereto as the “Hold-the-Offering-Price Maturities.”]

(c) [Holding Period means, with respect to a Hold-the-Offering-Price Maturity, the period starting on the Sale Date and ending on the earlier of (i) the close of the fifth business day

after the Sale Date, or (ii) the date on which the Underwriters have sold at least 10% of such Hold-the-Offering-Price Maturity to the Public at prices that are no higher than the Initial Offering Price for such Hold-the-Offering-Price Maturity.]

(d) *Issuer* means Sacramento Municipal Utility District.

(e) *Maturity* means Bonds with the same credit and payment terms. Bonds with different maturity dates, or Bonds with the same maturity date but different stated interest rates, are treated as separate maturities.

(f) *Public* means any person (including an individual, trust, estate, partnership, association, company, or corporation) other than an Underwriter or a Related Party (as such terms are defined below) to an Underwriter.

(g) A purchaser of any of the Bonds is a *Related Party* to any Underwriter if the Underwriter and the purchaser are subject, directly or indirectly, to (i) at least 50% common ownership of the voting power or the total value of their stock, if both entities are corporations (including direct ownership by one corporation of another), (ii) more than 50% common ownership of their capital interests or profits interests, if both entities are partnerships (including direct ownership by one partnership of another), or (iii) more than 50% common ownership of the value of the outstanding stock of the corporation or the capital interests or profit interests of the partnership, as applicable, if one entity is a corporation and the other entity is a partnership (including direct ownership of the applicable stock or interests by one entity of the other).

(h) *Sale Date* means the first day on which there is a binding contract in writing for the sale of a Maturity of the Bonds. The Sale Date of the Bonds is [SALE DATE].

(i) *Underwriter* means (i) any person that agrees pursuant to a written contract with the Issuer (or with the lead underwriter to form an underwriting syndicate) to participate in the initial sale of the Bonds to the Public, and (ii) any person that agrees pursuant to a written contract directly or indirectly with a person described in clause (i) of this paragraph to participate in the initial sale of the Bonds to the Public (including a member of a selling group or a party to a retail distribution agreement participating in the initial sale of the Bonds to the Public).

The representations set forth in this certificate are limited to factual matters only, and as it relates to the actions of the other Underwriters, such representations are made to the best of the Representative's knowledge based on the Representative's records. Nothing in this certificate represents the Representative's interpretation of any laws, including specifically Sections 103 and 148 of the Internal Revenue Code of 1986, as amended, and the Treasury Regulations thereunder. The undersigned understands that the foregoing information will be relied upon by the Issuer with respect to certain of the representations set forth in the Tax Certificate and with respect to compliance with the federal income tax rules affecting the Bonds, and by Orrick, Herrington & Sutcliffe LLP, Bond Counsel to the Issuer, in connection with rendering its opinion that the interest on the Bonds is excluded from gross income for federal income tax purposes, the preparation of the Internal Revenue Service Form 8038-G, and other federal income tax advice that it may give to the Issuer from time to time relating to the Bonds.

Dated: [CLOSING DATE]

Goldman, Sachs & Co. LLC,
as representative of the Underwriting Group

By: _____
Name: _____

Schedule A

Sale Prices

\$[PAR] Electric Revenue Refunding Bonds, 2021 Series I

<u>Maturity</u> <u>(August 15)</u>	<u>Principal</u> <u>Amount</u>	<u>Interest</u> <u>Rate</u>	<u>Yield</u>	<u>Price</u>	<u>Hold the</u> <u>Price</u> <u>Maturities</u>	<u>General</u> <u>Rule</u> <u>Maturities</u>
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* Term Bond

^c Priced to first call date of August 15, 20__.

**Attachment H
to Resolution No. 21-06-10**

PRELIMINARY OFFICIAL STATEMENT DATED JUNE __, 2021

NEW ISSUE - FULL BOOK-ENTRY

Ratings: See “RATINGS” herein

In the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to SMUD, based upon an analysis of existing laws, regulations, rulings and court decisions and, assuming, among other matters, the accuracy of certain representations and compliance with certain covenants, interest on the 2021 Series I Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 and is exempt from State of California personal income taxes. In the further opinion of Bond Counsel, interest on the 2021 Series I Bonds is not a specific preference item for purposes of the federal alternative minimum tax. Bond Counsel expresses no opinion regarding any other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the 2021 Series I Bonds. See “TAX MATTERS.”



**\$(PRINCIPAL AMOUNT)*
ELECTRIC REVENUE REFUNDING BONDS, 2021 SERIES I**

Dated: Date of Delivery

Due: August 15, as shown on the inside cover

The Electric Revenue Refunding Bonds, 2021 Series I (the “2021 Series I Bonds”) will be issued pursuant to the provisions of Resolution No. 6649 of the Sacramento Municipal Utility District (“SMUD”), as amended and supplemented, and will be payable from the Net Revenues of the Electric System of SMUD, as described herein. The 2021 Series I Bonds are being issued to (i) refund certain of SMUD’s outstanding Bonds (as defined herein) and (ii) pay certain costs associated with the issuance of the 2021 Series I Bonds. See “PLAN OF FINANCE.”

The 2021 Series I Bonds will mature in the years and amounts as shown on the inside cover. Interest on the 2021 Series I Bonds will accrue at the rates set forth on the inside cover and be payable on February 15, 2022, and semiannually thereafter on each February 15 and August 15.

The 2021 Series I Bonds are not subject to redemption prior to maturity.

The 2021 Series I Bonds will be issued in fully registered form and, when issued, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York (“DTC”). DTC will act as securities depository (the “Securities Depository”) for the 2021 Series I Bonds. Individual purchases of interests in the 2021 Series I Bonds may be made in book-entry form only, in the principal amount of \$5,000 or any integral multiple thereof. Purchasers of such interests will not receive certificates representing their interests in the 2021 Series I Bonds. Principal and interest are payable directly to the Securities Depository by U.S. Bank National Association, Trustee and Paying Agent. Upon receipt of payments of principal and interest, the Securities Depository will in turn remit such principal and interest to the Securities Depository’s Direct Participants (as such term is herein defined) for subsequent disbursement to the purchasers of interests in the 2021 Series I Bonds, as described herein. See APPENDIX C – “BOOK-ENTRY SYSTEM.”

The principal of and interest on the 2021 Series I Bonds, together with the debt service on other Parity Bonds (as defined herein), are payable exclusively from and secured by a pledge of the Net Revenues of the Electric System of SMUD. Neither the credit nor the taxing power of SMUD or the State of California is pledged to the payment of the 2021 Series I Bonds.

The information presented on this cover page is for general reference only and is qualified in its entirety by reference to the entire Official Statement and the documents summarized and described herein.

The 2021 Series I Bonds are offered when, as and if issued and received by the Underwriters, subject to the approval of the validity of the 2021 Series I Bonds and certain other legal matters by Orrick, Herrington & Sutcliffe LLP, Bond Counsel to SMUD. Certain legal matters will be passed on for the Underwriters by their counsel, Nixon Peabody LLP, San Francisco, California. It is expected that the 2021 Series I Bonds will be available for delivery through the facilities of DTC on or about July __, 2021.

Goldman Sachs & Co. LLC

BofA Securities

Barclays

Citigroup

J.P. Morgan

Morgan Stanley

June __, 2021

* Preliminary, subject to change.

SACRAMENTO MUNICIPAL UTILITY DISTRICT
Sacramento, California

\$[PRINCIPAL AMOUNT]*
ELECTRIC REVENUE REFUNDING BONDS, 2021 SERIES I

MATURITY SCHEDULE*

Due (August 15)	Amount	Interest Rate	Yield	CUSIP[†]
	\$	%	%	

* Preliminary, subject to change.

[†] CUSIP[®] is a registered trademark of the American Bankers Association. CUSIP[®] data herein is provided by CUSIP Global Services (CGS), which is managed on behalf of the American Bankers Association by S&P Capital IQ. Copyright[©] 2014 CUSIP Global Services. All rights reserved. This data is not intended to create a database and does not serve in any way as a substitute for the CGS database. CUSIP[®] numbers have been assigned by an independent company not affiliated with SMUD or the Underwriters and are included solely for the convenience of the registered owners of the applicable 2021 Series I Bonds. Neither SMUD nor the Underwriters are responsible for the selection or uses of these CUSIP[®] numbers, and no representation is made as to their correctness on the applicable 2021 Series I Bonds or as included herein. The CUSIP[®] number for a specific maturity is subject to being changed after the execution and delivery of the 2021 Series I Bonds as a result of various subsequent actions including, but not limited to, a refunding in whole or in part or as a result of the procurement of secondary market portfolio insurance or other similar enhancement by investors that is applicable to all or a portion of certain maturities of the 2021 Series I Bonds.

SACRAMENTO MUNICIPAL UTILITY DISTRICT
Sacramento, California

BOARD OF DIRECTORS

Nancy Bui-Thompson, President
Brandon Rose, Vice President
Gregg Fishman
Rosanna Herber
Rob Kerth
Heidi Sanborn
Dave Tamayo

OFFICERS AND EXECUTIVES

Paul Lau, Chief Executive Officer and General Manager
Brandy Bolden, Chief Customer Officer
Stephen Clemons, Chief Innovation and Information Officer
Gary King, Chief Diversity Officer
Scott Martin, Chief Strategy Officer
Laura Lewis, Chief Legal and Government Affairs Officer and General Counsel
Frankie McDermott, Chief Operating Officer
Lora Anguay, Chief Zero Carbon Officer
Jennifer Davidson, Chief Financial Officer
Farres Everly, Director, Communications, Marketing and Community Relations
Russell Mills, Treasurer
Lisa Limcaco, Controller

SPECIAL SERVICES

ORRICK, HERRINGTON & SUTCLIFFE LLP
Bond Counsel

U.S. BANK NATIONAL ASSOCIATION
Trustee and Paying Agent

BAKER TILLY VIRCHOW KRAUSE, LLP, Madison, Wisconsin
Independent Accountants

PFM FINANCIAL ADVISORS LLC, Philadelphia, Pennsylvania
Financial Advisor

SWAP FINANCIAL GROUP
Swap Advisor

No dealer, broker, salesperson or other person has been authorized by SMUD or the Underwriters to give any information or to make any representations with respect to the 2021 Series I Bonds other than those contained in this Official Statement and, if given or made, such information or representations must not be relied upon as having been authorized by any of the foregoing. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the 2021 Series I Bonds by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale. The information set forth herein has been obtained from SMUD and other sources which are believed to be reliable, but it is not guaranteed as to accuracy or completeness by, and is not to be construed as a representation of, the Underwriters. The information and expressions of opinion stated herein are subject to change without notice. The delivery of this Official Statement shall not, under any circumstances, create any implication that there has been no change in the affairs of SMUD since the date hereof. The Underwriters have provided the following sentence for inclusion in this Official Statement: The Underwriters have reviewed the information in this Official Statement in accordance with and as part of their responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriters do not guarantee the accuracy or completeness of such information.

The 2021 Series I Bonds have not been registered under the Securities Act of 1933, as amended, in reliance upon an exemption from the registration requirements contained in such Act. The 2021 Series I Bonds have not been registered or qualified under the securities laws of any state.

IN CONNECTION WITH THE OFFERING OF THE 2021 SERIES I BONDS THE UNDERWRITERS MAY OVERALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICES OF SUCH BONDS AT LEVELS ABOVE THOSE THAT MIGHT OTHERWISE PREVAIL ON THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME. THE UNDERWRITERS MAY OFFER AND SELL THE 2021 SERIES I BONDS TO CERTAIN DEALERS AND OTHERS AT PRICES LOWER THAN THE PUBLIC OFFERING PRICES SET FORTH ON THE INSIDE COVER PAGE HEREOF AND SAID PUBLIC OFFERING PRICES MAY BE CHANGED FROM TIME TO TIME BY THE UNDERWRITERS.

CAUTIONARY STATEMENTS REGARDING FORWARD-LOOKING STATEMENTS IN THIS OFFICIAL STATEMENT

Certain statements included or incorporated by reference in this Official Statement constitute “forward-looking statements.” Such statements generally are identifiable by the terminology used, such as “plan,” “expect,” “estimate,” “budget” or other similar words.

The achievement of certain results or other expectations contained in such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, performance or achievements described to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. SMUD does not plan to issue any updates or revisions to those forward-looking statements if or when its expectations or events, conditions or circumstances on which such statements are based occur.

This Official Statement, including any supplement or amendment hereto, is intended to be deposited with the Municipal Securities Rulemaking Board through the Electronic Municipal Market Access website. SMUD maintains a website. However, the information presented therein is not part of this Official Statement and should not be relied upon in making investment decisions with respect to the 2021 Series I Bonds. The references to internet websites in this Official Statement are shown for reference and convenience only; unless explicitly stated to the contrary, the information contained within the websites is not incorporated herein by reference and does not constitute part of this Official Statement.

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OFFICIAL STATEMENT
RELATING TO
SACRAMENTO MUNICIPAL UTILITY DISTRICT
\$(PRINCIPAL AMOUNT)*
ELECTRIC REVENUE REFUNDING BONDS, 2021 SERIES I
INTRODUCTION

This Official Statement, including the cover page and Appendices attached hereto, describes the Sacramento Municipal Utility District (“SMUD”), a political subdivision of the State of California (the “State”), and its \$(PRINCIPAL AMOUNT)* Electric Revenue Refunding Bonds, 2021 Series I (the “2021 Series I Bonds”), in connection with the sale by SMUD of the 2021 Series I Bonds. The 2021 Series I Bonds are being issued to (i) refund certain of SMUD’s outstanding Bonds (as defined herein) (the “Refunded Bonds”) and (ii) pay certain costs associated with the issuance of the 2021 Series I Bonds. See “PLAN OF FINANCE.”

The 2021 Series I Bonds are part of an Electric Revenue Bond authorization of SMUD and are issued pursuant to Resolution No. 6649 (the “Master Resolution”) adopted in 1971, as amended and supplemented, and applicable California law, including Article 6a of Chapter 6 of the Municipal Utility District Act (Public Utilities Code Sections 12850 to 12860) (the “Act”), the Revenue Bond Law of 1941 (Government Code Section 54300 *et seq.*) and Article 11 of Chapter 3 of Part 1 of Division 2 of Title 5 of the California Government Code (Government Code Section 53580 *et seq.*). The issuance of the 2021 Series I Bonds was authorized on June 17, 2021, by the Board of Directors of SMUD by a Sixty-Fourth Supplemental Resolution (the “Sixty-Fourth Supplemental Resolution”) supplemental to the Master Resolution. The Master Resolution and all supplemental resolutions, including the Sixty-Fourth Supplemental Resolution, are collectively referred to herein as the “Resolution.” See APPENDIX D — “SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION.”

The purchasers of the 2021 Series I Bonds, by virtue of their purchase of the 2021 Series I Bonds, will consent to certain amendments to the Resolution. See “SECURITY FOR THE BONDS – Consent to Amendments to the Resolution.”

The 2021 Series I Bonds and other bonds issued on a parity therewith pursuant to the Resolution are collectively referred to herein as the “Bonds.” The Bonds, together with other Parity Bonds, are payable solely from the Net Revenues of the Electric System. See “SECURITY FOR THE BONDS.” As of June 1, 2021, Bonds in the aggregate principal amount of \$2,085,120,000 were outstanding under the Resolution. Immediately following the issuance of the 2021 Series I Bonds and the refunding of the Refunded Bonds, Bonds in the aggregate principal amount of \$_____ * will be outstanding under the Resolution.

Although the Resolution establishes an “Electric Revenue Bond Reserve Fund” (the “Reserve Fund”), the Reserve Fund does *not* secure and will *not* be available to pay debt service on the 2021 Series I Bonds. The Reserve Fund secures all Bonds issued prior to January 1, 2004 that are currently outstanding (and not otherwise deemed to be paid and discharged under the Resolution) and may secure additional Bonds issued in the future.

* Preliminary, subject to change.

U.S. Bank National Association serves as trustee and paying agent under the Resolution (the “Trustee”).

From time to time, SMUD issues Subordinated Electric Revenue Bonds (the “Subordinated Bonds”) pursuant to Resolution No. 85-11-1 of SMUD, adopted on November 7, 1985, as amended and supplemented (the “Subordinate Resolution”). As of June 1, 2021, Subordinated Bonds in the aggregate principal amount of \$200,000,000 were outstanding. The Subordinated Bonds are payable solely from the Net Subordinated Revenues of the Electric System and are subordinate in right of payment to the prior payment of principal of and interest on the Bonds (including the 2021 Series I Bonds).

SMUD also issues commercial paper notes (the “Notes”) from time to time. As of June 1, 2021, no Notes were outstanding. Currently, Notes in the aggregate principal amount of \$400,000,000 may be outstanding at any one time, but SMUD reserves the right to increase or decrease the aggregate principal amount of the Notes that may be outstanding at any one time in the future. The Notes are secured by letters of credit issued by commercial banks. The Notes (and SMUD’s obligations to repay drawings under the letters of credit) are payable solely from available revenues of SMUD’s Electric System and are subordinate in right of payment to the prior payment of principal of, premium if any, and interest on the Bonds (including the 2021 Series I Bonds) and the Subordinated Bonds. Drawings under the letters of credit, to the extent not repaid immediately from the proceeds of commercial paper or other available SMUD funds, are repayable with interest over a period of five years. The letters of credit currently expire in February, June and October of 2022.

SMUD is responsible for the acquisition, generation, transmission and distribution of electric power to its service area, which includes most of Sacramento County and small portions of Placer and Yolo counties. For the year ended December 31, 2020, SMUD served a population of approximately 1.5 million with a total annual retail load of approximately 10,145 million kilowatt hours (“kWh”). SMUD owns and operates an electric system which includes generating facilities owned and operated by SMUD with an aggregate generating capacity of approximately 789 megawatts (“MW”), local gas-fired plants owned and operated by separate joint powers authorities and managed by SMUD with an aggregate generating capacity of approximately 1,081 MW, over which SMUD has exclusive control of dispatch, and purchased power with an aggregate generating capacity of approximately 1,379 MW and transmission and distribution facilities. SMUD’s power requirements exceed its generating capacity and thus SMUD has agreements with others (including the Local Gas-Fired Plants as defined in APPENDIX A) for the purchase of a portion of its power requirements. See APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – POWER SUPPLY AND TRANSMISSION – Power Supply Resources.” Continuing development of SMUD’s business strategy in response to changing environmental and regulatory requirements has had, and is expected to continue to have, a major effect on SMUD’s power supply planning. See APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – BUSINESS STRATEGY.”

Pursuant to a Continuing Disclosure Agreement, dated the date of issuance of the 2021 Series I Bonds (the “Continuing Disclosure Agreement”) between SMUD and the Trustee, SMUD will covenant for the benefit of the holders of the 2021 Series I Bonds and owners of beneficial interest in the 2021 Series I Bonds to provide certain financial information and operating data and to provide certain notices. See “CONTINUING DISCLOSURE UNDERTAKING” and APPENDIX F – “FORM OF CONTINUING DISCLOSURE AGREEMENT.”

The information presented in this Introduction is qualified in its entirety by reference to this entire Official Statement and the documents summarized or described herein. This Official Statement, including the Appendices, summarizes the terms of the 2021 Series I Bonds, the Resolution and certain agreements, contracts and other arrangements, some of which currently exist and others of which may exist in the future.

The summaries of and references to all documents, statutes, regulations and other instruments referred to herein do not purport to be complete, comprehensive or definitive, and each such summary and reference is qualified in its entirety by reference to each such document, statute, regulation or instrument.

Capitalized terms not otherwise defined in this Official Statement shall have the meanings ascribed thereto in APPENDIX D – “SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION – Certain Definitions” or in the Resolution.

PLAN OF FINANCE

The proceeds of the 2021 Series I Bonds will be used to (i) refund the \$127,030,000 outstanding principal amount of the Sacramento Municipal Utility District Electric Revenue Refunding Bonds, 2011 Series X maturing after August 15, 2021 (the “Refunded Bonds”) and (ii) pay certain costs associated with the issuance of the 2021 Series I Bonds, including the interest rate swap termination payment described below. In connection with the refunding of the Refunded Bonds, SMUD expects to terminate an interest rate swap agreement that was executed in December of 2019 to hedge potential interest rate exposure relating to the future refunding of the Refunded Bonds. SMUD expects that it will pay a termination payment for the termination of the interest rate swap agreement.

A portion of the proceeds of the 2021 Series I Bonds, together with other available funds, will be deposited in trust in an escrow fund (the “Escrow Fund”) established under an escrow agreement between SMUD and the Trustee. The moneys so deposited will be invested in direct obligations of the United States of America (the “Federal Securities”), the interest on and principal of which will be sufficient to pay the interest on the Refunded Bonds due on August 15, 2021 (the “Redemption Date”) and to redeem the Refunded Bonds on the Redemption Date. Upon deposit, all liability of SMUD with respect to the Refunded Bonds (except for the obligation of SMUD to pay the interest on and redemption price of the Refunded Bonds from moneys on deposit in the Escrow Fund) will cease. The holders of the Refunded Bonds will be entitled to payment from SMUD solely from moneys or Federal Securities on deposit in the Escrow Fund, and the Refunded Bonds will no longer be outstanding under the Resolution. The Federal Securities and moneys in the Escrow Fund will not secure the 2021 Series I Bonds and will not be available to pay the principal of or interest on the 2021 Series I Bonds.

ESTIMATED SOURCES AND USES OF FUNDS

The estimated sources and uses of funds with respect to the 2021 Series I Bonds are as follows:

Sources of Funds:

Principal Amount	\$
[Net] Original Issue [Premium/Discount]	
Interest Fund Release	
SMUD Contribution	
Total Sources of Funds	\$

Uses of Funds:

Refunding of Refunded Bonds	\$
Interest Rate Swap Termination Payment	
Costs of Issuance (including Underwriters’ Discount)	
Total Uses of Funds	\$

THE 2021 SERIES I BONDS

The 2021 Series I Bonds will mature in the years and amounts and bear interest at the rates set forth on the inside cover page hereof. Interest on the 2021 Series I Bonds will accrue from the date of delivery of the 2021 Series I Bonds, and will be payable on February 15, 2022, and semiannually thereafter on each February 15 and August 15 (each, an “Interest Payment Date”) to the owners thereof as of the first day of the month (whether or not such day is a Business Day) in which an Interest Payment Date occurs (each, a “Record Date”).

The 2021 Series I Bonds will be issued in fully registered form and, when issued, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York (“DTC”). DTC will act as securities depository (the “Securities Depository”) for the 2021 Series I Bonds. Individual purchases of interests in the 2021 Series I Bonds will be made in book-entry form only, in the principal amount of \$5,000 or any integral multiple thereof. Purchasers of such interests will not receive certificates representing their interests in the 2021 Series I Bonds. Principal and interest are payable directly to the Securities Depository by the Trustee. Upon receipt of payments of principal and interest, the Securities Depository will in turn remit such principal and interest to the Securities Depository’s Direct Participants (as such term is hereinafter defined) for subsequent disbursement to the purchasers of interests in the 2021 Series I Bonds. See APPENDIX C – “BOOK-ENTRY SYSTEM.”

The 2021 Series I Bonds are not subject to redemption prior to maturity.

DEBT SERVICE SCHEDULE

The following table sets forth the debt service requirements with respect to the 2021 Series I Bonds. See also APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS – Outstanding Indebtedness – *Debt Service Requirements*.”

Calendar Year	Principal	Interest	Total
2021	\$	\$	\$
2022			
2023			
2024			
2025			
2026			
2027			
2028			
2029			
2030			
2031			
2032			
2033			
2034			
2035			
2036			
2037			
2038			
2039			
2040			
2041			
	<u>\$</u>	<u>\$</u>	<u>\$</u>

SECURITY FOR THE BONDS

General

The principal of and premium, if any, and interest on the Bonds, together with other Parity Bonds, are payable exclusively from, and are secured by a pledge (effected in the manner and to the extent provided in the Resolution) of, the Net Revenues of the Electric System of SMUD.

Neither the credit nor the taxing power of SMUD is pledged to the payment of the Bonds and the general fund of SMUD is not liable for the payment thereof. The owners of the Bonds cannot compel the exercise of any taxing power of SMUD or the forfeiture of any of its property. The Bonds are not a legal or equitable pledge, charge, lien or encumbrance upon any of SMUD's property (including the Electric System) or upon any of its income, receipts or revenues except the Net Revenues of the Electric System to the extent of the pledge thereof contained in the Resolution.

Consent to Amendments to the Resolution

The purchasers of the 2021 Series I Bonds, by virtue of their purchase of the 2021 Series I Bonds, will consent to certain amendments to the Resolution (the "Proposed Amendments"). Such amendments are described in ***bold italic*** font herein under "SECURITY FOR THE BONDS – Rates and Charges" and "– Limitations on Additional Obligations Payable from Revenues" and in APPENDIX D – "SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION – Certain Definitions" and "– Reserve Fund for Certain Bonds." The written consents to the Proposed Amendments of the holders and registered owners

of at least 60% of the Bonds outstanding have been filed with SMUD or the Trustee, as required by the Resolution. However, while certain Bonds remain outstanding, SMUD must also obtain the written consents of certain bond insurers to implement the Proposed Amendments. SMUD expects to implement the Proposed Amendments when the written consents of such bond insurers are obtained or when the Bonds insured by such bond insurers are no longer outstanding.

Allocation of Revenues

After making an allocation of Revenues to Maintenance and Operation Costs and to Energy Payments not included in Maintenance and Operation Costs, the Treasurer of SMUD is required (subject to the last paragraph of this section) to set aside, on an equal priority with sums set aside for all other Parity Bonds, Net Revenues as follows:

First: To the Electric Revenue Bond Interest Fund, in approximately equal monthly installments on or before the first day of each month, an amount equal to at least one-fifth (1/5) of the aggregate amount of interest becoming due on the Bonds on the next succeeding semiannual interest payment date, until an amount sufficient to meet said interest payment is accumulated.

Second: To the Electric Revenue Bond Redemption Fund, to be set aside in the Principal Account and Sinking Fund, respectively, in approximately equal monthly installments on or before the first day of each month, an amount equal to at least one-tenth (1/10) of the aggregate amount of principal becoming due on serial Bonds and the aggregate minimum sinking fund payments required to be made with respect to term Bonds during the next ensuing 12 months, until an amount sufficient to meet the principal and sinking fund requirements on all Bonds outstanding is accumulated in said accounts, respectively.

Third: To the Electric Revenue Bond Reserve Fund, such amounts as any supplemental resolution authorizing the issuance of a series of Bonds may require to build up and maintain said fund.

If interest on Bonds of a series or maturity is payable more frequently than semiannually, the Treasurer of SMUD shall set aside out of Net Revenues in the Interest Fund such amounts as may be required to pay interest on the Bonds of such series or maturity on each interest payment date at least one month prior to such interest payment date. Allocation to the Electric Revenue Bond Redemption Fund and Electric Revenue Bond Reserve Fund shall be made as set forth above.

All remaining Revenues, after making the foregoing allocations, will be available to SMUD for all lawful SMUD purposes.

From time to time SMUD may deposit in the Rate Stabilization Fund from such remaining Revenues such amounts as SMUD shall determine, provided that deposits in the Rate Stabilization Fund from remaining Revenues in any fiscal year may be made until (but not after) the date 120 days after the end of such fiscal year. SMUD may withdraw amounts from the Rate Stabilization Fund only for inclusion in Revenues for any fiscal year, such withdrawals to be made until (but not after) 120 days after the end of such fiscal year. All interest or other earnings upon deposits in the Rate Stabilization Fund shall be withdrawn therefrom and accounted for as Revenues. No deposit of Revenues to the Rate Stabilization Fund may be made to the extent such Revenues were included in any certificate submitted in connection

with the issuance of additional bonds and withdrawal of the Revenues from the Revenues employed in rendering said certificate would have caused noncompliance with the additional bond provisions or to the extent withdrawals of the Revenues for any fiscal year would have reduced the debt service ratio for such fiscal year to or below 1.40:1.00. See APPENDIX A – “RATES AND CUSTOMER BASE – Rates and Charges” for a description of the balance in the Rate Stabilization Fund.

With respect to Bonds of a series issued on or after October 1, 2003 (including the 2021 Series I Bonds), notwithstanding the foregoing, so long as the Bonds of such series or maturity are outstanding, the supplemental resolution authorizing the issuance of such series shall require the Treasurer, out of Net Revenues received by SMUD, to set aside in the Interest Fund and the Principal Account, respectively, such amounts as may be required so that an amount equal to the amount of principal and/or interest becoming due and payable on the Bonds of such series or maturity on each interest payment date and principal payment date is on deposit in the Interest Fund and the Principal Account, respectively, at such time on or prior to such interest payment date or principal payment date as shall be specified in the supplemental resolution authorizing such Bonds.

Rates and Charges

SMUD has covenanted in the Resolution to establish and at all times maintain and collect rates and charges for the sale or use of electric energy generated, transmitted, distributed or furnished by SMUD which, together with certain items of other income permitted under the Resolution, will yield Revenues at least sufficient, with respect to the ensuing 12 months, to pay and provide for all sums required for Maintenance and Operation Costs and Energy Payments not included in Maintenance and Operation Costs and, in addition, to provide an aggregate sum equal to at least 1.20 times the total amount required for the payment of principal and interest, together with any sinking fund or reserve fund payments, on the Bonds and all Parity Bonds, in each case during such 12 months.

For purposes of the calculations of payments to be made pursuant to the Resolution, the interest rates on Parity Bonds which bear a variable rate of interest or a rate subject to periodic adjustment or to being fixed at some date after issuance shall be, if such Parity Bonds bear a rate or rates of interest for a known period or periods of time, such rate or rates of interest for such period or periods and thereafter, for the portion of the calculation period not covered by such known period or periods, the Assumed Interest Rate.

For purposes of the above calculations of principal of and interest on Parity Bonds, if a Financial Products Agreement has been entered into by SMUD with respect to any Parity Bonds, interest on such Parity Bonds shall be included in the calculation of such principal and interest by including for each fiscal year or period an amount equal to the amount of interest payable on such Parity Bonds in such fiscal year or period at the rate or rates stated in such Parity Bonds plus any Financial Product Payments payable in such fiscal year or period minus any Financial Product Receipts receivable in such fiscal year or period; provided that in no event shall any calculation made pursuant to this clause result in a number less than zero being included in the calculation of such principal and interest.

For purposes of the above calculations of principal of and interest on Parity Bonds, Excluded Principal Payments shall be disregarded (but interest on the Parity Bonds to which such Excluded Principal Payments relate shall be included until but not after the stated due date when principal payments on such Parity Bonds are scheduled by their terms to commence) and Assumed Principal Payments and Assumed Interest Payments shall be included; and for purposes of the above calculations of interest on Parity Bonds, the interest rates on Parity Bonds which bear a variable rate of interest or a rate subject to periodic adjustment or to being fixed at some date after issuance shall be, if such Parity Bonds bear a rate or rates of interest for a known period or periods of time, such rate or rates of interest for such period or periods

and thereafter, for the portion of the calculation period not covered by such known period or periods, the Assumed Interest Rate.

SMUD has full power to establish rates and charges for all SMUD services, and the levels of such rates are not subject to review or regulation by any other governmental agency, either federal or state.

For purposes of the calculations specified in this section: (1) any calculation of principal of and interest on Parity Bonds for any period of time shall be reduced by the amount of any Subsidy that SMUD receives or expects to receive during such period of time relating to or in connection with such Parity Bonds; and (2) to the extent the calculation of principal of and interest on Parity Bonds is reduced by the Subsidy as provided in clause (1) of this paragraph, any calculation of Revenues for any period of time shall be reduced by the amount of any Subsidy received or expected to be received by SMUD with respect to or in connection with such Parity Bonds during such period of time.

See APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS – Outstanding Indebtedness – *Build America Bonds Subsidy Payments*” for a description of the current Subsidy that SMUD receives with respect to certain Bonds.

See APPENDIX D hereto for the definitions of certain capitalized terms used in this section.

Limitations on Additional Obligations Payable from Revenues

The Resolution provides that SMUD will not, so long as any Bonds are outstanding, issue any obligations payable in whole or in part from Revenues except the following:

1. Refunding bonds issued solely to refund all or part of the Bonds or Parity Bonds;
2. General obligation bonds or other securities secured by the full faith and credit of SMUD;
3. Additional revenue bonds (including additional Bonds under the Resolution and additional Parity Bonds), payable on a parity with the Bonds, with an equal lien and charge upon the Revenues, but only subject to the following conditions:
 - (a) Such additional revenue bonds shall have been authorized for and the proceeds therefrom required to be applied to additions, betterments, extensions or improvements to the Electric System (and necessary costs of issuance, interest during construction and reserve funds);
 - (b) The proceedings for the issuance of such additional revenue bonds shall require SMUD to fix and collect rates and charges in an amount not less, with respect to such bonds, than the amounts required with respect to Bonds issued under the Resolution;
 - (c) SMUD shall not then be in default under the Resolution or other resolutions authorizing the issuance of Parity Bonds; and
 - (d) The Trustee shall receive a certificate of SMUD to the effect (i) that Net Revenues, after completion of the improvements proposed to be financed by such additional revenue bonds, will be sufficient to pay the principal of and interest (and bond reserve fund requirements) on all Bonds and Parity Bonds then outstanding and on such additional revenue bonds; and (ii) that for a period of 12 consecutive months during the 24 months immediately preceding the issuance of the additional revenue bonds the Net Revenues have been at least equal to 1.25 times maximum annual debt service on all Bonds and Parity Bonds then outstanding and on such additional revenue bonds

(after adjusting Net Revenues to include 75 percent of the estimated additional Net Revenues to be derived from an increase in rates and charges or from the acquisition of an existing revenue producing electric system); and

4. Revenue bonds junior and subordinate to the Bonds and Parity Bonds.

For purposes of the above calculations, Excluded Principal Payments shall be disregarded (but interest on the Parity Bonds to which such Excluded Principal Payments relate shall be included until but not after the stated due date when principal payments on such Parity Bonds are scheduled by their terms to commence) and Assumed Principal Payments and Assumed Interest Payments shall be included; and for purposes of the above calculations of interest on Parity Bonds, the interest rates on Parity Bonds which bear a variable rate of interest or a rate subject to periodic adjustment or to being fixed at some date after issuance shall be, if such Parity Bonds bear a rate or rates of interest for a known period or periods of time, such rate or rates of interest for such period or periods and thereafter, for the portion of the calculation period not covered by such known period or periods, the Assumed Interest Rate.

For purposes of the above calculations of principal of and interest on Parity Bonds, if a Financial Products Agreement has been entered into by SMUD with respect to any Parity Bonds, interest on such Parity Bonds shall be included in the calculation of such principal and interest by including for each fiscal year or period an amount equal to the amount of interest payable on such Parity Bonds in such fiscal year or period at the rate or rates stated in such Parity Bonds plus any Financial Product Payments payable in such fiscal year or period minus any Financial Product Receipts receivable in such fiscal year or period; provided that in no event shall any calculation made pursuant to this clause result in a number less than zero being included in the calculation of such principal and interest.

For purposes of the calculations specified in this section: (1) any calculation of principal of and interest on Parity Bonds for any period of time shall be reduced by the amount of any Subsidy that SMUD receives or expects to receive during such period of time relating to or in connection with such Parity Bonds; and (2) to the extent the calculation of principal of and interest on Parity Bonds is reduced by the Subsidy as provided in clause (1) of this paragraph, any calculation of Net Revenues for any period of time shall be reduced by the amount of any Subsidy received or expected to be received by SMUD with respect to or in connection with such Parity Bonds during such period of time.

See APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS – Estimated Capital Requirements” for a description of SMUD’s projected capital requirements. Such capital requirements may be satisfied through the issuance of additional Bonds or Parity Bonds.

See APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS – Outstanding Indebtedness – *Build America Bonds Subsidy Payments*” for a description of the current Subsidy that SMUD receives with respect to certain Bonds.

See APPENDIX D hereto for the definitions of certain capitalized terms used in this section.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

SMUD owns and operates an electric system that has provided retail electric service since 1946. SMUD’s current service area is approximately 900 square miles, and includes the principal parts of Sacramento County and small portions of Placer and Yolo counties. For a full description of SMUD, its history, organization, operations, and financial performance, certain developments in the energy markets,

certain factors affecting the electric utility industry and certain regulatory and other matters, see APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT.”

ABSENCE OF LITIGATION REGARDING THE 2021 SERIES I BONDS

SMUD is not aware of any action, suit or proceeding, threatened or pending, to restrain or enjoin the issuance, sale or delivery of the 2021 Series I Bonds, or in any way contesting or affecting the validity of the 2021 Series I Bonds or any of the proceedings of SMUD taken with respect to the 2021 Series I Bonds. SMUD is not aware of any action, suit or proceeding, threatened or pending, questioning the corporate existence of SMUD, or the title of the officers of SMUD to their respective offices, or the power and authority of SMUD to execute and deliver the 2021 Series I Bonds. For a description of certain litigation in which SMUD is involved, see APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – LEGAL PROCEEDINGS.”

UNDERWRITING

Goldman Sachs & Co. LLC, BofA Securities, Inc., Barclays Capital Inc., Citigroup Global Markets, Inc., JP Morgan Securities LLC (“JPMS”), and Morgan Stanley & Co. LLC (each an “Underwriter” and, collectively, the “Underwriters”) have jointly and severally agreed, subject to certain customary conditions to closing, to purchase the 2021 Series I Bonds from SMUD at an aggregate purchase price of \$_____ (being the aggregate principal amount of the 2021 Series I Bonds, plus [net] original issue [premium/discount] of \$_____, and less Underwriters’ discount of \$_____). The Underwriters will be obligated to purchase all 2021 Series I Bonds if any 2021 Series I Bonds are purchased. The Underwriters have agreed to make a public offering of the 2021 Series I Bonds at the initial offering prices set forth on the inside cover page hereof. The 2021 Series I Bonds may be offered and sold to certain dealers (including underwriters and other dealers depositing such bonds into investment trusts) at prices lower than such public offering prices, and such public offering prices may be changed, from time to time, by the Underwriters.

[BofA Securities, Inc., an Underwriter of the 2021 Series I Bonds, has entered into a distribution agreement with its affiliate Merrill Lynch, Pierce, Fenner & Smith Incorporated (“MLPF&S”). As part of this arrangement, BofA Securities, Inc. may distribute securities to MLPF&S, which may in turn distribute such securities to investors through the financial advisor network of MLPF&S. As part of this arrangement, BofA Securities, Inc. may compensate MLPF&S as a dealer for their selling efforts with respect to the 2021 Series I Bonds.]

[Citigroup Global Markets Inc., an Underwriter of the 2021 Series I Bonds, has entered into a retail distribution agreement with Fidelity Capital Markets, a division of National Financial Services LLC (together with its affiliates, “Fidelity”). Under this distribution agreement, Citigroup Global Markets Inc. may distribute municipal securities to retail investors at the original issue price through Fidelity. As part of this arrangement, Citigroup Global Markets Inc. will compensate Fidelity for its selling efforts.]

[JPMS, one of the Underwriters of the Bonds, has entered into negotiated dealer agreements (each, a “Dealer Agreement”) with each of Charles Schwab & Co., Inc. (“CS&Co.”) and LPL Financial LLC (“LPL”) for the retail distribution of certain securities offerings at the original issue prices. Pursuant to each Dealer Agreement, each of CS&Co. and LPL may purchase 2021 Series I Bonds from JPMS at the original issue price less a negotiated portion of the selling concession applicable to any 2021 Series I Bonds that such firm sells.]

[Morgan Stanley & Co. LLC., an Underwriter of the 2021 Series I Bonds, has entered into a retail distribution arrangement with its affiliate Morgan Stanley Smith Barney LLC. As part of the distribution

arrangement, Morgan Stanley & Co. LLC may distribute municipal securities to retail investors through the financial advisor network of Morgan Stanley Smith Barney LLC. As part of this arrangement, Morgan Stanley & Co. LLC may compensate Morgan Stanley Smith Barney LLC for its selling efforts with respect to the 2021 Series I Bonds.]

The Underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage activities. Certain of the Underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various investment banking services for SMUD for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the Underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (which may include bank loans and/or credit default swaps) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve securities and instruments of, or issued for the benefit of, SMUD.

FINANCIAL ADVISOR

SMUD has retained PFM Financial Advisors LLC, as Financial Advisor in connection with various matters relating to the delivery of the 2021 Series I Bonds. The Financial Advisor assumes no responsibility for the accuracy, completeness or fairness of the information contained in this Official Statement. The Financial Advisor is an independent advisory firm and is not engaged in underwriting or distribution of securities. The Financial Advisor will receive compensation that is contingent upon the sale, issuance and delivery of the 2021 Series I Bonds.

APPROVAL OF LEGAL PROCEEDINGS

The validity of the 2021 Series I Bonds and certain other legal matters are subject to the approval of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to SMUD. The approving opinion of Bond Counsel will be delivered with the 2021 Series I Bonds in substantially the form appearing in APPENDIX E. Bond Counsel undertakes no responsibility for the accuracy, completeness or fairness of this Official Statement. Certain legal matters will be passed on for the Underwriters by Nixon Peabody LLP, San Francisco, California, counsel to the Underwriters.

FINANCIAL STATEMENTS

SMUD's audited, consolidated financial statements for the years ended December 31, 2020 and December 31, 2019 are included in APPENDIX B attached to this Official Statement. These financial statements have been audited by Baker Tilly Virchow Krause, LLP, Madison, Wisconsin (the "Auditor"), for the periods indicated and to the extent set forth in their report thereon and should be read in their entirety. SMUD has not requested nor did it obtain permission from the Auditor to include the audited, consolidated financial statements as an appendix to this Official Statement. Accordingly, the Auditor has not performed any procedures to review the financial condition or operations of SMUD subsequent to the date of its report included therein, nor has it reviewed any information contained in this Official Statement.

TAX MATTERS

In the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to SMUD (“Bond Counsel”), based upon an analysis of existing laws, regulations, rulings and court decisions, and assuming, among other matters, the accuracy of certain representations and compliance with certain covenants, interest on the 2021 Series I Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 (the “Code”) and is exempt from State of California personal income taxes. Bond Counsel is of the further opinion that interest on the 2021 Series I Bonds is not a specific preference item for purposes of the federal alternative minimum tax. A complete copy of the proposed form of opinion of Bond Counsel is set forth in APPENDIX E hereto.

To the extent the issue price of any maturity of the 2021 Series I Bonds is less than the amount to be paid at maturity of such 2021 Series I Bonds (excluding amounts stated to be interest and payable at least annually over the term of such 2021 Series I Bonds), the difference constitutes “original issue discount,” the accrual of which, to the extent properly allocable to each Beneficial Owner thereof, is treated as interest on the 2021 Series I Bonds which is excluded from gross income for federal income tax purposes and State of California personal income taxes. For this purpose, the issue price of a particular maturity of the 2021 Series I Bonds is the first price at which a substantial amount of such maturity of the 2021 Series I Bonds is sold to the public (excluding bond houses, brokers, or similar persons or organizations acting in the capacity of underwriters, placement agents or wholesalers). The original issue discount with respect to any maturity of the 2021 Series I Bonds accrues daily over the term to maturity of such 2021 Series I Bonds on the basis of a constant interest rate compounded semiannually (with straight-line interpolations between compounding dates). The accruing original issue discount is added to the adjusted basis of such 2021 Series I Bonds to determine taxable gain or loss upon disposition (including sale, redemption, or payment on maturity) of such 2021 Series I Bonds. Beneficial Owners of the 2021 Series I Bonds should consult their own tax advisors with respect to the tax consequences of ownership of 2021 Series I Bonds with original issue discount, including the treatment of Beneficial Owners who do not purchase such 2021 Series I Bonds in the original offering to the public at the first price at which a substantial amount of such 2021 Series I Bonds is sold to the public.

2021 Series I Bonds purchased, whether at original issuance or otherwise, for an amount higher than their principal amount payable at maturity (or, in some cases, at their earlier call date) (“Premium Bonds”) will be treated as having amortizable bond premium. No deduction is allowable for the amortizable bond premium in the case of bonds, like the Premium Bonds, the interest on which is excluded from gross income for federal income tax purposes. However, the amount of tax-exempt interest received, and a Beneficial Owner’s basis in a Premium Bond, will be reduced by the amount of amortizable bond premium properly allocable to such Beneficial Owner. Beneficial Owners of Premium Bonds should consult their own tax advisors with respect to the proper treatment of amortizable bond premium in their particular circumstances.

The Code imposes various restrictions, conditions and requirements relating to the exclusion from gross income for federal tax purposes of interest on obligations such as the 2021 Series I Bonds. SMUD has covenanted to comply with certain restrictions designed to assure that interest on the 2021 Series I Bonds will not be included in federal gross income. Inaccuracy of these representations or failure to comply with these covenants may result in interest on the 2021 Series I Bonds being included in gross income for federal income tax purposes, possibly from the date of issuance of the 2021 Series I Bonds. The opinion of Bond Counsel assumes compliance with these covenants. Bond Counsel has not undertaken to determine (or to inform any person) whether any actions taken (or not taken), or events occurring (or not occurring), or any other matters coming to Bond Counsel’s attention after the date of issuance of the 2021 Series I Bonds may adversely affect the value of, or the tax status of interest on, the 2021 Series I Bonds.

Accordingly, the opinion of Bond Counsel is not intended to, and may not, be relied upon in connection with any such actions, events or matters.

Although Bond Counsel is of the opinion that interest on the 2021 Series I Bonds is excluded from gross income for federal income tax purposes and is exempt from State of California personal income taxes, the ownership or disposition of, or the accrual or receipt of amounts treated as interest on, the 2021 Series I Bonds may otherwise affect a Beneficial Owner's federal, state or local tax liability. The nature and extent of these other tax consequences depends upon the particular tax status of the Beneficial Owner or the Beneficial Owner's other items of income or deduction. Bond Counsel expresses no opinion regarding any such other tax consequences.

Current and future legislative proposals, if enacted into law, clarification of the Code or court decisions may cause interest on the 2021 Series I Bonds to be subject, directly or indirectly, in whole or in part, to federal income taxation or to be subject to or exempted from state income taxation, or otherwise prevent Beneficial Owners from realizing the full current benefit of the tax status of such interest. The introduction or enactment of any such legislative proposals or clarification of the Code or court decisions may also affect, perhaps significantly, the market price for, or marketability of, the 2021 Series I Bonds. Prospective purchasers of the 2021 Series I Bonds should consult their own tax advisors regarding the potential impact of any pending or proposed federal or state tax legislation, regulations or litigation, as to which Bond Counsel is expected to express no opinion.

The opinion of Bond Counsel is based on current legal authority, covers certain matters not directly addressed by such authorities, and represents Bond Counsel's judgment as to the proper treatment of the 2021 Series I Bonds for federal income tax purposes. It is not binding on the Internal Revenue Service ("IRS") or the courts. Furthermore, Bond Counsel cannot give and has not given any opinion or assurance about the future activities of SMUD, or about the effect of future changes in the Code, the applicable regulations, the interpretation thereof or the enforcement thereof by the IRS. SMUD has covenanted, however, to comply with the requirements of the Code.

Bond Counsel's engagement with respect to the 2021 Series I Bonds ends with the issuance of the 2021 Series I Bonds, and, unless separately engaged, Bond Counsel is not obligated to defend SMUD or the Beneficial Owners regarding the tax-exempt status of the 2021 Series I Bonds in the event of an audit examination by the IRS. Under current procedures, parties other than SMUD and its appointed counsel, including the Beneficial Owners, would have little, if any, right to participate in the audit examination process. Moreover, because achieving judicial review in connection with an audit examination of tax-exempt bonds is difficult, obtaining an independent review of IRS positions with which SMUD legitimately disagrees may not be practicable. Any action of the IRS, including but not limited to selection of the 2021 Series I Bonds for audit, or the course or result of such audit, or an audit of bonds presenting similar tax issues may affect the market price for, or the marketability of, the 2021 Series I Bonds, and may cause SMUD or the Beneficial Owners to incur significant expense.

CONTINUING DISCLOSURE UNDERTAKING

Pursuant to the Continuing Disclosure Agreement, SMUD will covenant for the benefit of the holders and the "Beneficial Owners" (as defined in the Continuing Disclosure Agreement) of the 2021 Series I Bonds to provide certain financial information and operating data relating to SMUD by not later than six months after the end of each of SMUD's fiscal years (presently, each December 31), commencing with the report for the year ending December 31, 2021 (the "Annual Report"), and to provide notices of the occurrence of certain listed events with respect to the 2021 Series I Bonds. The Annual Report will be filed by or on behalf of SMUD with the Municipal Securities Rulemaking Board (the "MSRB") through its Electronic Municipal Market Access system ("EMMA") and any notices of such listed events will be filed

by or on behalf of SMUD with the MSRB through EMMA. The specific nature of the information to be contained in the Annual Report and the notices of listed events are set forth in the form of the Continuing Disclosure Agreement which is included in its entirety in APPENDIX F hereto. SMUD's covenant will be made in order to assist the Underwriters in complying with Securities and Exchange Commission Rule 15c2-12.

In a limited number of circumstances, certain of the annual reports, audited financial statements or listed event filings required to be made by SMUD during the last five years under its continuing disclosure undertakings were not connected to all of the CUSIP numbers of the bonds subject to the continuing disclosure undertakings. In addition, SMUD entered into two subordinated forward starting interest rate swaps in December 2019 and filed a notice of the interest rate swaps with the MSRB through EMMA in April 2020. A notice of rating upgrade on October 6, 2020, by Moody's Investors Service of the Northern California Gas Authority No. 1 Gas Project Revenue Bonds, Series 2007B, was also not filed until October 28, 2020.

RATINGS

[Fitch Ratings, Inc. ("Fitch") and S&P Global Ratings ("S&P")] have assigned ratings of "AA (stable outlook)" and "AA (stable outlook)," respectively, to the 2021 Series I Bonds. Such ratings reflect only the views of such organizations and are not a recommendation to buy, sell or hold the 2021 Series I Bonds. Explanations of the significance of such ratings may be obtained only from the respective rating agencies. SMUD has furnished to Fitch and S&P certain information and materials concerning the 2021 Series I Bonds and itself. Generally, a rating agency bases its rating on the information and materials furnished to it and on investigations, studies and assumptions of its own. There is no assurance that such ratings will continue for any given period or that they will not be revised downward, suspended or withdrawn entirely by the respective rating agencies, if in the judgment of such rating agency, circumstances so warrant. SMUD has not, other than as described under "CONTINUING DISCLOSURE UNDERTAKING" above, and the Underwriters have not undertaken any responsibility either to bring to the attention of the holders or beneficial owners of the 2021 Series I Bonds any proposed revision, suspension or withdrawal of any rating on the 2021 Series I Bonds or to oppose any such proposed revision, suspension or withdrawal. Any such downward revision, suspension or withdrawal of such ratings may have an adverse effect on the market price or marketability of the 2021 Series I Bonds.

VERIFICATION

Upon delivery of the 2021 Series I Bonds, [] (the "Verification Agent") will verify, from the information provided to it, the mathematical accuracy as of the date of the closing of the 2021 Series I Bonds of the computations contained in the provided schedules to determine that the anticipated receipts from the securities and cash deposits listed in the Underwriters' schedules, to be held in escrow, will be sufficient to pay, when due, the interest on and redemption requirements of the Refunded Bonds. The Verification Agent will express no opinion on the assumptions provided to them.

MISCELLANEOUS

This Official Statement includes descriptions of the terms of the 2021 Series I Bonds, power purchase agreements with certain other parties, pooling and other agreements, the Resolution and certain provisions of the Act. Such descriptions do not purport to be complete, and all such descriptions and references thereto are qualified in their entirety by reference to each such document.

Copies of the Resolution, which forms a contract with the holders of the 2021 Series I Bonds, will be made available upon request.

This Official Statement has been duly authorized by the Board of Directors of SMUD.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By: _____
Chief Executive Officer and General Manager

APPENDIX A
INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT

APPENDIX A

INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT

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SACRAMENTO MUNICIPAL UTILITY DISTRICT
Sacramento, California

BOARD OF DIRECTORS

Nancy Bui-Thompson, President
Brandon Rose, Vice President
Gregg Fishman
Rosanna Herber
Rob Kerth
Heidi Sanborn
Dave Tamayo

OFFICERS AND EXECUTIVES

Paul Lau, Chief Executive Officer and General Manager
Brandy Bolden, Chief Customer Officer
Stephen Clemons, Chief Innovation and Information Officer
Gary King, Chief Diversity Officer
Scott Martin, Chief Strategy Officer
Laura Lewis, Chief Legal and Government Affairs Officer and General Counsel
Frankie McDermott, Chief Operating Officer
Lora Anguay, Chief Zero Carbon Officer
Jennifer Davidson, Chief Financial Officer
Farres Everly, Director, Communications, Marketing & Community Relations
Russell Mills, Treasurer
Lisa Limcaco, Controller

INTRODUCTION

General

The Sacramento Municipal Utility District (“SMUD”) owns and operates an electric system that has provided retail electric service since 1946. SMUD’s current service area is approximately 900 square miles, and includes the principal parts of Sacramento County and small portions of Placer and Yolo counties. See “THE SERVICE AREA AND ELECTRIC SYSTEM – The Service Area.”

Independent Governance

SMUD is an independently run community-owned organization. SMUD is not required by law to transfer any portion of its collections from customers to any local government.

SMUD is governed by a Board of Directors (the “Board”), which consists of seven directors elected by ward for staggered four-year terms. The Board determines policy and appoints the Chief Executive Officer and General Manager, who is responsible for SMUD’s overall management and day-to-day operations. The Chief Executive Officer and General Manager is responsible for the hiring and removal of all employees, other than the Chief Legal Officer and General Counsel, the Internal Auditor and the Special Assistant to the Board, who are hired and may be removed only by the Board. The employment status of nearly all SMUD employees is governed by a civil service system administered by the Chief Executive Officer and General Manager.

The Board elects its President and Vice President annually to take office in January. The current members of the Board are as follows:

Name	Occupation	Term Expires
Nancy Bui-Thompson, President	Chief Information Officer, Wellspace Health	December 31, 2024
Brandon Rose, Vice President	Air Pollution Specialist, California Environmental Protection Agency	December 31, 2024
Gregg Fishman	Broadcaster	December 31, 2022
Rosanna Herber	Retired Utility Director	December 31, 2022
Rob Kerth	Business Owner	December 31, 2024
Heidi Sanborn.....	Executive Director, National Stewardship Action Council	December 31, 2022
Dave Tamayo.....	Environmental Specialist IV, County of Sacramento	December 31, 2022

SMUD’s senior management consists of the following executives:

Chief Executive Officer & General Manager. Paul Lau was named chief executive officer and general manager (“CEO & GM”) of SMUD in October 2020. He reports to the SMUD Board of Directors. As CEO & GM, he leads the sixth largest community-owned electric utility in the nation, serving a population of approximately 1.5 million residents and managing a \$1.7 billion budget. Mr. Lau previously served as SMUD’s Chief Grid Strategy & Operations Officer and has held several other executive leadership positions during his 39-year career at SMUD. He serves on several national and local boards, including the Large Public Power Council, California Municipal Utilities Association, American Public Power Association, and Smart Electric Power Alliance, and as a Commissioner of the Balancing Authority

of Northern California (“BANC”). A registered professional electrical engineer in the State of California (the “State”), Mr. Lau received his bachelor’s degree in electrical power engineering from California State University, Sacramento.

Chief Customer Officer. Brandy Bolden reports to the CEO & GM and oversees SMUD’s Customer and Community Services business unit. She is responsible for business intelligence, account management, customer care, revenue management, customer experience and segmentation strategy, channel management, customer program and service delivery, and special assistance. She is also responsible for commercial development and business attraction and oversees Community Energy Services, which provides services and support for community choice aggregators. Since joining SMUD in 2003, Brandy has demonstrated strong leadership and held a variety of senior leadership roles, including leading the Customer & Community Services project management office and the dual role of director of Customer Care and Revenue Operations. Ms. Bolden led the team responsible for streamlining the meter-to-cash processes, delivering key billing and payment experience enhancements and recognizing operational efficiencies that resulted in sustained annual savings for SMUD. Ms. Bolden holds a bachelor’s degree in Sociology from University of California, Davis.

[Chief Innovation and Information Officer. Stephen Clemons reports to the CEO & GM and joined SMUD in 2017. He is responsible for SMUD’s information technology strategy, operations, infrastructure, IT Project Management Office, enterprise innovation process and information security and privacy. Before joining SMUD, Mr. Clemons worked as the public sector vice president for cybersecurity firm, iBoss Cybersecurity. His previous employment includes roles as a senior director for Product Management at Qualcomm Education in San Diego, chief information officer for the San Diego County Office of Education from 2007 to 2014, information technology director for the County of San Diego, chief enterprise architect for the State’s Office of the Chief Information Officer in Sacramento from 2003 to 2006, and chief enterprise technology architect for the Franchise Tax Board in Sacramento from 1994 to 2003. He holds a bachelor’s degree in business administration from California State University, Sacramento.][to be reviewed/updated]

Chief Diversity Officer. Gary King reports to the CEO & GM and is responsible for human resources, workforce diversity and inclusion and SMUD’s Sustainable Communities program. Mr. King most recently served as SMUD’s Chief Workforce Officer, and prior to that, as manager of human resource services. Prior to joining SMUD in 1998 as a supervisor for compensation and selection, Mr. King worked as a manager of employment for the city of Palo Alto and served in senior human resource management positions for the city and county of San Francisco. Mr. King holds a master’s degree in industrial/organizational psychology from the University of Maryland and a bachelor’s degree in behavioral science from Pacific Union College.

Chief Strategy Officer. Scott Martin reports to the CEO & GM and is responsible for looking holistically at all strategies across the company and driving prioritization including zero carbon, rates and pricing, enterprise strategic planning and enterprise prioritization. Mr. Martin is a seasoned executive with more than 30 years of experience. Prior to assuming this role, Mr. Martin was a director for resource planning and new business strategy. Previous experience also includes customer strategy planning supervisor. Mr. Martin joined SMUD in 1999 and holds a bachelor of arts degree in economics from the University of California, Berkeley and a master of arts degree in economics from the University of Nevada, Las Vegas.

Chief Legal & Government Affairs Officer and General Counsel. Laura Lewis was named general counsel for SMUD in April 2014. In this position she serves as chief lawyer and manages SMUD’s legal office and its staff of eight attorneys. She also serves as the secretary to SMUD’s elected board of directors. She reports to the Board and to the CEO & GM and has responsibility for all legal matters in

which SMUD is a party to, or has an interest in. Ms. Lewis also oversees SMUD's government affairs and reliability compliance department. In this capacity, she is responsible for management and coordination of all legislative matters and regulatory requirements affecting SMUD at the state and federal level, including the FERC-NERC electric reliability standards. Ms. Lewis joined SMUD in 1997 as a staff attorney, serving in that capacity through 1999, after which she moved to the San Francisco law firm Davis Wright Tremaine. In 2002, she returned to SMUD as a senior attorney. In 2010, she became assistant general counsel and in 2013 was appointed chief assistant general counsel. She holds a juris doctorate from McGeorge School of Law, where she won membership in the Order of the Coif honor society. She holds a bachelor's degree in political science from the University of California, San Diego and is a member of the American Bar Association, the Energy Bar Association, and the State Bar of California.

Chief Operating Officer. Frankie McDermott reports to the CEO & GM and is responsible providing strategic leadership and tactical oversight related to the safe and reliable transmission and delivery of energy to customers, ensuring efficient planning, construction, operation and maintenance of transmission, and distribution facilities requirements in order to safely and efficiently meet customer demands. This position has primary responsibility for the processes and functions related to system reliability and operations across SMUD. The Chief Operating Officer is also the safety leader for the enterprise, leader of operational efficiency and responsible for all non-IT capital investments. Prior to this role, Mr. McDermott served as Chief Energy Delivery Officer and Chief Customer Officer, responsible for SMUD's overall retail strategy. From 2010 to 2014, he served as customer services director, which included managing relationships with customer segments as SMUD moved forward with smart-grid technologies. Prior to that, he served as manager of enterprise performance and held positions in supply chain and in general services. Before joining SMUD in 2003, Mr. McDermott served in management roles in the semiconductor industry at NEC Electronics in Roseville, California and in Ireland. After engineering school in Ireland, he earned an MBA from Golden Gate University and completed the Advanced Management Program at the Haas School of Business at the University of California Berkeley.

Chief Zero Carbon Officer. Lora Anguay reports to the CEO & GM and is responsible for the delivery of SMUD's plan to provide 100% carbon free energy resources by 2030. This includes obtaining new grants and partnerships, overseeing research and development, designing distributed energy resource programs, enabling processes to settle distributed energy transactions with SMUD's customers and transitioning SMUD's power generation assets and energy contracts to zero carbon resources. Prior to assuming this role, Ms. Anguay was the director of Distribution Operations & Maintenance and was responsible for the day to day operations of SMUD's electric distribution grid. Before that she was an engineering designer, process control supervisor, project manager for smart meter deployment, a senior project manager for smart grid distribution automation and supervisor in Grid Assets. Before SMUD, she worked for Oracle Corporation as a finance manager and is a veteran who served in the United States Coast Guard. Ms. Anguay joined SMUD in 2004 and holds a Bachelor of Science degree in business administration from California State University, Sacramento.

Chief Financial Officer. Jennifer Davidson was named chief financial officer ("CFO") in 2017. Reporting to the CEO & GM, she oversees corporate accounting, treasury operations and risk management, and planning and budget functions and is also responsible for key corporate services, including facilities, security, image production and postal service, purchasing, warehouse and fleet. Ms. Davidson joined SMUD in 2006 and previously served as director of budget, enterprise performance and risk management. Before joining SMUD, Ms. Davidson held management positions with investor-owned utility Southern California Edison and software and services provider Amdocs. She holds a bachelor's degree in geography from the University of California, Los Angeles.

Director, Communications, Marketing & Community Relations. Farres Everly reports to the CEO & GM and since 2009 has been responsible for oversight of the SMUD brand, all external and internal

strategic marketing and communications activities and campaigns and SMUD's outreach efforts to the community and the State's capital region, including volunteerism, events and sponsorships. He previously served as SMUD's Manager of Advertising and Promotions. Prior to joining SMUD, Mr. Everly held marketing leadership positions at VSP, The Money Store and the Sacramento Metropolitan Chamber of Commerce. He holds a bachelor's degree in Journalism from California State University, Chico.

Treasurer. Russell Mills reports to the CFO. He oversees all treasury operations, including debt and cash management, banking, financial planning and forecasting, enterprise and commodity risk management, property and casualty insurance, and is responsible for developing and implementing capital borrowing strategies. Mr. Mills also serves as treasurer for the Transmission Agency of Northern California ("TANC"), the Central Valley Financing Authority ("CVFA"), the Sacramento Cogeneration Authority ("SCA"), the Sacramento Municipal Utility District Financing Authority ("SFA"), the Sacramento Power Authority ("SPA"), the Northern California Gas Authority No. 1 ("NCGA"), the Northern California Energy Authority ("NCEA") and BANC. Before joining SMUD in 2018 as Treasurer, Mr. Mills served as Chief Financial Officer of Southern California Public Power Authority. He also served as the Chief Financial Officer of the Power Supply Program at the California Department of Water Resources. He holds an MBA from Loyola Marymount University, and a bachelor's degree in economics from Towson University in Baltimore, Maryland. Mr. Mills also holds the Energy Risk Professional (ERP) designation and is a CFA level II candidate.

Controller. Lisa Limcaco reports to the CFO and is responsible for accounting and financial reporting at SMUD. Prior to her appointment as controller in 2020, Ms. Limcaco served as an assistant controller, manager of customer value, performance and projects, senior energy commodity specialist and as principal accountant for SMUD's joint powers authorities. Ms. Limcaco also serves as controller for TANC, CVFA, SCA, SFA, SPA, NCGA, NCEA and BANC. Before joining SMUD in 2010 as a senior accountant, Ms. Limcaco had 12-years' experience as the Director of Accounting and controller for a food service provider in Sacramento and over 13-years' experience in public accounting including audit manager at Price Waterhouse LLP. Ms. Limcaco holds a bachelor's degree in accounting from the University of Hawaii, a Master of Business Administration from Sacramento State University and is a Certified Public Accountant in the State.

THE SERVICE AREA AND ELECTRIC SYSTEM

The Service Area

SMUD is the primary distributor of electric power within an area of approximately 900 square miles in central California. The service area includes the State Capital, Sacramento, the populous areas principally to the northeast and south of the City of Sacramento (the "City" or "Sacramento") and the agricultural areas to the north and south. The City is located 85 miles northeast of San Francisco.

SMUD's electric system supplies power to a population of approximately 1.5 million with a total annual retail load of approximately 10,415 million kilowatt-hours ("kWh") for the year ended December 31, 2020. As the capital of the nation's most populous state, Sacramento benefits from the historically stabilizing influence of a large government sector. Sacramento is home to the State government headquarters, the Sacramento County seat, the City government and various special districts that combine to make government the largest single employment sector in the Sacramento area. Information technology, transportation, education and health services, leisure and hospitality, and construction round out the other major sectors of employment and industry in the area.

SMUD's annual peak load has averaged 2,976 Megawatts ("MW") over the last three years, with SMUD's record peak load of 3,299 MW occurring on July 24, 2006. In 2017, SMUD recorded its second highest peak load of 3,157 MW. SMUD reviews its load forecast, at a minimum, on an annual basis.

The Electric System

SMUD owns and operates an integrated electric system that includes generation, transmission and distribution facilities.

SMUD supplies power to its bulk power substations through a 230 kilovolt ("kV") and 115 kV transmission system. This system transmits power from SMUD's generation plants and interconnects with Pacific Gas & Electric ("PG&E") and the Western Area Power Administration ("WAPA"). Power is distributed throughout Sacramento County via a 69 kV sub-transmission system with the exception of the City's downtown area, which is served from the 115 kV transmission system. The downtown area is served from 115/12 kV and 115/21 kV substations. The distribution system serving the remainder of SMUD's service territory is comprised of 69/12 kV substations with overhead and underground 12 kV distribution circuits.

BUSINESS STRATEGY

General

SMUD's Board of Directors has established the following purpose and vision statements: "SMUD's purpose is to enhance the quality of life for our customers and community by providing reliable and affordable electricity, and leading the transition to a clean energy future. SMUD's vision is to be a trusted and powerful partner in achieving an inclusive, zero carbon economy. SMUD will leverage its relationships to accelerate innovation, ensure energy affordability and reliability, protect the environment, eliminate greenhouse gas emissions, catalyze economic and workforce development, promote environmental justice, and enhance community vitality for all." The Board has adopted a set of Strategic Directions with related metrics, which it considers essential for the success of SMUD and for serving SMUD's customers. These include competitive rates, access to credit markets, reliability, customer relations, environmental leadership, resource planning, enterprise risk management and safety. Some of the general elements in SMUD's business strategy are:

- developing and maintaining a sustainable and reliable power supply to meet demand growth consistent with State mandates and the Board's directions for renewable energy and the reduction of carbon emissions to zero by 2030. See "BUSINESS STRATEGY – Sustainable Power Supply and Transmission – 2030 Zero Carbon Plan";
- working closely with customers to provide the information, tools and incentives to assist them to more efficiently manage energy use, which will contribute to meeting greenhouse gas ("GHG") emission targets and managing needle peak demand requirements (those 40 or so hours of the year with extreme temperatures when customer demand surges by up to 400 additional MW);
- managing price, volumetric and credit risks associated with energy and natural gas procurement;
- attracting, developing and retaining a diverse, skilled and engaged workforce that reflects SMUD's values and is committed to achieving SMUD's mission;
- retaining local decision making authority and operational independence; and

- collaborating regionally to attract new businesses and grow existing business to diversify and strengthen the Sacramento economy.

SMUD's long-range business strategy focuses in part on ensuring financial stability by establishing rates that provide acceptable cash coverage of all fixed charges on a consolidated basis, taking into consideration the impact of capital expenditures and other factors on cash flow. SMUD's Board policy sets a minimum fixed charge coverage ratio of 1.50 times for annual budgets, though it generally plans to meet a minimum fixed charge coverage ratio of 1.70 times. Over the past ten years, the actual fixed charge coverage ratio has averaged 2.13 times on a consolidated basis. SMUD also manages its liquidity position by planning for a minimum of 150 days cash on hand and planning to maintain at least \$150 million of available capacity under its commercial paper program. As of June 1, 2021, SMUD had all \$400 million of the authorized principal amount of its commercial paper program available for use. SMUD uses cash on hand and commercial paper to fund capital expenditures, then issues debt to reimburse itself for cash expended for qualified capital expenditures or to pay down the outstanding principal amount of its commercial paper program. Over the past ten years, the days cash on hand has averaged 208. The resolutions securing SMUD's Senior Bonds and Subordinated Bonds (each as defined under the caption "CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS" below) do not require SMUD to maintain a minimum fixed charge coverage ratio, minimum days cash on hand or minimum available capacity under its commercial paper program.

In addition, SMUD's business strategy focuses on servicing its customers in a progressive, forward-looking manner, addressing current regulatory and legislative issues and potential competitive forces.

Serving SMUD's Customers

SMUD continually looks for ways to better serve and partner with its customers to further strengthen customer loyalty, while providing reasonable product pricing. SMUD also has a focused effort to assist and incentivize customers to more efficiently manage energy use, which will contribute to meeting GHG emission targets and managing peak demand requirements as noted below.

Digital Enhancements. Customers are increasingly turning to digital channels such as the new SMUD application, SMUD website, e-mail and social media to interact and do business with SMUD. SMUD has delivered many digital enhancements, including bill pay functionality; online payment arrangements; start/stop/transfer move service; view of energy usage, chat, an enhanced outage map; and the SMUD Energy Store, which is an online marketplace for energy-related products. SMUD plans to continue efforts to provide more personalized digital customer experiences.

Advanced Metering, Infrastructure and Rate Design. As a community-owned organization, SMUD is dedicated to providing the tools and transparency in customer energy usage to enable customers to easily and positively affect energy usage, energy cost, and climate change. In 2012 SMUD installed smart technology, including 617,000 digital communicating smart meters, distribution automation systems and equipment to facilitate load management. The advanced technology has allowed SMUD to deliver tools such as text and e-mail bill alerts and online energy usage comparison charts to help customers manage energy use. SMUD has leveraged smart grid investments to improve reliability, reduce losses, reduce power quality issues and improve customer service through better, more timely information, particularly related to outages.

Time-of-Day Rates. On June 15, 2017, the Board approved TOD rates as the standard rate for residential customers. The residential rate transition began in the fourth quarter of 2018 and was completed in the fourth quarter of 2019. Currently, about 98% of residential customers are on TOD rates.

All of SMUD's business customers are also on time-based rates. On June 24, 2019, the Board approved an update to the commercial TOD rates to improve consistency and better align commercial rates with current energy market prices. Due to the impacts of the COVID-19 pandemic on SMUD's operations and priorities, on August 20, 2020, the Board postponed the implementation of the commercial rate restructure for one year, with the transition expected to be complete in the fourth quarter of 2022. See "RATES AND CUSTOMER BASE – Rates and Charges."

Renewable Options. SMUD's customers have been increasingly interested in distributed energy resources, mainly through the installation of solar systems. In 2007, SMUD received 39 applications for customer-owned solar connections. In 2020, SMUD received approximately 5,111 applications for new solar connections. As of March 2021, approximately 35,500 of SMUD's residential and commercial customers had installed solar systems, representing approximately 260 MW of solar installations.

As the cost of energy storage continues to decline, SMUD anticipates an increase in behind-the-meter energy storage, mainly through the installation of battery storage systems. As of March 2021, approximately 340 of SMUD's residential and commercial customers had installed battery storage systems, representing approximately 3.1 MW of battery storage.

As another option for solar, SMUD's SolarShares® ("SolarShares") pilot program is a cost-effective and convenient way for commercial customers to meet their energy needs from solar power. The SolarShares program offers SMUD commercial customers the opportunity to receive solar power without upfront costs or equipment installation through 5, 10 or 20 year purchase contracts. These customers can receive up to half of their power from a utility-scale solar system. SMUD supplies solar power for the SolarShares program either by building and maintaining utility-scale solar systems or by procuring solar power from third parties through power purchase agreements. The SolarShares generation was approximately 3.2% of retail sales in 2020. As of April 30, 2021, SMUD had completed the SolarShares pilot program and is not entering into new SolarShares contracts.

Starting in 2020, State building efficiency standards require installation of rooftop photovoltaic solar systems for newly constructed residential buildings under three stories, with an option to satisfy the requirement through community solar systems or energy storage. SMUD submitted an application to the California Energy Commission (the "CEC") to be the program administrator of a community solar program, called Neighborhood SolarShares® ("Neighborhood SolarShares"), which is designed to meet these building efficiency standards. On February 20, 2020, the CEC approved the Neighborhood SolarShares program as an alternative to the on-site photovoltaics required by the building efficiency standards. The Neighborhood SolarShares program can be used by developers of new low-rise residential buildings to achieve the mandatory solar requirement. See also "DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – *Rooftop Solar Mandate*." During the CEC approval process for Neighborhood SolarShares, SMUD received and responded to feedback from CEC staff and several stakeholders. SMUD revised its application and program design to better align with such feedback, including limiting the size of community solar facilities to 20MW, siting those facilities within SMUD's service territory, and increasing the financial benefit to program participants. The CEC approved SMUD's revised application in early 2020 and the program went live in the fall of 2020.

As part of the regular triennial proceedings to update the State building codes, the CEC is currently undertaking a public stakeholder process to receive and review comments on proposed changes to the current version of the State building efficiency standards that includes amendments to the current mandatory solar and storage requirements described above. The proposed amendments include potential changes to the regulatory requirements of community solar and storage programs, as well as the addition of mandatory solar and/or storage requirements to certain commercial building types. SMUD is actively engaged with the CEC in these proceedings and anticipates that the proposed changes will likely have an

impact on the design and implementation of SMUD’s programs that are designed to meet the current State building efficiency standards. The proceedings are expected to conclude in calendar year 2021 with the new requirements becoming effective on January 1, 2023.

In addition to SolarShares and Neighborhood SolarShares, SMUD maintains a voluntary green energy pricing program called Greenergy® (“Greenergy”). The Greenergy program allows customers the opportunity to pay an additional amount per month to ensure that either all or part of their electricity comes from green energy sources. In 2020, the program allocated Renewable Energy Credits (“RECs”) equivalent to approximately 4.2% of retail sales to its participating customers.

Energy Efficiency. To further assist customers in managing energy usage and reducing regional carbon emissions and air pollution, SMUD offers an extensive array of energy efficiency and building electrification programs and services including financial incentives, loans, energy audits and education. In addition, SMUD has partnered with local developers to incorporate energy efficiency and all-electric construction measures into new residential and commercial construction, which helps developers plan and design efficient, cost-effective and low or zero-emission buildings. As part of SMUD’s 2019 Integrated Resource Plan (“IRP”), SMUD set a goal for regional carbon emissions through transport and building electrification that aims to reduce carbon emissions in buildings and transport by 64% over the next 20 years. SMUD’s focus on electrification is continued in the Zero Carbon Plan (defined and discussed below). SMUD was the first utility in the country to set its efficiency goals based on carbon reductions, allowing building electrification and energy efficiency to both count toward meeting SMUD’s efficiency goals. This is a significant opportunity, as converting a typical home today to all-electric saves more than three times the carbon emissions compared to doing a major energy efficiency upgrade alone to the same building. See “POWER SUPPLY AND TRANSMISSION – Projected Resources.”

Sustainable Power Supply and Transmission

Maintaining a sustainable power supply entails focusing efforts on researching, promoting and implementing new renewable energy technologies and sources to meet SMUD’s long-term commitment to reducing carbon emissions and providing a reliable energy supply. SMUD defines a sustainable power supply as one that reduces SMUD’s GHG emissions to serve retail customer load to zero by 2030. See “– 2030 Zero Carbon Plan” below. SMUD is planning to achieve zero GHG emissions to serve retail customer load through investments in energy efficiency, clean distributed energy resources, renewables portfolio standard (“RPS”) eligible renewables, energy storage, large hydroelectric generation, clean and emissions free fuels, and new technologies and business models. Additionally, SMUD plans to continue pursuing GHG emissions reductions through vehicle, building and equipment electrification. At the same time, SMUD’s plans for maintaining a sustainable power supply include assuring the reliability of SMUD’s electric system, minimizing environmental impacts on land, habitat, water and air quality, and maintaining competitive rates relative to other electricity providers in the State.

A number of bills affecting the electric utility industry have been enacted by the State Legislature. In general, these bills regulate GHG emissions and encourage greater investment in energy efficiency and sustainable generation alternatives, principally through more stringent RPS. See “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings” herein.

2030 Zero Carbon Plan. In July 2020, the Board declared a climate emergency and adopted a resolution calling for SMUD to take significant and consequential actions to reduce its carbon footprint by 2030. The Board also directed SMUD staff to report by March 31, 2021 on clear, actionable, and measurable strategies and plans to reach SMUD’s climate emergency goals. SMUD staff presented SMUD’s 2030 Zero Carbon Plan (the “Zero Carbon Plan”) to the Board on March 31, 2021. On April 28, 2021, the Board approved the Zero Carbon Plan. The Zero Carbon Plan is intended to be a flexible roadmap for SMUD to

eliminate carbon emissions from its electricity production by 2030 while maintaining reliable and affordable service. To achieve this, the Zero Carbon Plan is focused on four main areas: natural gas generation repurposing, proven clean technologies, new technologies and business models and financial impacts and options. SMUD plans to revisit the Zero Carbon Plan annually.

The natural gas generation repurposing focus of the Zero Carbon Plan calls for exploring the retirement of two of SMUD's five Local Gas-Fired Plants (as defined herein) and the retooling of the other three Local Gas-Fired Plants. See "POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – *Local Gas-Fired Plants*." Based on SMUD's studies to date, SMUD estimates that SPA McClellan (as defined herein) can be retired by 2024 and that the SPA Project (as defined herein) can be retired by 2025. Final decisions about the retirement of these two Local Gas-Fired Plants will be based on additional reliability studies and engagement with the community. As part of the Zero Carbon Plan, SMUD is also exploring converting the CVFA Project (as defined) and the SCA Project (as defined herein) to standby operations only and investigating the use of alternative fuels like Renewable Natural Gas-biomethane (RNG-biomethane), hydrogen and other biofuels for the CVFA Project, SCA Project, and SFA Project (as defined herein). In addition, SMUD is investigating long duration energy storage strategies for the SFA Project. All final generator configurations are subject to reliability assessments.

The proven clean technologies focus of the Zero Carbon Plan calls for SMUD to procure approximately 1,100 to 1,500 MW of local utility-scale solar photovoltaic ("PV") generating capacity, 700 to 1,100 MW of local utility-scale battery storage, 300 to 500 MW of wind generating capacity, 100 to 220 MW of geothermal generating capacity, and 100 MW of regional utility-scale solar PV generating capacity. The Zero Carbon Plan also estimates that customer installation of approximately 500 to 750 MW of behind-the-meter solar PV generating capacity and approximately 50 to 250 MW of behind-the-meter battery storage will assist SMUD with achieving the Zero Carbon Plan goals.

With respect to new technologies and business models, the Zero Carbon Plan focuses on evaluating, prioritizing and scaling the emerging technologies that SMUD expects will have the largest impact on reducing carbon in SMUD's 2030 resource mix. SMUD is currently focused on four main areas of technology: electrification, education and demand flexibility, virtual power plants and vehicle-to-grid technology, and new grid-scale technologies. The Zero Carbon Plan forecasts that customer-owned resources and SMUD customer-focused programs will contribute between 360 and 1,300 MW of capacity to SMUD's grid by 2030.

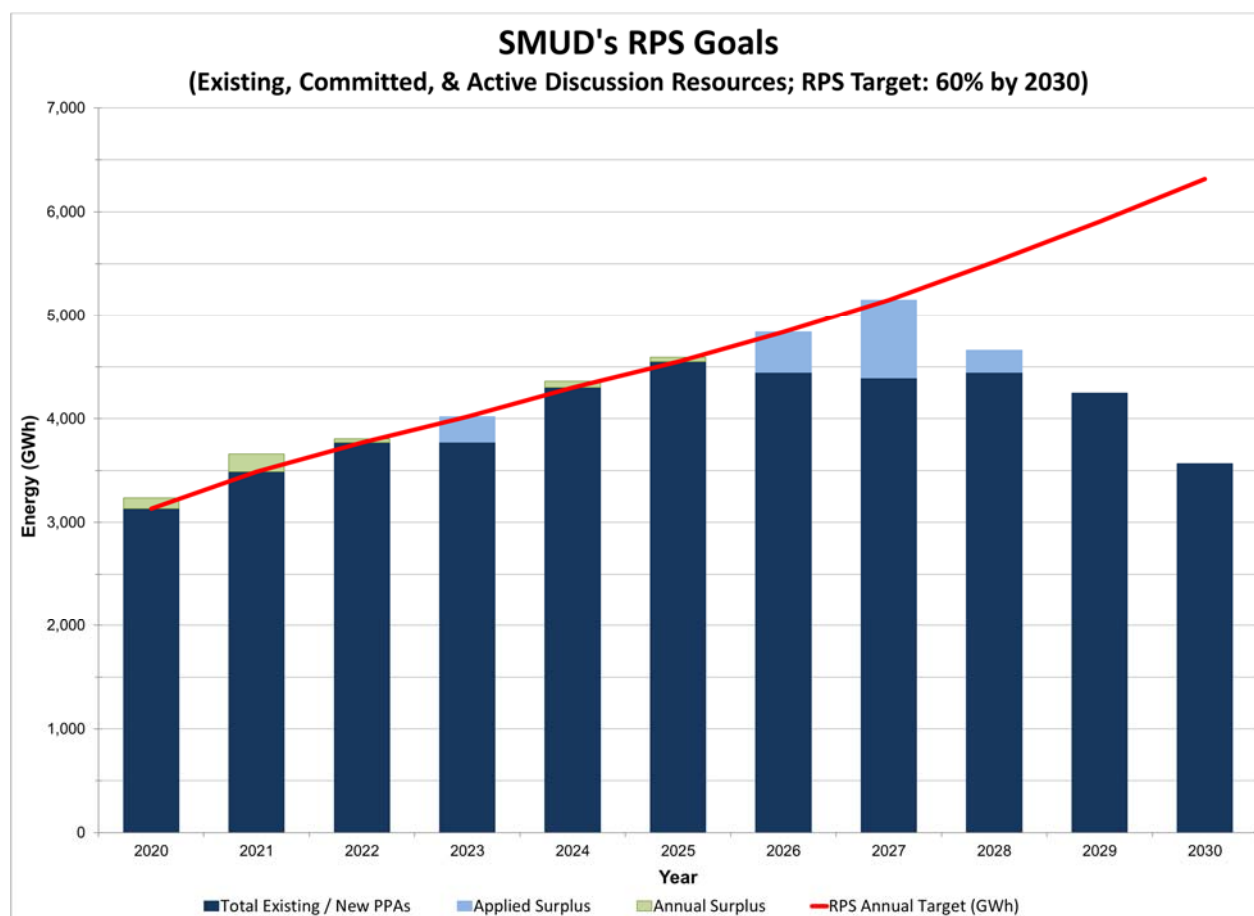
The financial impacts and options focus of the Zero Carbon Plan aims to keep SMUD rate increases at or below the rate of inflation while achieving SMUD's goal of eliminating carbon emissions from its power supply by 2030. To pay for the expected costs of the Zero Carbon Plan and keep rate increases at or below the rate of inflation, the Zero Carbon Plan estimates the need for SMUD to realize between \$50 million and \$150 million of sustained annual savings. SMUD currently plans to achieve these sustained annual savings by exploring the implementation of operational savings strategies and pursuing partnership and grant opportunities.

While the ultimate impacts of the Zero Carbon Plan on SMUD's financial results and operations are difficult to predict and are dependent on a variety of factors, such as the relative cost of procuring energy from clean technologies, the availability and relative cost of new technologies, and the adoption and implementation of energy efficiency and other measures by SMUD's customers, such impacts could be material.

Renewable Energy and Climate Change. The California Renewable Energy Resources Act, established by Senate Bill X1-2 ("SBX1-2") and the Clean Energy and Pollution Reduction Act of 2015, enacted by Senate Bill 350 ("SB 350") require that SMUD meets 33% of its retail sales from RPS-eligible

renewable resources by 2020 and 50% of its retail sales from RPS-eligible renewable resources by 2030. Senate Bill 100 (“SB 100”), passed by the legislature and approved by then-Governor Brown on September 10, 2018, accelerates the RPS targets and establishes a new 60% target by 2030. The bill also creates a planning goal to meet all of the State’s retail electricity supply with a mix of RPS-eligible and zero-carbon resources by December 31, 2045. See “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – *Renewables Portfolio Standards*” for a discussion of the State RPS requirements.

SMUD’s compliance with State RPS requirements is evaluated over 3 or 4-year compliance periods. SMUD met the State RPS requirements for the first compliance period (2011-2013) and second compliance period (2014-2016). By the end of the third compliance period (2017-2020), SMUD is required to source one-third of its energy from renewable resources, and is confident that it has procured the necessary resources to meet the third compliance period requirements. For 2020, when the RPS target was 33%, SMUD anticipates using in-year renewable generation to meet this goal. SMUD expects to file its 2020 RPS compliance report with the CEC by July 1, 2021 and anticipates receiving verification of its submission from the CEC by the second quarter of 2022. As of the end of 2020, SMUD estimates that it has approximately 1.0 million surplus RECs available to help meet future RPS targets. In addition to meeting RPS standards, SMUD serves an additional 7% of its customer load with renewable energy through its voluntary green pricing programs. SMUD estimates that it has sufficient renewable energy deliveries, new power supply contract commitments, new power supply commitments under active discussion, and RPS-eligible surplus carryover to meet its RPS requirements through 2027. The following table illustrates SMUD’s current RPS requirements through 2030 and its existing and committed resources and resources under active discussion that are expected to be utilized to meet those requirements.



In addition to procuring new sources, meeting the RPS requirements will require replacement of certain existing renewable contracts which expire in future years. While SMUD anticipates it will meet much of its renewable resource requirements through purchase contracts with third parties, it continues to explore additional options, including wind, solar, biomass, and geothermal developments, partnering with other utilities on future projects, and local development options. SMUD's resource forecast (see "POWER SUPPLY AND TRANSMISSION – Projected Resources") accounts for future renewable resources as a component of "Uncommitted Purchases." To meet SMUD's Zero Carbon Plan goals, SMUD anticipates meeting loads in 2030 with approximately 70% renewable resources, in addition to hydro and other new zero carbon technologies. See "*– 2030 Zero Carbon Plan*" above.

Given the intermittent nature of power from renewable resources such as wind and solar, SMUD is exploring options that provide the flexibility to manage the intermittency of such renewable resources. Potential options include energy storage resources and expanding load management resources. Additionally, on April 3, 2019, SMUD, through its membership in BANC, a joint exercise of powers agency formed in 2009, and currently comprised of SMUD, the Modesto Irrigation District ("MID"), the City of Roseville ("Roseville"), the City of Redding ("Redding"), the City of Shasta Lake and the Trinity Public Utilities District has commenced its participation in the California Independent System Operator Corporation ("CAISO") energy imbalance market ("EIM"). Participation in the EIM will benefit SMUD by providing it with broader access to balancing resources within the region to help manage its expanding renewable portfolio. In addition, other entities within the BANC Balancing Authority Area are exploring participation in the EIM in 2021. See "*BUSINESS STRATEGY – Serving SMUD's Customers – Operational Independence and Local Control*" and "*POWER SUPPLY AND TRANSMISSION – Balancing Authority Area Agreements.*"

In 2018, SMUD's Board adopted a new IRP through a comprehensive public process and filed the approved IRP with the CEC on April 29, 2019 pursuant to the CEC's IRP guidelines. The approved IRP calls for a reduction in GHG emissions from SMUD's energy supply by more than 60% by 2030 relative to 1990 levels and a goal of net zero emissions by 2040 due, in part, to a significant investment in electrification of the local building and transportation sectors. The IRP is expected to reduce Sacramento's economy-wide GHG emissions by 70% relative to current levels. Pursuant to the CEC's IRP guidelines, SMUD plans to file an updated IRP by the second quarter of 2024.

The State's carbon cap-and-trade market established pursuant to Assembly Bill 32 ("AB 32") began in 2013. See "*DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – Greenhouse Gas Emissions*" for a discussion of AB 32 and the State's cap-and-trade program. SMUD anticipates that allowances allocated to SMUD will nearly equal SMUD's compliance obligations under normal water year conditions. Under low water year conditions, SMUD may need to purchase additional allowances to cover its compliance obligations, including carbon obligations related to wholesale energy sales from SMUD's natural gas power plants. As SMUD implements its clean power goals, SMUD expects its need for these allowances to decline.

There is scientific consensus that increasing concentrations of GHG have caused and will continue to cause a rise in temperatures in the State and around the world. The change in the earth's average atmospheric temperature, generally referred to as "climate change," is, among other things, expected to result in a wide range of changes in climate patterns, including increases in the frequency and severity of extreme weather events, including droughts and heat waves, more frequent incidences of wildfires, changes in wind patterns, sea level rise and flooding, any of which alone or in combination could materially adversely affect SMUD's financial results or operations. See also "*FACTORS AFFECTING THE REGION*" and "*OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY – Other Factors.*" As described above, SMUD is actively working to meet its sustainable power supply goals, reduce its own GHG emissions, and assist the local governments in the territory it serves with their desired

GHG reductions. In 2016, SMUD introduced the Pilot Natural Refrigerant Incentive Program, its first customer program providing incentives for GHG reduction in addition to kWh savings. SMUD is a founding member and active participant in the Capital Region Climate Readiness Collaborative, a public private partnership formed to better understand and plan for climate impacts expected in the region. SMUD is also an active member of the United States Department of Energy (the “DOE”) Partnership for Energy Sector Climate Resilience. SMUD regularly reviews scientific findings related to climate change and in 2016 published its Climate Readiness Assessment and Action Plan.

Energy Storage Systems. Assembly Bill 2514 (“AB 2514”) requires the Board to re-evaluate energy storage goals every three years. In compliance with AB 2514, the Board established a target of 9 MW of energy storage procurement by December 31, 2020, which SMUD has procured. See “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – *Energy Storage Systems*” for further discussion of AB 2514. In September 2020, the Board directed that energy storage forecasts be implemented through SMUD’s IRP process going forward. SMUD is also evaluating how to couple utility-scale solar with utility-scale storage to support future system reliability needs and renewable energy goals.

Meeting Peak Load. A significant consideration for SMUD will be how it addresses its system peak load. SMUD has implemented programs and tools, such as advanced metering, energy efficiency options, and TOD rates for residential customers, to help customers manage their costs while helping SMUD to reduce its peak load. In 2017, in connection with the Board’s approval to establish TOD rates as the standard rate for residential customers, SMUD projected that TOD rates would reduce peak load by as much as 75 MW in 2019. Analysis of 2018 and 2019 data showed a reduction of approximately 130 MW during the TOD peak period (5-8 p.m. local time). SMUD staff will continue to monitor the progress and results of the implementation of TOD rates and will use this information to inform future rate actions and load forecasts. See “BUSINESS STRATEGY – Serving SMUD’s Customers – *Time-of-Day Rates*.” SMUD is also exploring the use of more distributed energy resources and demand response programs that could further reduce SMUD’s system peak.

In addition, SMUD is scheduled to complete a transmission system project by the end of 2021 that will increase load serving capacity to help SMUD meet its peak demand forecast through the next ten years. SMUD also has a short-term agreement with Sutter Energy Center, a merchant power plant, to provide additional power during peak periods if necessary. This agreement expires at the end of 2023.

Operational Independence and Local Control. A key component of SMUD’s business strategy is focused on maintaining its independence in operating and maintaining its resources. As such, SMUD has taken a number of actions to mitigate the potential impacts of various federal and state regulatory actions. For example, in 2002 SMUD established itself as an independent control area (now termed “Balancing Authority”) within the Western Electricity Coordinating Council (“WECC”) region. By removing itself from CAISO’s Balancing Authority area, SMUD became responsible for balancing electric supply and demand within its own service territory. This move substantially reduced fees paid to CAISO, preserved operational flexibility and helped to insulate SMUD from the uncertain regulatory environment and tariff structure of CAISO. In addition to decreased financial risks, this independence also reduced SMUD’s exposure to the impacts of capacity and energy shortages in the CAISO Balancing Authority area. Further, as an independent Balancing Authority, SMUD continued to support the statewide electric grid in events of electrical emergencies requiring rotating outages, such as loss of major transmission lines or equipment, as provided in the statewide emergency plan. By 2006, the SMUD Balancing Authority footprint expanded north to the California-Oregon border and south to Modesto, to include the service areas of the WAPA, MID, Redding and Roseville, and the Transmission Agency of Northern California (“TANC”)–owned 340-mile 500-kV California-Oregon Transmission Project (“COTP”). In October 2009, SMUD, with the coordination and cooperation of WAPA, joined the Northwest Power Pool Reserve Sharing Group, which

supports reliability and reduces operating costs. In May 2011, BANC assumed the role of the Balancing Authority, though SMUD continues to oversee operation of the grid on behalf of BANC. BANC members share cost responsibility for balancing authority-related compliance obligations, liabilities, and operations. BANC also serves as an important venue for SMUD and other BANC members to collaborate with respect to operational and market improvements inside the BANC footprint and to preserve their operational independence. See “POWER SUPPLY AND TRANSMISSION – Balancing Authority Area Agreements.” On April 3, 2019, SMUD, through its participation in BANC, began operating in the CAISO EIM, which will help SMUD better manage the integration of renewable energy resources. The CAISO EIM is a voluntary market, which allows SMUD to maintain its operational independence from the CAISO, while providing SMUD greater access to balancing resources throughout the western region. See “POWER SUPPLY AND TRANSMISSION – Balancing Authority Area Agreements.”

FERC Order 1000. In 2011, the Federal Energy Regulatory Commission (“FERC”) issued Order 1000, which mandates regional transmission planning and imposes a regional cost allocation methodology for transmission facilities. FERC states that it has the authority to allocate costs to beneficiaries of transmission services even in the absence of a contractual relationship between the owner of the transmission facilities and the beneficiary. Despite appeals challenging FERC’s authority on a number of grounds, the D.C. Circuit Court of Appeals upheld Order 1000. See “DEVELOPMENTS IN THE ENERGY MARKETS – Federal Legislation and Regulatory Proceedings – *Federal Regulation of Transmission Access*.” Nevertheless, there remains flexibility with respect to SMUD’s participation in regional transmission planning. Specifically, SMUD is voluntarily participating as a Coordinating Transmission Owner (“CTO”) in the WestConnect transmission planning organization, and will rely on its WestConnect membership to keep it Order 1000 compliant. While SMUD opposes any cost allocation methodology that would obligate SMUD to pay for facilities that it does not use or need to maintain reliable operations or serve its load, the FERC-approved WestConnect planning process does provide a CTO the option to not accept an allocation of costs. WestConnect is composed of utility companies providing transmission of electricity in a portion of the western United States, working collaboratively to assess stakeholder and market needs and develop cost-effective enhancements to the western wholesale electricity market. SMUD is unable to predict at this time the full impact that Order 1000 will have on the operations and finances of SMUD’s electric system or the electric industry generally.

Electricity, Natural Gas, and Related Hedging

SMUD continues to utilize a comprehensive and integrated power and fuel supply strategy to acquire a reliable and diversified portfolio of resources to meet existing and future needs. This strategy includes a combination of both physical supply and financial hedging transactions to reduce price risk exposure over a five-year horizon. SMUD’s physical supply arrangements include ownership of power generating resources, as well as a diversified portfolio of power and fuel supply purchase contracts that range in duration, with a mixture of fixed and variable pricing terms.

With regard to the power purchase contracts, SMUD has entered into a series of contracts for the purchase of electricity to supply the portion of its resource needs not already provided by owned resources. SMUD also actively manages its exposure on variable rate electricity purchases, and at times may enter into financial contracts to fix prices by using options to reduce price risk, in each case when warranted by economic conditions. See “POWER SUPPLY AND TRANSMISSION – Power Purchase Agreements.”

With regard to fuel supply contracts, SMUD utilizes a similar strategy of employing financial contracts of various durations to hedge its variable rate fuel supply contracts. As of May 13, 2021, these contracts are forecasted to have hedged the price exposure on approximately 83%, 67% and 65% of SMUD’s anticipated natural gas requirements for 2021, 2022 and 2023, respectively. See “POWER SUPPLY AND TRANSMISSION – Fuel Supply – *Supply*.”

As provided in SMUD's natural gas contracts, SMUD may be required to post collateral to various counterparties. As of April 30, 2021, SMUD did not have any collateral posting obligations. A decrease in natural gas prices could result in a collateral posting by SMUD. While the posting of collateral is not an expense for SMUD, it does temporarily encumber unrestricted cash balances.

To hedge against hydroelectric production volatility of SMUD-owned hydroelectric facilities, SMUD implemented a pass-through rate component called the Hydro Generation Adjustment (the "HGA"). The HGA and the associated Hydro Rate Stabilization Fund (the "HRSF") help to offset increased power supply or fuel supply costs in years where precipitation levels at SMUD-owned hydroelectric facilities are low. To hedge against variations in the volume of energy received from non-SMUD-owned hydroelectric resources, SMUD uses a rate stabilization fund to help offset increased power supply or fuel supply costs. See "RATES AND CUSTOMER BASE – Rate Stabilization Funds."

Managing Risks

SMUD maintains an Enterprise Risk Management ("ERM") program, a strategic approach to managing enterprise-wide risks as a portfolio, to help reduce the chance of loss, create greater financial stability and protect SMUD resources. It is designed to maintain an early warning system to monitor changes in, and the emergence of, risks that affect the organization's business objectives. Under the purview of the Enterprise Risk Oversight Committee, composed of executive members and chaired by the Chief Financial Officer, ERM conducts ongoing risk identification, assessments, monitoring, mitigation, risk-based budgeting and reporting. To ensure accountability and oversight, each identified risk is assigned to an executive-level risk owner. Risk status and mitigation efforts are reported monthly to the Board.

Competitive Challenges

In the coming decade, utilities like SMUD may face competition from companies in other industries looking to diversify into the energy sector. Examples of developing competitive areas include retail sale of electricity, distributed electric storage resources, renewable distributed generation (mostly solar in Sacramento), customer installation of fuel cells, third-party electric vehicle charging, home or business automation that enables greater customer participation in energy markets, and third-party provision of energy management software and solutions.

SMUD has a wide range of initiatives to monitor and adapt to changing market conditions and new industry participants. Key areas of focus include:

- Enhancing customer experience. Recognizing the importance of meeting customer expectations, SMUD introduced the Customer Experience Strategy in 2016 to provide customers "value for what they pay" and further strengthen customer loyalty. The initiative is focused on ensuring SMUD has the people, systems, technology, programs and services to consistently meet or exceed customers' changing expectations. The customer experience is measured via surveys with the goal of achieving and maintaining at least 70% of customers agreeing that SMUD provides them with value for what they pay by 2024.
- Restructuring electric rates. In 2017, the Board approved TOD rates as the standard rate for residential customers. The residential rate transition began in the fourth quarter of 2018, and the full transition was completed in the fourth quarter of 2019. All of SMUD's business customers are also on time-based rates. In 2019, the Board approved a restructuring of commercial rates to collect a greater portion of fixed costs through fixed charges and to better align time periods and prices with energy markets. The commercial rate restructuring was delayed by one year due to the impacts of the COVID-19 pandemic and is expected to be completed in 2022. See "RATES AND CUSTOMER BASE – Rates

and Charges” and “FACTORS AFFECTING THE REGION – Impacts from COVID-19 Pandemic.”

- Ongoing integrated resource planning. SMUD monitors and updates its integrated resource planning to ensure future sources of energy balance cost, reliability and environmental requirements with the flexibility to meet challenges of changing market and regulatory conditions, customer energy resources, and emerging technologies.

Leveraging Core Competencies

In addition to these initiatives, SMUD is also looking into new revenue opportunities. By leveraging core competencies, SMUD is finding opportunities to generate new revenues while improving industry safety and helping communities serve their customers’ energy needs.

Sacramento Power Academy. SMUD is leveraging its significant experience in training skilled lineworkers with the opening of the SMUD Power Academy regional training center in 2016. The academy currently emphasizes training for public power, customer-owned utility employees. There are currently approximately 2,000 customer-owned utilities in the United States that are similar to SMUD, many of which may not have the resources to adequately train their employees. In addition to lineworkers, the center will also train substation and network electricians. Future plans include training electrical, telecom and meter technicians; engineers and designers; construction management inspectors; equipment operators; cable splicers and locators; and support staff.

Community Choice Aggregation. In 2002, Assembly Bill 117 was passed to establish Community Choice Aggregation in the State. SMUD sees the growth of Community Choice Aggregators (“CCAs”) as an opportunity to support organizations with values closely aligned with SMUD’s values, while also generating additional revenue for SMUD. CCA programs are proliferating in the State thanks to support for expanding renewable energy use and desire for local control particularly for electricity procurement. There are numerous CCAs operating in the State, and more are anticipated to launch in the future. CCAs are responsible for procuring wholesale power, setting the generation rate, and staffing a call center to handle opt-outs and questions about the power portfolio. The local investor-owned utility (“IOU”) continues to deliver electricity from the electric grid, maintain its electric infrastructure, bill customers and collect payments.

In October 2017, SMUD was selected by the governing board of Valley Clean Energy (“VCE”) to provide technical, energy and support services, including data management and call center services, wholesale energy services, and business operations support, to VCE for a five year term. VCE is a joint powers agency formed in 2016 by the City of Woodland, the City of Davis and Yolo County to implement a local CCA program. The service territory expanded to include the City of Winters in 2021. The mission of VCE is to deliver cost-competitive clean electricity, product choice, price stability, energy efficiency, and greenhouse gas emissions reductions to its customers in Yolo County. VCE began electric services to its customers in the summer of 2018, giving Yolo County residents a choice between two electricity providers, VCE and PG&E.

In November 2017, SMUD was selected by the governing board of East Bay Community Energy (“EBCE”) to provide call center and data management services for a three-year term beginning in January 2018. EBCE is a joint powers agency formed in 2016 by the cities of Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Oakland, Piedmont, San Leandro and Union City in Alameda County to implement a local CCA program. EBCE expanded its territory to the cities of Pleasanton, Newark, and Tracy in April 2021. EBCE recently issued a Request For Proposal (“RFP”) for call center and data management services. As of June 3, 2021, the results of the RFP have not been made public.

In June 2019, SMUD was selected by the governing board of Silicon Valley Clean Energy (“SVCE”) to provide program services to help local SVCE communities reduce carbon pollution while delivering engaging customer experiences. SVCE programs are focused on grid integration, as well as electrifying transportation, buildings and homes. SVCE is a joint powers agency formed in 2016 by the cities of Campbell, Cupertino, Gilroy, Los Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Morgan Hill, Mountain View, Saratoga, Sunnyvale and Unincorporated Santa Clara County to implement a local CCA program.

While CCAs have had success in the State, they are susceptible to business, regulatory and other risks that could lead to a financial loss and/or result in a cessation of operations for the CCA. These risks could extend to a CCA’s counterparties, including SMUD. SMUD has made an effort to identify and mitigate potential counterparty risks to the extent possible in service agreements with the CCA’s described above. SMUD may pursue opportunities to provide similar services to additional CCAs in the future. SMUD management does not expect its current arrangements with VCE, EBCE, and SVCE to have a material adverse impact on SMUD’s financial position, liquidity or results of operations.

FACTORS AFFECTING THE REGION

Precipitation Variability

SMUD uses a National Weather Service precipitation station located at Pacific House, California to approximate available water supply to SMUD’s Upper American River Project (the “UARP”) hydropower reservoirs. As of March 31, 2021, precipitation at Pacific House, California totaled 29.57 inches for the October-September hydropower water supply period. This is below the 79-year median of 41.73 inches. Total reservoir storage in the UARP hydropower reservoirs was about 59% of capacity as of March 31, 2021, approximately 14% below historical average for this date. SMUD manages its reservoirs to maximize water storage going into the summer season, which preserves generating capacity during SMUD’s high load months and ensures that SMUD meets its UARP FERC license requirements, including requirements for recreational and environmental flows.

Although reservoir levels in the UARP are below historical averages, there remains the potential for wide swings in precipitation from year to year. In years with below average rainfall, SMUD may have to generate or purchase replacement energy at additional cost. To hedge against variations in the volume of energy received from SMUD-owned UARP hydroelectric resources, SMUD uses the HRSF to help offset increased power supply or fuel supply costs. See “RATES AND CUSTOMER BASE – Rate Stabilization Funds.”

SMUD is also exposed to precipitation variability through its contract with the WAPA. In an average water year this contract provides roughly 661 gigawatt hours (“GWh”) of power, but the actual amount will vary depending on precipitation. Unlike the UARP, SMUD does not monitor precipitation stations to approximate power deliveries under the WAPA contract, and instead relies on a forecast of power deliveries from WAPA. As of April 30, 2021, WAPA has forecasted power deliveries of 494 GWh for 2021. See “POWER SUPPLY AND TRANSMISSION – Power Purchase Agreements – *Western Area Power Administration*.”

Wildfires

General. Wildfires in the State have become increasingly common and destructive. Frequent drought conditions and unseasonably warm temperatures have increased, and could further increase, the possibility of wildfires occurring in areas where SMUD maintains generation, transmission and distribution facilities. Greater numbers of diseased and dead trees have increased, and could further increase, this

possibility. As a result, SMUD faces an increased risk that it may be required to pay for wildfire related property damage or personal injuries, fines and penalties, some of which may not be covered by insurance (including costs in excess of applicable policy limits), or may be disputed by insurers, and could be material. In addition, a significant fire or fires in SMUD's generation, transmission or service area could result in damage or destruction to SMUD's facilities, result in a temporary or permanent loss of customers or otherwise materially increase SMUD's costs or materially adversely affect SMUD's ability to operate its Electric System or generate revenues.

SMUD's service territory is located within Sacramento County, which is located outside the California Public Utilities Commission (the "CPUC") high fire threat areas. However, as described below, SMUD's UARP facilities and certain of SMUD's and TANC's transmission facilities are within CPUC high fire threat areas. In addition, as described below, certain portions of SMUD's service territory are located within the California Department of Forestry and Fire Protection ("Cal Fire") Fire Protection and Resource Assessment Program ("FRAP") Moderate, High and Very High Fire Hazard Severity Zones. SMUD's exposure to liability for damages related to its UARP facilities, which are located within high fire threat areas in El Dorado County, is reduced due to risk mitigation measures adopted by SMUD and the low number of inhabitants and structures near the UARP facilities. SMUD continues to take responsible action to minimize its exposure to liability from wildfires; however, under current State law, utilities can be held liable for damages caused by wildfires sparked by their equipment or other facilities whether or not the utility was negligent or otherwise at fault. Therefore, at this time the full extent of SMUD's potential exposure to wildfire risk is unknown.

Distribution (SMUD Service Territory). Portions of SMUD's service territory are located within Cal Fire's FRAP Moderate, High and Very High Fire Hazard Severity Zones. State law requires Cal Fire to classify areas in the State based on the severity of the fire hazard that is expected to prevail there. These areas or "Fire Hazard Severity Zones" are based on factors such as fuel (material that can burn), slope and the expected chance of burning. There are three Fire Hazard Severity Zones (Moderate, High and Very High) based on increasing fire hazard. SMUD has assessed its service territory based on Cal Fire's FRAP map, adopted in 2007; the following table illustrates SMUD's assessment of the approximate extent of its service territory and retail customer base located within the three Fire Hazard Severity Zones.

Fire Hazard Severity Zone	Moderate	High	Very High
Acres of SMUD Service Area	231,816	2,337	1,061
% of Total SMUD Service Area	40.6%	0.4%	0.2%
Number of Retail Customers	40,114	3,688	136
% of Total Retail Customers	6.0%	0.6%	0.0%

Transmission (Outside of SMUD Service Territory). In 2018, the CPUC approved a new statewide fire map that identifies areas of elevated and extreme risk from utility-associated wildfires throughout the State. SMUD directly participated in the development of the CPUC's statewide fire map. In connection with the development of the CPUC's statewide fire map, a peer review and a team of independent nationwide experts led by Cal Fire affirmed that SMUD's electric service area is properly located outside of these elevated ("Tier 2") and extreme ("Tier 3") high fire threat areas; however, SMUD's UARP facilities are located within both Tier 2 and Tier 3 areas. According to the CPUC, Tier 2 fire-threat areas are areas where there is an elevated risk from utility associated wildfires and Tier 3 fire-threat areas are areas where there is an extreme risk from utility associated wildfires. As of April 1, 2020, approximately 36.9 right-of-way miles, which equates to approximately 89.2 line-miles, of SMUD's transmission lines are in Tier 2 fire-threat areas and approximately 19.3 right-of-way miles, or 54.7 line-miles, of SMUD's

transmission lines are in Tier 3 fire-threat areas. SMUD is also a member of TANC. As of April 1, 2020, approximately 116.3 linear miles of TANC's transmission lines are in Tier 2 fire-threat areas and approximately 4.5 linear miles of TANC's transmission lines are in Tier 3 fire-threat areas. In accordance with its FERC license, SMUD adheres to a FERC-approved Fire Prevention and Response Plan for its UARP facilities. On May 17, 2018, in accordance with State law, SMUD's Board of Directors determined that the UARP area may have a "significant risk of catastrophic wildfire" resulting from overhead electric facilities and that SMUD's FERC-approved UARP Fire Prevention and Response Plan meets requirements for presenting wildfire mitigation measures to the Board for its approval.

Wildfire Mitigation. In response to potential wildfire risk, SMUD has identified a series of measures intended to prevent wildfires from occurring, minimize the spread of any fire that does occur and improve the resiliency of its system. These measures include installation of Cal Fire-approved exempt material to reduce the risk of sparking; enhanced inspection and maintenance programs; consideration of ignition-resistant construction, including covered conductors and undergrounding; increased monitoring of and identified responses to fire conditions, including operational procedures for the de-energization of lines during high fire conditions and operational protocols for the use of reclosing functionality on SMUD's transmission lines and on SMUD's distribution lines in certain areas during fire season.

SMUD also takes a proactive approach to vegetation management with respect to its electric system. SMUD's vegetation management activities have recently been expanded to include the use of advanced technologies such as Light Detection and Ranging (LIDAR) surveys. In addition, SMUD has installed additional weather stations in some of its transmission corridors and substations for increased situational awareness, and has continued coordination and collaboration with local agencies and first responders as well as vulnerable populations.

Legislation enacted in 2018 and 2019 requires publicly owned utilities to prepare and present Wildfire Mitigation Plans to their governing boards by January 1, 2020, and annually thereafter. SMUD assembled an enterprise-wide team of subject-matter experts to prepare its plan in compliance with this legislation, released a draft of the plan for public comment, contracted for and obtained an independent evaluation of the comprehensiveness of the plan, and presented the plan and the evaluator's report to the Board in the fourth quarter of 2019. The plan was adopted by the Board and submitted to the State Wildfire Safety Advisory Board (the "WSAB") in 2020. The WSAB issued a general set of recommendations for publicly owned electric utility wildfire mitigation plans and SMUD will respond to those recommendations in its 2021 plan, the submittal of which is due to the WSAB in July 2021.

SMUD reviewed and updated its wildfire mitigation plan, released a draft of the updated wildfire mitigation plan for 2021 (the "2021 Wildfire Mitigation Plan") for public comment, contracted for and obtained an independent evaluation of the comprehensiveness of the 2021 Wildfire Mitigation Plan, and presented the 2021 Wildfire Mitigation Plan and the evaluator's report to the Board in the fourth quarter of 2020. SMUD will annually review and update its wildfire mitigation plan, conducting a comprehensive review at least every third year.

Wildfire Insurance. Wildfires in the State have not only increased potential liability for utilities, but have also adversely impacted the insurance markets, leading to higher costs for coverage; coverages becoming prohibitively expensive; limited or restricted coverage to certain types of risks; or coverage at insufficient levels. SMUD most recently renewed its general and wildfire liability insurance coverage on June 15, 2020. SMUD reduced the commercially-insured portion of its \$250 million wildfire coverage

program from \$186.5 million to \$170 million to stay within budgeted premium amounts. SMUD self-insures certain layers and quota share portions of the insurance tower.

In addition, it is expected that SMUD will have a portion of the \$400 million aggregate principal amount of its commercial paper program to provide operational flexibility in the event of the occurrence of a wildfire or other operational event. However, SMUD has not covenanted to maintain the availability of the commercial paper program for these purposes and no assurances can be given that the commercial paper program will be available at the time of, or during, such an event.

August Heat Wave

The State experienced a prolonged above average temperature from August 14, 2020 to August 1, 2021. The CAISO was forced to institute rotating electricity outages in the State during this extreme heat wave. SMUD, as a member of BANC, did not have to implement any planned power disruptions. Additionally, SMUD was able to support the CAISO during some hours of the heat wave with both requested emergency assistance and wholesale market sales. SMUD's peak demand between August 14, 2021 and August 18, 2021 varied between 2,874 MW and 3,057 MW, well below SMUD's record peak of 3,299 MW.

Impacts from COVID-19 Pandemic

The COVID-19 pandemic has dramatically altered the behavior of businesses and people in a manner that has had, and continues to have, negative effects on global and local economies. SMUD is still experiencing the impact from COVID-19, but the impact on SMUD has lessened since the height of the pandemic in 2020. Compared to weather adjusted, pre-pandemic load levels, SMUD is experiencing an approximately 4-5% increase in residential customer load and an approximately 6% decrease in commercial customer load, resulting in a net decrease in load of 1-2%. The commercial customers experiencing the largest impacts of the pandemic appear to be small to medium sized commercial customers while the largest commercial customers appear to have returned to pre-pandemic load levels. SMUD anticipates that load recovery will continue over the next couple of years resulting in a return to pre-pandemic levels.

In addition, as a result of the pandemic, many businesses have closed or reduced operations, unemployment has dramatically increased, many employees have been furloughed and/or shifted to reduced working hours and an increased number of SMUD's customers have been, and could continue to be, unable to pay their electric bills. Part of the governmental response to the economic consequences of the pandemic required utility providers (including SMUD) to provide additional grace periods and flexible payment plans for the payment of utility bills or to refrain from pursuing collection remedies for unpaid bills for a period of time. SMUD has also implemented a no-shutoff policy through at least June 30, 2021, under which SMUD will not disconnect power to a customer for non-payment of its electric bill. SMUD has experienced an increase in delinquencies for customer electric accounts. As of April 30, 2021, the total delinquencies for customer electric accounts was \$65.4 million, which is an increase from the February 2020 balance of total delinquencies for customer electric accounts of \$16.9 million. SMUD has also paused the recertification process for existing customers in its low-income discount program. SMUD saw the number of customers participating in the low-income assistance program increase by 14,200, or approximately 14% from February 2020 to March 2021. Although SMUD saw an increase in low-income assistance customers, program costs decreased by \$0.2 million in 2020 compared to 2019 due to a previously approved program restructuring. SMUD anticipates that low-income assistance program costs will increase by approximately \$8 million in 2021 compared to 2020.

To date, SMUD's actual revenue is trending with its 2021 revenue forecast. Revenue in 2022 and 2023 is expected to increase as customers shift back to pre-pandemic energy usage patterns. SMUD is also

proposing a rate action in mid-June which includes a proposed rate increase of 1.5% in March 2022 and 2.0% in January 2023. See “RATES AND CUSTOMER BASE – Rates and Charges – 2021 *Planned Rate Action*.”

While the full effects of the pandemic and its related consequences on SMUD’s financial results and operations are difficult to predict, SMUD’s financial results or operations could be materially adversely affected. If the pandemic and its consequences are prolonged, again become more severe or another similar event occurs, the likelihood of adverse impacts could be increased.

RATES AND CUSTOMER BASE

Rates and Charges

SMUD’s Board of Directors has autonomous authority to establish the rates charged for all SMUD services. Unlike IOUs and some other municipal utility systems, retail rate and revenue levels are not subject to review or regulation by any other federal, State or local governmental agencies. Changes to SMUD rates only require formal action by the Board of Directors after two public workshops and a public hearing. SMUD is not required by law to transfer any portion of its collections from customers to any local government. SMUD typically reviews and sets rates on a two-year cycle.

2017 Rate Action.

On June 15, 2017, the Board approved a 1.5% rate increase effective January 1, 2018 for residential customers, and a 1.0% rate increase effective January 1, 2018 and an additional 1.0% rate increase effective January 1, 2019 for all non-residential customers. In addition, the Board approved TOD rates as the standard rate for residential customers effective January 1, 2018. See “BUSINESS STRATEGY – Serving SMUD’s Customers – *Time-of-Day Rates*.” The residential rate transition began in the fourth quarter of 2018, and the full transition was completed in the fourth quarter of 2019. Residential customers are placed on the standard TOD rate and may opt out to a fixed rate. SMUD is among the first power providers that have approved the transition to a time-based rate as the standard rate for residential customers. Certain IOUs in the State adopted time-based rates in 2020.

Additionally, the Board approved a restructuring of the low-income program. Effective September 1, 2018, the discounts are based on federal poverty level rather than a percentage discount, which will provide a higher discount to those low-income customers who need it most. The restructuring occurred over a two-year time period, and was completed in the first quarter of 2021. See “RATES AND CUSTOMER BASE – Low Income Discount” below.

2019 Rate Action.

On June 24, 2019, the Board approved a 3.75% rate increase effective January 1, 2020, a 3.00% rate increase effective October 1, 2020, a 2.50% rate increase effective January 1, 2021, and a 2.00% rate increase effective October 1, 2021, for all customer classes. Additionally, the Board approved a restructuring of the commercial rates, including new time periods and an overall increase in the fixed bill components, such as the System Infrastructure Fixed Charge and demand charges, and a corresponding decrease in energy charges, making the restructuring revenue neutral by rate category. To minimize bill impacts, rate categories will be restructured over an 8-year period. Customers were expected to be transitioned to the new rates starting as early as January 1, 2021 and no later than May 31, 2022. There is currently pending litigation concerning the adoption of the 2020 and 2021 rates. See “LEGAL PROCEEDINGS – Proposition 26 Lawsuit.”

Due to the impacts of the COVID-19 pandemic on SMUD's operations and priorities, on August 20, 2020, the Board approved postponing the implementation of the commercial rate restructure for one year, with the transition expected to be complete in the fourth quarter of 2022.

2021 Planned Rate Action.

SMUD has planned a rate action to begin in June of 2021. The rate proposal [was] released on June 17, 2021, and the rate action is expected to be completed by mid-September. The rate proposal will include recommended rate increases of 1.5% in March 2022 and 2.0% in January 2023 for all customer classes, a proposed Solar and Storage Rate, updates to certain schedules of SMUD's Open Access Transmission Tariff ("OATT"), and other miscellaneous rate items.

For new solar customers, starting January 1, 2022, SMUD staff is proposing a solar rate of \$0.074/kWh for customers selling energy back to the SMUD grid. Also, starting June 1, 2022, SMUD staff is proposing an optional rate for customers participating in a qualified program that will offer a per kWh discount on summer Off-Peak and Mid-Peak hours in exchange for a higher per kWh rate during times when the grid is most stressed, up to 50 hours per summer.

SMUD staff is also proposing an increase to SMUD's OATT for Scheduling, System Control and Dispatch Service ("Scheduling 1") to \$361.72/MW of reserved capacity per month and for Reactive Supply and Voltage Control from Generation or Other Sources Service ("Schedule 2") to \$80.38/MW of reserved capacity per month.

Apart from the proposed rate action, SMUD staff plans to implement a solar interconnection fee based on the size of solar interconnection and supporting programs such as battery incentives, incentives to enroll in SMUD's Critical Peak Pricing rate, battery incentives for Virtual Power Plants, and a program to bring the benefits of solar to under-resourced multi-family communities. These programs and fees are not subject to Board approval.

Rate Stabilization Funds

The Rate Stabilization Fund (the "RSF") is maintained by SMUD to reduce the need for future rate increases when costs exceed existing rates. At the direction of the Board, amounts may be either transferred into the RSF (which reduces revenues) or transferred out of the RSF (which increases revenues). The Board authorizes RSF transfers on an event driven basis. The RSF includes funds to hedge variations in the volume of energy received from non-SMUD hydroelectric generation, variation in AB 32 revenue and variations in Low Carbon Fuel Credit ("LCFS") revenue. As of April 1, 2021, the balance in the RSF was \$99.7 million.

Effective July 2008, SMUD implemented the HGA, which is a pass-through rate component to deal with variations in hydroelectric generation from the UARP (see "POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – *Hydroelectric*"). The HGA is designed to increase revenues in dry years when SMUD must buy power to replace hydroelectric generation and return money to the HRSF in wet years when SMUD has more hydroelectric generation than expected. Each year SMUD determines the impact of precipitation variances on projected hydroelectric generation from the UARP. When the precipitation variance results in a deficiency of hydroelectric generation from the UARP, transfers from the HRSF, which was created as a component of the RSF, will be made in an amount approximating the cost to SMUD of replacement power (up to 4% of revenues) until the balance in the HRSF is zero. When the precipitation variance results in a projected surplus of hydroelectric generation from the UARP, deposits will be made into the HRSF in an amount approximating the positive impact to SMUD from the surplus hydroelectric generation (up to 4% of revenues) until the balance in the HRSF is equal to 6% of

budgeted retail revenue (currently approximately \$82 million). If the balance in the HRSF is not sufficient to cover transfers that would otherwise be made in the event of a projected deficiency in UARP hydroelectric generation, a 12-month HGA surcharge will automatically be included on customers' electric bills up to 4% of retail revenue. If the balance in the HRSF is equal to 6% of budgeted retail revenue on any precipitation variance calculation date and the precipitation variance results in a projected UARP hydroelectric generation surplus, the positive impact of the surplus may be used for other purposes at staff's recommendation, with the approval of the Board, including returned to customers through an electric bill discount up to 4% of retail revenue. SMUD calculates HRSF transfers based on an April-March precipitation period at Pacific House, California. This National Weather Service precipitation station is used to approximate available water supply to SMUD's UARP hydropower reservoirs. As of March 31, 2021, precipitation at Pacific House, California totaled 39.18 inches which is below the 50-year rolling median of 50.32 inches.

SMUD transferred approximately \$19.1 million out of the HRSF in April 2021 due to below average precipitation, which decreased the balance in the HRSF from \$74.7 million to approximately \$55.6 million. As of April 1, 2021, the combined balance in the RSF and HRSF was \$155.6 million.

Low Income Discount

As of March 2021, approximately 86,200 customers received the low-income discount offered by SMUD, which represents approximately 16% of all residential customers. SMUD monitors the program to ensure participants continue to be eligible for the discount. In 2020, the total discount was approximately \$30.2 million. The low-income discount program restructuring began October 1, 2018, and is expected to reduce the total discount by approximately \$9 million per year by 2021, when the restructuring is complete. In light of the potential effects of the COVID-19 pandemic and related economic downturn, SMUD experienced an increase in low-income discount applicants. See "FACTORS AFFECTING THE REGION – Impacts from COVID-19 Pandemic."

To ensure the success of the transition to the new program, SMUD expanded its programs and services starting in 2016 to help customers with energy assistance, home improvement packages and education. SMUD is creating tailored solutions to best meet the needs of low-income customers. These solutions include free solar panels and inspecting homes to identify energy saving opportunities. As of March 2021, SMUD has performed 24,295 energy retrofits and, in partnership with Grid Alternatives (a non-profit organization that focuses on implementing solar power and energy efficiency for low-income families), 196 customers have benefited from free solar installations. Nine additional homes received solar and energy efficiency through a partnership with Habitat for Humanity. As part of SMUD's IRP focus on building electrification, SMUD has also been ramping up electrification investments for low income customers, expecting to reach 240 customers this year with electrification upgrades.

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Rate Comparisons

SMUD's rates remain significantly below those of PG&E and other large utilities throughout the State. The following table sets forth the average charges per kWh by customer class for both SMUD and PG&E. PG&E's rates reflect their recently approved rate effective March 1, 2021.

AVERAGE CLASS RATES

	SMUD Rates (cents/kWh) ⁽¹⁾	PG&E Rates (cents/kWh) ⁽²⁾	Percent SMUD is Below PG&E ⁽³⁾
Residential - Standard	17.00¢	28.31¢	40.0%
Residential – Low Income	11.83¢	17.74¢	33.3%
All Residential	16.05¢	24.58¢	34.7%
Small Commercial (Less than 20 kW)	16.59¢	27.75¢	40.2%
Small Commercial (21 to 299 kW)	15.34¢	25.85¢	40.7%
Medium Commercial (300 to 499 kW)	14.21¢	24.17¢	41.2%
Medium Commercial (500 to 999 kW)	13.28¢	20.84¢	36.3%
Large Commercial (Greater than 1,000 kW)	10.97¢	15.94¢	31.2%
Lighting – Traffic Signals	13.12¢	26.13¢	49.8%
Lighting – Street Lighting	15.90¢	30.10¢	47.2%
Agriculture	14.63¢	24.95¢	41.3%
System Average	14.72¢	23.19¢	36.5%

⁽¹⁾ Projected 2021 average prices for SMUD with rates effective January 1, 2021.

⁽²⁾ PG&E average prices in 2021 reflect rates effective March 1, 2021, per Advice Letter 6090-E-A dated February 26, 2021.

⁽³⁾ The rates in the Average Class Rates table are calculated by dividing the total revenue of each class by the total usage of that class in kWh. The actual savings per customer will vary based on their electricity consumption.

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The following table shows a comparison of SMUD's charges for the average residential usage of 750 kWh per month (based on an average of summer and non-summer) and charges of seven similar neighboring or largest utilities in the State.

STATEWIDE COMPARISON—RESIDENTIAL SERVICE

	Monthly Billing Charge 750 kWh⁽²⁾	Percent SMUD is (Below)/Above Utility
Sacramento Municipal Utility District ⁽¹⁾	\$123.96	
Pacific Gas & Electric Company	\$215.25	(42.4%)
Roseville Electric Utility	\$112.98	9.7%
Turlock Irrigation District	\$116.17	6.7%
Modesto Irrigation District	\$134.54	(7.9%)
Southern California Edison Company	\$191.17	(35.2%)
Los Angeles Dept. of Water & Power	\$162.86	(23.9%)
San Diego Gas and Electric Company	\$257.16	(51.8%)

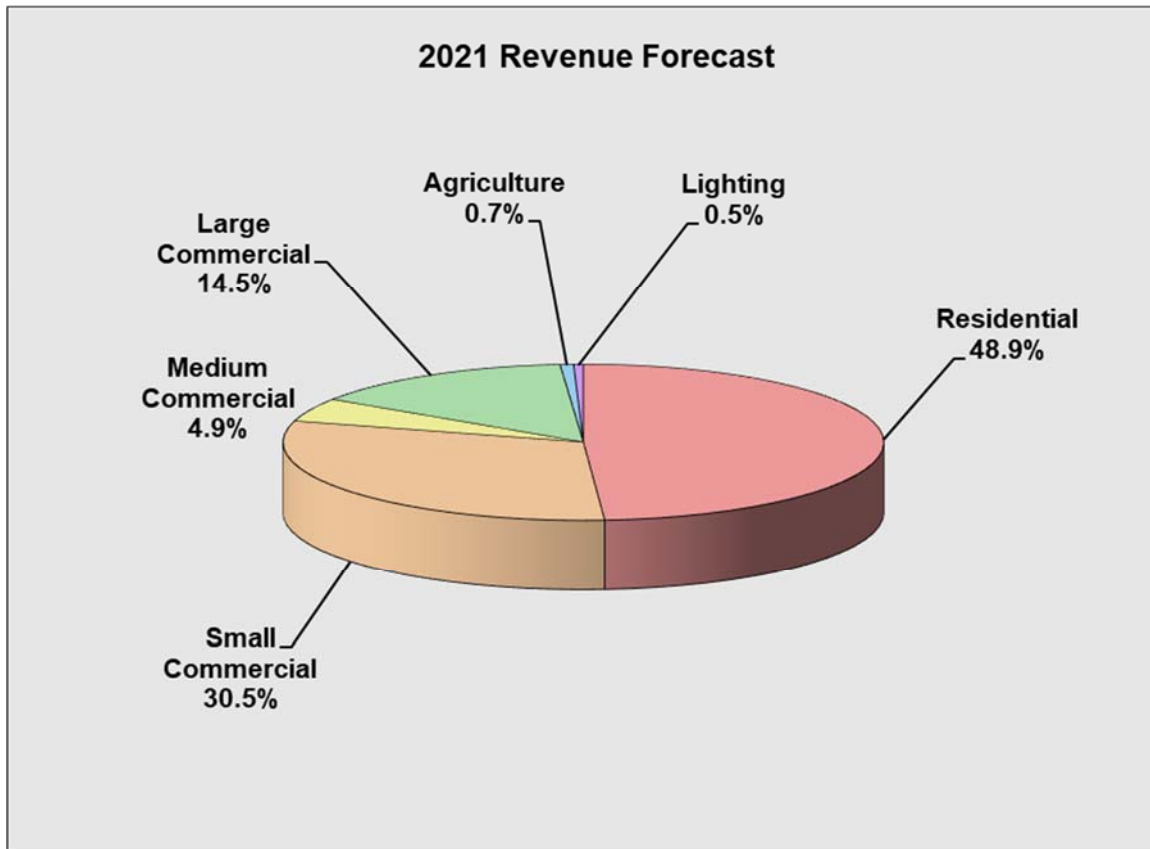
⁽¹⁾ Includes approved January 1, 2021 rates.

⁽²⁾ Per individual utility's published schedules as of March 1, 2021.

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Allocation of Revenue by Customer Class

The following chart sets forth the forecast percentage of SMUD revenues from billed sales associated with each customer class.



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Customer Base; Largest Customers

A stabilizing influence on SMUD's revenues is that a substantial proportion is derived from residential customers (50.6% in 2020). Historically, revenue from commercial and industrial consumption has been more sensitive to economic fluctuation. Furthermore, SMUD has no dominant customers that account for a significant percentage of annual revenues. In 2020, no single customer contributed more than 3% of revenues. The top ten customers generated approximately 11% of revenues and the top 30 generated approximately 17%. The following table presents information on SMUD's top ten customers as of December 31, 2020.

SMUD'S LARGEST CUSTOMERS (As of December 31, 2020)

Customer Type	Annual Revenue (\$ millions)	% of Total Revenue
Technology	\$32.81	2.22%
Government	\$32.30	2.19%
Government	\$28.38	1.92%
Technology	\$12.55	0.85%
Government	\$12.31	0.83%
Communications	\$9.50	0.64%
Industrial Gases	\$8.55	0.58%
Grocery	\$7.10	0.48%
Medical	\$6.60	0.45%
Grocery	\$6.41	0.43%
Top 10 Total	\$156.51	10.61%

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POWER SUPPLY AND TRANSMISSION

Power Supply Resources

The following table sets forth information concerning SMUD's power supply resources as of April 30, 2021. Capacity availability reflects expected capacities at SMUD's load center, as well as entitlement, firm allocations and contract amounts in the month of July, which is generally SMUD's peak month.

POWER SUPPLY RESOURCES (As of April 30, 2021)

Source:	Capacity Available (MW) ⁽¹⁾
Generating Facilities:	
Upper American River Project – Hydroelectric	685
Solano Wind Project – Wind ⁽²⁾	105
Sub-total:	789
Local Gas-Fired Plants:	
SFA (Cosumnes)	570
CVFA (Carson-Ice)	103
SCA (Procter & Gamble)	166
SPA (McClellan)	72
SPA (Campbell Soup)	170
Sub-total:	1,081
Purchased Power:	
Western Area Power Administration (WAPA) ^{(3) (4)}	304
Feed-in-Tariff Photovoltaic – Solar	83
Grady – Wind	67
Rancho Seco Solar 1	8
Rancho Seco Solar 2	116
Recurrent – Solar	55
Wildflower Solar	11
Rock Tenn (Simpson) – Biomass	42
Iberdrola (PPM) – Wind	24
CalGeo – Geothermal	26
Patua (Gradient/Vulcan) – Geothermal	12
Other Long-Term Contracts	21
Firm Contract Reserves ⁽⁴⁾	15
Committed Short-Term Purchases ⁽⁵⁾	583
Uncommitted Short-Term Purchases	13
Sub-total:	1,379
Total	3,249

(1) Available capacity is the net capacity available to serve SMUD's system peak load during the month of July.

(2) Wind supply resources are intermittent and are shown at the average historical capacity over the past 3 years between 12:00 p.m. and 6:00 p.m.

(3) Total includes SMUD's Base Resource share and WAPA Customer allocations.

(4) Assumes firm reserves of 5% are included.

(5) Committed Short-Term Purchases are primarily purchased on a year-ahead to season-ahead basis from various sources.

Note: Totals may not add due to rounding.

Power Generation Facilities

Hydroelectric. The UARP consists of three relatively large storage reservoirs (Union Valley, Loon Lake and Ice House) with an aggregate water storage capacity of approximately 400,000 acre-feet and eight small reservoirs. Project facilities also include eight tunnels with a combined length of over 26 miles and eight powerhouses containing 11 turbines. In addition to providing clean hydroelectric power and operating flexibility for SMUD, the UARP area provides habitat for fish and wildlife and a variety of recreational opportunities, including camping, fishing, boating, hiking, horseback riding, mountain biking and cross-country skiing.

The combined capacity of the UARP is approximately 673 MW at SMUD's load center in Sacramento. Under current licensing and mean water conditions, these facilities are expected to generate approximately 1,600 GWh of electric energy annually, which represents approximately 15% of SMUD's current average annual retail energy requirements. In 1957, the Federal Power Commission (predecessor agency to FERC) issued a license to SMUD for the UARP. This 50-year license was subsequently amended to add and upgrade facilities and now includes all segments of SMUD's hydroelectric facilities located on the South Fork of the American River and its tributaries. Before the original FERC license expired in 2007, SMUD reached a settlement agreement with federal and state regulatory land management agencies, nongovernmental organizations, and other interested stakeholders on proposed terms and conditions to be included in a new FERC license for the UARP. The settlement agreement was filed with the FERC on February 1, 2007.

On October 4, 2013 the California State Water Resources Control Board (the "SWRCB") issued a 401 Water Quality Permit as required by the Clean Water Act, and on July 23, 2014 FERC issued a new 50 year license for the UARP. The new license followed the Settlement Agreement filed in 2007. The new license includes increases in environmental flow releases, and recreational flows at several locations. The estimated loss of generation is approximately 100 GWh per year and an additional \$15 million of O&M and capital costs per year.

On August 15, 2019, the Board approved the purchase of the Chili Bar Hydroelectric Project which consists of a 7 MW powerhouse, reservoir, dam and spillway, north of Placerville on the South Fork of the American River for approximately \$10.4 million. The purchase and transfer of ownership is expected to be finalized in June 2021.

Solano Wind Project. SMUD owns and operates a 102 MW wind project, located in Solano County, known as Solano Phases 1 and 2. Solano Phases 1 and 2 consist of 23 wind turbine generators ("WTG") rated at 660 kilowatts ("kW") each, and 29 WTGs rated at 3 MW each, respectively. Energy from the project is collected at 21 kV and transmitted over a dedicated 3-mile overhead system to the SMUD-owned Russell substation. At the Russell facility, the energy is transformed to 230 kV and interconnected to PG&E's Birds Landing Switching Station. Energy deliveries are scheduled through the CAISO.

Solano 3 Project. In 2011 and 2012, SMUD constructed a 128 MW wind project adjacent to Solano Phases 1 and 2, known as Solano 3. The Solano 3 project consists of 55 WTGs rated at 1.8 MW and 3.0 MW, and interconnects at the Russell substation. The Solano 3 project was sold to Solano 3 Wind, LLC, a subsidiary of Citigroup, in December of 2011. The transaction included an option for SMUD to repurchase the Solano 3 project at year six, eight or fifteen. SMUD exercised its repurchase option at year six, and completed this transaction and transfer of ownership in April 2018.

Solano 4 Project. SMUD is developing the Solano 4 Wind Project. The Solano 4 Wind Project currently plans to utilize SMUD-owned land near the Solano 3 project, known as the Collinsville and

Roberts properties, to install 10 WTGs rated at 5.6 MW, and to remove the Solano Phase 1 turbines and replace them with 9 WTGs rated at 5.6 MW. In 2019, SMUD secured the wind rights on the Roberts property and removed the wind turbines on that property. SMUD received the Cluster II Phase I Study results from the CAISO in January 2019, provided the initial security posting in April 2019, and received the Phase II Study Report in November 2019, furthering the process towards a Large Generator Interconnection Agreement. SMUD has met all of the CAISO requirements to remain in the queue for execution of a Large Generator Interconnection Agreement and expects to enter into a Large Generator Interconnection Agreement in June 2021 that will allow for 90.8 MW of capacity at the point of interconnection. WAPA and PG&E identified upgrades needed to interconnect the Solano 4 Wind Project that may not be complete before 2024. SMUD released a draft environmental impact report for the Solano 4 Wind Project in July 2019 but delayed the completion of the environmental review to respond to comments and resolve concerns raised by Travis Air Force Base. With comments responded to and concerns resolved, SMUD expects to release the final environmental document and take the Solano 4 Wind Project to the Board for approval in August 2021. In addition, SMUD applied for and obtain extensions of the Federal Aviation Administration Determinations of No Hazard allowing for construction of the turbines. SMUD released the Request for Proposals to construct the Solano 4 Wind Project in May 2021. The expected full operation date for the project may be delayed into the first quarter of 2024 due to the timeframe established for the PG&E and WAPA required upgrades.

Solar Photovoltaic. SMUD owns and operates approximately 2 MW of solar photovoltaic generating facilities. These facilities include installations at the Hedge Substation property, SMUD Headquarters, the East Campus Operations Center, and other smaller photovoltaic systems throughout the service area on parking lots.

Local Gas-Fired Plants. SMUD constructed five local natural gas-fired plants in its service area: the CVFA Project, the SCA Project, the SPA Project, SPA McClellan and the SFA Project (each defined below). These five plants are referred to collectively as the “Local Gas-Fired Plants.” These plants are a strategic component of SMUD’s resource mix. In addition to providing SMUD a total capacity of approximately 1,139 MW, the Local Gas-Fired Plants provide SMUD with needed voltage support, operational and load following capability, and the reliability inherent in having power resources located close to loads. With the exception of SPA McClellan, these plants have been financed through the issuance of project revenue bonds by separate joint powers authorities (collectively, the “Authorities”). SMUD has entered into long-term agreements with the Authorities providing for the purchase by SMUD of all of the power from each of the Local Gas-Fired Plants. Although the Local Gas-Fired Plants are owned individually by the Authorities, SMUD has exclusive control of their dispatch and manages their operations as part of its overall power supply strategy.

Payments under the power purchase agreements are payable from the revenues of SMUD’s Electric System prior to the payment of the principal of or interest on SMUD’s Senior Bonds and Subordinated Bonds (each as defined under the caption “CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS” below), as are other maintenance and operation costs and energy payments. For further discussion of SMUD’s obligations to make these payments to the joint powers authorities, see “CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS – Outstanding Indebtedness – *Joint Powers Authorities.*”

The following is a brief description of the five Local Gas-Fired Plants:

The Cosumnes Power Plant (the “SFA Project”). The SFA Project is a 612 MW natural gas-fired, combined cycle plant located in the southern portion of Sacramento County adjacent to SMUD’s decommissioned Rancho Seco Nuclear Power Plant. Commercial operation of the SFA Project commenced on February 24, 2006. SFA increased the net generating capacity of the facility by 81 MWs via an

Advanced Gas Path (“AGP”) upgrade. The additional AGP generation was realized after hardware and software upgrades were completed on both units in March of 2019. The SFA Project is owned by the SFA, a joint powers authority formed by SMUD and MID. The existing take-or-pay power purchase agreement between SMUD and the SFA expires no earlier than when the related bonds have been paid in full (the outstanding related bonds are scheduled to mature on July 1, 2030).

The CVFA Carson Cogeneration Project (the “CVFA Project”). The CVFA Project, a 103 MW natural-gas-fired cogeneration project consisting of separate combined cycle and peaking plants, provides steam to the Sacramento Regional County Sanitation District (“SRCSD”) wastewater treatment plant adjacent to the site. The CVFA Project is owned by the CVFA, a joint powers authority formed by SMUD and the SRCSD. Construction of the CVFA Project was completed and the plant began commercial operation on October 11, 1995. The CVFA bonds were defeased in September 2019. The take-or-pay power purchase agreement between SMUD and CVFA (the “CVFA PPA”) will be in effect until terminated by SMUD.

The SCA Procter & Gamble Cogeneration Project (the “SCA Project”). The SCA Project, a 182 MW natural gas-fired cogeneration facility, is located in an established industrial area of Sacramento. The initial combined cycle portion of the plant began commercial operation on March 1, 1997. Construction of the peaking plant portion of the SCA Project commenced during 2000 and the unit achieved commercial status on April 24, 2001. The SCA Project produces steam for use in Procter & Gamble Manufacturing Company’s oleochemical manufacturing processes and electricity for sale to SMUD. The SCA Project is owned by the SCA, a joint powers authority formed by SMUD and SFA, a separate joint powers authority. The SCA bonds were defeased in September 2019. The take-or-pay power purchase agreement between SMUD and SCA (the “SCA PPA”) will be in effect until terminated by SMUD.

The SPA Campbell Soup Cogeneration Project (the “SPA Project”). The SPA Project, a 170 MW natural gas-fired cogeneration project, was completed and began commercial operations on December 4, 1997. Upgrades were implemented during 2000, which increased the plant’s peaking capacity to 180 MW, well above its net demonstrated capacity of 159.8 MW. The plant is located in south Sacramento adjacent to the Capital Commerce Center (formerly the Campbell Soup Company food processing facility). The SPA Project is owned by the SPA, a joint powers authority formed by SMUD and SFA. The SPA bonds were redeemed in July 2015. The power purchase agreement between SMUD and SPA (the “SPA PPA”) covers both the SPA Project and SPA McClellan and will be in effect until terminated by SMUD. As part of the Zero Carbon Plan, SMUD is exploring retiring the SPA Project in 2025 pending a feasibility assessment. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – 2030 Zero Carbon Plan.”

The SPA McClellan Gas Turbine (“SPA McClellan”). SPA McClellan is a 72 MW natural gas-fired simple cycle combustion turbine generating plant at McClellan Business Park in Sacramento. This turbine is connected to SMUD’s electric system and is operated to meet SMUD’s peak-load requirements. SPA McClellan is aligned for remote starting and operation with both black start and fast start capabilities. SMUD constructed the McClellan unit in 1986 as a 50 MW emergency power source for the McClellan Air Force Base. In 2001, following the Air Force Base closure, McClellan was upgraded to 72 MW and converted for SMUD use. In May 2007, SMUD transferred ownership of the McClellan Gas Turbine to the SPA for more efficient operation. SPA passes all costs of operations and maintenance through to SMUD in accordance with the terms of the SPA PPA. SPA has no debt related to SPA McClellan. In exchange for paying all costs related to SPA McClellan, SMUD receives all of the power generated thereby. As part of the Zero Carbon Plan, SMUD is exploring retiring SPA McClellan in 2024 pending a feasibility assessment. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – 2030 Zero Carbon Plan.”

Fuel Supply

General. SMUD is obligated to arrange for the purchase and delivery of natural gas to the Local Gas-Fired Plants. Management of the natural gas procurement and delivery process is a key focus of SMUD's reliability and risk policies. The Local Gas-Fired plants generally supply approximately 50% of SMUD's average electric load. Although the natural gas consumption of the power plants for SMUD's load can vary significantly depending on the season and the market price of power, the plants required, on average in 2020, a total of approximately 89,000 Decatherms per day ("Dth/day") with a daily peak slightly more than 171,000 Dth/day of natural gas. Due to a gradual decline in natural gas consumption, SMUD is forecasting consumption of approximately 80,000 Dth/day in 2024. SMUD has implemented a comprehensive strategy to secure a reliable and diversified fuel supply through a variety of agreements for the supply, transportation, and storage of natural gas.

Supply. SMUD hedges a significant portion of its expected gas needs to meet customer power requirements. This is accomplished through a combination of long-term supply arrangements and an exposure reduction program. The program consists of a primary rolling three-year exposure reduction component, as well as supplemental fixed calendar year components reaching out five calendar years. Long-term arrangements may consist of a combination of physical commodity supply contracts, financial hedges, or options. Natural gas is purchased from a wide variety of producers and marketers at the northern and southern California borders, at Alberta, Canada and from the San Juan and the Rocky Mountain supply basins. SMUD has a number of both fixed-price supply agreements and financial hedging contracts to fix gas costs ranging from one month to several years in duration. These contracts are forecasted to have hedged the price of approximately 83%, 67% and 65% of SMUD's natural gas requirements for 2021, 2022 and 2023, respectively.

SMUD has contracted with the Northern California Gas Authority No. 1 ("NCGA") to purchase an approximate average of 8,700Dth/day over the remaining life of a contract expiring May 31, 2027 (the "NCGA Contract"). Under the NCGA contract, SMUD pays a discounted variable price for the fuel and anticipates periodically fixing the effective price under separate hedging contracts. Currently the delivery point for the NCGA Contract is the AECO hub in Alberta. SMUD is using its long-term transport capacity to deliver the fuel to the local area plants. SMUD has also contracted with the Northern California Energy Authority ("NCEA") to purchase an approximate average of 22,000 Dth/day or to be converted to the approximate value in MegaWatt-hours ("MWh") of electricity over the remaining life of a contract expiring on May 31, 2049. The gas will be delivered to the SMUD system via the Malin receipt point on the PG&E backbone system. SMUD is using its long-term transport capacity to deliver the fuel to the local area plants. SMUD will pay a discounted variable price for the fuel and anticipates periodically fixing the effective price under separate hedging contracts.

Renewable Natural Gas Supply. As a component of meeting SMUD's RPS goals, SMUD procures renewable natural gas and digester gas as fuels to generate renewable electricity from the SFA Project. Descriptions of the renewable natural gas supply agreements are provided below.

In March 2009, SMUD entered into a 15-year contract (that qualifies as renewable energy) with Shell Energy North America (US), L.P. ("Shell Energy") to purchase up to 6,000 Dth/day of renewable natural gas produced from a landfill project in Texas. SMUD began taking deliveries of this supply in April 2009. In March 2012, SMUD amended the contract with Shell Energy to increase the maximum volumes to 7,300 Dth/day and extend the term by 10 years. Currently, the delivery point is PG&E Topock and SMUD is using its long-term transport capacity to deliver it to the SFA Project. In 2016, SMUD entered into a 3-year contract with Shell Energy to sell back the entire volume of renewable natural gas purchased, less 500 Dth/day, to be sold into the vehicle transportation markets. Upon expiration of the initial 3-year

contract for the sale of biogas to Shell Energy, SMUD extended the sell back of the entire volume of biogas for an additional 3 years with Element Markets, starting in 2020.

SMUD contracted with Heartland Renewable Energy, LLC (“HRE”) in December 2009 for a 20-year supply of up to 7,000 Dth/day of renewable natural gas from a digester facility in Colorado. Deliveries began in March of 2014. Currently, the delivery point is Opal, Wyoming and SMUD uses its long-term transport capacity to deliver it to the SFA Project. HRE has not delivered volumes from the project to SMUD since December 2016 due to current litigation with Weld County, Colorado regarding odor and permit issues. EDF Renewables, the majority owner of HRE, notified SMUD in August of 2017 that it is in discussions with a short list of bidders to sell its interests in the facility. In June of 2020, the project was purchased and SMUD’s contract was assigned to the new owner, Platte River Biogas, LLC (“PRB”). PRB is currently formulating a plan to restore the project to commercial operations as a manure-only project. SMUD is in discussions with PRB on how their plans may impact SMUD’s existing contract.

In September 2011, SMUD and CVFA entered into a “Digester Gas Purchase and Sale Agreement” through which CVFA cleans nearly all of the digester gas received from SRCSD and sells it to SMUD for delivery to the SFA Project. In return, SMUD pays all of CVFA’s costs in acquiring, cleaning and making the gas available to SMUD. The Digester Gas Agreement runs through the remaining life of the CVFA Project. CVFA is currently receiving, processing and selling up to 1,500 Dth/day with provisions for volume increases over time to 2,500 Dth/day. Digester gas, when designated for use in SMUD’s power plants, is counted as renewable generation towards SMUD’s RPS obligations.

In December 2011, SMUD entered into a 20-year agreement with EIF KC Landfill Gas LLC (“EIF”) to purchase up to 7,050 Dth/day of renewable natural gas produced from multiple landfill projects. SMUD began taking deliveries of this supply in January 2014. Currently the delivery point is Kern River – Opal and SMUD uses its long-term transport capacity to deliver it to the SFA Project. Renewable natural gas, when designated for use in SMUD’s power plants, is counted as renewable generation towards SMUD’s RPS obligations.

AB 2196 is a law that defines the criteria by which existing and future renewable natural gas contracts will qualify for the State RPS program. The CEC adopted a RPS Eligibility Guidebook on April 30, 2013, which includes detailed rules for implementation of AB 2196. SMUD received an updated certificate of eligibility from the CEC in July 2014 for the SFA Project that included the quantities of renewable natural gas from all four contracts. The CEC adopted a revised RPS Eligibility Guidebook (Ninth Edition) on April 27, 2017. This latest guidebook did not change the RPS eligibility of any of the above SMUD renewable natural gas and digester gas contracts, but did simplify reporting requirements for these contracts. When fully delivering, these contracts represent roughly 30% of SMUD’s 2020 RPS requirement.

Gas Transmission

SMUD has satisfied its obligation to deliver natural gas to its power plants by constructing a natural gas pipeline, purchasing an equity interest in two PG&E backbone gas transmission lines, and contracting for capacity on a number of existing interstate natural gas transmission lines.

The Local Pipeline. SMUD constructed and owns a 20-inch, 50-mile natural gas pipeline in the greater Sacramento area (the “Local Pipeline”) that transports gas to all of the Local Gas-Fired Plants except SPA McClellan. The Local Pipeline is interconnected with PG&E’s major State gas transmission lines 300 and 401. Additionally, it may be interconnected with one or more private gas gathering pipelines located in the area, a gas storage project and/or other FERC approved pipelines that may be built in the local area. In conjunction with the construction of the SFA Project, SMUD extended the Local Pipeline to the plant

site. The 26-mile extension was completed in 2004. The extension is 24 inches in diameter and was designed to serve both the SFA Project and an additional second phase, if constructed.

PG&E Backbone Gas Transmission Lines 300 and 401. In 1996, SMUD purchased an equity interest in PG&E's backbone gas transmission lines 300 and 401 (referred to as the PG&E backbone). The total capacity acquired at that time was approximately 85,000 Dth/day and consisted of approximately 43,600 Dth/day of firm gas transport from the California–Oregon border at Malin, Oregon and 44,700 Dth/day from the California–Arizona border at Topock, Arizona, to SMUD's interconnection with the PG&E backbone near Winters, California. SMUD was also entitled to a share of non-firm capacity, which was approximately 4,360 Dth/day; making the total capacity potentially available to SMUD almost 90,000 Dth/day. This purchase made SMUD a co-owner of the PG&E backbone gas transmission lines 300 and 401 and obligated SMUD to pay PG&E to operate the pipelines on its behalf subject to the terms of the purchase agreement and operating protocols.

PG&E suffered a natural gas explosion in San Bruno, CA in September of 2010. Since this event, PG&E performs extensive testing of its natural gas transmission lines. This testing has resulted in curtailments of SMUD's transport capacity.

In July 2013, PG&E provided notice to SMUD that, due to a review of their gas transmission and distribution systems, more conservative pressure control strategies were to be implemented. In PG&E's recent Gas Transmission and Storage Rate case at the CPUC, PG&E testified that it had elected to implement a new Normal Operating Pressure (NOP) policy on Line 300 in order to reduce the risk of over-pressurization in the pipeline and increase its margin of safety. The new policy has caused PG&E to lower its operating pressures on Line 300, which caused a reduction in firm capacity on Line 300 over the pre-San Bruno rating. As an equity partner, SMUD takes a pro-rata share of any de-rating of capacity appropriate under the terms of the pipeline equity contract. As a result of lower operating pressures implemented on Line 300, SMUD's firm equity transport capacity was subject to reduced capacity in accordance with the terms of the equity contract. Per the equity contract, SMUD had the option to make a payment to PG&E to maintain current pipeline capacities. After a legal review, SMUD was of the view that PG&E's proposed reduction was not in accordance with the terms of the pipeline equity contract and as a result SMUD disputed PG&E's proposed reduction.

In January 2016, SMUD and PG&E concluded settlement negotiations to resolve the dispute. The resolution combined SMUD's firm and non-firm capacity rights into one firm capacity amount for each pipeline. The agreement ensures SMUD approximately 99 percent of SMUD's original firm capacity on Line 300, and 106 percent of SMUD's prior firm capacity on Line 401, and dramatically reduced curtailments of SMUD's firm capacity. As a result, this settlement generates significant savings to SMUD due to PG&E assuring virtually full utilization of Lines 300 and 401. SMUD now holds a total capacity of approximately 88,000 Dth/day, consisting of approximately 47,620 Dth/day of firm gas transport from the California–Oregon border at Malin, and 40,712 Dth/day of firm gas transport from the California–Arizona border at Topock, Arizona, to SMUD's interconnection with the PG&E backbone near Winters, California. The terms of the settlement are currently in effect.

SMUD also holds additional backbone capacity under tariff service for 10,000 Dth/day of northern path (Redwood) capacity. This current contract expires in June 2021 but has been renewed for 5,000 Dth/day expiring in June 2023.

Kern River Gas Transmission Company Long Term Agreement. SMUD has an agreement with Kern River Gas Transmission Company for 20,000 Dth/day of firm capacity through April 30, 2028. This capacity gives SMUD access to the Rocky Mountain supply basin at Opal, Wyoming, and connects to PG&E Line 300 (owned in part by SMUD) at Daggett, California.

TransCanada Firm Transmission Service Agreements. SMUD has several agreements with TransCanada Corporation that give SMUD access to Canadian supply from the Alberta basin to Kingsgate, British Columbia and the California-Oregon border at Malin. SMUD has agreements for 22,101 Dth/day at the California-Oregon border at Malin via the Gas Transmission Northwest (“GTN”) pipeline that expires in 2023. SMUD has agreements for approximately 12,000 Dth/day from the Alberta ANG/Foothills pipeline, also expiring in 2023. In order to match the Canadian capacity with the takeaway capacity at Malin, SMUD has an agreement with Foothills Pipeline for approximately 10,000 Dth/day that expires on October 31, 2022.

SMUD’s diversified portfolio of gas transmission arrangements allow for the purchase of gas from a variety of suppliers and locations, and the opportunity to capitalize on regional price differentials where possible. In addition, its ownership interest in the SMUD/PG&E backbone and Local Pipeline enhances the reliability of SMUD’s gas supply.

Gas Storage

SMUD also employs gas storage as part of its overall fuel supply strategy. Gas storage is useful in helping to balance gas supply, mitigate market price volatility, and provide a reliable supply to meet peak day delivery requirements.

SMUD has a contract with Wild Goose Storage, LLC, which began in April 2020 and expires in March 2022, for capacity in the Wild Goose Gas Storage facility located near Delavan in northern California. The contract provides SMUD with capacity levels of 1.0 million Dth of storage inventory, 10,000 Dth/day of injection rights and 20,000 Dth/day of withdrawal capacity.

SMUD also has a contract with Lodi Gas Storage, LLC, which began in April 2018 and expires in March 2023, for capacity in the Lodi Gas Storage project located near Acampo in northern California. The contract provides SMUD with capacity levels of 1.0 million Dth of storage inventory, 10,000 Dth/day of injection rights and 20,000 Dth/day of withdrawal capacity.

Power Purchase Agreements

SMUD has a number of power purchase agreements to help meet its power requirements. Some of these agreements are described below.

Western Area Power Administration. Effective January 1, 2005, SMUD entered into a 20-year contract with WAPA. SMUD has entered into a replacement agreement extending the term by 30 years for the period of January 1, 2025 through December 31, 2054. Power sold under this contract is generated by the Central Valley Project (“CVP”), a series of federal hydroelectric facilities in northern California operated by the United States Bureau of Reclamation. The contract provides WAPA’s CVP Base Resource customers (including SMUD) delivery of a percentage share of project generation in return for reimbursement of an equivalent share of project costs. SMUD’s CVP Base Resource share is roughly 25% of project generation and costs. This is expected to be approximately 318 MW of capacity and 661 GWh of energy in an average water year but will vary depending on precipitation. Energy available under the contract is determined by water releases required for water supply and flood control and is then shaped into higher value periods within other CVP operating constraints. More capacity and energy are typically available in spring and summer months and less in fall and winter.

SMUD also has a contract with WAPA expiring December 31, 2024, by which WAPA delivers an additional 200-300 MW per hour from projects located in the Pacific Northwest based on certain contractual parameters. In 2020, SMUD received 1,562 GWh of energy under this contract.

Avangrid (formerly Iberdrola Renewables (“Iberdrola”)). SMUD has two contracts with Iberdrola that provide SMUD with bundled renewable energy (energy plus RECs). These contracts include an agreement for 126 GWh of wind power generated in Solano County, California and a 12-year contract for 340 GWh per year of renewable biomass energy from Washington State that commenced July 1, 2009. The SMUD Board recently approved an extension of the wind contract through June 30, 2025. The biomass contract ends August 1, 2021.

Patua Project LLC. In April 2010, SMUD entered into a power purchase agreement with Patua Project LLC (“Patua”), a subsidiary of Gradient Resources, for the delivery of up to 132 MW (expected to be 120 MW nominal power output) of renewable energy from geothermal generation being developed in north central Nevada, from a Gradient Resources project known as the Patua Project. The project was to have been developed in three phases. Since 2010, the agreed upon capacity has been reduced several times. In December 2013, Phase 1 of the project, which had been reduced to 30 MW, finally achieved commercial operation. In 2014, the parties concluded negotiations on the fourth amendment to the power purchase agreement with Patua, which reduced the total capacity down to 40 MW, extended the commercial operation date of Phase 2 to January 1, 2016, and allowed Patua to add up to 13 MW of solar photovoltaics to supplement geothermal production. In addition, this amendment shifted responsibility to Patua for a portion of the long-term transmission service agreements that have been underutilized due to the project not meeting its targets. In November 2015, the Patua Project was acquired by TL Power, LLC, a wholly owned subsidiary of Cyrq Energy, Inc. (“Cyrq”). In December 2015, Cyrq terminated Phase 2. Upon termination of Phase 2, the contractual right for Cyrq to add solar photovoltaics to supplement geothermal production was reduced to 10 MW. As a result of poor performance during the first year of operation, SMUD reduced its obligation to take power from 30 MW to 25 MW. Performance continued to lag in 2015 and 2016 and SMUD further reduced its obligation to take power from 25 MW to 19 MW.

Renewable Energy Feed-In Tariff. In September 2009, SMUD’s Board authorized a feed-in tariff program for the purchase of renewable energy from local renewable energy projects connected to SMUD’s distribution system. SMUD’s Board authorized connection of up to 100 MW under the feed-in tariff which included standard payment rates and standard purchase terms for power. The feed-in tariff program became effective on January 1, 2010. Under the feed-in tariff, SMUD has executed 20-year term power purchase agreements for solar projects totaling 98.5 MW. Construction and start-up was completed on all projects between 2010 and 2012.

CalEnergy LLC. In August 2014, SMUD entered into a 22-year power purchase agreement with CalEnergy LLC for the purchase of 30 MWs per year of renewable energy from its Salton Sea geothermal facilities. As of July 1, 2017, SMUD began receiving up to 10 MWs from the CalEnergy portfolio, which escalated to the full 30 MWs on May 1, 2020.

Rancho Seco Solar. In October 2015, SMUD entered into a 20-year power purchase agreement with Rancho Seco Solar LLC for the purchase of energy from a 10.88 MW solar PV project sited on SMUD’s property at the closed Rancho Seco Nuclear Generating Station. Commercial operation was achieved in August of 2016. Rancho Seco Solar LLC leased the property from SMUD under a land lease agreement. The output of this project will directly serve two large commercial customers having executed agreements with SMUD for retail supply of solar power.

In May 2019, SMUD entered into a 30-year power purchase agreement for an additional 160 MW solar PV project with Rancho Seco Solar II, LLC. The project is located on SMUD-owned property at the closed Rancho Seco Nuclear Generating Station, adjacent to the existing 10.88 MW solar PV project. Construction began in 2019, and the project became commercially operable in February 2021.

Grady Wind Energy. In October 2015, SMUD entered into a 25-year power purchase agreement with Grady Wind Energy LLC (“Grady”) for the purchase of energy from a 200 MW wind project located in New Mexico (the “Grady Project”). The Grady Project began commercial operations on August 5, 2019. Energy from the Grady Project is delivered to CAISO. SMUD purchases 100% of the Grady Project output which includes energy, renewable energy credits, and capacity attributes. SMUD and Grady have a short-term (6-month) agreement spanning the winter 2021-spring 2022 season wherein Grady has the option to pay SMUD to curtail up to 100 MW. This agreement does not affect the remaining term of the agreement.

Great Valley Solar 2, LLC. In January 2017, SMUD entered into a 20-year power purchase agreement with Great Valley Solar 2, LLC for the purchase of energy from a 60 MW solar PV project located in Fresno County, California. The project’s commercial operation date was December 28, 2017.

ARP-Loyalton Cogen LLC. On September 14, 2016, Senate Bill 859 (“SB 859”) was signed into law. Under SB 859, a publicly owned utility (“POU”) must procure its proportionate share of 125 MWs of renewable energy from biomass plants burning high hazard forest fuels, subject to terms of at least five years. Seven POUs (SMUD, MID, Turlock Irrigation District (“TID”), Anaheim Public Utilities, Imperial Irrigation District, Los Angeles Department of Water & Power and Riverside Public Utilities) jointly solicited proposals for up to 29 MW of contract capacity for renewable energy to meet the requirements of SB 859. In January 2018, SMUD entered into a 5-year power purchase agreement with ARP-Loyalton Cogen LLC to fulfill 18 MWs of the required 29 MWs with SMUD’s share being just over 23 percent. The contract became effective on April 1, 2018. On February 18, 2020, ARP-Loyalton Cogen LLC filed for Chapter 11 bankruptcy and stopped producing and selling energy from the biomass plant. On May 7, 2020, the bankruptcy court approved the sale of the Loyalton facility to Sierra Valley Enterprises, LLC (“SVE”). SVE is interested in bringing the facility back into service to produce power again and is currently reviewing the terms of the agreement. If SVE is not willing to accept the terms of the agreement, the POU parties will discuss their options, which may include amending the agreement or issuing a new request for proposals for the remainder of the five-year term.

Roseburg Forest Products Co. For the remaining SB 859 biomass obligation of 11 MW, SMUD and the other POUs have entered into a five-year power purchase agreement with Roseburg Forest Products Co. SMUD’s share of the contract capacity is 2.5795 MW, and the plant began operating under the contract on February 26, 2021.

Sutter Energy Center. SMUD entered into an initial two-year contract (with a third year exercisable option) with Calpine Energy Services, L.P. (“Calpine”) for the ability to schedule up to 258 MWs of energy from Sutter Energy Center. The Sutter Energy Center is a natural gas-fired, combined-cycle facility located in Yuba City, California. The initial contract became effective on April 1, 2018. SMUD exercised its option to extend the contract and it expired November 1, 2020. SMUD entered into a new contract with Calpine for the same 258 MWs of energy. The new contract became effective January 1, 2021 and expires January 1, 2024.

Drew Solar, LLC. In June 2018, SMUD entered into a 30-year power purchase agreement with Drew Solar, LLC for the purchase of energy from a 100 MW solar PV project located in Imperial County, California. The project’s commercial operation date is set to be December 31, 2021.

Wildflower Solar. In October 2018, SMUD entered into a 25-year power purchase agreement with Wildflower Solar I, LLC, for the purchase of energy, capacity, and RECs from a 13 MW solar PV project located in Rio Linda, California. The project began commercially operating on December 18, 2020.

Sacramento Valley Energy Center, LLC. In June 2021, the Board authorized the CEO & GM, or his delegate, to execute a 30-year power purchase agreement with Sacramento Valley Energy Center, LLC

for the purchase of energy from a 200 MW solar PV and 100 MW four-hour storage capacity project located in Sacramento County, California. The project's commercial operation date is expected to be December 31, 2023.

Kings Country, LLC. In July 2021, SMUD staff expects to recommend that the Board authorize the CEO & GM, or his delegate, to execute a 30-year power purchase agreement with Kings Country, LLC for the purchase of energy from a 50 MW solar PV project located in Sacramento County, California. The project's commercial operation date is expected to be December 31, 2023.

Transmission Service Agreements

TANC California-Oregon Transmission Project. The 340 mile COTP is one part of a three 500-kV line coordinated system known as the California-Oregon Intertie ("COI"). The COTP is allocated one-third of the 4,800 MW capability of the COI system (see related agreements below). TANC is entitled to use 1,390 MW and is obligated to pay approximately 80% of the operating costs of the COTP. SMUD is a member of TANC and a party to Project Agreement No. 3 ("PA3"), under which it is entitled to 378 MW and obligated to pay on an unconditional take-or-pay basis about 27.5% of TANC's COTP debt service and operations costs, subject to a "step-up" obligation of up to 25% of its entitlement share upon the unremedied default of another TANC member-participant. In 2009, SMUD entered into a long-term layoff agreement with certain members that increased SMUD's entitlement by 35 MW. In 2014, SMUD entered into another long-term layoff agreement with certain other members that increased SMUD's COTP entitlements by 128 MW and amended the 2009 layoff agreement that returned 13 MW to a member. As of December 31, 2018, SMUD was entitled to approximately 528 MW of TANC's transfer capability for imports and 405 MW for exports, and is obligated to pay approximately 38.6% of TANC's COTP debt service and operations costs. SMUD's payments under this contract, like SMUD's payments under its other power purchase and transmission service agreements, are treated as "Maintenance and Operation Costs" or "Energy Payments" under the resolutions securing the Senior Bonds and Subordinated Bonds (each as defined under the caption "CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS" below). SMUD relies on its COTP rights to purchase power, access contingency reserves through the Northwest Power Pool, and obtain renewable resources to supplement its own resources to serve its load. TANC maintains its own property/casualty insurance program. TANC's budget for COTP costs, support services and advocacy expenses is about \$43.8 million for 2021. SMUD's obligation of the TANC budget is about \$16.7 million.

TANC Tesla-Midway Transmission Service. TANC has a long-term contract with PG&E to provide TANC with 300 MW of transmission service between PG&E's Midway Substation and the electric systems of the TANC Members (the "Tesla-Midway Service"). SMUD's share of the Tesla-Midway Service had been 46 MW. As part of the 2009 long-term layoff agreement, SMUD acquired an additional 2 MW of South-of Tesla Principles ("SOTP") transmission rights for 15 years starting February, 2009 from another TANC member, bringing SMUD's share of the Tesla-Midway Service to 48 MW.

Bonneville Power Administration. In 2009, SMUD entered into a transmission service agreement with the Bonneville Power Administration ("BPA") for 60 MW of firm point-to-point transmission service from BPA's Hilltop substation in north eastern California to the Malin substation at the California-Oregon border for the purpose of transmitting power under SMUD's power purchase agreement with Gradient Resources for Phase 1 of the Patua geothermal project over BPA's 230kV transmission lines. In early 2013, in accordance with BPA's transmission tariff, the transmission service was split into two 30 MW services and deferred as appropriate to better fit the timing of expected commercial operation of the Phase 1 30 MW and Phase 2 30 MW of the Patua project. See "POWER SUPPLY AND TRANSMISSION – Power Purchase Agreements – *Patua Project LLC*." SMUD submitted another request for the 30 MW of transmission procured for Patua Phase 2 to split the service into a 10 MW and a 20 MW service, with the

10 MW of service deferred to be timed with the expected commercial operation date of Phase 2. With the termination of Phase 2 and SMUD's reduced obligation due to the poor performance of Phase 1, much of the transmission reserved for it will no longer be needed. BPA does not have a provision in its transmission tariff for early termination of transmission service. However, the power purchase agreement with Patua requires Patua to cover unused transmission that SMUD has procured for the Patua purchases. On January 1, 2020, SMUD's transmission rights with BPA were reduced to 19 MW. This now aligns with SMUD's PacifiCorp transmission rights of 19 MW described below.

PacifiCorp. In 2009, SMUD entered into a transmission service agreement with PacifiCorp for 60 MW of firm point-to-point transmission service across PacifiCorp's high voltage step-up transformer at the Malin substation at the California-Oregon border for the purpose of transmitting power under SMUD's power purchase agreement with Gradient Resources for Phase 1 of the Patua geothermal project. In early 2013, in accordance with PacifiCorp's transmission tariff, the commencement of the 60 MW of transmission service was deferred to fit the timing of first deliveries expected from the 30 MW of Phase 1 of the Patua project. In 2013, SMUD terminated the 60 MW of transmission service and requested two new transmission services of 30 MW each, the start of which is timed to better fit with the expected start dates of phases 1 and 2 of the Patua Project. With the reduction in expected Patua output due to the Patua power purchase agreement fourth amendment, SMUD terminated the second 30 MW transmission agreement, and replaced it with a 10 MW transmission service agreement for Patua Phase 2. With the recent termination of Phase 2 of the Patua Project, SMUD terminated the 10 MW PacifiCorp transmission service agreement. As a result of the reduced obligation to take power from the Patua Project, SMUD has reduced its PacifiCorp transmission service from 30 MW to 19 MW.

Western Area Power Administration. SMUD does not have a direct interconnection of its power system to the COTP. To receive power deliveries that use its COTP rights, SMUD has a long-term transmission service agreement with WAPA for transmission of power from the COTP line (received at WAPA's Tracy or Olinda substations) to SMUD's system. In May of 2011, WAPA completed the Sacramento Voltage Support Transmission Project. Completion of this project has given SMUD an additional 165 MW of transmission service rights on WAPA's system from the COTP at the Olinda Substation to SMUD's system at the Elverta Substation.

Projected Resources

The following tables titled "Projected Requirements and Resources to Meet Load Requirements Energy Requirements and Resources" (the "Energy Table") and "Capacity Requirements and Resources Net Capacity – Megawatts" (the "Capacity Table") describe SMUD's contracted commitments and owned resources available to meet its forecasted load requirements through the year 2030. Resources are shown on an annualized basis with market purchases netted against surplus sales to arrive at a single net position for each year. Because SMUD's available resources do not exactly match its actual load requirements on an hourly basis, there are times during a year when resources available will either exceed or be insufficient to meet SMUD's needs. Expected actual capacity values are included in the tables. These values may differ from measured net demonstrated capacity values of the Local Area Gas-Fired Plants. The table below also includes the impact energy efficiency has on resource requirements as discussed below under "Demand Side Management Programs." See "BUSINESS STRATEGY" and "POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – *Local Gas-Fired Plants.*"

Resources listed in both the Energy Table and the Capacity Table are listed as either renewable or non-renewable. Generally, SMUD follows the CEC guidelines for eligibility requirements. Some of SMUD's renewable resources listed include solar, wind, geothermal, small hydroelectric facilities with a capacity of 30 MW or less, and biomass (representing generation from a fuel comprised of agricultural wastes and residues, landscape and tree trimmings, wood and wood waste).

As in any forecast, assumptions are made. In both the Energy Table and the Capacity Table the WAPA and UARP forecasts assume average water conditions throughout the period. On the capacity table, WAPA and SFA renewable capacity is estimated based on the ratio of renewable energy to total WAPA or SFA energy. See “POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – *Hydroelectric.*”

The Uncommitted Purchases (Sales) on the tables represent either anticipated future needs or surpluses. Future needs are met well in advance of delivery. They also include both renewable and non-renewable resources.

The Transmission Losses represent reductions in the amount of energy or capacity from the location it was purchased to the point of entering SMUD’s electrical system. This amount reduces the Total Resources available to meet the Total Projected Energy Requirements of the electrical system.

Demand Side Management Programs

SMUD’s demand-side management initiatives represent an integral element of its total resource portfolio, and are organized into two major components: energy efficiency and load management programs. Energy efficiency offerings include a wide variety of programs and services to customers to retrofit or upgrade existing equipment and fixtures and to install new energy efficiency measures in existing and new construction facilities. Load management allows SMUD to reduce the load on the electric system by cycling residential air conditioning, and calling upon commercial/industrial customers to curtail energy usage when energy is constrained during the summer or system emergencies. Load management programs are projected to allow SMUD to shed approximately 60 MW of peak load in an emergency on a hot day, representing about 2% of SMUD’s maximum system peak demand.

The customer “smart meter” system with 2-way communication capability provides information regarding customer usage patterns, which is expected to help SMUD tailor rate designs that provide customers with both the information and ability to manage their energy usage around high energy cost periods.

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**PROJECTED REQUIREMENTS AND RESOURCES TO MEET
LOAD REQUIREMENTS⁽¹⁾
ENERGY REQUIREMENTS AND RESOURCES (GWh)**

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Renewable Resources										
<u>District or Joint Powers Authority Owned:</u>										
UARP - Small Hydro	53	91	93	92	92	92	92	92	92	92
Solano Wind	659	593	594	559	854	854	854	854	854	854
SFA – Shell Landfill Gas and Digester Gas ⁽²⁾	229	206	725	720	767	691	692	692	692	676
Total	942	890	1,413	1,371	1,713	1,637	1,638	1,638	1,638	1,622
<u>Purchases</u>										
Western (WAPA) – Small Hydro	13	19	20	20	20	20	20	20	20	20
Rock Tenn (Simpson) – Biomass	192	--	--	--	--	--	--	--	--	--
Patua (Gradient/Vulcan) – Geothermal	137	147	147	147	147	147	146	147	147	147
Cal Energy – Geothermal	219	223	223	224	223	223	223	224	223	223
Iberdrola (PPM) – Wind	102	98	98	98	58	--	--	--	--	--
Grady – Wind	846	814	934	937	934	934	934	937	934	934
Recurrent Solarshares	176	171	171	170	172	169	169	169	169	166
Rancho Seco PV2	339	335	333	332	330	328	327	325	323	322
Feed-in-Tariff Photovoltaic – Solar	214	211	210	209	208	207	206	205	204	203
Navajo Solar	1	303	301	301	294	291	291	289	288	285
Kings Country	--	--	--	126	126	125	124	124	123	122
SVEC – Solar	--	--	--	509	510	507	505	502	500	497
Other Long-Term Contracts	243	238	238	235	206	194	182	179	179	177
Generic Renewables	--	--	--	--	1,858	3,000	3,020	4,238	5,452	6,273
Total	2,482	2,559	2,675	3,309	5,085	6,145	6,146	7,360	8,562	9,370
Non-Renewable										
<u>District or Joint Powers Authority Owned:</u>										
UARP – Large Hydro ⁽³⁾	1,297	1,297	1,513	1,554	1,554	1,554	1,554	1,554	1,554	1,554
SFA – Cosumnes	3,593	3,227	2,902	2,880	2,708	2,516	2,284	1,770	1,084	713
CVFA – Carson Ice	307	310	264	282	49	15	4	1	4	5
SCA – P&G	659	628	475	486	332	234	113	19	8	7
SPA – McClellan	17	2	2	2	--	--	--	--	--	--
SPA – Campbell Soup	616	453	190	63	--	--	--	--	--	--
Total	6,490	5,917	5,347	5,268	4,644	4,320	3,955	3,345	2,650	2,280
<u>Purchases</u>										
Western (WAPA) – Large Hydro	418	609	641	641	641	641	641	641	641	641
Western (WAPA) Customers (wheeling)	25	36	38	38	38	38	38	38	38	38
Calpine Sutter	1,150	1,502	1,099	--	--	--	--	--	--	--
Committed Purchases	95	--	--	--	--	--	--	--	--	--
Total	1,688	2,147	1,778	679	679	679	679	679	679	679
Total Resources	11,601	11,513	11,213	10,628	12,121	12,781	12,419	13,021	13,530	13,951
Uncommitted Purchases / (Sales)	(917)	(845)	(590)	16	(1,368)	(1,883)	(1,364)	(1,692)	(1,873)	(2,001)
Transmission Losses (COTP/CVP)	(31)	(45)	(50)	(45)	(38)	(67)	(58)	(91)	(120)	(109)
Total Projected Energy Requirements	10,653	10,623	10,573	10,599	10,714	10,831	10,996	11,238	11,537	11,842
Energy Efficiency (EE) Board Goals	84	161	236	314	334	391	451	514	556	608
SB1 Photovoltaic Goals	68	129	188	243	649	688	725	762	795	828
Expected Electric Vehicle (EV) Charging	(16)	(34)	(61)	(96)	(174)	(287)	(405)	(547)	(762)	(957)
Electric Building (EB)	(9)	(21)	(36)	(58)	(85)	(121)	(162)	(211)	(280)	(375)
Battery Storage (Utility)	--	--	--	(1)	(18)	(25)	(64)	(108)	(142)	(195)
Battery Storage (BTM)	--	--	--	--	(5)	(6)	(7)	(8)	(10)	(12)
Total Gross Energy Requirements before EE, SB1 and EV Charging	10,781	10,857	10,900	11,002	11,415	11,470	11,535	11,639	11,694	11,739

⁽¹⁾ Totals may not sum due to rounding.

⁽²⁾ Includes a biomethane contract counted as renewable (see “POWER SUPPLY AND TRANSMISSION – Fuel Supply – *Renewable Natural Gas Supply*”).

⁽³⁾ 2021 based on current precipitation levels. All other years assume average precipitation.

CAPACITY REQUIREMENTS AND RESOURCES⁽¹⁾
NET CAPACITY – MEGAWATTS

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<u>Load:</u>										
Planned Peak	2,870	2,877	2,856	2,849	2,870	2,881	2,881	2,893	2,919	2,931
Transmission Losses	28	28	28	28	28	28	28	28	28	28
Dispatchable Demand Resource	(73)	(73)	(73)	(73)	(32)	(48)	(71)	(100)	(138)	(182)
Adjusted Peak	2,825	2,832	2,811	2,804	2,866	2,861	2,838	2,821	2,809	2,777
15% Reserve Margin	424	425	422	421	430	429	426	423	421	417
Adjusted Peak with Reserves	3,249	3,257	3,233	3,225	3,296	3,290	3,264	3,244	3,231	3,193
<u>Renewable Resources</u>										
<u>District or Joint Powers Authority Owned:</u>										
UARP – Small Hydro	45	45	45	45	45	45	45	45	45	45
Solano Wind	105	60	60	57	80	80	80	80	80	80
SFA – Shell Landfill Gas and Digester Gas ⁽²⁾	51	63	120	120	120	120	120	120	120	120
Total	200	168	225	222	245	245	245	245	245	245
<u>Purchases</u>										
Western (WAPA) – Small Hydro	9	10	10	10	10	10	10	10	11	11
Rock Tenn (Simpson) – Biomass	42	--	--	--	--	--	--	--	--	--
Iberdrola (PPM) – Wind	24	14	14	14	--	--	--	--	--	--
Grady – Wind	67	32	32	32	32	32	32	32	32	32
Patua (Gradient/Vulcan) – Geothermal	12	12	12	12	12	12	12	12	12	12
CalGeo – Geothermal	26	26	26	26	26	26	26	26	26	26
Recurrent Solarshares	55	35	34	34	55	55	55	55	55	55
RanchoSeco PV2 – Solar	116	98	95	93	93	93	93	93	93	93
SVEC – Solar	--	--	--	81	81	81	81	81	81	81
Kings Country Solar	--	--	--	16	16	16	16	16	16	16
Navajo Solar	--	39	37	35	35	35	35	34	34	34
Feed-in-Tariff Photovoltaic – Solar	83	59	58	57	55	55	55	55	55	55
Other Long-Term Contracts	40	30	30	30	28	14	14	14	14	14
Total	472	354	347	438	441	426	426	426	426	427
<u>Non-Renewable</u>										
<u>District or Joint Powers Authority Owned:</u>										
UARP – Large Hydro	640	640	640	640	640	640	640	640	640	640
SFA (Cosumnes)	519	507	450	450	450	450	450	450	450	450
CVFA (Carson-Ice)	103	103	103	103	104	104	100	100	100	100
SCA (Procter & Gamble)	166	166	166	166	166	166	166	166	166	166
SPA (McClellan)	72	72	72	72	--	--	--	--	--	--
SPA (Campbell Soup)	170	170	170	170	--	--	--	--	--	--
Total	1,670	1,658	1,601	1,601	1,360	1,360	1,356	1,356	1,356	1,356
<u>Purchases</u>										
Western (WAPA) – Large Hydro	279	309	309	309	309	309	309	309	309	309
Western (WAPA) Customers (wheeling)	16	18	18	18	18	18	18	18	18	18
Firm Contract Reserves ⁽³⁾	15	17	17	17	17	17	17	17	17	17
Committed Purchases	325	250	250	--	--	--	--	--	--	--
Total	893	852	852	344	344	344	344	344	344	344
Uncommitted Purchases / (Sales)	13	225	208	620	907	916	894	873	860	821
Total Resources	3,249	3,257	3,233	3,225	3,296	3,290	3,264	3,244	3,231	3,193

⁽¹⁾ Totals may not sum due to rounding. Capacity values shown for 2022 and later are based on resource effective load carrying capability modeling.

⁽²⁾ The SFA Project is a 495 MW plant that includes 100 MW capacity attributable to a biogas contract counted as renewable (see “POWER SUPPLY AND TRANSMISSION – Fuel Supply – *Renewable Natural Gas Supply*”) and 395 MW capacity from natural gas.

⁽³⁾ SMUD assumes that for all firm system purchases, the suppliers will be planning 5% reserves.

Balancing Authority Area Agreements

Background. SMUD began operating as an independent control area, later termed a Balancing Authority, on June 18, 2002 within the WECC reliability organization's region. This reduced SMUD's exposure to the costs and reliability risks of the CAISO's markets. SMUD expanded its operational footprint beyond SMUD's service territory to include WAPA's electric system, including the MID, Roseville, and Redding service areas (on January 1, 2005) and the COTP (on December 1, 2005). As described further below, SMUD ceased to be the Balancing Authority on April 30, 2011, as BANC took SMUD's place as the Balancing Authority. SMUD remains the operator of the Balancing Authority through a contract with BANC. SMUD administers the contracts with WAPA and TANC to provide specified Balancing Authority-related and other services, and is compensated by WAPA and TANC for its added labor expense. TANC recovers such Balancing Authority services costs as a part of its annual operating budget from the COTP Participants and WAPA recovers its Balancing Authority services costs through its rates for power and transmission service. The agreement with WAPA, among other terms, establishes operating reserve obligations between the parties. WAPA in turn has agreements with electric systems connected to it to assure that such systems also operate reliably (i.e., MID, Roseville and Redding). As a result of the transition to BANC as the Balancing Authority, SMUD assigned or terminated its interconnection and operations agreements with other interconnecting Balancing Authority areas (i.e., CAISO, BPA and TID). BANC is now the party to these agreements as they primarily address only Balancing Authority matters required for compliance with the reliability standards issued by the North American Electric Reliability Corporation ("NERC"), such as emergency assistance arrangements. See also "OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY – Energy Imbalance Market."

Reliability Standards. The Energy Policy Act of 2005 gave FERC authority to enforce reliability standards for the bulk electric system. In June 2007, these standards became mandatory for SMUD and BANC.

In late 2019, SMUD and BANC underwent a combined NERC/WECC audit to evaluate compliance with applicable reliability standards. These audits occur every three years. At the conclusion of the audit, regulators determined that neither entity had any compliance violations related to the Operations and Planning or Critical Infrastructure Protection Standards. Resolutions to minor recommendations and areas of concern were completed in 2020. SMUD and BANC will undergo another NERC/WECC audit sometime in 2022.

Balancing Authority of Northern California. SMUD, MID, Redding and Roseville executed a Joint Exercise of Powers Agreement (the "BANC JPA Agreement") creating BANC on May 8, 2009. BANC became operational on May 1, 2011 as a Balancing Authority and replaced SMUD as the entity responsible for Balancing Authority-related reliability standards. Since that time, the Trinity Public Utilities District and the City of Shasta Lake have also become members of BANC. As provided in the BANC member agreement, liability for penalties associated with such Balancing Authority-related reliability standards are shared on a pro rata basis among the members of BANC. SMUD is the Balancing Authority operator under contract and performs Balancing Authority operational functions on behalf of BANC, much as it did when it was the Balancing Authority. The BANC JPA Agreement assigns cost responsibility based on member load within the BANC Balancing Authority, with SMUD representing approximately 70% of the total load.

Power Pool and Other Agreements

Northwest Power Pool Agreement. The Northwest Power Pool ("NWPP") is an agreement among over 30 utilities and public agencies in the western United States to coordinate contingency reserve sharing, referred to as the NWPP Reserve Sharing Program ("RSP"). The RSP permits participants to rely on one

another in the event that any participant experiences a generating resource outage. While SMUD became an RSP participant in 2009, participation is limited to Balancing Authorities, which SMUD relinquished to BANC in 2011. Under the RSP, BANC and TID (also a NWPP member) share their reserve amounts and when necessary may call upon NWPP reserves using BANC member systems and unused COTP rights. The NWPP RSP permits members to operate more efficiently by reducing the contingency reserves that they would otherwise need to have available if they could not rely on each other.

TANC-SMUD OASIS Administration Agreement. SMUD entered into an agreement with TANC to provide OASIS services (transmission sales and scheduling related services in the BANC BA of TANC members' COTP rights) on September 29, 2005. SMUD is compensated for performing these services. TANC and SMUD entered into a letter agreement dated October 25, 2010 to clarify each party's role for regulatory reliability standards compliance responsibilities and take into account SMUD's increased efforts related to supporting TANC's compliance requirements. TANC includes the costs of this service in its annual budgets and recovers the costs from its members who use the TANC OASIS to make their COTP transmission available to third parties.

Other Agreements with PG&E

Background. SMUD's electric system was originally purchased from PG&E in 1947. SMUD's service area is mostly surrounded by PG&E's service area and the two electric systems are interconnected at SMUD's Rancho Seco and Lake 230-kV substations.

Interconnection Agreement. PG&E and SMUD executed a Replacement Interconnection Agreement ("RIA") which became effective on January 1, 2010. The RIA provides that SMUD and PG&E operate their interconnections reliably, plan their electric systems to meet their load requirements, and avoid or mitigate impacts they cause by certain electric system modifications. The new agreement has a termination date of December 31, 2024, subject to FERC approval.

Generator Interconnection Agreements. SMUD signed a Large Generator Interconnection Agreement with CAISO and PG&E for the Solano 3 Wind Project, effective December 16, 2008, with a 50-year term. The Solano Wind Project Phase 1 has interconnection rights granted through a Small Generator Interconnection Agreement with the CAISO and PG&E and the Solano Wind Project Phase 2 has interconnection rights granted through a Large Generator Interconnection Agreement, also with the CAISO and PG&E. Both agreements became effective in January 2010 and both have terms of 20 years. In 2018, SMUD initiated a 92.4 MW Large Generator Interconnection Agreement request through CAISO for the Solano 4 Wind project.

Other generator interconnection agreements include a Small Generator Interconnection Agreement for Camp Far West with CAISO and PG&E for a 22-year term and a Small Generator Interconnection Agreement with PG&E for Slab Creek with a 22-year term. Both agreements became effective on January 14, 2010.

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SELECTED OPERATING DATA

Selected operating data of SMUD for the four years ended December 31, 2017 through 2020, and for the three months ended March 31, 2021 and March 31, 2020 are presented in the following table.

SMUD SELECTED OPERATING DATA CUSTOMERS, SALES, SOURCES OF ENERGY AND REVENUES

	Three Months Ended March 31,		Year Ended December 31,			
	2021	2020	2020	2019	2018	2017
Customers at End of Period:						
Residential	570,267	566,736	568,741	565,103	559,907	554,201
Commercial and industrial	68,815	68,342	68,628	68,203	67,782	67,260
Other	7,362	7,388	7,354	7,406	7,448	7,491
Total	646,444	642,466	644,723	640,712	635,137	628,952
MWh Sales:						
Residential	1,042,800	994,276	4,906,566	4,493,548	4,515,031	4,957,240
Commercial and industrial	1,239,372	1,289,022	5,453,120	5,616,920	5,661,449	5,761,158
Other	14,239	14,441	55,590	55,770	57,031	57,952
Total	2,296,411	2,297,739	10,415,276	10,166,238	10,233,511	10,776,350
Surplus power/out of area sales	499,865	460,266	2,259,991	1,878,205	1,516,289	1,788,719
Total	2,796,276	2,758,005	12,675,267	12,044,443	11,749,800	12,565,069
Sources of Energy Sold MWh:						
Generated by SMUD	1,494,805	1,429,806	6,414,380	7,143,944	7,089,430	7,274,860
Purchased or exchanged	1,411,765	1,417,335	6,691,279	5,324,217	5,078,432	5,757,332
Total	2,906,570	2,847,141	13,105,659	12,468,161	12,167,862	13,032,192
Less System losses and SMUD usage	110,294	89,136	430,392	423,718	418,062	467,123
Total	2,796,276	2,758,005	12,675,267	12,044,443	11,749,800	12,565,069
Gross System peak demand (kW) ⁽¹⁾	1,549,000	1,520,000	3,057,000	2,927,000	2,944,000	3,157,000
Average kWh sales per residential customer ⁽²⁾	1,830	1,756	8,650	7,987	8,101	8,969
Average Revenue per kWh Sold:						
Residential ⁽²⁾ (cents)	13.90	13.25	15.27	14.90	14.43	14.05
Commercial & industrial ⁽²⁾ (cents)	12.97	12.52	13.17	12.71	12.57	12.63

⁽¹⁾ Peak system MW values are measured at the four SMUD interconnection points and exclude SMUD's generation losses. Historical values include the impacts of dispatchable, non-dispatchable, and energy efficiency program capacity savings.

⁽²⁾ The average kWh sales per residential customer and the average revenue per kWh sold are calculated based upon billed and unbilled sales.

Source: SMUD

SELECTED FINANCIAL DATA

SMUD Financial Information

The following table presents selected financial data of SMUD. Under generally accepted accounting principles, data with respect to SMUD's component units, such as the Authorities, is included with that of SMUD. The following presents data for SMUD only and not its component units, such as the Authorities. SMUD's audited financial statements for the years ended December 31, 2020 and December 31, 2019 are included in APPENDIX B attached to this Official Statement. The following unaudited data for SMUD (excluding its component units) is drawn from SMUD's financial records that have been subjected to the auditing procedures applied in the audits of SMUD's and its component units financial statements for the years ended December 31, 2017 through 2020. The selected financial data for the periods ended March 31, 2021 and March 31, 2020 are derived from SMUD's unaudited financial records, which

have been prepared on the same basis as SMUD's data for the years ended December 31, 2017 through 2020. The selected financial data for the period ended March 31, 2021 are not necessarily indicative of the financial data to be expected for the entire year ending December 31, 2021.

SMUD FINANCIAL DATA⁽¹⁾
(thousands of dollars)

	Three Months Ended March 31,		Year Ended December 31,			
	2021	2020	2020	2019	2018 (restated)	2017
Summary of Income						
Operating Revenues ⁽²⁾	\$ 366,922	\$ 330,117	\$ 1,582,979	\$ 1,553,167	\$ 1,589,612	\$ 1,554,366
Operating Expenses	(352,001)	(316,977)	(1,397,845)	(1,412,199)	(1,376,987)	(1,366,555)
Operating Income (Loss)	14,921	13,140	\$ 185,134	\$ 140,968	\$ 212,625	\$ 187,811
Interest and Other Income (Expense) ..	7,842	12,172	63,014	(21,113)	76,966	58,217
Interest Expense	(21,515)	(18,365)	(80,699)	(66,185)	(73,021)	(78,554)
Change in Net Position	\$ 1,248	\$ 6,947	\$ 167,449	\$ 53,670	\$ 216,570	\$ 167,474
Selected Statement of Net Position Information						
Net Plant in Service	\$3,201,953	\$3,160,846	\$3,234,208	\$3,187,135	\$2,995,505	\$2,942,005
Construction Work in Progress	504,440	416,812	460,155	351,584	396,794	278,721
Electric Utility Plant – Net.....	<u>\$3,706,393</u>	<u>\$3,577,658</u>	<u>\$3,694,363</u>	<u>\$3,538,719</u>	<u>\$3,392,299</u>	<u>\$3,220,726</u>
Unrestricted Cash.....	\$ 582,240	\$ 388,536	\$ 662,155	\$ 451,800	\$ 434,103	\$ 608,311
Rate Stabilization Fund.....	\$ 174,444	\$ 141,770	\$ 168,726	\$ 143,669	\$ 96,694	\$ 99,899
Total Assets	\$5,734,957	\$5,381,813	\$5,826,449	\$5,429,137	\$5,254,839	\$5,426,013
Net Position	\$1,945,841	\$1,784,090	\$1,944,593	\$1,777,145	\$1,723,476	\$1,506,905
Long-Term Debt ⁽³⁾	\$2,515,538	\$2,158,799	\$2,523,921	\$2,166,389	\$1,803,840	\$2,001,767
Debt Service Coverage Ratios						
Parity Debt Service Coverage Ratio ..	N/A	N/A	2.25x	2.11x	2.37x	2.77x
Parity and Subordinate Debt Service Coverage Ratio.....	N/A	N/A	2.14x	2.06x	2.37x	2.75x

⁽¹⁾ The financial statements of SMUD comprise financial information of SMUD along with its component units, CVFA, SPA, SCA, SFA, NCGA and NCEA. This table includes only financial information of SMUD excluding its component units. Net operating revenues and expenses and Electric Utility Plant and Capitalization of CVFA, SPA, SCA, SFA, NCGA and NCEA are not included in this table, although amounts paid to or received from the Authorities by SMUD are included.

⁽²⁾ Operating Revenues reflect net transfers to (from) the Rate Stabilization Fund for each full year as follows:

2021 \$5.7 million (through March 31, 2021)

2020 \$25.1 million

2019 \$47.0 million

2018 (\$3.2 million)

2017 \$64.7 million

Transfers to the Rate Stabilization Fund reduce operating revenues in the year transferred; transfers from the Rate Stabilization Fund increase operating revenues. Transfers from the HGA balancing account in the Rate Stabilization Fund are automatic based on the amount of precipitation received. See "RATES AND CUSTOMER BASE – Rates and Charges" above.

⁽³⁾ Long-Term Debt includes Long-Term Debt due within one year and unamortized premiums.

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Financial Information of SMUD and the Authorities

The following table presents a summary of selected financial information for SMUD and the Authorities.

SUMMARY OF FINANCIAL INFORMATION OF SMUD AND THE AUTHORITIES FOR THE YEARS ENDED DECEMBER 31, 2020 AND 2019 (thousands of dollars)

	Year Ended December 31, 2020			Year Ended December 31, 2019		
	SMUD	Authorities	Total ⁽¹⁾	SMUD	Authorities	Total ⁽¹⁾
Summary of Income						
Operating Revenues ⁽²⁾	\$ 1,582,979	\$ 267,211	\$ 1,587,905	\$ 1,553,167	\$ 294,908	\$1,559,224
Operating Expenses	(1,397,845)	(252,832)	(1,388,392)	(1,412,199)	(239,477)	(1,362,825)
Operating Income	185,134	14,379	199,513	\$ 140,968	55,431	196,399
Interest and Other Income	63,014	1,605	63,022	(21,113)	2,432	(19,634)
Interest Expense.....	(80,699)	(28,601)	(109,300)	(66,185)	(31,665)	(97,850)
Change in Net Position.....	<u>\$ 167,449</u>	<u>\$ (12,617)</u>	<u>\$ 153,235</u>	<u>\$ 53,670</u>	<u>\$ 26,198</u>	<u>\$ 78,915</u>
Selected Statement of Net Position Information						
Net Plant in Service	\$3,234,208	\$ 334,011	\$3,285,840	\$3,187,135	\$ 367,089	\$3,272,058
Construction Work in Progress.....	460,155	1,164	461,319	351,584	2,218	353,802
Electric Utility Plant – Net	<u>\$3,694,363</u>	<u>\$ 335,175</u>	<u>\$3,747,159</u>	<u>\$3,538,719</u>	<u>\$ 369,307</u>	<u>\$3,625,860</u>
Unrestricted Cash	\$ 662,155	\$ 52,261	\$ 714,416	\$ 451,800	\$ 43,175	\$ 494,975
Rate Stabilization Fund	\$ 168,726	--	\$ 168,726	\$ 143,669	--	\$ 143,669
Total Assets	\$5,826,449	\$1,220,049	\$6,689,080	\$5,429,137	\$1,263,973	\$6,337,781
Net Position	\$1,944,593	\$ 295,299	\$1,957,512	\$1,777,145	\$ 309,297	\$1,804,277
Long-Term Debt ⁽³⁾	\$2,523,921	\$ 862,781	\$3,386,702	\$2,166,389	\$ 895,711	\$3,062,100

⁽¹⁾ Financial information for SMUD and the SMUD JPAs (CVFA, SPA, SCA, SFA, NCGA and NCEA) include intercompany balances. The financial information reflects balances after the elimination of intercompany accounts including Authorities distributions to SMUD of \$1.6 million in 2020 and \$1.0 million in 2019.

⁽²⁾ Operating Revenues reflect net transfers to (from) the Rate Stabilization Fund as follows:

2020: \$25.1 million

2019: \$47.0 million

Transfers to the Rate Stabilization Fund reduce operating revenues in the year transferred; transfers from the Rate Stabilization Fund increase operating revenues. Transfers from the HGA balancing account in the Rate Stabilization Fund are automatic based on the amount of precipitation received. See “RATES AND CUSTOMER BASE – Rates and Charges” above.

⁽³⁾ Long-Term Debt includes Long-Term Debt due within one year and unamortized premiums.

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Management's Discussion of SMUD's Operating Results

Three Months Ended March 31, 2021 (Unaudited). For the three months ended March 31, 2021, SMUD reported an increase in net position of \$1.2 million as compared to an increase of \$6.9 million for the three months ended March 31, 2020.

Operating revenues were \$36.8 million higher than 2020. This was primarily due to higher sales of surplus gas (\$21.4 million), sales of surplus power (\$14.1 million), sales to customers (\$5.0 million), low carbon fuel standard (LCFS) credit sales revenue (\$4.0 million), AB 32 revenue (\$3.6 million), partially offset by higher transfers to the RSF (\$7.6 million) and lower transfers from the RSF (\$2.1 million).

Operating expenses were \$35.0 million higher than 2020. This was primarily due to higher production expense (\$25.7 million), purchased power expenses (\$9.1 million), transmission and distribution operating expenses (\$4.0 million), customer service and information expenses (\$2.5 million) and depreciation expense (\$2.2 million), partially offset by lower administrative and general expenses (\$3.8 million) and public good expenses (\$3.0 million).

Non-Operating expense was \$4.3 million lower than 2020. This was primarily due to lower unrealized holding gains (\$3.2 million) and interest income (\$1.6 million).

Interest expense increased \$3.2 million from 2020.

Year Ended December 31, 2020. For the year ended December 31, 2020, SMUD reported an increase in net position of \$167.4 million as compared to an increase of \$53.7 million for 2019.

Operating revenues were \$29.8 million higher than 2019. This was primarily due to higher sales to customers (\$42.8 million), transfers from the RSF (\$23.1 million), sales of surplus power (\$22.3 million), LCFS credit sales revenue (\$5.9 million) and other electric revenue (\$3.7 million), partially offset by lower sales of surplus gas (\$32.7 million), AB 32 revenue (\$26.9 million), miscellaneous service revenue (\$5.4 million) and customer late fee revenue (\$2.3 million).

Operating expenses were \$14.4 million lower than 2019. This was primarily due to lower production operating expenses (\$42.5 million), administrative and general expenses (\$17.4 million), public good expenses (\$6.4 million), depletion expense (\$4.1 million), production maintenance expenses (\$4.1 million) and transmission and distribution operating expenses (\$3.0 million), partially offset by higher purchased power expenses (\$21.4 million), transmission and distribution maintenance expenses (\$17.7 million), depreciation expenses (\$14.8 million) and amortization of regulatory assets (\$8.7 million).

Non-Operating income increased by \$84.1 million due to no divestment of its interests in the Rosa Unit (\$52.1 million), lower write-off of preliminary projects in 2020 (\$11.6 million), dissolution of RBC CSCDA gas prepay contract (\$10.9 million), higher insurance proceeds (\$8.3 million), higher distributions from the JPAs (\$4.0 million) and lower CCA costs net of higher revenues (\$2.8 million), partially offset by lower contributions in aid of construction (\$2.7 million) and lower unrealized holding gains (\$2.4 million).

Interest expense increased \$14.5 million from 2019.

Year Ended December 31, 2019. For the year ended December 31, 2019, SMUD reported an increase in net position of \$53.7 million as compared to an increase of \$216.6 million for 2018.

Operating revenues were \$36.4 million lower than 2018. This was primarily due to higher transfers to the RSF (\$50.2 million), lower sales of surplus power (\$15.1 million), AB 32 revenue (\$2.9 million),

revenue from low carbon fuel credit sales (\$1.8 million) and rent from electric property (\$1.2 million), partially offset by higher sales to customers (\$26.2 million), sales of surplus gas (\$8.2 million) and miscellaneous revenue (\$0.5 million).

Operating expenses were \$35.2 million higher than 2018. This was primarily due to higher maintenance expenses (\$17.2 million), administrative and general expenses (\$10.5 million), customer accounts expenses (\$8.7 million), public good expenses (\$8.3 million), customer service and information expenses (\$4.5 million), amortization of regulatory assets (\$3.4 million), production operating expenses (\$3.0 million), and transmission and distribution operating expense (\$2.9 million), partially offset by lower purchased power expenses (\$15.3 million), depreciation expenses (\$5.1 million) and depletion expense (\$2.9 million).

Non-Operating income decreased by \$98.1 million due to the loss on SMUD's divestment of its interests in the Rosa Unit (\$52.1 million), lower gains from a wind facility repurchase (\$46.7 million) in 2018, higher project write offs (\$11.0 million), lower distributions from the JPAs (\$9.9 million), lower revenue from grants (\$3.8 million) and higher investment expense (\$2.2 million), offset by lower net judgment and arbitration awards (\$17.0 million), lower CCA costs net of revenues (\$5.8 million) and higher unrealized holding gains (\$4.4 million).

Interest expense decreased \$6.8 million from 2018.

Regulatory Assets. In accordance with Governmental Accounting Standards Board ("GASB") No. 62, "Regulated Operations," SMUD defers, as regulatory assets, certain types of expenditures. These assets are amortized and collected through future rates.

As of December 31, 2020, SMUD had a total of \$742.6 million recorded for regulatory assets. Regulatory assets associated with costs related to implementation of GASB No. 68 which requires SMUD to record a net pension liability was \$374.6 million at December 31, 2020. Regulatory assets associated with costs related to implementation of GASB No. 75 which requires SMUD to record a net Other Post Employment Benefit (OPEB) liability was \$306.6 million at December 31, 2020. Regulatory assets associated with Rancho Seco decommissioning costs totaled \$88.7 million at December 31, 2020. Nuclear fuel storage costs and non-radiological decommissioning costs have been collected in rates since 2009. For a complete description of these regulatory assets, see Note 8 (Regulatory Deferrals) to SMUD's financial statements.

The Board has authorized the deferral of any charges or credits that result from the change in valuation of ineffective hedges that should be reported as Investment Revenue/Expense on the Statements of Revenues, Expenses and changes in net position. The Board's resolution establishes that such charges or credits are not included in rates based on market value changes but are included in rates when the underlying transactions occur. Therefore, under GASB No. 62, "Regulated Operations," any such changes are included in the Statement of Net Position as regulatory assets or liabilities. For a complete description of these derivative financial instruments, see Note 9 (Derivative Financial Instruments) to SMUD's financial statements.

RANCHO SECO DECOMMISSIONING

Overview. The 913 MW Rancho Seco Nuclear Power Plant ("Rancho Seco") began Nuclear Regulatory Commission ("NRC") licensed operations in 1974. In June 1989, the electorate of SMUD voted against allowing SMUD to continue to operate Rancho Seco as a nuclear generating facility, and the plant was shut down. In 1991, SMUD submitted a report (the "Financial Assurance Plan") providing required financial assurance to the NRC that SMUD will have sufficient funds available to pay for the cost of

decommissioning. On March 17, 1992, the NRC granted SMUD a change from an operating to a possession-only license for Rancho Seco that relieved SMUD from compliance with a number of NRC regulations applicable to operating nuclear power plants. SMUD also filed a proposed decommissioning plan with the NRC (the “Decommissioning Plan”), which was approved in March 1995.

After the decommissioning efforts began, no suitable disposal option was available to SMUD for the Class B and Class C low level radioactive waste generated during the plant decommissioning. With the used nuclear fuel stored onsite requiring oversight staff, SMUD opted to store the Class B and Class C radioactive waste in an existing interim onsite storage building until a suitable disposal option was available. In November 2007, the possession-only license for Rancho Seco was amended to update the Decommissioning Plan to terminate the possession-only license for the Class B and Class C waste in two phases. Phase I of the decommissioning was completed at the end of 2008. Following verification of the site conditions, SMUD submitted a request to the NRC to reduce the licensed facility from 2,480 acres to the interim onsite storage building and about one acre surrounding it. The request was approved by the NRC in September 2009. Phase II of decommissioning included approximately the two-acre interim storage building containing the Class B and Class C radioactive waste and surrounding area. In September 2013, SMUD entered into a contract with the operator of the low-level radioactive waste disposal facility located in Andrews, Texas. Shipment of the Class B and Class C radioactive waste for disposal was completed in November 2014. SMUD conducted additional clean-up activities and radiological surveys, which were followed by NRC confirmatory surveys. The results of these surveys demonstrated unit dose criteria well below NRC release criteria, and the NRC approved the Phase II area for unrestricted use. On September 21, 2017, SMUD formally requested the termination of the possession-only license. On August 31, 2018, the NRC officially terminated SMUD’s possession-only license for the remaining Class B and Class C waste at Rancho Seco.

As part of the Decommissioning Plan, the nuclear fuel and Greater Than Class C (“GTCC”) radioactive waste is being stored in a dry storage facility (the Independent Spent Fuel Storage Installation or “ISFSI”) constructed by SMUD, adjacent to the former reactor facility. The NRC has separately licensed this facility. The DOE, under the Nuclear Waste Policy Act of 1982, is responsible for permanent disposal of used nuclear fuel and GTCC radioactive waste. SMUD has a contract with the DOE for the removal and disposal of this waste. The DOE was to have a waste repository operating by 1998, but has experienced significant and ongoing delays. The Nuclear Waste Policy Act designates Yucca Mountain in Nevada as the final and exclusive repository for the nation’s used nuclear fuel. The DOE discontinued the Yucca Mountain license review activities in 2010, but after a court ordered the NRC to resume its review in 2013, the NRC published its final safety evaluation report in 2015. The final safety report, and the final environmental impact statement, concluded that the proposed repository would be safe and environmentally sound for one million years.

Nevertheless, seeking alternatives to Yucca Mountain, the Blue Ribbon Commission on America’s Nuclear Future delivered its final report in January 2012 with several recommendations. The Department of Energy (“DOE”) responded to the recommendations by issuing a report in January 2013 (Strategy for the Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste). Key to both documents is a focus on used fuel from decommissioned sites including Rancho Seco. The DOE report accepts most of the Blue Ribbon Commission recommendations, and contains timelines for fuel management options which could remove the fuel from Rancho Seco as early as 2021. However, any progress on the strategies proposed by the DOE is dependent on legislative action by Congress. With no legislative action taken to date, the 2021 projected date for fuel removal slips year-for-year. Therefore, SMUD cannot determine at this time when the DOE will fulfill its contractual obligations to remove the nuclear fuel and GTCC waste from the Rancho Seco facility. In the meantime, SMUD continues to incur costs of approximately \$5 to \$6 million per year for storage of used nuclear fuel at the ISFSI. SMUD has filed a series of successful lawsuits against the federal government for recovery of past spent fuel costs,

with recoveries to date in excess of \$104 million. SMUD plans to continue pursuing cost recovery claims to ensure it is reimbursed for all such costs in the future. The ISFSI will be decommissioned and its license terminated after the fuel and GTCC is removed.

Financial Assurance Plan. In accordance with the Financial Assurance Plan, SMUD established and funded an external decommissioning trust fund currently held by Wells Fargo Bank (the “Decommissioning Trust Fund”). Pursuant to the Financial Assurance Plan, SMUD made the final deposit into the Decommissioning Trust Fund in 2008. Additional deposits are not expected but will be made if increased cost estimates or reduced fund interest earnings require it. In 2011, the NRC began requiring that SMUD demonstrate financial assurance for decommissioning the ISFSI as well as the former power facility, increasing the overall cost for decommissioning Rancho Seco. The estimated total cost for decommissioning the ISFSI was approximately \$5.7 million at December 31, 2019. The decommissioning cost estimate is required to be updated every three years. As of December 31, 2020, the balance of the Decommissioning Trust Fund was \$8.87 million, excluding unrealized gains and losses. Based on the current decommissioning cost estimate and the value of the fund, SMUD’s existing Decommissioning Trust Fund provides sufficient funds to complete decommissioning and terminate the ISFSI license.

In addition to these costs, SMUD also estimates that it would cost approximately \$13.1 million to restore the site to make it available for other SMUD uses with some major structures remaining intact. Site restoration is not a legal requirement.

EMPLOYEE RELATIONS

SMUD has approximately 2,228 employees, most of whom are covered by a civil service system. SMUD is a contracting member of the California Public Employees’ Retirement System (“PERS”). Approximately 50% of SMUD’s work-force is represented as to wages, hours and other terms and conditions of employment, by one of three recognized employee organizations, the International Brotherhood of Electrical Workers (“IBEW”) Local 1245, the Organization of SMUD Employees (“OSE”), and the SMUD Public Safety Officers’ Association (“PSOA”). The remaining 50% of SMUD’s work-force, which includes managers, professional, administrative, supervisory, confidential and security staff, is unrepresented.

SMUD negotiated four-year Memoranda of Understanding (“MOU”) with IBEW and the OSE, effective January 1, 2018, through December 31, 2021. Both contracts contain a no-strike/no-lockout clause effective during the life of the agreements. The PSOA recently obtained recognition status in 2018, and in 2019, SMUD negotiated an MOU with PSOA effective through December 31, 2022. SMUD is currently negotiating a new MOU with IBEW and expects to begin negotiations with OSE prior to the expiration of the OSE MOU. SMUD has experienced only one labor interruption, which occurred in January 1980 that lasted four days.

RETIREMENT BENEFITS AND POST-EMPLOYMENT MEDICAL BENEFITS

Pension Plans

SMUD participates in PERS, an agent multiple-employer public employee defined benefit pension plan. PERS provides retirement and disability benefits, annual cost-of-living adjustments, and death benefits to plan members and beneficiaries. PERS acts as a common investment and administrative agent for participating public entities within the State. Benefit provisions and all other requirements are established by State statute and SMUD policies. The pension plan provides retirement benefits, survivor benefits, and death and disability benefits based upon employees’ years of credited service, age, and final compensation.

As of June 30, 2019, the last actuarial valuation date for SMUD's plan within PERS, the market value of the SMUD plan assets was \$1.87 billion. The plan is 78.4% funded on a market value of assets basis, an increase of 0.5% compared to the June 30, 2018 funded status based on the market value of assets.

As an employer, SMUD is required to contribute a percentage of payroll each year to PERS to fund SMUD's plan based on actuarial valuations performed by PERS. PERS collects the normal cost based on a percentage of payroll and the unfunded liability portion is based on a dollar amount. SMUD also makes partial contributions required of SMUD employees on their behalf and for their account. At the PERS fiscal year ended June 30, 2020, SMUD's required employer contribution rate for normal cost was 8.7% of payroll and the unfunded liability contribution was \$31.1 million. During 2020, SMUD contributed \$54.3 million to PERS (including SMUD's contributions to cover required employee contributions), and SMUD employees paid \$15.7 million for their share of the PERS contribution.

For the fiscal years ending June 30, 2021 and June 30, 2022, SMUD is required to contribute 9.1% and 9.0% of payroll for normal costs and \$33.5 million and \$36.3 million for the unfunded liability contribution, respectively. Assuming no amendments to the plan and no liability gains or losses (which can have a significant impact), PERS has projected that SMUD will be required to contribute 8.9% of payroll to the plan for normal costs and \$38.8 million for the unfunded liability contribution for the fiscal year ending June 30, 2023, not including SMUD contributions to cover required employee contributions. The amount SMUD is required to contribute to PERS is expected to increase in the future. The actual amount of such increases will depend on a variety of factors, including but not limited to investment returns, actuarial methods and assumptions, experience and retirement benefit adjustments.

SMUD has the option to prepay an annual lump sum payment to PERS for the unfunded accrued liability portion only (not including SMUD contributions to cover required employee contributions). SMUD made an annual lump sum prepayment of \$30.0 million, and also voluntarily made an additional payment of \$20.0 million, for the unfunded accrued liability for the fiscal year ended June 30, 2020. SMUD also made an annual lump sum prepayment of \$31.3 million, and voluntarily made an additional payment of \$98.9 million for the unfunded accrued liability for the fiscal year ending June 30, 2021.

While SMUD has some ability to adjust the retirement benefits provided to its employees, PERS determines the actuarial methods and assumptions used with respect to assets administered by PERS (including the SMUD plan assets) and makes the investment decisions with respect to such assets. For a description of such actuarial methods and assumptions (including the smoothing conventions used by PERS when setting employer contribution rates) and investments, see the comprehensive annual financial report of PERS (SMUD's plan is part of the Public Employees' Retirement Fund of PERS) available on its website at www.calpers.ca.gov. SMUD cannot guarantee the accuracy of such information and neither the comprehensive annual financial report of PERS nor any other information contained on the PERS website is incorporated by reference in or part of this Official Statement. Actuarial assessments are "forward-looking" information that reflect the judgment of the fiduciaries of the pension plans, and are based upon a variety of assumptions, one or more of which may prove to be inaccurate or be changed in the future. Actuarial assessments will change with the future experience of the pension plans.

GASB issued statement No. 68 "Accounting and Financial Reporting for Pensions – An Amendment of GASB Statement No. 27" ("GASB No. 68"). The primary objective of GASB No. 68 is to improve accounting and financial reporting by state and local governments for pensions. Under GASB No. 68, SMUD is required to report the net pension liability (i.e., the difference between the total pension liability and the pension plan's net position or market value of assets) in its Statement of Net Position. This standard requires shorter amortization periods for recognition of non-investment gains and losses and actuarial assumption changes, as well as for recognition of investment gains and losses. GASB No. 68

separates financial reporting from funding requirements for pension plans. The net pension liability as of December 31, 2020 is \$469.8 million.

SMUD provides its employees with two cash deferred compensation plans: one pursuant to Internal Revenue Code (“IRC”) Section 401(k) (the “401(k) Plan”) and one pursuant to IRC Section 457 (the “457 Plan” and collectively, the “Plans”). The Plans are contributory plans in which SMUD’s employees contribute the funds. Each of SMUD’s eligible full-time or permanent part-time employees may participate in either or both Plans, and amounts contributed by employees are vested immediately. Such funds are held by a trustee in trust for the employees upon retirement from SMUD service and, accordingly, are not subject to the general claims of SMUD’s creditors. SMUD makes annual contributions to the 401(k) Plan on behalf of certain employees pursuant to a memorandum of understanding with both of its collective bargaining units. SMUD matches non-represented employee contributions to the 401(k) Plan up to a set amount. SMUD also makes limited discretionary contributions to non-represented employees hired after January 1, 2013, which contributions fully vest after five years. SMUD made contributions into the 401(k) Plan of \$5.8 million in 2020 and \$5.4 million in 2019. SMUD does not match employee contributions, nor make contributions on behalf of its employees to the 457 Plan. Participating employees made contributions into both Plans totaling \$28.8 million in 2020 and \$24.8 million in 2019.

Other Post-Employment Benefits

SMUD provides postemployment healthcare benefits, in accordance with SMUD policy and negotiated agreements with employee representation groups in a single employer defined benefit plan, to all employees who retire from SMUD, and their dependents. SMUD also provides postemployment healthcare benefits to covered employees who are eligible for disability retirement. SMUD contributes the full cost of coverage for retirees hired before January 1, 1991, and a portion of the cost based on credited years of service for retirees hired after January 1, 1991. SMUD also contributes a portion of the costs of coverage for these retirees’ dependents. Retirees are required to contribute the portion that is not paid by SMUD. The benefits, benefit levels, retiree contributions and employer contributions are governed by SMUD and can be amended by SMUD through its personnel manual and union contracts.

SMUD’s post-employment health care benefits are funded through the PERS California Employers’ Retiree Benefit Trust (“CERBT”), an agent multiple-employer plan. The funding of a plan occurs when the following events take place: the employer makes payments of benefits directly to or on behalf of a retiree or beneficiary; the employer makes premium payments to an insurer; or the employer irrevocably transfers assets to a trust or other third party acting in the role of trustee, where the plan assets are dedicated to the sole purpose of the payments of the plan benefits, and creditors of the government do not have access to those assets.

SMUD has elected to contribute the normal costs to the CERBT but annually receive reimbursement for cash benefit payments from the CERBT. In 2021, SMUD decided to forgo making a contribution for the normal costs to the CERBT because there was a net OPEB asset at December 31, 2020. In May 2020 and March 2019, SMUD made contributions for the normal costs to the CERBT in the amount of \$9.5 million and \$9.4 million, respectively. SMUD can elect to make additional contributions to the trust. During 2020 and 2019, SMUD made healthcare benefit contributions by paying actual medical costs of \$23.8 million and \$23.7 million, respectively. During 2020 and 2019, SMUD received a \$20.0 million reimbursement for cash benefit payments from the CERBT.

At June 30, 2020 and 2019, SMUD estimated that the actuarially determined accumulated postemployment benefit obligation was approximately \$405.8 and \$437.5 million, respectively. At June 30, 2020 and 2019, the plan was 97.9% and 88.6% funded, respectively.

SMUD's actuary uses PERS economic and other assumptions as the basis for the calculation of the post-employment benefit obligation. The actual accumulated post-employment benefit obligation will vary substantially if such PERS assumptions, such as interest rate and life expectancy, among others, prove to be inaccurate or different than SMUD's actual experience. Although SMUD believes that such assumptions and estimates are reasonable, no assurance can be given that any such assumptions will prove to be accurate, or that SMUD's actual accumulated post-employment benefit obligation will not materially exceed its estimates. Additional information is available in Note 15 (Other Postemployment Benefits) and "Required Supplementary Information" to SMUD's consolidated financial statements.

GASB previously issued SGAS No. 75 "Accounting and Financial Reporting for Postemployment Benefits Other than Pensions". The primary objective of GASB No. 75 is to improve accounting and financial reporting by state and local governments for postemployment benefits other than pensions ("OPEB"). Under GASB No. 75, SMUD is required to report the net OPEB asset or net OPEB liability (i.e., the difference between the total OPEB liability and the OPEB plan's net position or market value of assets) in its Statement of Net Position. This standard requires shorter amortization periods for recognition of non-investment gains and losses and actuarial assumption changes, as well as for recognition of investment gains and losses. The net OPEB asset as of December 31, 2020 is \$0.8 million and the net liability as of December 31, 2019 is \$32.2 million.

CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS

Estimated Capital Requirements

SMUD has a projected capital requirement of approximately \$1.993 billion for the period 2021 through 2025 as shown in the table below. Approximately 60% of this requirement is anticipated to be funded with internally generated funds and cash on hand.

Special projects include costs relating to construction of large substations and the potential construction of Solano Phase 4. The Estimated Capital Requirements table below includes \$111 million for Solano Phase 4. See "POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – Solano 4 Project."

ESTIMATED CAPITAL REQUIREMENTS

(Dollars in Thousands)

	Service Area and Other System Improvements Including Distribution System	Improvements to Existing Generation Plant	General Plant	Special Projects	Total Capital Requirements
2021	\$193,488	\$65,022	\$114,234	\$11,409	\$384,153
2022	120,336	70,441	123,836	77,794	392,408
2023	202,728	55,436	124,614	21,591	404,369
2024	204,728	55,436	124,614	21,591	406,369
2025	204,728	55,436	124,614	21,591	406,369

Outstanding Indebtedness

General. SMUD typically finances its capital requirements through the sale of revenue bonds, commercial paper and from internally generated funds.

SMUD's Electric Revenue Bonds (the "Senior Bonds") are issued pursuant to Resolution No. 6649 (the "Senior Resolution") adopted in 1971, as amended and supplemented (the "Senior Resolution"). As of June 1, 2021, SMUD had Senior Bonds in the aggregate principal amount of \$2,085,120,000 outstanding. Immediately following the issuance of the 2021 Series I Bonds and the refunding of the Refunded Bonds, as described in the forepart of this Official Statement, Senior Bonds in the aggregate principal amount of \$_____ * will be outstanding under the Senior Resolution. See "PLAN OF FINANCE" in the forepart of this Official Statement. The Senior Bonds are payable solely from the Net Revenues of SMUD's Electric System. The Senior Bonds are subordinate in right of payment to the prior payment of "Maintenance and Operation Costs" and "Energy Payments" as defined in the Master Resolution, including payments by SMUD to TANC under PA3, payments by SMUD under power purchase agreements related to the Authorities and payments by SMUD to NCGA and NCEA under their respective gas supply contracts.

SMUD's Subordinated Electric Revenue Bonds (the "Subordinated Bonds") are issued pursuant to Resolution No. 85-11-1 of SMUD, adopted on November 7, 1985, as amended and supplemented (the "Subordinate Resolution"). As of June 1, 2021, SMUD had Subordinated Bonds in the aggregate principal amount of \$200,000,000 outstanding. The Subordinated Bonds are payable solely from the Net Subordinated Revenues of SMUD's Electric System. The Subordinated Bonds are subordinate in right of payment to the prior payment of principal of and interest on the Senior Bonds.

SMUD also issues commercial paper notes (the "Notes") from time to time. As of June 1, 2021, no Notes were outstanding. Currently, Notes in the aggregate principal amount of \$400,000,000 may be outstanding at any one time, but SMUD reserves the right to increase or decrease the aggregate principal amount of the Notes that may be outstanding at any one time in the future. The Notes are secured by letters of credit issued by commercial banks. The Notes (and SMUD's obligations to repay drawings under the letters of credit) are payable solely from available revenues of SMUD's Electric System and are subordinate in right of payment to the prior payment of principal of, premium if any, and interest on the Senior Bonds and the Subordinated Bonds. Drawings under the letters of credit, to the extent not repaid immediately from the proceeds of commercial paper or other available SMUD funds, are repayable with interest over a period of five years. The letters of credit currently expire in February, June and October of 2022.

Joint Powers Authorities. SMUD has entered into long-term power purchase agreements with each of the Authorities relating to the Local Gas-Fired Plants. Under such agreements, SMUD has exclusive control of the dispatch of all five of the Local Gas-Fired Plants and takes all of the power produced by the Local Gas-Fired Plants. See "POWER SUPPLY AND TRANSMISSION – Power Generation Facilities – Local Gas-Fired Plants." The Authorities are each treated as component units of SMUD for accounting purposes. Only SFA has outstanding debt, payable solely from capacity payments made by SMUD under the related power purchase agreements. The SPA bonds were redeemed on July 1, 2015. The CVFA bonds were defeased in September 2019. The SCA bonds were defeased in September 2019. The SFA power purchase agreement is on a take-or-pay basis whereby payments must be made by SMUD regardless of plant performance. As of June 1, 2021, bonds issued by the Authorities to finance the Local Gas-Fired Plants were outstanding in the aggregate principal amount of \$112,085,000. SMUD's payments under the power purchase agreements relating to the Local Gas-Fired Plants are payable from revenues of SMUD's Electric System prior to the payment of principal of and interest on the Senior Bonds and Subordinated

* Preliminary, subject to change.

Bonds as either “Maintenance and Operation Costs” or “Energy Payments” under the Senior Resolution and Subordinate Resolution.

SMUD and Sacramento Municipal Utility District Financing Authority formed a joint powers authority called the Northern California Gas Authority No. 1 (“NCGA”). NCGA is treated as a component unit of SMUD for accounting purposes. NCGA issued \$757,055,000 in bonds in May 2007 for the purpose of paying Morgan Stanley Capital Group in advance for natural gas to be delivered to NCGA and then sold to SMUD pursuant to a long-term purchase contract. SMUD’s obligation under the purchase contract is limited to payment for gas supplies delivered by NCGA. SMUD’s payments under the purchase contract are payable from revenues of SMUD’s Electric System prior to the payment of principal and interest on the Senior Bonds and the Subordinated Bonds as either “Maintenance and Operation Costs” or “Energy Payments” under the Senior Resolution and the Subordinate Resolution. SMUD is not obligated to make any payments in respect of debt service on the NCGA bonds. As of June 1, 2021, related bonds in the aggregate principal amount of \$181,935,000 remain outstanding.

SMUD and Sacramento Municipal Utility District Financing Authority formed a joint powers authority called the Northern California Energy Authority (“NCEA”). NCEA is treated as a component unit of SMUD for accounting purposes. NCEA issued \$539,615,000 in bonds in December 2018 for the purpose of paying J. Aron & Company LLC in advance for natural gas or electricity to be delivered to NCEA and then sold to SMUD pursuant to a long-term purchase contract. SMUD’s obligation under the purchase contract is limited to payment for gas or electricity supplies delivered by NCEA. SMUD’s payments under the purchase contract are payable from revenues of SMUD’s Electric System prior to the payment of principal and interest on the Senior Bonds and the Subordinated Bonds as either “Maintenance and Operation Costs” or “Energy Payments” under the Senior Resolution and the Subordinate Resolution. SMUD is not obligated to make any payments in respect of debt service on the NCEA bonds. As of June 1, 2021, related bonds in the aggregate principal amount of \$539,615,000 remain outstanding.

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Interest Rate Swap Agreements. SMUD has two interest rate swap agreements relating to previously or currently outstanding Subordinated Bonds and four forward starting interest rate swap agreements relating to potential refunding bonds to be issued in the future, as shown in the following table. For more information, see Note 9 (Derivative Financial Instruments) to SMUD’s consolidated financial statements.

Effective Date	Termination Date	SMUD Pays		SMUD Receives	Notional Amount (000’s)	Counterparty
7/2/1997	7/1/2024	Floating	SIFMA	5.154%	\$72,620	J Aron & Company LLC
7/15/2003	8/15/2028	Fixed	2.894%	63% of 1M LIBOR	80,100	Morgan Stanley Capital Services, Inc.
07/21/2021	08/15/2028	Fixed	1.099%	67% of 1M LIBOR	127,030	J Aron & Company LLC
07/20/2022	08/15/2033	Fixed	1.607%	SIFMA	157,785	Morgan Stanley Capital Services, Inc.
07/12/2023	08/15/2041	Fixed	0.718%	70% of 1M LIBOR	132,020	Barclays Bank
07/12/2023	08/15/2033	Fixed	0.554%	70% of 1M LIBOR	75,680	Barclays Bank

The obligations of SMUD under the swap agreements are not secured by a pledge of revenues of SMUD’s electric system or any other property of SMUD. SMUD does not currently have any collateral posting requirements with respect to the interest rate swap agreements but SMUD may be required to post collateral under certain circumstances. In connection with the refunding of the Refunded Bonds, as described in the forepart of this Official Statement, SMUD expects to terminate the interest rate swap with J Aron that would otherwise be effective on July 21, 2021. See “PLAN OF FINANCE” in the forepart of this Official Statement.

Build America Bonds Subsidy Payments. SMUD’s Electric Revenue Bonds, 2009 Series V (the “2009 Series V Bonds”) and Electric Revenue Bonds, 2010 Series W (the “2010 Series W Bonds”) were issued as “Build America Bonds” under the provisions of the American Recovery and Reinvestment Act of 2009. At the time the 2009 Series V Bonds and 2010 Series W Bonds were issued, SMUD expected to receive an annual cash subsidy payment from the United States Treasury equal to 35% of the interest payable on the 2009 Series V Bonds and the 2010 Series W Bonds. However, as a result of the federal budget process, many payments from the federal government, including Build America Bonds subsidy payments, have been reduced. Absent the federal budget reductions, the aggregate annual cash subsidy payable to SMUD with respect to the 2009 Series V Bonds and the 2010 Series W Bonds would be approximately \$9.8 million. With the current federal budget reductions, SMUD has typically been receiving aggregate annual cash subsidy payments with respect to the 2009 Series V Bonds and the 2010 Series W Bonds of approximately \$9.2 million. It is possible that future federal budget actions could further reduce, or eliminate entirely, the annual cash subsidy payments with respect to Build America Bonds, including the annual cash subsidy payments payable to SMUD with respect to the 2009 Series V Bonds and the 2010 Series W Bonds. SMUD cannot predict the likelihood of the further reduction or elimination of the Build America Bonds subsidy payments. A significant reduction or elimination of the cash subsidy payments payable to SMUD with respect to the 2009 Series V Bonds or the 2010 Series W Bonds could be material.

Debt Service Requirements. The following table sets forth SMUD’s debt service requirements with respect to SMUD’s Senior Bonds and Subordinated Bonds.

DEBT SERVICE REQUIREMENTS⁽¹⁾

Calendar Year	Senior Bonds Debt Service⁽²⁾	Subordinated Bonds Debt Service⁽³⁾	Total Debt Service
2021	\$	\$	\$
2022			
2023			
2024			
2025			
2026			
2027			
2028			
2029			
2030			
2031			
2032			
2033			
2034			
2035			
2036			
2037			
2038			
2039			
2040			
2041			
2042			
2043			
2044			
2045			
2046			
2047			
2048			
2049			
2050			
Total	<u>\$</u>	<u>\$</u>	<u>\$</u>

⁽¹⁾ Does not include outstanding bonds issued by the Authorities for the Local Gas-Fired Plants. Does not include bonds issued by NCGA, NCEA or SMUD’s portion of bonds issued by TANC. Payments by SMUD which are used by the Authorities, NCGA, NCEA, and TANC to pay debt service on such bonds constitute either “Maintenance and Operation Costs” or “Energy Payments” under the Senior Resolution and the Subordinate Resolution.

⁽²⁾ [Does not include debt service for the 2021 Series I Bonds or reflect the refunding of the Refunded Bonds]. Debt service is not reduced by the amount of any subsidy that SMUD currently expects to receive in connection with the 2009 Series V Bonds and 2010 Series W Bonds.

⁽³⁾ [Based on an assumed interest rate of 3% per annum following (i) the initial scheduled Mandatory Purchase Date of October 17, 2023 for SMUD’s Subordinated Electric Revenue Bonds, 2019 Series A and (ii) the initial scheduled Mandatory Purchase Date of October 15, 2025 for SMUD’s Subordinated Electric Revenue Bonds, 2019 Series B.]

Note: Amounts may not add due to rounding.

INSURANCE

SMUD maintains a comprehensive property/casualty insurance program designed to protect against catastrophic losses that would have an adverse effect on its financial position or operational capabilities. Insurance programs are continuously reviewed and modified when construction, operational exposures, or developments in the insurance industry so warrant. Long term relationships with a variety of insurers minimize SMUD's susceptibility to the effects of market cycles. SMUD budgets reserves to meet potential insurance deductibles and self-insured liability claims.

SMUD safeguards assets with all-risk property and boiler/machinery insurance with limits of \$800 million per occurrence for physical damage and business interruption combined. Various coverage sublimits and deductibles apply to losses arising from certain perils, such as business interruption, earthquake, or flood, respectively. Liability insurance is in effect to defend and indemnify SMUD against third party claims, including general, automobile and sudden and accidental pollution claims with policy limits of \$140 million, and wildfire coverage with policy limits of \$250 million, all of which include a variety of self-insured retentions.

Nuclear property and liability insurance policies are maintained in accordance with the NRC's requirements for decommissioned nuclear plants that maintain dry storage of spent fuel on-site. This includes \$100 million in first party property damage and decontamination, \$100 million for nuclear liability arising from accidents on-site, \$200 million for supplier's and transporter's nuclear liability, and \$300 million for nuclear worker liability. SMUD is exposed to possible retrospective assessments for nuclear property events occurring at other nuclear facilities in the United States capped at ten times SMUD's annual nuclear property premium (currently the maximum retrospective assessment is approximately \$1,000,000).

Other types of insurance include non-owned aircraft liability, workers' compensation, crime, cyber security, fidelity, fiduciary liability, directors' and officers' liability, professional errors and omissions, transportation and installation, and builder's risk for major facilities under construction.

LEGAL PROCEEDINGS

SMUD is a party to numerous actions arising out of the conduct of its business and affairs, some of which are discussed below. SMUD believes that any losses or adverse financial results it may suffer in these current actions, to the extent not covered by insurance, would not, in the aggregate, have an adverse material impact on SMUD, its business and affairs, the results of its operations, financial position or liquidity.

Environmental Litigation

SMUD was one of many potentially responsible parties that had been named in a number of actions relating to environmental claims and/or complaints. SMUD has resolved these environmental claims and/or complaints and entered into settlement agreements and/or consent orders. These settlement agreements and consent orders have statutory reopener provisions which allow regulatory agencies to seek additional funds for environmental remediation under certain limited circumstances. While SMUD believes it is unlikely that any of the prior settlements or consent orders will be reopened, the possibility exists. If any of the settlements or consent orders were to be reopened, SMUD management does not believe that the outcome will have a material adverse impact on SMUD's financial position, liquidity or results of operations.

North City Environmental Remediation

In 1950, SMUD purchased property (the “North City Site”) from the City of Sacramento and the Western Railroad Company. Portions of the North City Site prior to the sale had been operated as a municipal landfill by the City of Sacramento. SMUD currently operates a bulk substation on the North City Site and plans to decommission the facility in the next few years. SMUD intends to assure compliance with State standards at closed landfill sites and is in the process of determining the appropriate remediation for the North City Site. In 2009, SMUD established a regulatory asset to defer recognition of the expense related to the investigation, design and remediation necessary for the North City Site, and recorded a liability for the full \$12.0 million estimated for the project. On December 31, 2012, the regulatory asset was fully amortized. As the owner of the North City Site, SMUD will play the principal role in the remediation selection and activities. SMUD has estimated the total exposure for closing the site at as high as \$12 million based on initial tests and studies of the site and approved and implemented cap designs for nearby former landfill areas. However, costs could exceed that amount based on the need to design around transmission-related infrastructure improvements. SMUD’s management does not believe this will occur. Even if remediation costs associated with the North City Site were to increase, SMUD management believes that any increased costs will not have a material adverse impact on SMUD’s financial position, liquidity or results of operations.

Bonneville Power Administration

BPA is a federal power marketing administration that owns and operates an extensive transmission network in the northwest. BPA’s Southern Intertie is a series of transmission lines that connect to California entities at the border of California and Oregon. SMUD purchases power at the California-Oregon Border (the “COB”) trading hub from various sellers that use BPA’s Southern Intertie transmission service, and imports the power to serve its load.

In 2017, BPA conducted its BP-18 rate proceeding for the fiscal year 2018-2019 period, and on July 26, 2017, issued its Record of Decision adopting its proposal to nearly triple the rate for its hourly Southern Intertie transmission service from \$3.53/MWh to \$9.56/MWh. The hourly rate increase had an effective date of October 1, 2017. The delivered energy at the COB includes the cost of transmission, and therefore, the price of energy will increase with the escalation of the BPA’s hourly transmission rate. As a result of the hourly rate increase, SMUD estimates a negative financial impact to SMUD of approximately \$7-13 million annually in additional costs of energy.

SMUD, along with TANC and TID, two other entities that are negatively impacted by the hourly transmission rate increase, jointly filed an appeal on June 15, 2018 in the Ninth Circuit seeking to overturn BPA’s Southern Intertie hourly rate increase. In its decision on June 17, 2019, the court denied the joint appeal and upheld BPA’s Southern Intertie hourly rate increase. SMUD did not seek rehearing of the court’s order.

SMUD management believes that any increased costs ultimately borne by SMUD as a result of higher energy prices at the COB will not have a material adverse impact on SMUD’s financial position, liquidity, or results of operations.

Claim for Accidental Death

In February 2020, SMUD received a claim alleging an employee of a gutter company died after he accidentally came into contact with a SMUD electrical line during an installation. The claim is for approximately \$43 million. SMUD concluded the electrical lines at the site of the accident exceeded required clearances and there is no basis for the claim against SMUD. SMUD management believes that

SMUD has no potential liability in this matter and that any costs ultimately borne by SMUD will not have a material adverse impact on SMUD's financial position, liquidity or results of operations.

Proposition 26 Lawsuit

Two SMUD customers jointly filed a complaint against SMUD in October 2019. The complaint states that SMUD violated Proposition 26 (see "DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – *Proposition 26*" for a description of Proposition 26) when SMUD's Board on June 24, 2019 adopted rate increases for 2020 and 2021. The Plaintiffs contend the rate increases do not reflect SMUD's reasonable cost of service because they include a 9.2% scalar that SMUD applied to its TOD residential rate restructure in the 2017 rate process which SMUD's Board of Directors adopted at that time. Therefore, the plaintiffs contend SMUD's 2020 and 2021 rates should be decreased by this scalar amount because the scalar exceeded SMUD's cost of service, and refunded to SMUD customers. Because SMUD has a strong evidentiary record supporting the Board's rate decisions in 2017 and 2019, and the lawsuit has little merit, SMUD anticipates the court will rule in SMUD's favor. While SMUD believes the court will rule in its favor, SMUD is unable to predict the outcome of the litigation or, if or to the extent SMUD ultimately is not successful in the litigation, what remedies against SMUD may be available. SMUD management believes that if SMUD is not successful in the litigation, and to the extent the outcome would have a material adverse impact on SMUD's financial position, liquidity, or results of operations, the Board would make appropriate rate modifications based on an evidentiary record consistent with guidance from a judicial decision in the case.

Other Litigation Matters

Currently, SMUD is party to various claims, legal actions and complaints relating to its operations, including but not limited to: property damage and personal injury, contract disputes, torts, and employment matters. SMUD management believes that the ultimate resolution of these matters will not have a material adverse effect on SMUD's financial position, liquidity or results of operation.

FERC Administrative Proceedings

SMUD is involved in a number of FERC administrative proceedings related to the operation of wholesale energy markets, regional transmission planning, gas transportation and the development of NERC reliability standards. While these proceedings are complex and numerous, they generally fall into the following categories: (i) filings initiated by the CAISO (or other market participants) to adopt/modify the CAISO Tariff and/or establish market design and behavior rules; (ii) filings initiated by existing transmission owners (i.e., PG&E and the other IOUs) to pass-through costs to their existing wholesale transmission customers; (iii) filings initiated by FERC on market participants to establish market design and behavior rules or to complain about or investigate market behavior by certain market participants; (iv) filings initiated by transmission owners under their transmission owner tariffs for the purpose of establishing a regional transmission planning process; (v) filings initiated by providers of firm gas transportation services under the Natural Gas Act; and (vi) filings initiated by NERC to develop reliability standards applicable to owners, users, and operators of the bulk electric system. In addition, SMUD is an active participant in other FERC administrative proceedings, including those related to reliability and cybersecurity standards, variable resource integration, and transmission planning and cost allocation. SMUD management believes that the ultimate resolution of these matters will not have a material adverse effect on SMUD's financial position, liquidity or results of operations.

CPUC Administrative Proceedings

In July 2016, the CPUC adopted a final decision on PG&E's triennial gas transmission and storage ("GT&S") rate case. The case affects SMUD through several tariff rates SMUD pays to move natural gas along PG&E's backbone transmission lines. As a result of the 2010 San Bruno pipeline explosion, PG&E has applied for a significant increase in its revenue requirement to pay for enhanced safety measures on its entire gas pipeline system, including the backbone. PG&E proposed to increase the transportation tariff significantly for the period 2015-2017 in order to collect revenues to finance dramatic capital expenditures to implement over 75 remedies to enhance pipeline safety improvements of PG&E's gas transmission pipeline system. The CPUC authorized an 85% increase in PG&E's revenue requirement, which included an even larger rate increase for electric generators who use local transmission to supply their power plants. Some of those affected parties advocated for a single transportation rate that would eliminate the cost-based distinction between the high local rate that they would pay and the low backbone transmission rate that SMUD would pay. SMUD opposed those parties. In the final decision, CPUC ruled in SMUD's favor resulting in a backbone rate that remained essentially unchanged through 2018. While certain parties impacted by the increased local transportation rates sought a rehearing on the final decision and later filed a petition for modification of that decision, the CPUC has not acted on the petition for rehearing and it denied the petition for modification.

PG&E's 2019 GT&S rate case (the "2019 GT&S Case") was filed on October 30, 2017, and seeks to significantly increase the backbone transmission rates SMUD pays. Unlike the prior GT&S case described in the preceding paragraph, in the 2019 GT&S Case, PG&E is also seeking to divest itself of some of its primary gas storage assets, as well as upgrade those which will remain in its portfolio. This is largely in response to increased regulations and needed costly modifications imposed by the Division of Oil, Gas, and Geothermal Resources in the wake of the Aliso Canyon gas storage leak that occurred in 2016. PG&E estimated that these regulatory changes would reduce the capacity of its gas storage assets by nearly forty percent. Moreover, changes in PG&E's resource mix due to State policies favoring carbon-free resources, make this divestiture a key part of its overall resource portfolio strategic plan.

SMUD actively participated in the 2019 GT&S Case and was successful in affirming the application of cost causation principles to prevent excessive and unreasonable costs being shifted to electric generator backbone customers like SMUD, either through proposed changes in PG&E's natural gas storage strategy or through cost shifts within the electric generator customer class. In August 2020, PG&E hosted a workshop on local transmission study parameters and approaches. Several parties presented studies showing varying levels of cost allocation between core and non-core customers. PG&E's study will be presented in PG&E's next rate case, expected in the third quarter of 2021. SMUD will actively participate in PG&E's next rate case proceeding to ensure that costs are not shifted to electric generator backbone customers. Separately, SMUD continues to participate and monitor a proceeding at the CPUC concerning long-term gas system planning. At this point in the proceeding, SMUD management does not anticipate that the ultimate resolution of this case will have a material adverse effect on SMUD's financial position, liquidity, or results of operation.

DEVELOPMENTS IN THE ENERGY MARKETS

Background; Electric Market Deregulation

In 1996, the State partially deregulated its electric energy market. CAISO was established, as well as an independent power exchange, the PX. The PX was originally established to permit power generators to sell power on a competitive spot market basis; however, the PX has ceased all power exchange operations and filed for bankruptcy protection.

During 2000 and 2001, the State and many of the other western states experienced significantly higher and more volatile prices for natural gas and wholesale electricity. In reaction to such conditions, SMUD made significant changes to its business strategy to mitigate the impacts of the more volatile and unpredictable energy markets. While the difficult market conditions have moderated substantially, volatility in energy prices in the State are always a potential risk due to a variety of factors which affect both the supply and demand for electricity in the western United States. These factors include, but are not limited to, the implementation of the CAISO market design changes, insufficient generation resources, the increase in intermittent renewable energy resources, natural gas price volatility, fuel costs and availability, weather, transmission constraints and levels of hydroelectric generation within the region. While SMUD has taken a number of steps to mitigate its exposure to price volatility associated with these factors, this price volatility under extreme conditions may contribute to greater volatility in SMUD's net revenues from the sale of electric energy and, therefore, could materially adversely affect the financial condition and liquidity of SMUD. For a discussion of SMUD's current resource planning activities and risk management strategies, see "BUSINESS STRATEGY" above.

Cybersecurity

In 2015, Congress passed the Cybersecurity Information Sharing Act, which facilitated the secure sharing of information about cybersecurity threats between electric utilities and the federal government. SMUD participates in sharing and receiving information about cyber security threats in real time through the Electricity Information Sharing and Analysis Center, the central hub for such data, to actively manage risk related to potential cyber intrusion.

SMUD also participates in NERC's development of mandatory, enforceable cyber security standards to address vulnerabilities in electric utility systems. SMUD also adopts voluntary measures suggested as best practices by the National Institute of Standards and Technology ("NIST") in its national framework.

Cyber security continues to be a top priority for SMUD. SMUD's prudent response to this ever-changing threat requires constant monitoring and frequent updates to implement new regulatory requirements as they are developed. SMUD manages risk related to frequently changing regulatory requirements by participating in the development of standards at NERC and NIST and through active engagement in the cyber security policy dialogue in Congress. Nevertheless, cyberattacks are becoming more sophisticated and certain cyber incidents, such as surveillance, may remain undetected for an extended period. Critical infrastructure sectors such as the electric grid may be specific targets of cybersecurity attacks or threats. Attacks or threats directed at critical electric or energy sector operations could damage or cause the shut-down of generation, transmission or distribution assets that are essential to SMUD's ability to serve its customers, cause operational malfunctions and outages affecting SMUD's electric system, and result in costly recovery and remediation efforts. The costs of security measures or of remedying breaches could be material.

Federal Legislation and Regulatory Proceedings

Energy Policy Act of 2005. On August 8, 2005, the Energy Policy Act of 2005 (the "EPAct of 2005") was signed into law. Provisions in the law include repeal of the Public Utility Holding Company Act; the grant of authority to FERC to site transmission facilities if states are unwilling or unable to approve siting; authorization of FERC establishment of performance- and incentive-based rate treatments; revisions to the Public Utility Regulatory Policies Act; service obligation protections for native load customers for utilities in certain areas of the country; limited FERC jurisdiction over interstate transmission assets of municipal utilities, cooperatives and federal utilities to order these entities to provide transmission services on rates and terms comparable to those the entities charge and provide to themselves; limited FERC

authority to order refunds for wholesale power sales by the largest public power entities, including SMUD; the grant of authority to FERC to establish and certify an electric reliability organization to develop and enforce reliability standards for users of the bulk power transmission system; the requirement that FERC seek to conclude its investigation of the State electricity crisis and submit a report to Congress on its progress by December 31, 2005; and prohibitions of certain market practices including the provision of false information and related expansion of FERC civil and criminal penalty authority. So far, the most visible impact of the EAct of 2005 on SMUD has been the development of federal reliability standards.

Federal Regulation of Transmission Access. The Energy Policy Act of 1992 (the “Energy Policy Act”) made fundamental changes in the federal regulation of the electric utility industry, particularly in the area of transmission access. The Energy Policy Act provided FERC with the authority to require a transmitting utility to provide transmission services at rates, charges, terms and conditions set by FERC. The purpose of these changes, in part, was to bring about increased competition in the electric utility industry. Under the Energy Policy Act, electric utilities owned by municipalities and other public agencies which own or operate electric power transmission facilities which are used for the sale of electric energy at wholesale are “transmitting utilities” subject to the requirements of the Energy Policy Act.

In April 1996, FERC issued its Order No. 888 to implement the competitive open access to transmission lines authorized by the Energy Policy Act. Order No. 888 requires the provision of open access transmission services on a nondiscriminatory basis by all “jurisdictional utilities” (which, by definition, does not include municipal entities like SMUD) by requiring all such utilities to file Open Access Transmission Tariffs (“OATTs”). Order No. 888 also requires “nonjurisdictional utilities” (which, by definition, does include SMUD) that purchase transmission services from a jurisdictional utility under an open access tariff and that owns or controls transmission facilities to provide open access service to the jurisdictional utility under terms that are comparable to the service that the nonjurisdictional utility provides itself. Section 211A of the EAct of 2005 authorizes, but does not require, FERC to order unregulated transmission utilities to provide transmission services. Specifically, FERC may require an unregulated transmitting utility to provide access to their transmission facilities (1) at rates that are comparable to those that the unregulated transmitting utility charges to itself; and (2) on terms and conditions (not relating to rates) that are comparable to those under which the unregulated transmitting utility provides transmission services to itself that are not unduly discriminatory or preferential.

On February 16, 2007, FERC issued Order 890, which concluded that reform of the pro forma OATT was necessary to reduce the potential for undue discrimination and provide clarity in the obligations of transmission providers and customers. Significantly, in Order 890 FERC stated that it will implement its authority under Section 211A on a case-by-case basis and retain the current reciprocity provisions.

On July 21, 2011, FERC issued Order 1000, which among other things requires public utility (jurisdictional) transmission providers to participate in a regional transmission planning process that produces a regional transmission plan and that incorporates a regional and inter-regional cost allocation methodology. Similar to Order 890, FERC states that it will implement its authority under Section 211A on a case-by-case basis. However, in Order 1000, FERC appears to expand upon the current reciprocity provisions. Further, FERC states that it has the authority to allocate costs to beneficiaries of services provided by specific transmission facilities even in the absence of a contractual relationship between the owner of the transmission facilities and the identified beneficiary.

SMUD, individually, and through the Large Public Power Council (“LPPC”), unsuccessfully sought a rehearing of Order 1000 and subsequently appealed Order 1000 to the D.C. Circuit Court of Appeals. On August 15, 2014, the D.C. Circuit Court of Appeals rejected all of the arguments raised on appeal, upholding the entirety of Order 1000. LPPC filed a request for en banc review solely on FERC’s

ability to allocate costs in the absence of a contractual relationship. The D.C. Circuit Court of Appeals denied rehearing on October 17, 2014. LPPC did not petition the U.S. Supreme Court for writ of certiorari.

The jurisdictional members of WestConnect filed their proposed regional planning process and cost allocation methodology through a series of compliance filings. FERC accepted binding cost allocation for jurisdictional transmission providers of WestConnect and mandated that non-jurisdictional transmission providers identified as beneficiaries of a project have the ability to not accept the cost allocation. Following FERC's acceptance of the final WestConnect Order 1000 process on May 14, 2015, SMUD executed the WestConnect Order 1000 transmission planning participation agreement with its membership effective January 1, 2016 for the start of the 2016-2017 planning cycle.

However, in response to FERC's WestConnect orders on compliance, El Paso Electric Company ("El Paso"), a jurisdictional transmission provider, petitioned to the Court of Appeals for the 5th Circuit. In its appeal, El Paso contends that FERC's WestConnect orders violate Order 1000's cost causation principle because WestConnect's binding cost allocation applies only to the jurisdictional transmission providers and thus forces jurisdictional transmission providers to subsidize projects benefitting non-jurisdictional transmission providers that opt-out of projects. SMUD and the other non-jurisdictional transmission providers filed an intervention in support of FERC's orders. Since that time, the jurisdictional and non-jurisdictional transmission providers have met to discuss the jurisdictionals' concerns with Westconnect's current structure and whether alternative options are feasible. The transmission providers have reached a settlement agreement in principle on an alternative option that, if approved by FERC, will resolve all issues. The court has held the case in abeyance during the settlement discussions while the parties develop the documents for pending FERC filings. In the meantime, SMUD continues to participate in the WestConnect process.

In addition to regional planning, Order 1000 includes an interregional transmission planning component. WestConnect and the other two regional planning entities in the western interconnection (CAISO and Northern Grid), have developed a common FERC-approved approach to jointly evaluate transmission projects that interconnect two or more regions. While El Paso did not appeal FERC's orders on WestConnect's interregional planning, the decision of the Court of Appeals for the 5th Circuit described above does implicate the interregional cost allocation process because it defers to WestConnect's regional cost allocation methodology.

SMUD is unable to predict at this time the full impact that Order 1000 will have on the operations and finances of SMUD's electric system or the electric industry generally. However, WestConnect has conducted two planning cycles under its Order 1000 planning process and has not identified any project eligible for cost allocation. SMUD will continue to take any action necessary, including withdrawing from a cost allocation determination and engaging in FERC proceedings, to ensure that it is not required to pay for transmission costs in the absence of an agreement or service relationship.

NERC Reliability Standards. EAct of 2005 required the FERC to certify an electric reliability organization ("ERO") to develop mandatory and enforceable reliability standards, subject to FERC review and approval. On February 3, 2006, FERC issued Order 672, which certified the NERC as the ERO. Many reliability standards have since been approved by FERC, including those aimed at protecting the bulk electric system from physical and cyber threats.

The ERO or the regional entities, such as the WECC, may enforce the reliability standards, subject to FERC oversight or the FERC may independently enforce reliability standards. Potential monetary sanctions include fines of up to \$1 million per violation per day. Order 693 provides the ERO and regional entities with the discretion necessary to assess penalties for such violations, while also having discretion to calculate a penalty without collecting the penalty if circumstances warrant. On March 18, 2010, FERC

issued a Policy Statement on Penalty Guidelines, which appeared to envision the option of more serious penalties than would be imposed by NERC. NERC and a significant part of the industry challenged that Policy Statement. On September 17, 2010, FERC issued a Revised Policy Statement on Penalty Guidelines, which clarified and tempered some of its prior statements, although the revised guidelines maintained that it was appropriate to use the United States Criminal Sentencing Guidelines Model as an analytical tool for assessing penalties. FERC further clarified that its Revised Policy Statement on Penalty Guidelines would only be applied to investigations conducted by FERC.

Anti-Market Manipulation Rules. EPCA of 2005 gave the FERC the authority to issue rules to prevent market manipulation in jurisdictional wholesale power and gas markets, and in jurisdictional transmission and transportation services. These anti-market manipulation rules apply to non-jurisdictional entities such as SMUD. Further, EPCA of 2005 provided the FERC civil penalty authority, which the Commission has stated that it will exercise carefully by assuring that its market manipulation rules are clear.

Greenhouse Gas Emissions. The United States Environmental Protection Agency (the “EPA”) has taken steps to regulate GHG emissions under existing law. In 2007, the U.S. Supreme Court held that the Clean Air Act (“CAA”) directed EPA to regulate GHG emissions from new motor vehicles if it judged that such emissions contribute to climate change. In 2009, the EPA finalized an “Endangerment Finding” under the CAA, declaring that six identified GHGs – carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride – cause global warming, and that global warming endangers public health and welfare. Subsequently, EPA promulgated GHG standards for passenger cars and light-duty trucks (the so-called “Tailpipe Rule”).

GHGs from Cars and Light Duty Trucks. In 2012, EPA and the National Highway Traffic Safety Administration (the “NHTSA”) announced a negotiated rulemaking with the State and several automakers that would establish fuel efficiency standards to reduce GHGs from cars and light-duty trucks with each subsequent model year becoming more fuel efficient through 2025. The agreement called for a Mid-Term Evaluation (“MTE”) by April 2017 to ensure the further years’ standards were still appropriate and achievable. In 2016, EPA began its review and completed a Technical Advisory Report supporting the conclusion that the standards were, in fact, appropriate and achievable. EPA finalized its MTE in January 2017.

However, following a change in presidential administration, EPA withdrew the MTE and announced it would reconsider the standards for 2021 through 2025. The withdrawal, and subsequent rollback of the 2012 standards, were immediately challenged in court, and did not reach final adjudication before the next presidential election resulted in another change in administration. SMUD now expects EPA to promulgate standards more in line with the 2012 agreement.

GHGs from Power Plants. Promulgation of the Tailpipe Rule required EPA to also address emissions of the same pollutants from other sources, namely, the electric sector.

In 2014, the EPA issued a proposed rule under section 111(d) of the CAA called the Clean Power Plan (the “CPP”) that projected power sector emissions reductions of 30% below 2005 levels by 2030. The proposed CPP would have established a rate-based emissions goal for each state and gave each state the responsibility to develop a State Implementation Plan (“SIP”) describing how it will meet the goal assigned by EPA using the “Best System of Emissions Reduction” (“BSER”) established by EPA. The BSER under the CPP featured a suite of emissions reduction measures including fuel switching, emissions trading, and other measures. Significantly for the State, the proposed CPP included a “state measures” plan that allowed for continued operation of successful state programs that achieve CPP goals. The rule was finalized in October 2015.

In November 2015, 27 states and numerous corporations challenged the CPP in court, alleging that EPA had exceeded its authority under the CAA. After a ruling by the D.C. Circuit Court of Appeals denying a stay, the Supreme Court stayed implementation of the CPP pending disposition of the petitions for review in the D.C. Circuit and any subsequent review by the Supreme Court. The D.C. Circuit Court of Appeals held oral arguments on the petitioner's claims, but before the court issued a decision, the 2016 presidential election resulted in a change of administration.

The new administration quickly moved for an abeyance (or stay) of the case for as long as the agency needed to review and withdraw the CPP. Since that time, the court has issued a series of 60-day abeyances and ultimately dismissed the case on September 17, 2019. Meanwhile, in August 2018, the EPA proceeded to withdraw the CPP and published its proposed revision of the rule under the same provision of the CAA. The new rule, known as the Affordable Clean Energy ("ACE") rule, establishes a BSER that only includes measures that can be undertaken at an individual power plant, rather than the broader suite of measures envisioned under the CPP. The ACE rule would also allow states to decide individually, on a case-by-case basis, the standards to be achieved by the best system of emission reductions, as well as exempt certain upgrades of fossil-fuel power plants from the CAA's New Source Review program, and extend the time to implement SIPs after the ACE rule is finalized. The ACE rule was finalized by the EPA on June 19, 2019 and has already been challenged by environmental groups and states alleging that the revised rule inadequately responds to the EPA's responsibility to protect public health and welfare. SMUD joined in this litigation along with other challengers. The D.C. Circuit vacated the ACE rule on Jan. 19, 2021 and remanded it to EPA for review and revision, just days before a new presidential administration took office. The current administration is expected to issue a new rulemaking rather than reverting to the CPP.

Federal Clean Energy Legislation. SMUD expects the 117th Congress to consider substantial legislation related to infrastructure, clean energy, and carbon emissions. SMUD actively participates in dialogues at the federal level regarding legislation that would meaningfully alter SMUD's existing GHG reduction strategies or impose new requirements for electric generators, including, but not limited to, discussions about a proposed federal clean energy standard.

SMUD is unable to predict with certainty at this time whether legislation will ultimately be considered or enacted, whether any new EPA rulemakings will be undertaken, and what the full impact of the reduction of fossil-based generation over time will have on the operations and finances of SMUD's electric system or the electric utility industry generally.

State Legislation and Regulatory Proceedings

A number of bills affecting the electric utility industry have been enacted by the State Legislature. In general, these bills provide for reduced GHG emission standards and greater investment in energy efficient and environmentally friendly generation alternatives through more stringent RPS. Additionally, ongoing regulatory proceedings address water flow and quality issues related to the Sacramento – San Joaquin River Delta. The following is a brief summary of these bills and regulatory proceedings.

Greenhouse Gas Emissions. On June 1, 2005, the Governor of the State signed Executive Order S-03-05, which emphasized efforts to reduce GHG emissions by establishing statewide GHG reduction targets. The targets are: (i) a reduction to 2000 emissions levels by 2010; (ii) a reduction to 1990 levels by 2020; and (iii) a reduction to 80% below 1990 levels by 2050. The Executive Order also called for the California Environmental Protection Agency ("Cal/EPA") to lead a multi-agency effort to examine the impacts of climate change on the State and develop strategies and mitigation plans to achieve the targets. On April 25, 2006, the Governor of the State signed Executive Order S-06-06 which directs the State to

increase production of biofuels in the State and to meet 20% of its renewable energy goals in 2010 and 2020 using biomass resources.

On September 27, 2006 the Governor signed into law AB 32, the Global Warming Solutions Act of 2006 (“AB 32”). AB 32 requires the California Air Resources Board (“CARB”) to adopt enforceable GHG emission limits and emission reduction measures in order to reduce GHG emissions to 1990 levels by 2020. In addition, AB 32 establishes a mandatory reporting program for all IOUs, local, publicly-owned electric utilities and other load-serving entities (electric utilities providing energy to end-use customers) (“LSEs”). The AB 32 reporting program allows CARB to adopt regulations using market-based compliance mechanisms such as a “cap-and-trade” system.

On December 16, 2010, CARB approved a resolution adopting cap-and-trade regulations for the State. The regulations became effective on January 1, 2012. As adopted, the cap-and-trade program covers sources accounting for 85% of the State’s GHG emissions, the largest program of its type in the United States.

The cap-and-trade program has been implemented in phases. The first phase of the program (through December 31, 2014) introduced a hard emissions cap on the combined electric utility and large industrial sectors, covering all sources emitting more than 25,000 metric tons of carbon dioxide-equivalent greenhouse gases (“CO₂e”) per year. In 2015, the program was expanded to cover distributors of transportation, natural gas, and other fossil fuels. The cap declined about 2 percent in 2014, and will decline 3 percent annually from 2015 to 2020. The cap-and-trade program will require covered entities to retire compliance instruments (allowances and carbon offsets) for each metric ton of CO₂e they emit. Initially, CARB allocated free allowances to LSEs and most industrial facilities at roughly 90% of their average emissions. SMUD was granted a higher amount because of early action taken to reduce GHG emissions. In the case of electric utilities, the value of allowances must be used to benefit ratepayers and achieve GHG emission reductions. As the program matures, some covered entities will be required to buy an increasing portion of their allowances at auction or on the secondary market. The cap-and-trade program will also allow covered entities to use offset credits for compliance purposes (not exceeding 8% of a regulated entity’s compliance obligation). Offsets must be obtained from certified projects in sectors that are not regulated under the cap-and-trade program.

In November of 2012, CARB conducted its first allowance auction and auctions now occur on a quarterly schedule. On January 1, 2014, CARB linked the State cap and trade program with a companion program in the Canadian province of Quebec. The first quarterly joint auction for the linked programs occurred in November, 2014. On January 1, 2018, CARB linked the State’s cap-and-trade program with Ontario’s companion program. Immediately thereafter, an entity in any one of the three jurisdictions was able to purchase allowances on the secondary market in a linked jurisdiction, and as of February 21, 2018 (the date of the first joint auction) could purchase allowances in the joint auction. In June 2018, elections in Ontario changed political parties and the new administration formally withdrew from the Cap and Trade linkage. CARB has limited purchase and use of Ontario allowances in response. The August 2018 Cap and Trade auction did not include Ontario. The Washington state legislature recently passed a Cap and Trade bill, which will interact with the State’s markets. Future potential near-term links to the CARB cap-and-trade program also include the states of Oregon and New Mexico.

On October 7, 2015, Governor Jerry Brown signed SB 350 that contained aggressive goals for reducing carbon emissions by 2030, including raising the proportion of renewable energy to 50%, reducing the use of petroleum fuel in cars and trucks by up to 50%, and doubling the energy efficiency of existing buildings. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – *Renewable Energy and Climate Change*” for additional information. In addition, SB 350 established requirements for larger POUs to adopt (by January 1, 2019) and file with the CEC Integrated Resource Plans (“IRPs”) by

April 2019 that would show planned procurement to achieve the 50% RPS and State GHG goals established by CARB. The CEC developed “guidelines” for these IRPs for POU’s in 2017. CARB established specific GHG target ranges for these IRPs in summer 2018, with SMUD’s planning target set at 1.1 – 1.9 million metric tons of emissions. SMUD developed and adopted an IRP in 2018 through a comprehensive public process and filed the adopted IRP with the CEC on April 29, 2019. SMUD’s adopted IRP plans for a greater than 60% net reduction in GHG emissions by 2030 relative to 1990 levels, which equals approximately 1.3 million metric tons of GHG emissions. See “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – *Renewable Energy and Climate Change*.”

On April 29, 2015, Governor Brown signed Executive Order B-30-15, establishing a goal for the State to reduce GHG emissions to 40% below 1990 levels by 2030. In 2016, the State Legislature passed Senate Bill 32 (“SB 32”), which codified Governor Brown’s goal of reducing the State’s GHG emissions to 40% below 1990 levels by 2030. In 2017, the State Supreme Court resolved a final lawsuit, ruling that the Cap and Trade program was not a “fee” or “tax”, and hence a two-thirds legislative vote for AB 32 was not required. In 2017, the State Legislature passed Assembly Bill 398 (“AB 398”), explicitly authorizing the continuation of the cap and trade program, with designated changes, through 2030. Subsequently, CARB adopted an initial set of regulatory changes extending the Cap and Trade program, including establishing utility sector allowance allocations through 2030. In 2018, CARB completed a rulemaking to implement the cap and trade program changes designated by AB 398. These changes include development of a hard price ceiling for the cap and trade program and two price-containment points below that ceiling, in an attempt to ensure stable prices in the program. CARB adopted final regulations on December 13, 2018.

In addition, any new projects constructed in the State, including power plants, that may cause a significant adverse impact on the environment must be analyzed under CEQA. Some State agencies have begun using CEQA in novel ways to require mitigation of “significant” GHG emissions caused, either directly or indirectly, by a project. Pursuant to Senate Bill 97 passed in 2007, CARB will assist the Governor’s Office of Planning and Research in setting thresholds of significance under CEQA of GHG impacts from new projects. This is an area of State law that is evolving and untested in the courts. However, there is a risk that any project proponent of an electric system infrastructure project might have to mitigate such potential impacts to a level of less than significance.

On December 3, 2012, the Superior Court issued a ruling in *Cleveland National Forest Foundation v. San Diego Association of Governments (“SANDAG”)*, Case No. 2100-00101593, that sided with the State Attorney General and the other petitioners stating that the SANDAG did not follow CEQA when it adopted a \$257 billion regional transportation plan in 2011. The ruling expressly invalidated the certification of the Environmental Impact Report (“EIR”) on the grounds that the EIR should have analyzed the plan’s consistency with the governor’s policy goal to reduce GHG emissions by 80% by 2050 as articulated in the 2005 Executive Order S-03-05. On November 24, 2014, the Fourth Appellate District upheld the trial court in a published decision, and SANDAG appealed to the State Supreme Court. On July 13, 2017, the Supreme Court reversed and held that SANDAG’s decision not to adopt the 2050 goal was not an abuse of discretion. Nevertheless, the Court articulated three clear principles for agencies to follow in their CEQA review of planning documents: 1) agencies must take seriously the significance of even small increases in GHG emissions; 2) they must consider science-based State policy guidance in their decision-making; and 3) they are required to use the best scientific information available to determine whether their planning decisions are consistent with the State’s goals. These principles will apply to SMUD in CEQA reviews of future projects.

On September 29, 2006, Governor Schwarzenegger signed into law Senate Bill 1368 (“SB 1368”), the GHG Emissions Performance Standard (“EPS”). SB 1368 limits long-term investments in baseload generation by the State’s utilities to power plants that meet an EPS jointly established by the CEC and the

CPUC. The agencies have set the EPS at 1,100 pounds CO₂ per MWh, which is roughly half of the CO₂ emissions rate of a conventional coal-fired power plant. CEC regulations to implement the law for POU's were approved by the Office of Administrative Law on October 16, 2007.

SMUD's primary supply and demand-side resource needs to meet customers' electricity usage patterns over the next 10 years are for peaking resources. Currently there is a ban in the State that prohibits the development of nuclear power plants until there is a permanent storage solution for spent fuel rods. With the effective ban on new coal power imports under SB 1368, natural gas-fired, combined cycle power plants would appear to be the primary viable option for fossil fuel based baseload power plant development absent the implementation of new technologies in connection with other resource options. The reliance on a single fuel source will continue to put pressure on the natural gas market in the United States. SMUD has in place a natural gas procurement plan to mitigate natural gas volatility, see "POWER SUPPLY AND TRANSMISSION – Fuel Supply" above.

Energy Efficiency. Senate Bill 1037 ("SB 1037"), signed by Governor Schwarzenegger on September 29, 2005, requires that each municipal electric utility, including SMUD, prior to procuring new energy generation resources, first acquire all available energy efficiency, demand reduction and renewable resources that are cost effective, reliable and feasible. SB 1037 also requires each municipal electric utility to report annually to its customers and to the CEC its investment in energy efficiency and demand reduction programs. Further, State Assembly Bill 2021 ("AB 2021"), signed by the Governor on September 29, 2006 requires that the publicly owned utilities establish energy efficiency and demand reduction targets and report and explain the basis of the targets beginning June 1, 2007 and every three years thereafter for a ten year horizon. Future reporting requirements as set forth in AB 2021 include: (i) the identification of sources of funding for the investment in energy efficiency and demand reduction programs, (ii) the methodologies and input assumptions used to determine cost effectiveness, and (iii) the results of an independent evaluation to measure and verify energy efficiency savings and demand reduction program impacts. The information obtained from local publicly owned utilities will be used by the CEC to present the progress made by the publicly owned utilities on the State's goal of reducing electrical consumption by 10% in ten years and amelioration with the GHG targets presented in Executive Order S-3-05 enacted by the Governor of the State on June 1, 2005.

In response to SB 1037 and AB 2021, SMUD has established specific goal of reducing energy consumption by 15% by 2018 and adopted annual targets for gigawatt hour and megawatt savings. SMUD revisits its energy efficiency goals and programs on a regular basis to ensure compliance with State policies established by SB 1037 and AB 2021 (as modified by SB 350).

SB 350 (passed in 2015) requires the CEC to develop statewide energy efficiency targets for 2030 aimed at doubling the achieved savings, and requires POU's to establish efficiency targets that are "consistent" with those targets. In 2017, the CEC developed a report on the doubling of energy efficiency targets required by SB 350. Both SB 350 and the CEC report contemplate the use of fuel substitution to meet energy efficiency targets and have a strong focus on carbon reduction. In response, SMUD developed a methodology and carbon tool to count fuel substitution, namely switching natural gas end-uses to efficient electric end uses and measuring savings in carbon emissions. SMUD presented its methodology to the joint state agency working group known as the Fuel Substitution Working Group several times in 2019 and adopted a carbon-based metric in early 2020 to guide overall SMUD carbon targets. This goal is expected to facilitate substantial expansion of building electrification and result in more than double the overall amount of energy efficiency being delivered per year, when measured on a carbon reduction basis. The vast majority of this energy efficiency (more than 85%) is expected to be delivered through efficient electrification by 2030.

Also passed in 2015 was AB 802. This bill directed the CEC to develop a State-wide building energy use benchmarking and public disclosure program for those buildings greater than 50,000 square feet. As set forth in regulations adopted by the CEC, building owners are required to report building characteristic information and energy use data each year. The reporting began in 2018 for buildings without residential utility accounts and in 2019 for buildings with 17 or more residential utility accounts. Energy utilities must provide building-level energy use data to building owners upon request.

In order to support the implementation of SB 350 and AB 802, the CEC opened a rulemaking to amend its Title 20 Data Collection regulations, resulting in an expansion of customer data utilities must report to the CEC. The CEC adopted regulations pursuant to the rulemaking in February 2018, and the regulations were approved and went into effect in the Summer of 2018. SMUD has made three data filings under the new regulations. A working group of utilities and CEC staff is developing the protocols for a second part of the new data requirements, and compliance with that part has been officially suspended pending the working group's final product, expected later in 2020.

Rooftop Solar Mandate. In February, 2018, the CEC approved updates to the 2019 Title 24, Part 6, Building Energy Efficiency Standards to require installation of rooftop photovoltaic solar systems for residential buildings under three stories constructed starting in 2020, with an option to satisfy the requirement through community solar systems or energy storage. Utilities expected the mandate to occur at some point in the next few years and have been largely supportive. SMUD is beginning to evaluate the potential impact of incorporating this new increment of solar generation on the grid and on SMUD's resource plan. There is a "Community Solar" option for compliance with the mandate that permits a utility to provide solar power to the residential customers instead of rooftop solar, and SMUD submitted an application to the CEC for that option. The CEC approved SMUD's Community Solar program, Neighborhood SolarShares, on February 20, 2020. The CEC is currently considering revisions to the 2019 Building Energy Efficiency Standards, which may impact the design and implementation of SMUD's Neighborhood SolarShares program. See also "BUSINESS STRATEGY – Serving SMUD's Customers – Renewable Options."

Renewables Portfolio Standard. Senate Bill 100 was passed by the Legislature and approved by Governor Brown on September 10, 2018. The bill sets a 50% RPS target for 2026 and sets compliance period targets at 44% by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030. The bill also created a statewide planning goal to meet all of the state's retail electricity supply with a mix of RPS-eligible and zero-carbon resources by December 31, 2045. Along with SB 100, Governor Brown signed a new Executive Order that directs the State to achieve carbon neutrality by 2045 and net negative greenhouse gas emissions thereafter. The new goal of carbon neutrality by 2045 would be in addition to existing statewide targets of reducing greenhouse gas emission. By expanding the State's carbon reduction goal, the State will also look to reduce carbon through sequestration in forests, soils and other natural landscapes.

Energy Storage Systems. In September 2010, the State Legislature enacted, and the Governor signed into law, Assembly Bill 2514 ("AB 2514"). On or before March 1, 2012, the governing board of each POU was required to initiate a process to determine appropriate targets, if any, for the utility to procure viable and cost-effective energy storage systems to be achieved by December 31, 2016, and December 31, 2020. The bill required each POU to report certain information to the CEC. In 2014, SMUD set a 0 MW target for 2017, and in 2017 set a 9 MW target for 2020. In 2018, SMUD identified a potential need for 246 MW of storage by 2030. Following SMUD's 2020 compliance report to the CEC in January 2021, going forward SMUD will evaluate and report energy storage planning as part of its IRP update every five years. The next update will be in 2023. See also "BUSINESS STRATEGY – Sustainable Power Supply and Transmission – Energy Storage Systems."

Sacramento-San Joaquin River Bay-Delta Processes. The Sacramento-San Joaquin River Delta is an expansive inland estuary, formed at the western edge of the California Central Valley by the confluence of the Sacramento and San Joaquin rivers (“Delta”). There are two substantial Delta planning processes with the potential to affect (1) energy available for SMUD’s purchase from the Central Valley Project (“CVP”) and (2) flows within the Upper American River watershed. These processes are called the Bay-Delta Water Quality Control Plan (“Bay-Delta Plan”) and the Delta Conveyance Project.

The Bay-Delta Water Quality Control Plan is updated periodically by the State Water Resources Control Board (“SWRCB”), the last time being in 2006. The current Bay-Delta Plan update process is being implemented in four phases. The first phase considered southern Delta water quality, with a significant focus on San Joaquin River tributaries. Phase 2, which is initially being addressed by a document under development by SWRCB staff, will address Sacramento River tributaries and various flow related issues, including the critically important one of those tributaries’ contribution to Delta outflow. Phase 3 will concern changes to water rights needed to implement Phase 2. A substantial change in Delta outflow requirements could have a major impact on the timing of hydroelectric energy generation by the CVP. SMUD has a long-term agreement with WAPA to purchase some of this power (see “POWER SUPPLY AND TRANSMISSION – Power Purchase Agreements – *Western Area Power Administration*”). On July 18, 2018, the SWRCB released an updated Framework document signaling its staff’s intent to propose Delta outflow requirements of 45–65% unimpaired flows for the Sacramento River tributaries (which includes the American River, the upper portions of which are where the UARP sits), though the report will analyze requirements of 35–75%. If these criteria were implemented, they could cut CVP generation by 50 to 63%. Governor Newsom has urged the SWRCB, other agencies and affected parties to execute voluntary agreements to address species’ needs and outflow requirements. Although the negotiations stalled during the last year of the Trump Administration the interested parties are expected to pursue them more vigorously since President Biden assumed office, though there is as yet no certainty that all affected parties will agree on terms. If the agreements do not come to fruition, SMUD plans to fully participate in all regulatory and legal proceedings to argue for consideration and minimization of impacts to hydropower generation. SMUD will assess the potential impacts of proposed modifications to the present outflow objectives on SMUD’s operations once the SWRCB makes those available.

On January 15, 2020, the State Department of Water Resources (“DWR”) announced it will prepare an Environmental Impact Report (“EIR”) to evaluate the potential impacts of carrying out the Delta Conveyance Project. The Project is expected to entail construction of two intakes on the Sacramento River that will carry water to a main tunnel to the California Aqueduct for delivery south of the Delta. The Project may pose the potential to exacerbate impacts to already imperiled aquatic species, and in turn could have indirectly prompted regulatory agencies to require third parties, such as SMUD, to compensate by making changes to their operations. SMUD will be actively involved in reviewing the draft EIR and any regulatory proceedings to ensure any impacts to SMUD interests are minimized.

Proposition 26. Proposition 26 was approved by the electorate on November 2, 2010 and amends Article XIII A and Article XIII C of the State Constitution. Proposition 26 imposes a two-thirds voter approval requirement for the imposition of fees and charges by the State, unless the fees and charges are expressly excluded. It also imposes a majority voter approval requirement on local governments with respect to fees and charges for general purposes, and a two-thirds voter approval requirement with respect to fees and charges for special purposes, unless the fees and charges are expressly excluded. The initiative, according to its supporters, is intended to prevent the circumvention of tax limitations imposed by the voters pursuant to Proposition 13, approved in 1978, and other measures through the use of non-tax fees and charges. Proposition 26 expressly excludes from its scope a charge imposed for a specific local government service or product provided directly to the payor that is not provided to those not charged, and which does not exceed the reasonable cost to the local government of providing the service or product. Proposition 26 is not retroactive as applied to local governments. Although SMUD believes that the initiative was not

intended to apply to fees for utility services such as those charged by SMUD and its fees and charges meet the criteria of the exclusion described above, it is possible that Proposition 26 could be interpreted to further limit fees and charges for electric utility services and/or require stricter standards for the allocation of costs among customer classes. SMUD is unable to predict at this time how Proposition 26 will be interpreted by the courts or what its ultimate impact will be. As of the date of this Official Statement, SMUD is unaware of any fees or charges relating to SMUD's service that would have to be reduced or eliminated because of Proposition 26.

Wildfire Legislation. In September 2016, Governor Brown signed into law Senate Bill 1028 ("SB 1028"), which requires POU's (including SMUD), IOUs, and electrical cooperatives to construct, maintain and operate their electrical lines and equipment in a manner that will minimize the risk of catastrophic wildfire posed by electrical lines and equipment. SB 1028 also requires the governing board of POU's to make an initial determination whether any portion of that geographical area has a significant risk of catastrophic wildfire resulting from those electrical lines and equipment, based on historical fire data and local conditions, and in consultation with the fire departments or other entities responsible for control of wildfires within the geographical area.

Senate Bill 901 ("SB 901"), signed into law in September 2018 by Governor Brown, further addresses response, mitigation and prevention of wildfires. The bill requires POU's, including SMUD, before January 1, 2020, and annually thereafter, to prepare a wildfire mitigation plan and present it in a public meeting to their governing board. SB 901 requires POU's to accept comments on the wildfire mitigation plan from the public, other local and State agencies, and interested parties, and to verify that the plan complies with all applicable rules, regulations, and standards, as appropriate. The bill requires a qualified independent evaluator to review and assess the comprehensiveness of its wildfire mitigation plan and present its report to the board in a public meeting.

In 2019, Governor Newsom released his comprehensive strategy on wildfires, laying the groundwork for legislative discussions on utility wildfire liability and allocating costs associated with catastrophic wildfires, among other things. While the Governor supported a modification of State's current inverse condemnation doctrine, under which utilities are held liable for wildfire damage without regard to the fault of the utility, no bill was introduced. AB 1054 (Holden) did pass in 2019 that included several provisions for solvent investor owned utilities, including the development of a fund to help pay victim claims for utility ignited wildfires. The bill also created a new Wildfire Safety Division within the CPUC to prioritize wildfire safety throughout the State, and established an appointed Wildfire Safety Advisory Board to advise and make recommendations relating to wildfire safety to this new Division. For POU's, the bill requires submittal of annual wildfire mitigation plans to the Advisory Board for review and advisory opinions.

Senate Bill 247 ("SB 247"), signed by Governor Newsom on October 2, 2019, establishes notification, audit and reporting guidelines for electrical corporations relating to vegetation management requirements in the wildfire mitigation plan. SB 247 also specifies the qualifications for electrical line clearance tree trimmers performing work to comply with the vegetation management requirements in an electrical corporation's wildfire mitigation plan and requires that qualified line clearance tree trimmers be paid no less than a specified prevailing wage rate. POU's are not required to adhere to SB 247, but the market impacts are projected to significantly increase SMUD's annual vegetation management costs.

Centralized Procurement. Assembly Bill 56 (E. Garcia) would set up a centralized procurement entity to meet the State's climate, clean energy, and reliability goals that are not satisfied by load-serving entities. POU's were removed from the bill in its current form, but there will likely be market impacts that would affect all load-serving entities. This bill did not move forward in 2019, but was granted

reconsideration for 2020. SMUD also anticipates the introduction of similar legislation by other authors in 2020.

Nonstock Security. SMUD sponsored legislation in 2019, Assembly Bill 689, which was signed into law by Governor Newsom on September 5, 2019. This bill expressly allows SMUD the ability to operate a pilot project, of up to three acquisitions, to hold nonstock security in a corporation or other private entity if acquired as part of a procurement of goods or services from that entity, provided that no separate funding is expended solely for the nonstock security. This will allow SMUD to realize the financial benefits of its investments, partnerships, and intellectual property.

Future Regulation

The electric industry is subject to continuing legislative and administrative reform. States and Federal entities routinely consider changes to the way in which they regulate the electric industry. Recently, both further deregulation and forms of additional regulation have been proposed for the industry, which has been highly regulated throughout its history. SMUD is unable to predict at this time the impact any such proposals will have on the operations and finances of SMUD or the electric utility industry generally.

OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY

CAISO Market Initiatives

The CAISO has initiated a number of initiatives and stakeholder processes that propose certain operational and market changes. SMUD has mitigated the impact of certain CAISO initiatives by taking actions aimed at remaining independent from the CAISO market. Consequently, SMUD participates in the CAISO market for only a small percentage of energy needs (2-3%), and the remaining CAISO usage is discretionary (including EIM, described below). SMUD will continue to monitor the various initiatives proposed by the CAISO and participate in its stakeholder processes to ensure that its interests are protected.

Resource Adequacy Filing

In September 2005, the State Legislature enacted and the Governor signed into law Assembly Bill 380 (“AB 380”), which requires the CPUC to establish resource adequacy requirements for all LSEs within the CPUC’s jurisdiction. In addition, AB 380 requires publicly owned utilities, including SMUD, to meet the most recent resource adequacy standard as adopted by the WECC. In October 2005, the CPUC issued a decision stating that LSEs under its jurisdiction would be required, by June 2006, to demonstrate that they have acquired capacity sufficient to serve their forecast retail customer load plus a 15-17% planning reserve margin. In March 2021, the CPUC issued a decision requiring the three largest investor owned utilities (PG&E, Southern California Edison, and San Diego Gas & Electric) to target a minimum of 2.5% of incremental resources for their planning reserve margin for 2021 and 2022. The WECC has yet to formally adopt a resource adequacy requirement. However, consistent with current WECC practices, SMUD utilizes a 15% planning reserve margin when assessing the need for future resources.

Energy Imbalance Market

Federal and state policymakers have promoted the development of an energy imbalance market (“EIM”) as a means of integrating intermittent resources into the electric system. The CAISO launched a real-time EIM on October 1, 2014, with PacifiCorp as the first participant. Since this time, NV Energy, Arizona Public Service, Puget Sound Energy, and Portland General Electric, Idaho Power, and Powerex have all joined the EIM. BANC and SMUD commenced their participation on April 3, 2019 and are the first public power agencies to participate. TID and the Los Angeles Department of Water and Power began

to participate in spring 2021, as well as two IOUs, Public Service Company of New Mexico and NorthWestern Energy. Tacoma Power, Tucson Electric Power, Avista, Bonneville Power Administration, and Excel Energy - Colorado are expected to participate in 2022. El Paso is expected to join the EIM in 2023.

Early assessment of participation in EIM by SMUD has shown meaningful financial and operational benefits, in addition to furthering an already favorable working partnership between SMUD and the CAISO to develop solutions to integrate renewable resources in support of carbon reduction goals.

The BANC Commission authorized BANC to participate in the EIM utilizing a phased approach, with SMUD (as the largest member of BANC) implementing in Phase 1, while the other BANC members and WAPA would continue to assess their participation under a so-called “Phase 2” (the “Phase 2 Parties”). Upon completion of the EIM Phase 2 “gap assessment” (done to determine what was incrementally required for other BANC members and WAPA to participate in the EIM along with SMUD), it was decided to proceed. The BANC Commission therefore voted on August 21, 2019, to move forward with BANC EIM Phase 2 implementation, and the other BANC members and WAPA began EIM participation under Phase 2 on March 25, 2021.

In addition, all of the Phase 2 Parties independently obtained approvals from their own governing boards and councils and have each executed an agreement with BANC to participate in Phase 2. Part of their Phase 2 participation will include reimbursement to SMUD for their respective shares’ of the upfront infrastructure costs incurred by SMUD in Phase 1 to establish BANC as an EIM Entity.

The CAISO and EIM participants, including SMUD and BANC, have participated in a study examining the benefits of extending the EIM real time framework to the CAISO’s day ahead market, referred to as the “extended day ahead market” or “EDAM.” Like EIM, EDAM would broaden the access to regional resources for the reliable integration of renewable resources, only over a longer (day ahead) time horizon. This longer timeframe will allow for a more economic and efficient optimization of regional resources by providing grid operators greater time (day ahead as opposed to real time) to commit or decommit units based on market price signals. Only participants in the EIM will be allowed to extend their participation to EDAM. The CAISO launched a public stakeholder initiative in February of 2020 to develop EDAM. EDAM could be in place by 2023.

Community Choice Aggregation

State Assembly Bill 117 (2002) created Community Choice Aggregation by authorizing Community Choice Aggregators (“CCAs”) to aggregate customer electric load and purchase electricity for customers. CCAs can only be formed in IOU territory, and the IOU still transmits and delivers the power to customers, as well as provides metering, billing and customer service. A customer within the CCA territory is automatically “opted in” to the CCA program unless the customer takes affirmative action to receive electric service from the IOU. Various counties and cities in the State have formed CCAs, and many more are in the process of formation. The primary purposes of CCAs are local decision making and to provide greener electricity options for their respective community.

Valley Clean Energy Alliance (“VCE”) is a CCA formed in 2016 by the County of Yolo, the City of Davis, and City of Woodland. The City of Winters joined VCE in 2021. SMUD has for 70 years performed many of the same services required by CCAs and CCAs’ public power and clean energy objectives are in alignment with SMUD’s track record in these areas. SMUD has contracted with VCE as a service provider to support VCE’s data management, call center, power procurement, and technical energy service needs. The initial term of the contract is 5 years beginning October 2017.

SMUD has also contracted with East Bay Community Energy (“EBCE”) to provide call center and data management services for a term of three years beginning January 2018. EBCE is a joint powers agency formed in 2016 by the cities of Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Oakland, Piedmont, San Leandro and Union City in Alameda County to implement a local CCA program. The cities of Pleasanton, Newark, and Tracy joined ECBE in 2021. EBCE recently issued a RFP for call center and data management services. As of June 3, 2021, the results of the RFP have not been made public.

Additionally, in June 2019, SMUD contracted with Silicon Valley Clean Energy (“SVCE”) for a term of two years. Under this contract, SMUD provides program services that will help local SVCE communities reduce carbon pollution while delivering engaging customer experiences through promoting energy efficiency and grid integration, as well as electrifying transportation, buildings and homes. SVCE is a joint powers agency formed in 2016 by the cities of Campbell, Cupertino, Gilroy, Los Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Morgan Hill, Mountain View, Saratoga, Sunnyvale and Unincorporated Santa Clara County to implement a local CCA program.

SMUD management does not expect its current arrangements with VCE, EBCE, and SVCE to have a material adverse impact on SMUD’s financial position, liquidity or results of operations.

SMUD will assess the CCA market as it expands and determine whether new opportunities to assist other CCAs provide SMUD a net financial benefit.

See also “BUSINESS STRATEGY – Leveraging Core Competencies – *Community Choice Aggregation*.”

PG&E Bankruptcy

On January 14, 2019, PG&E and its parent company, PG&E Corporation, announced their intention to file, on or about January 29, 2019, for bankruptcy protection under Chapter 11 of the United States Bankruptcy Code (the “Bankruptcy Code”) mainly as a result of wildfire liability claims and exposure. On January 29, 2019, PG&E and PG&E Corporation filed for bankruptcy protection under Chapter 11 of the Bankruptcy Code (the “Bankruptcy Code”). On May 28, 2020, the CPUC approved PG&E’s Plan of Reorganization. On June 20, 2020 the United States Bankruptcy Court for the Northern District of California confirmed PG&E’s Plan of Reorganization. SMUD does not anticipate any material impacts to SMUD in connection with PG&E’s Plan of Reorganization.

In addition, other electric utilities, including the other major IOUs in the State, Southern California Edison and San Diego Gas & Electric Company, have experienced credit rating downgrades as a result of potential wildfire liabilities exposure, which may have implications for the electric market generally.

Other Factors

The electric utility industry in general has been, or in the future may be, affected by a number of other factors which could impact the financial condition and competitiveness of many electric utilities and the level of utilization of generating and transmission facilities. In addition to the factors discussed above, such factors include, among others, (a) effects of compliance with rapidly changing environmental, safety, licensing, regulatory and legislative requirements other than those described above; (b) changes resulting from conservation and demand side management programs on the timing and use of electric energy; (c) changes resulting from a national energy policy; (d) effects of competition from other electric utilities (including increased competition resulting from mergers, acquisitions, and “strategic alliances” of competing electric and natural gas utilities and from competitors transmitting less expensive electricity from much greater distances over an interconnected system) and new methods of, and new facilities for,

producing low cost electricity; (e) the repeal of certain federal statutes that would have the effect of increasing the competitiveness of many IOUs; (f) increased competition from independent power producers and marketers, brokers and federal power marketing agencies; (g) “self-generation” or “distributed generation” (such as solar, microturbines and fuel cells) by industrial and commercial customers and others; (h) issues relating to the ability to issue tax exempt obligations, including severe restrictions on the ability to sell to nongovernmental entities electricity from generation projects and transmission service from transmission line projects financed with tax exempt obligations; (i) effects of inflation on the operating and maintenance costs of an electric utility and its facilities; (j) changes from projected future load requirements; (k) increases in costs and uncertain availability of capital; (l) issues relating to supply chains and the uncertain availability or increased costs of necessary materials; (m) shifts in the availability and relative costs of different fuels (including the cost of natural gas); (n) sudden and dramatic increases in the price of energy purchased on the open market that may occur in times of high peak demand in an area of the country experiencing such high peak demand, such as has occurred in the State; (o) issues relating to risk management procedures and practices with respect to, among other things, the purchase and sale of natural gas, energy and transmission capacity; (p) other legislative changes, voter initiatives, referenda and statewide propositions; (q) effects of changes in the economy; (r) effects of possible manipulation of the electric markets; (s) natural disasters or other physical calamities, including, but not limited to, earthquakes, droughts, severe weather, wildfires and floods; (t) changes to the climate, including increasing volatility in rainfall in the Western United States and a reduction in the depth and duration of the Sierra snowpack; (u) issues relating to cyber security; and (v) outbreaks of infectious diseases or the occurrence of pandemics. Any of these factors (as well as other factors) could have an adverse effect on the financial condition of any given electric utility, including SMUD’s electric utility, and likely will affect individual utilities in different ways.

SMUD is unable to predict what impact such factors will have on the business operations and financial condition of SMUD’s electric system, but the impact could be significant. SMUD has taken major steps to mitigate the impacts of many of the changes. This Official Statement includes a brief discussion of certain of these factors. This discussion does not purport to be comprehensive or definitive, and these matters are subject to change subsequent to the date hereof. Extensive information on the electric utility industry is available from the legislative and regulatory bodies and other sources in the public domain, and potential purchasers of the 2021 Series I Bonds should obtain and review such information.

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APPENDIX B

2019 AND 2020 CONSOLIDATED FINANCIAL STATEMENTS AND REPORT OF INDEPENDENT ACCOUNTANTS

APPENDIX C

BOOK-ENTRY SYSTEM

The information in this Appendix regarding DTC has been provided by DTC, and SMUD takes no responsibility for the accuracy or completeness thereof. SMUD cannot and does not give any assurances that DTC, DTC Participants or Indirect Participants will distribute the Beneficial Owners either (a) payments of interest or principal with respect to the 2021 Series I Bonds or (b) certificates representing ownership interest in or other confirmation of ownership interest in the 2021 Series I Bonds, or that they will so do on a timely basis or that DTC, DTC Participants or DTC Indirect Participants will act in the manner described in this Official Statement.

The Depository Trust Company (“DTC”) New York, NY, will act as securities depository for the 2021 Series I Bonds. The 2021 Series I Bonds will be issued as fully registered securities registered in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully registered Bond certificate will be issued for each maturity of the 2021 Series I Bonds, each in the aggregate principal amount of such maturity, and will be deposited with DTC.

DTC, the world’s largest depository, is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934, as amended. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues and money market instruments from over 100 countries that DTC’s participants (“Direct Participants”) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities through electronic computerized book-entry transfers and pledges between Direct Participants’ accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations. DTC is a wholly owned subsidiary of The Depository Trust & Clearing Corporation (“DTCC”). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others, such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (“Indirect Participants”). DTC has a Standard & Poor’s rating of AA+. The DTC rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

Purchases of the 2021 Series I Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the 2021 Series I Bonds on DTC’s records. The ownership interest of each actual purchaser of each 2021 Series I Bond (“Beneficial Owner”) is in turn to be recorded on the Direct and Indirect Participants’ records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the 2021 Series I Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their beneficial ownership interests in the 2021 Series I Bonds, except in the event that use of the book-entry system for the 2021 Series I Bonds is discontinued.

To facilitate subsequent transfers, all 2021 Series I Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co. or such other name as may be requested by an authorized representative of DTC. The deposit of the 2021 Series I Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the 2021 Series I Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such 2021 Series I Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of the 2021 Series I Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the 2021 Series I Bonds, such as redemptions, tenders, defaults, and proposed amendments to the Bond documents. For example, Beneficial Owners of the 2021 Series I Bonds may wish to ascertain that the nominee holding the 2021 Series I Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners.

Redemption notices shall be sent to DTC. If less than all of a maturity of the 2021 Series I Bonds is being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in the 2021 Series I Bonds of such maturity to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the 2021 Series I Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to SMUD as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the 2021 Series I Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Principal, premium, redemption proceeds and interest payments on the 2021 Series I Bonds will be made to Cede & Co. or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts, upon DTC's receipt of funds and corresponding detail information from SMUD or the Trustee, on a payment date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participants and not of DTC, its nominee, the Trustee or SMUD, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal, premium, redemption proceeds and interest to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Trustee. Disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of the Direct and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the 2021 Series I Bonds at any time by giving reasonable notice to SMUD or the Trustee. Under such circumstances, in the event that a successor depository is not obtained, Bond certificates are required to be printed and delivered.

SMUD may decide to discontinue use of the system of book-entry-only transfers through DTC (or a successor securities depository). In that event, Bond certificates for such 2021 Series I Bonds will be printed and delivered to DTC.

Neither SMUD or the Trustee will have any responsibility or obligation to Participants, to Indirect Participants or to any Beneficial Owner with respect to (i) the accuracy of any records maintained by DTC, any Participant, or any Indirect Participant; (ii) the payment by DTC or any Participant or Indirect Participant of any amount with respect to the principal of or premium, if any, or interest on the 2021 Series I Bonds; (iii) any notice which is permitted or required to be given to Holders under the Resolution; (iv) the selection by DTC, any Participant or any Indirect Participant of any person to receive payment in the event of a partial redemption of 2021 Series I Bonds; (v) any consent given or other action taken by DTC as Bondholder; or (vi) any other procedures or obligations of DTC, Participants or Indirect Participants under the book-entry system.

APPENDIX D

SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION

The following is a summary of certain provisions of the Resolution. Other provisions of the Resolution are described under the captions “THE 2021 SERIES I BONDS” and “SECURITY FOR THE BONDS.” This summary is not to be considered a full statement of the terms of the Resolution and accordingly is qualified by reference thereto and is subject to the full text thereof. Capitalized terms not otherwise defined in this Official Statement shall have the meanings ascribed thereto in the Resolution.

Between July 1997 and August 2003, SMUD received consents to amend the Resolution from the owners of the requisite percentage of Outstanding Bonds. Pursuant to the authority granted by such consents, SMUD amended the Resolution in October 2003 by adopting the Forty-Eighth Supplemental Resolution and the Forty-Ninth Supplemental Resolution. The following summary of the Resolution reflects such amendments.

The purchasers of the 2021 Series I Bonds, by virtue of their purchase of the 2021 Series I Bonds, will consent to certain amendments to the Resolution (the “Proposed Amendments”). Such amendments are described in ***bold italic*** font in the forepart of this Official Statement under “SECURITY FOR THE BONDS – Rates and Charges” and “—Limitations on Additional Obligations Payable from Revenues” and in this summary of the Resolution under the captions “Certain Definitions” and “Reserve Fund for Certain Bonds.” The written consents to the Proposed Amendments of the holders and registered owners of at least 60% of the Bonds outstanding have been filed with SMUD or the Trustee, as required by the Resolution. However, while certain Bonds remain outstanding SMUD must also obtain the written consents of certain bond insurers to implement the Proposed Amendments. SMUD expects to implement the Proposed Amendments when the written consents of such bond insurers are obtained or when the Bonds insured by such bond insurers are no longer outstanding.

Certain Definitions

“Assumed Interest Payments” means for any fiscal year or period interest which would accrue during such fiscal year or period on an amount equal to the then unamortized balance of the remaining sum of Assumed Principal Payments at the Assumed Interest Rate.

“Assumed Interest Rate” for any Parity Bond means an interest rate equal to the “Bond Buyer Revenue Bond Index” most recently published in The Bond Buyer prior to the date of issuance of the Parity Bond to which the Assumed Interest Rate is applicable.

“Assumed Principal Payments” means for any fiscal year or period the sum of all amortized portions of each Excluded Principal Payment which fall within such fiscal year or period after the Excluded Principal Payments have been amortized (for purposes of this definition) equally over the years (pro rata in the case of a partial year) in the period commencing on the date of issuance of the Parity Bonds to which such Excluded Principal Payment relates and ending on the date which is 30 years from such date of issuance. Notwithstanding the foregoing, if Parity Bonds determined by SMUD to be an Excluded Principal Payment are refinanced with Parity Bonds determined by SMUD to be another Excluded Principal Payment, (1) Assumed Principal Payments with respect to the refinancing Parity Bonds shall not include any amount of principal which has previously been assumed amortized with respect to the refinanced Parity Bonds and (2) the period over which the refinancing Parity Bonds shall be assumed to be amortized shall be the period commencing on the date of issuance of the refinancing Parity Bonds and ending on the date which is 30 years from the date of issuance of the refinanced Parity Bonds.

“Electric System” means the entire electric system of SMUD, together with all additions, betterments, extensions and improvements.

“Energy Payments” means, when used with respect to the Electric System, all actual costs incurred, or charges made therefor, by SMUD in any particular fiscal year or period to which said term is applicable for purchased power (including power purchased from any special district included within the boundaries of SMUD), electric and thermal energy and capacity under contracts providing for payments by SMUD for electric or thermal energy or capacity whether or not such energy or capacity is delivered or capable of being delivered or otherwise made available to or received by or for the account of SMUD.

“Excluded Principal Payments” means each payment of principal on Parity Bonds which the Board of Directors of SMUD determines (on a date not later than the date of issuance of such Parity Bonds) that SMUD intends to refinance at or prior to the maturity date(s) of such Parity Bonds or otherwise to pay with moneys which are not Revenues. No such determination shall affect the security for such Parity Bonds or the obligation of SMUD to pay such payments from Revenues.

“Financial Products Agreement” means an interest rate swap, cap, collar, option, floor, forward or other hedging agreement, arrangement or security, however denominated, entered into by SMUD with a Qualified Provider not for investment purposes but with respect to specific Parity Bonds for the purpose of (1) reducing or otherwise managing SMUD’s risk of interest rate changes or (2) effectively converting SMUD’s interest rate exposure, in whole or in part, from a fixed rate exposure to a variable rate exposure, or from a variable rate exposure to a fixed rate exposure.

“Financial Product Payments” means payments periodically required to be paid to a counterparty by SMUD pursuant to a Financial Products Agreement.

“Financial Product Receipts” means amounts periodically required to be paid to SMUD by a counterparty pursuant to a Financial Products Agreement.

“Maintenance and Operation Costs” means all actual maintenance and operation costs incurred by SMUD (including purchased power and fuel costs) or charges therefor made in conformity with generally accepted accounting principles, exclusive in all cases of depreciation, or obsolescence charges or reserves therefor, amortization of intangibles or other entries of a similar nature, interest charges and charges for the payment of principal of SMUD debt.

“Net Revenues” for any fiscal period means the sum of (a) the Revenues for such fiscal period plus (b) the amounts, if any, withdrawn by SMUD from the Rate Stabilization Fund for treatment as Revenues for such fiscal period, less the sum of (c) all Maintenance and Operation Costs for such fiscal period, (d) all Energy Payments for such fiscal period not included in Maintenance and Operation Costs for such fiscal period, and (e) the amounts, if any, withdrawn by SMUD from Revenues for such fiscal period for deposit in the Rate Stabilization Fund pursuant to the Resolution.

“Parity Bonds” includes the Bonds and all revenue bonds issued on a parity with the Bonds as provided or permitted in the Resolution. No Parity Bonds (other than the Bonds) are currently outstanding.

“Qualified Provider” means any financial institution or insurance company which is a party to a Financial Products Agreement if the unsecured long-term debt obligations of such financial institution or insurance company (or of the parent or a subsidiary of such financial institution or insurance company if such parent or subsidiary unconditionally guarantees the performance of such financial institution or insurance company under such Financial Products Agreement and the Trustee receives an opinion of counsel to the effect that such guarantee is a valid and binding agreement of such parent or subsidiary), or

obligations secured or supported by a letter of credit, contract, guarantee, agreement, insurance policy or surety bond issued by such financial institution or insurance company (or such guarantor parent or subsidiary), are rated in one of the two highest rating categories of a national rating agency (without regard to any gradation or such rating category) at the time of the execution and delivery of the Financial Products Agreement.

“Rate Stabilization Fund” means the fund by that name established in the Resolution. From time to time, after provision for debt service, SMUD may deposit in the Rate Stabilization Fund from remaining Revenues such amounts as SMUD shall determine, provided that deposits may be made until (but not after) the date 120 days after the end of such fiscal year. SMUD may withdraw amounts from the Rate Stabilization Fund only for inclusion in Revenues for any fiscal year, such withdrawals to be made until (but not after) 120 days after the end of such fiscal year. All interest or other earnings on deposits in the Rate Stabilization Fund shall be withdrawn therefrom and accounted for as Revenues. Notwithstanding the foregoing, no deposit of Revenues to the Rate Stabilization Fund may be made to the extent such Revenues were included in an engineer’s certificate submitted in connection with the issuance of additional revenue bonds payable from Revenues and withdrawal of the Revenues to be deposited in the Rate Stabilization Fund from the Revenues employed in rendering said engineer’s certificate would have caused noncompliance with the provisions of the Resolution restricting issuance of additional obligations or securities payable from Revenues or to the extent any withdrawal of amounts from remaining Revenues for the Rate Stabilization Fund for any fiscal year would have reduced the debt service ratio referred to in this Appendix under the caption “Reserve Fund for Certain Bonds” to or below 1.40.

“Revenues” means all charges received for, and all other income and receipts derived by SMUD from the operation of the Electric System, or arising from the Electric System (consisting primarily of income derived from the sale or use of electric energy generated, transmitted or distributed by facilities of the Electric System, but also including receipts from the sale of property pertaining to the Electric System or incidental to the operation of the Electric System or from services performed by SMUD in connection with the Electric System and revenues derived from certain wholesale, but not retail, sales of water), but exclusive in every case of any moneys derived from the levy or collection of taxes upon any taxable property in SMUD.

“Subsidy” means any subsidy, reimbursement or other payment from the federal government of the United States of America under the American Recovery and Reinvestment Act of 2009 (or any similar legislation or regulation of the federal government of the United States of America or any other governmental entity or any extension of any of such legislation or regulation).

Reserve Fund for Certain Bonds

The Electric Revenue Bond Reserve Fund (the “Reserve Fund”) is created under the Resolution. The Reserve Fund secures all Bonds issued prior to January 1, 2004 that are currently outstanding (and not otherwise deemed to be paid and discharged under the Resolution) and may secure additional Bonds issued in the future. However, the Reserve Fund does not secure and will not be available to pay debt service on the 2021 Series I Bonds.

After the close of each fiscal year, SMUD shall determine the ratio (herein called the “debt service ratio”) of (1) the Net Revenues during said fiscal year to (2) the maximum annual debt service during the period of three fiscal years next following said fiscal year on all Bonds and Parity Bonds then outstanding. For this purpose, the term “maximum annual debt service” shall mean the sum of (i) the interest falling due on serial bonds and term bonds, (ii) the principal amount of serial bonds falling due by their terms, and (iii) the amount of minimum sinking fund payments required, as computed for the year in which such sum shall

be a maximum. Interest during construction which has been funded and provided for shall not be included in "minimum annual debt service" for the purpose of the above calculation.

So long as the debt service ratio shall exceed 1.40, the amount required to be maintained in the Reserve Fund shall be an amount such that the amount in the combined reserve funds of all Parity Bonds then outstanding will at no time be less than the current annual interest requirements on all then outstanding Parity Bonds, except only bonds (if any) for which payment has been provided in advance. If the debt service ratio in any fiscal year shall fall below 1.40, the Treasurer shall set aside in the Reserve Fund or in any other reserve fund or funds established for any one or more issues of the Parity Bonds (on or before the first day of each month of the next succeeding fiscal year) from the first available Net Revenues an amount not less than 15% of the sum of the current monthly interest requirements of all Parity Bonds then outstanding until the next year in which the debt service ratio shall exceed 1.40 or until the aggregate amount in the combined reserve funds established for all of the Parity Bonds (including the Reserve Fund) is equal to the maximum annual debt service on all of the Parity Bonds then outstanding, whichever shall first occur.

For purposes of the above calculation, the interest rates of Bonds which bear a variable rate of interest or a rate subject to periodic adjustment or to being fixed at some date after issuance shall be, if such Bonds bear a rate or rates of interest for a known period or periods of time, such interest rate or rates for such period or periods, and thereafter, for the portion of the calculation period not covered by such known period or periods, the interest rate shall be the greater of the numerical maximum rate that such Bonds may vary or be adjusted to and the numerical maximum rate (if any) that the interest rate for such Bonds may be fixed to, in both cases as set forth in the supplemental resolution authorizing such Bonds, or if such rate or rates have been increased in accordance with such supplemental resolution at such increased rate or rates.

Any amount in the Reserve Fund at any time in excess of the balance required to be then maintained therein shall be released to SMUD for any SMUD use.

SMUD shall not be required, notwithstanding anything herein contained, to maintain in the combined reserve funds appertaining to all Parity Bonds of SMUD, an aggregate amount in excess of the maximum annual debt service requirements in any subsequent fiscal year on all of the then outstanding Parity Bonds.

Any moneys at any time in any of said reserve funds shall be held by the Treasurer in trust for the benefit of the holder or holders from time to time of the Bonds and the coupons appertaining thereto entitled to be paid therewith, and SMUD shall not have any beneficial right or interest in any such moneys.

Notwithstanding the foregoing, a Supplemental Resolution adopted after the Forty-Eighth Supplemental Resolution may provide that a Series of Bonds issued pursuant to such Supplemental Resolution shall not be secured by the Reserve Fund. In such event, (i) payments of the principal of and interest on such Bonds shall be excluded from all calculations made in respect of the amount to be maintained in the Reserve Fund and (ii) amounts on deposit in the Reserve Fund shall not be applied to the payment of the principal of or interest on such Bonds, even if no other moneys are available therefor.

The 2021 Series I Bonds are not secured by the Reserve Fund.

In lieu of maintaining and depositing moneys in the Reserve Fund, SMUD may maintain and deposit in the Reserve Fund, for the sole benefit of the holders of Parity Bonds, a letter of credit (1) which is issued by a bank with a credit rating at the time of deposit of such letter of credit into the Reserve Fund within one of the top two rating categories (without regard to any refinement or graduation of such rating category by numerical modifier or otherwise) of Moody's Investors Service ("Moody's") and Standard & Poor's Rating Group, a division of The McGraw-Hill Companies, Inc. ("S&P"), (2) the repayment obligation with respect to which is not secured by a lien on assets of SMUD senior to any lien which secures the Bondholders and (3) which has a term of at least 364 days from the date of issuance thereof. If the credit rating of the bank issuing such letter of credit falls below such top two rating categories, SMUD shall within twelve months of such downgrading either (a) substitute a new letter of credit satisfying the requirements of this paragraph, (b) fund the Reserve Fund through the deposit of cash or an irrevocable surety bond policy satisfying the requirements of the immediately succeeding paragraph or (c) fund the Reserve Fund through a combination of (a) and (b). At least 120 days prior to the expiration date of a letter of credit on deposit in the Reserve Fund, SMUD shall either (a) substitute a new letter of credit satisfying the requirements of this paragraph, (b) fund the Reserve Fund through the deposit of cash or an irrevocable surety bond policy satisfying the requirements of the immediately succeeding paragraph or (c) fund the Reserve Fund through a combination of (a) and (b). Any such letter of credit shall permit SMUD to draw amounts thereunder for deposit in the Reserve Fund which, together with any moneys on deposit in, or surety bond policy available to fund, the Reserve Fund, are not less than the balance required to then be maintained in the Reserve Fund (the "Reserve Fund Requirement") and which may be applied to any purpose for which moneys in the Reserve Fund may be applied. SMUD shall make a drawing on such letter of credit and deposit the moneys obtained from drawing in the Reserve Fund (a) whenever moneys are required for the purposes for which Reserve Fund moneys may be applied, and (b) prior to any expiration or termination thereof; provided, however, that no such drawing need be made if other moneys or an irrevocable surety bond are available in the Reserve Fund in the amount of the Reserve Fund Requirement.

In lieu of maintaining and depositing moneys in the Reserve Fund, SMUD also may maintain and deposit in the Reserve Fund, for the sole benefit of the holders of the Bonds, an irrevocable surety bond policy (1) which is issued by a bond insurance company with a claims-paying ability rating at the time of deposit of such surety bond policy into the Reserve Fund within one of the top two rating categories (without regard to any refinement or graduation of such rating category by numerical modifier or otherwise) from Moody's and S&P, (2) the repayment obligation with respect to which is not secured by a lien on assets of SMUD senior to any lien which secures the Bondholders and (3) has a term of at least 364 days from the date of issuance thereof. If the credit rating of the bond insurance company issuing such surety bond policy falls below such top two rating categories, SMUD shall, within twelve months of such downgrading, either (a) substitute a new surety bond policy satisfying the requirements of this paragraph, (b) fund the Reserve Fund through the deposit of cash or a letter of credit satisfying the requirements of the immediately preceding paragraph or (c) fund the Reserve Fund through a combination of (a) and (b). At least 120 days prior to the expiration date of a surety bond policy on deposit in the Reserve Fund, SMUD shall either (a) substitute a new surety bond policy satisfying the requirements of this paragraph, (b) fund the Reserve Fund through the deposit of cash or a letter of credit satisfying the requirements of the immediately preceding paragraph or (c) fund the Reserve Fund through a combination of (a) and (b). Any such surety bond policy shall permit SMUD to obtain amounts thereunder for deposit in the Reserve Fund which, together with any moneys on deposit in, or letter of credit available to fund, the Reserve Fund, are not less than the Reserve Fund Requirement and which may be applied to any purpose for which moneys in the Reserve Fund may be applied. SMUD shall make a drawing on such surety bond policy and deposit the proceeds derived from such drawing in the Reserve Fund (a) whenever moneys are required for the purposes for which Reserve Fund moneys may be applied, and (b) prior to any expiration or termination thereof; provided, however,

that no such drawing need be made if other moneys or a letter of credit are available in the Reserve Fund in the amount of the Reserve Fund Requirement.

Notwithstanding anything to the contrary in the prior two paragraphs, if at any time that there is on deposit in the Reserve Fund a combination of cash, a letter of credit and/or a surety bond as contemplated above, SMUD shall draw first on such cash to the extent required and available, then on (1) such surety bond and letter of credit on a pro rata basis (if both a surety bond and letter of credit are available) to the extent required and available, or (2) such surety bond or letter of credit (if either a surety bond or letter of credit, but not both, is available) to the extent required and available.

For purposes of calculating the “debt service ratio” and, unless otherwise specified in a Supplemental Resolution providing for the issuance of a series of Parity Bonds, the amount required to be maintained in the Reserve Fund as described above: (1) any calculation of principal of and interest on Parity Bonds for any period of time shall be reduced by the amount of any Subsidy that SMUD receives or expects to receive during such period of time relating to or in connection with such Parity Bonds; and (2) to the extent the calculation of principal of and interest on Parity Bonds is reduced by the Subsidy as provided in clause (1) of this paragraph, any calculation of Net Revenues for any period of time shall be reduced by the amount of any Subsidy received or expected to be received by SMUD with respect to or in connection with such Parity Bonds during such period of time.

Additional Covenants

The Resolution contains the following additional covenants, among others:

1. That the Electric System will be maintained in good repair, working order and condition at all times, and will be continuously operated in an efficient and economical manner.
2. That no electric energy shall be supplied free by SMUD, and a reasonable wholesale charge will be made for water distributed at any cost to SMUD and such charge will be deemed Revenues; but SMUD may supply without charge water furnished to it without distribution cost, and any moneys received from any retail sales of water will not be deemed Revenues.
3. That all taxes and governmental charges and other lawful claims which might become a lien on the Electric System or the Revenues or impair the security of the Bonds will be paid and discharged when due.
4. That SMUD will comply with all lawful orders of any governmental agency or authority having jurisdiction in the premises (except while the validity or application thereof is being contested in good faith) and with all necessary permits and licenses issued by the NRC.
5. That no lease or agreement will be entered into, or sale or other disposition of essential property made, that would impair the operation of the Electric System or the rights of Bondholders with respect to the Revenues; provided, however, that notwithstanding the foregoing or any other provision of the Master Resolution, SMUD may sell or otherwise dispose of its accounts receivable and customer loan balances due to SMUD provided that SMUD delivers to the Trustee:
 - (a) a Certificate of SMUD to the effect that the amount derived by SMUD from the sale or other disposition of such accounts receivable or loan balances is a result of the sale or other disposition of such accounts receivable or loan balances upon fair and reasonable terms no less favorable to SMUD than the terms of a comparable arm’s-length transaction treated as a sale and not a loan under generally accepted accounting principles; and

(b) a written statement or report of an independent certified public accountant to the effect that, based on the audited financial statements of SMUD for the most recent fiscal year for which audited financial statements are available and after giving effect to such transaction by reducing Revenues for such fiscal year by the difference between the face amount of such accounts receivable or loan balances and the amount derived by SMUD from the sale or other disposition of such accounts receivable or loan balances, the debt service ratio computed pursuant to the Master Resolution would not have been reduced to less than 1.40:1.0.

6. That proper records and accounts will be maintained of all transactions relating to the Electric System and the Revenues (open to inspection by the Trustee and the holders of not less than 10 percent in principal amount of the Bonds), to be audited annually by an independent certified public accountant within 90 days after close of the fiscal year, and copies of such financial statements supplied to Bondholders on request.

7. That insurance adequate in amounts and as to risks covered will be maintained against such risks as are usually insurable in connection with similar electric systems, and in addition public liability and property damage insurance in amounts not less than \$1,000,000 per accident and adequate fidelity bonds on all officers and employees of SMUD handling or responsible for SMUD funds, subject in each case to the condition that such insurance is obtainable at reasonable rates and upon reasonable terms and conditions. See APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – INSURANCE” attached to this Official Statement for a description of SMUD’s insurance.

8. That the net proceeds realized by SMUD in the event all or any part of the Electric System is taken by eminent domain proceedings will be applied to the redemption or retirement of all Bonds and Parity Bonds if sufficient therefor, and, if not, then pro rata to the redemption or retirement of Bonds and Parity Bonds or to new facilities if the additional Revenues to be derived therefrom will sufficiently offset the loss of Revenues resulting from such eminent domain so that the ability of SMUD to meet its obligations will not be substantially impaired.

9. That SMUD will at all times use its best efforts to maintain the powers, functions and duties now reposed in it pursuant to law.

10. That SMUD will establish and at all times maintain and collect rates and charges for the sale or use of its electric energy sufficient to permit SMUD to purchase power or issue and sell Bonds or Parity Bonds to finance additions, betterments, extensions and improvements to the Electric System as may be reasonably necessary to satisfy its then projected electric demand upon its Electric System, and that unless the Board determines that SMUD will be able to satisfy such demand through the purchase of electric energy, SMUD will proceed with all reasonable diligence to issue and sell such Bonds or Parity Bonds.

11. That SMUD will not create, or permit the creation of, any mortgage or lien upon the Electric System or any property essential to the proper operation of the Electric System or to the maintenance of the Revenues. SMUD will not create, or permit the creation of, any pledge, lien, charge or encumbrance upon the Revenues except only as provided in the Master Resolution; provided that, notwithstanding the foregoing or any other provision of the Master Resolution, SMUD may create a pledge, lien, charge or encumbrance upon its accounts receivable and customer loan balances due to SMUD (which pledge, lien, charge or encumbrance shall be prior to any pledge, lien, charge or encumbrance created or made pursuant to the Master Resolution, including without limitation the pledge of Revenues made pursuant to the Master Resolution) to secure indebtedness with a term of one year or less provided that the principal amount of such indebtedness does not exceed 50% of the aggregate face amount of the accounts receivable and customer loan balances due to SMUD as shown on SMUD’s most recent audited financial statements.

Amendment of the Resolution

The Resolution and the rights and obligations of SMUD and of the holders of the Bonds may be modified or amended at any time pursuant to the affirmative vote at a meeting of Bondholders, or with the written consent without a meeting, of the holders of 60 percent in aggregate principal amount of the Bonds then outstanding, provided that no such modification or amendment shall (i) extend the fixed maturity of any Bond, or reduce the principal amount thereof, or reduce the rate or extend the time of payment of interest thereon or reduce any premium payable upon the redemption thereof, without the consent of the holder of each Bond so affected, or (ii) reduce the aforesaid percentage of Bonds required for consent to an amendment or modification, without the consent of the holders of all the Bonds then outstanding. Modifications or amendments may be made, without the consent of any Bondholders, to add covenants of SMUD or to surrender rights reserved by SMUD in the Resolution, to cure ambiguities or defective or inconsistent provisions or in regard to questions arising under the Resolution without adversely affecting the interests of the Bondholders, or to provide for the issuance of a series of Bonds, subject to the provisions contained in the Resolution with respect thereto.

Events of Default and Remedies of Bondholders

The Resolution declares each of the following to be an event of default:

- (a) Failure to pay the principal of and premium on any Bond when due and payable;
- (b) Failure to pay any installment of interest on any Bond when due and payable, if such default continues for a period of 30 days;
- (c) Default by SMUD in the observance of any of the covenants, agreements or conditions on its part in the Resolution or in the Bonds, if such default continues for a period of 60 days after written notice thereof (specifying such default and requiring the same to be remedied) has been given to SMUD by the Trustee, or to SMUD and the Trustee by the holders of not less than 25 percent in aggregate principal amount of the Bonds at the time outstanding; and
- (d) If, under the provisions of any law for the relief or aid of debtors, any court of competent jurisdiction shall assume custody or control of SMUD or of the whole or any substantial part of its property, and such custody or control shall not be terminated or stayed within 60 days.

In the event of default, the Trustee or the holders of not less than a majority in aggregate principal amount of the outstanding Bonds may, upon written notice to SMUD, declare the principal of all outstanding Bonds, and the interest accrued thereon, to be due and payable immediately. The Trustee is appointed as trustee to represent Bondholders and may take such action as may seem appropriate to it, and, upon the written request of the holders of 25 percent in aggregate principal amount of the outstanding Bonds, and upon being furnished with indemnity satisfactory to it, will take such action on behalf of Bondholders as is specified in such written request. Each Bondholder is entitled to proceed to protect and enforce the rights vested in such holder by the Resolution by such appropriate judicial proceedings as such holder deems most effectual.

The rights of Bondholders are limited and restricted to the use and application of Revenues as provided in the Resolution and do not extend to the levy of any attachment or execution upon or forfeiture of any of the properties of SMUD or to any moneys derived by SMUD from the levy or collection of taxes.

In addition to the limitations on remedies contained in the Resolution, the rights and remedies provided by the Bonds and the Resolution, as well as the enforcement by SMUD of contracts with customers

of the Electric System, may be limited by and are subject to bankruptcy, insolvency, reorganization and other laws affecting the enforcement of creditors' rights.

Refunding of 2021 Series I Bonds

If Refunding Bonds are issued for the purpose of refunding 2021 Series I Bonds, then SMUD is authorized to apply proceeds of the sale of such Refunding Bonds to the payment of the purchase price of direct noncallable obligations of the United States of America ("Treasury Obligations") to be held by the Trustee to insure the payment or retirement at or before maturity of all or a portion of the outstanding 2021 Series I Bonds. Upon deposit with the Trustee, in trust, of money or Treasury Obligations (including, but not limited to, direct obligations of the United States of America issued in book-entry form on the books of the Department of the Treasury of the United States of America), or any combination thereof, sufficient, together with the interest to accrue on any such Treasury Obligations, to pay or redeem all or a portion of 2021 Series I Bonds then outstanding at or before their maturity date, all liability of SMUD in respect of such 2021 Series I Bonds shall cease, determine and be completely discharged, and the holders thereof shall thereafter be entitled only to payment by SMUD out of the money and Treasury Obligations deposited with the Trustee for their payment. If the liability of SMUD shall cease and determine with respect to all or a portion of the 2021 Series I Bonds, then said 2021 Series I Bonds shall not be considered to be outstanding Bonds for any purpose of the Resolution.

Discharge of Resolution

The Resolution may be discharged by depositing with the Trustee in trust, moneys or Federal Securities or general obligation bonds of the State of California, in such amount as the Trustee shall determine will, together with the interest to accrue thereon, be fully sufficient to pay and discharge the indebtedness on all Bonds at or before their respective maturity dates.

Investment of Funds

Moneys in any fund established by the Resolution may be invested in bonds, notes, certificates of indebtedness, bills, bankers acceptances or other securities in which funds of SMUD may be legally invested as provided by the law in effect at the time of such investment. Currently this investment authority includes, among other things, the Local Agency Investment Fund which is administered by the Treasurer of the State of California for the investment of funds belonging to local agencies in the State of California.

APPENDIX E

PROPOSED FORM OF LEGAL OPINION FOR 2021 SERIES I BONDS

[Closing Date]

Sacramento Municipal Utility District
Sacramento, California

Sacramento Municipal Utility District
Electric Revenue Refunding Bonds, 2021 Series I
(Final Opinion)

Ladies and Gentlemen:

We have acted as bond counsel to the Sacramento Municipal Utility District (“SMUD”) in connection with the issuance of \$ _____ aggregate principal amount of Sacramento Municipal Utility District Electric Revenue Refunding Bonds, 2021 Series I (the “2021 Series I Bonds”), issued pursuant to Resolution No. 6649 of the Board of Directors of SMUD, adopted January 7, 1971 (the “Master Resolution”), as supplemented and amended by later resolutions of said Board of Directors (as so supplemented and amended, the “Resolution”), including Resolution No. 21-06-__, adopted June 17, 2021 (the “Sixty-Fourth Supplemental Resolution”). Capitalized terms not otherwise defined herein shall have the meanings ascribed thereto in the Resolution.

In such connection, we have reviewed the Resolution; the Tax Certificate, dated the date hereof (the “Tax Certificate”), executed by SMUD; opinions of counsel to SMUD and the Trustee; certificates of SMUD, the Trustee and others; and such other documents, opinions and matters to the extent we deemed necessary to render the opinions set forth herein.

The opinions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. Such opinions may be affected by actions taken or omitted or events occurring after original delivery of the 2021 Series I Bonds on the date hereof. We have not undertaken to determine, or to inform any person, whether any such actions are taken or omitted or events do occur or any other matters come to our attention after original issuance of the 2021 Series I Bonds on the date hereof. Accordingly, this letter speaks only as of its date and is not intended to, and may not, be relied upon or otherwise used in connection with any such actions, events or matters. Our engagement with respect to the 2021 Series I Bonds has concluded with their issuance, and we disclaim any obligation to update this letter. We have assumed the genuineness of all documents and signatures provided to us and the due and legal execution and delivery thereof by, and validity against, any parties other than SMUD. We have assumed, without undertaking to verify, the accuracy of the factual matters represented, warranted or certified in the documents, and of the legal conclusions contained in the opinions, referred to in the second paragraph hereof. Furthermore, we have assumed compliance with all the covenants and agreements contained in the Resolution and the Tax Certificate, including (without limitation), covenants and agreements compliance with which is necessary to assure that future actions, omissions or events will not cause interest on the 2021 Series I Bonds to be included in gross income for federal income tax purposes.

We call attention to the fact that the rights and obligations under the 2021 Series I Bonds, the Resolution and the Tax Certificate and their enforceability may be subject to bankruptcy, insolvency, receivership, reorganization, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors’ rights, to the application of equitable principles, to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against municipal utility districts in the State

of California. We express no opinion with respect to any indemnification, contribution, liquidated damages, penalty (including any remedy deemed to constitute or having the effect of a penalty), right of set-off, arbitration, judicial reference, choice of law, choice of forum, choice of venue, non-exclusivity of remedies, waiver or severability provisions contained in the foregoing documents, nor do we express any opinion with respect to the state or quality of title to or interest in any of the assets described in or as subject to the lien of the Resolution or the accuracy or sufficiency of the description contained therein of, or the remedies available to enforce liens on, any such assets. Our services did not include financial or other non-legal advice. Finally, we undertake no responsibility for the accuracy, completeness or fairness of the Official Statement, dated June __, 2021, or other offering material relating to the 2021 Series I Bonds and express no opinion with respect thereto.

Based on and subject to the foregoing, and in reliance thereon, as of the date hereof, we are of the following opinions:

1. The 2021 Series I Bonds constitute the valid and binding limited obligations of SMUD.
2. The Resolution, including the Sixty-Fourth Supplemental Resolution, has been duly adopted by, and constitutes the valid and binding obligation of, SMUD. The Resolution creates a valid pledge, to secure the payment of the principal of and interest on the 2021 Series I Bonds, of the Net Revenues, subject to the provisions of the Resolution permitting the application thereof for the purposes and on the terms and conditions set forth in the Resolution.
3. Interest on the 2021 Series I Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 and is exempt from State of California personal income taxes. Interest on the 2021 Series I Bonds is not a specific preference item for purposes of the federal alternative minimum tax. We express no opinion regarding other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the 2021 Series I Bonds.

Faithfully yours,

ORRICK, HERRINGTON & SUTCLIFFE LLP

per

APPENDIX F

FORM OF CONTINUING DISCLOSURE AGREEMENT

This Continuing Disclosure Agreement (the “Disclosure Agreement”) is executed and delivered by the Sacramento Municipal Utility District (the “Issuer”) and U.S. Bank National Association, in its capacity as Dissemination Agent (the “Dissemination Agent”) in connection with the issuance of \$_____ aggregate principal amount of Sacramento Municipal Utility District Electric Revenue Refunding Bonds, 2021 Series I (the “2021 Series I Bonds”). The 2021 Series I Bonds are being issued pursuant to the Issuer’s Resolution No. 6649, adopted on January 7, 1971, as amended and supplemented by supplemental resolutions, including Resolution No. 21-06-__, adopted on June 17, 2021 (the “Resolution”). Pursuant to Section 137.11 of the Resolution, the Issuer and the Dissemination Agent covenant and agree as follows:

SECTION 1. Purpose of the Disclosure Agreement. This Disclosure Agreement is being executed and delivered by the Issuer and the Dissemination Agent for the benefit of the Holders and Beneficial Owners of the 2021 Series I Bonds and in order to assist the Participating Underwriters in complying with S.E.C. Rule 15c2-12(b)(5).

SECTION 2. Definitions. In addition to the definitions set forth in the Resolution, which apply to any capitalized term used in this Disclosure Agreement unless otherwise defined in this Section 2, the following capitalized terms shall have the following meanings:

“Annual Report” shall mean any Annual Report provided by the Issuer pursuant to, and as described in, Sections 3 and 4 of this Disclosure Agreement.

“Beneficial Owner” shall mean any person which has or shares the power, directly or indirectly, to make investment decisions concerning ownership of any 2021 Series I Bonds (including persons holding Bonds through nominees, depositories or other intermediaries).

“Disclosure Representative” shall mean the Treasurer of the Issuer or his or her designee, or such other officer or employee as the Issuer shall designate in writing to the Trustee from time to time.

“Dissemination Agent” shall mean the U.S. Bank National Association, acting in its capacity as Dissemination Agent hereunder, or any successor Dissemination Agent designated in writing by the Issuer and which has filed with the Trustee a written acceptance of such designation.

“EMMA” shall mean the MSRB’s Electronic Municipal Market Access system.

“Financial Obligation” shall mean, for purposes of the Listed Events set out in Section 5(a)(15) and Section 5(a)(16), a (i) debt obligation; (ii) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation; or (iii) guarantee of (i) or (ii). The term “Financial Obligation” shall not include municipal securities (as defined in the Securities Exchange Act of 1934, as amended) as to which a final official statement (as defined in the Rule) has been provided to the MSRB consistent with the Rule.

“Listed Events” shall mean any of the events listed in Section 5(a) of this Disclosure Agreement.

“MSRB” shall mean the Municipal Securities Rulemaking Board.

“Participating Underwriter” shall mean any of the original underwriters of the 2021 Series I Bonds required to comply with the Rule in connection with offering of the 2021 Series I Bonds.

“Repository” shall mean the MSRB through EMMA or any other entity or system designated or authorized by the Securities and Exchange Commission to receive reports pursuant to the Rule.

“Rule” shall mean Rule 15c2-12(b)(5) adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as the same may be amended from time to time.

“State” shall mean the State of California.

SECTION 3. Provision of Annual Reports.

(a) The Issuer shall, or shall cause the Dissemination Agent to, not later than one hundred eighty (180) days after the end of the Issuer’s fiscal year (presently December 31), commencing with the report for the 2021 Fiscal Year, provide to each Repository an Annual Report which is consistent with the requirements of Section 4 of this Disclosure Agreement. The Annual Report may be submitted as a single document or as separate documents comprising a package, and may include by reference other information as provided in Section 4 of this Disclosure Agreement; provided that the audited financial statements of the Issuer may be submitted separately from the balance of the Annual Report and later than the date required above for the filing of the Annual Report if they are not available by that date. If the fiscal year changes for the Issuer, the Issuer shall give notice of such change in the same manner as for a Listed Event under Section 5 hereof.

(b) Not later than fifteen (15) Business Days prior to the dates specified in subsection (a) for providing the Annual Report to each Repository, the Issuer shall provide its respective Annual Report to the Dissemination Agent. If by such date, the Dissemination Agent has not received a copy of the Annual Report from the Issuer, the Dissemination Agent shall contact the Issuer to determine if the Issuer is in compliance with the first sentence of this subsection (b).

(c) If the Dissemination Agent is unable to verify that an Annual Report of the Issuer has been provided to each Repository by the date required in subsection (a), the Dissemination Agent shall send a notice to each Repository and the MSRB (if the MSRB is not a Repository) in substantially the form attached as Exhibit A.

(d) The Dissemination Agent shall:

(1) determine each year prior to the date for providing the Annual Report the name and address of each Repository and the then-applicable rules and procedures for filing the Annual Report with each Repository, if any; and

(2) file a report with the Issuer certifying that the Annual Report has been provided pursuant to this Disclosure Agreement, stating the date it was provided and listing each Repository to which it was provided.

SECTION 4. Content of Annual Reports.

(a) The Issuer’s Annual Report shall contain or include by reference the following:

(1) The audited financial statements of the Issuer for the prior fiscal year, prepared in accordance with generally accepted accounting principles as promulgated to apply to governmental entities from time to time by the Governmental Accounting Standards Board and where not in conflict with the Financial Accounting Standards Board (“FASB”) pronouncements or accounting principles prescribed by FASB. If the Issuer’s audited financial statements are not available by the time the Annual Report is required to be filed pursuant to Section 3(a), the Annual Report shall

contain unaudited financial statements, and the audited financial statements shall be filed in the same manner as the Annual Report when they become available.

(2) An update of the following types of information contained in Appendix A to the official statement, dated June __, 2021 and related to the 2021 Series I Bonds:

(i) The table entitled “Power Supply Resources.”

(ii) The table entitled “Projected Requirements and Resources to Meet Load Requirements.”

(iii) The table entitled “Average Class Rates” (to the extent such table relates to rates and revenues of the Issuer).

(iv) The table entitled “Selected Operating Data.”

(v) The table entitled “Unconsolidated Financial Data.”

(vi) The balance in the Decommissioning Trust Fund, the current estimate of decommissioning costs, the decommissioning costs to date, and the annual contribution level to the Decommissioning Trust Fund, all relating to the Rancho Seco Nuclear Power Plant.

(vii) The table entitled “Estimated Capital Requirements.”

(b) Any or all of the items listed above may be included by specific reference to other documents, including official statements of debt issues of the Issuer or public entities related thereto, which have been submitted to each Repository or the Securities and Exchange Commission. If the document included by reference is a final official statement, it must be available from the MSRB. The Issuer shall clearly identify each such other document so included by reference.

SECTION 5. Reporting of Listed Events.

(a) Pursuant to the provisions of this Section 5, the Issuer shall give, or cause to be given, notice of the occurrence of any of the following events with respect to the 2021 Series I Bonds not later than ten (10) business days after the occurrence of the event:

(1) principal and interest payment delinquencies;

(2) non-payment related defaults, if material;

(3) unscheduled draws on any applicable debt service reserves reflecting financial difficulties;

(4) unscheduled draws on credit enhancement reflecting financial difficulties;

(5) substitution of credit or liquidity providers, or their failure to perform;

(6) adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701 TEB) or other material notices or determinations with respect to the tax status of the 2021 Series I Bonds or other material events adversely affecting the tax status of the 2021 Series I Bonds;

- (7) modifications to rights of Bondholders, if material;
- (8) bond calls, if material, and tender offers;
- (9) defeasances;
- (10) release, substitution or sale of property securing repayment of the 2021 Series I Bonds, if material;
- (11) rating changes;
- (12) bankruptcy, insolvency, receivership or similar event of the Issuer;
- (13) the consummation of a merger, consolidation, or acquisition involving the Issuer or the sale of all or substantially all of the assets of the Issuer, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;
- (14) appointment of a successor or additional trustee or the change of name of the Trustee, if material;
- (15) incurrence of a Financial Obligation of the Issuer, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of the Issuer, any of which affect Bondholders, if material; and
- (16) default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of the Issuer, any of which reflect financial difficulties.

(b) For the purpose of the event identified in Section 5(a)(12), the event is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for the Issuer in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the Issuer, or if such jurisdiction has been assumed by leaving the existing governmental body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the Issuer.

(c) Whenever the Issuer obtains knowledge of the occurrence of a Listed Event, the Issuer shall as soon as possible determine if such event is required to be reported pursuant to this Section 5.

(d) If the Issuer has determined that such event is required to be reported pursuant to this Section 5, the Issuer shall promptly notify the Dissemination Agent in writing. Such notice shall instruct the Dissemination Agent to report the occurrence pursuant to subsection (e).

(e) If the Dissemination Agent has been instructed by the Issuer to report the occurrence of a Listed Event, the Dissemination Agent shall file a notice of such occurrence with the MSRB (if the MSRB is not a Repository) and each Repository.

SECTION 6. Termination of Reporting Obligation. The obligations of the Issuer and the Dissemination Agent under this Disclosure Agreement shall terminate upon the legal defeasance, prior redemption or payment in full of all of the 2021 Series I Bonds. If such termination occurs prior to the final maturity of the 2021 Series I Bonds, the Issuer shall give notice of such termination in the same manner as for a Listed Event under Section 5.

SECTION 7. Dissemination Agent; Filings.

(a) The Issuer may, from time to time, appoint or engage a Dissemination Agent to assist it in carrying out its obligations under this Disclosure Agreement, and may discharge any such Dissemination Agent, with or without appointing a successor Dissemination Agent. The Dissemination Agent shall not be responsible in any manner for the content of any notice or report prepared by the Issuer pursuant to this Disclosure Agreement. If at any time there is not any other designated Dissemination Agent, the Issuer shall be the Dissemination Agent. The initial Dissemination Agent shall be U.S. Bank National Association.

(b) Unless and until one or more different or additional Repositories are designated or authorized by the Securities and Exchange Commission, all filings with a Repository which are required by this Disclosure Agreement shall be filed with the MSRB through EMMA and shall be in an electronic format and accompanied by such identifying information as prescribed by the MSRB in accordance with the Rule.

SECTION 8. Amendment; Waiver. Notwithstanding any other provision of this Disclosure Agreement, the Issuer and the Dissemination Agent may amend this Disclosure Agreement, and any provision of this Disclosure Agreement may be waived, provided that the following conditions are satisfied:

(a) If the amendment or waiver relates to the provisions of Sections 3(a), 4, or 5(a), it may only be made in connection with a change in circumstances that arises from a change in legal requirements, change in law, or change in the identity, nature or status of an obligated person with respect to the 2021 Series I Bonds, or the type of business conducted;

(b) The undertaking, as amended or taking into account such waiver, would, in the opinion of nationally recognized bond counsel, have complied with the requirements of the Rule at the time of the original issuance of the 2021 Series I Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and

(c) The amendment or waiver either (1) is approved by the Holders of 60% of the 2021 Series I Bonds, or (2) does not, in the opinion of nationally recognized bond counsel, materially impair the interests of the Holders or Beneficial Owners of the 2021 Series I Bonds.

In the event of any amendment or waiver of a provision of this Disclosure Agreement, the Issuer shall describe such amendment in its next respective Annual Report, and shall include, as applicable, a narrative explanation of the reason for the amendment or waiver and its impact on the type (or, in the case of a change of accounting principles from those described in Section 4(a)(1), on the presentation) of financial information or operating data being presented by the Issuer. In addition, if the amendment relates to the accounting principles to be followed in preparing financial statements, (1) notice of such change shall be given in the same manner as for a Listed Event under Section 5, and (2) the Annual Report for the year in which the change is made should present a comparison (in narrative form and also, if feasible, in quantitative form) between the financial statements as prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles.

SECTION 9. Additional Information. Nothing in this Disclosure Agreement shall be deemed to prevent the Issuer from disseminating any other information, using the means of dissemination set forth in this Disclosure Agreement or any other means of communication, or including any other information in any Annual Report or notice of occurrence of a Listed Event, in addition to that which is required by this Disclosure Agreement. If the Issuer chooses to include any information in any Annual Report or notice of occurrence of a Listed Event in addition to that which is specifically required by this Disclosure Agreement, the Issuer shall have no obligation under this Disclosure Agreement to update such information or include it in any future Annual Report or notice of occurrence of a Listed Event.

SECTION 10. Default. In the event of a failure of the Issuer or the Dissemination Agent to comply with any provision of this Disclosure Agreement, the Trustee shall, at the request of any Participating Underwriter or the Holders of at least 25% aggregate principal amount of Outstanding Bonds and upon being indemnified to its satisfaction from and against any costs, liability, expenses and fees of the Trustee, including, without limitation fees and expenses of its attorneys, or any Holder or Beneficial Owner of the 2021 Series I Bonds may take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the Issuer or the Dissemination Agent, as the case may be, to comply with its obligations under this Disclosure Agreement. A default under this Disclosure Agreement shall not be deemed an Event of Default under the Resolution, and the sole remedy under this Disclosure Agreement in the event of any failure of the Issuer or the Dissemination Agent to comply with this Disclosure Agreement shall be an action to compel performance.

SECTION 11. Duties, Immunities and Liabilities of Dissemination Agent. The Dissemination Agent shall have only such duties as are specifically set forth in this Disclosure Agreement, and the Issuer agrees to indemnify and save the Dissemination Agent, its officers, directors, employees and agents, harmless against any loss, expense and liabilities which it may incur arising out of or in the exercise or performance of its powers and duties hereunder, including the costs and expenses (including attorneys' fees) of defending against any claim of liability, but excluding liabilities due to the Dissemination Agent's negligence or willful misconduct. The Dissemination Agent shall have only such duties as are specifically set forth in this Disclosure Agreement and no implied duties for obligation shall be read into this Disclosure Agreement against the Dissemination Agent. The Dissemination Agent has no power to enforce nonperformance on the part of the Issuer. The Dissemination Agent shall be paid compensation by the Issuer for its services provided hereunder in accordance with its schedule of fees provided to the Issuer and all expenses, legal fees and costs of the Dissemination Agent made or incurred by the Dissemination Agent in the performance of its duties hereunder. The obligations of the Issuer under this Section shall survive resignation or removal of the Dissemination Agent and payment of the 2021 Series I Bonds.

SECTION 12. Notices. Any notices or communications to or among any of the parties to this Disclosure Agreement may be given as follows:

To the Issuer:	Sacramento Municipal Utility District
	6201 S Street, MS B405
	Sacramento, California 95817
	Attention: Treasurer
	Telephone: (916) 732-6509
	Fax: (916) 732-5835

To the Dissemination Agent: U.S. Bank National Association
Global Corporate Trust
One California Street, Suite 1000
San Francisco, California 94111
Telephone: (415) 677-3699
Fax: (415) 677-3769

To the Trustee: U.S. Bank National Association
Global Corporate Trust
One California Street, Suite 1000
San Francisco, California 94111
Telephone: (415) 677-3699
Fax: (415) 677-3769

The Issuer, the Dissemination Agent and the Trustee may, by giving written notice hereunder to the other person listed above, designate a different address or telephone number(s) to which subsequent notices or communications should be sent. Unless specifically otherwise required by the context of this Disclosure Agreement, a party may give notice by any form of electronic transmission capable of producing a written record. Each such party shall file with the Trustee and Dissemination Agent information appropriate to receiving such form of electronic transmission.

SECTION 13. Beneficiaries. This Disclosure Agreement shall inure solely to the benefit of the Issuer, the Dissemination Agent, the Participating Underwriters and Holders and Beneficial Owners from time to time of the 2021 Series I Bonds, and shall create no rights in any other person or entity.

SECTION 14. Counterparts. This Disclosure Agreement may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

Dated: July __, 2021.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By _____
Treasurer

U.S. BANK NATIONAL ASSOCIATION,
as Dissemination Agent

By _____
Authorized Officer

ACKNOWLEDGED:

U.S. BANK NATIONAL ASSOCIATION, as Trustee

By: _____
Authorized Officer

EXHIBIT A

NOTICE TO REPOSITORIES OF FAILURE TO FILE ANNUAL REPORT

Name of Issuer: Sacramento Municipal Utility District
Name of Bond Issue: Electric Revenue Refunding Bonds, 2021 Series I
Name of Borrower: Sacramento Municipal Utility District
Date of Issuance: July __, 2021

NOTICE IS HEREBY GIVEN that the Sacramento Municipal Utility District (the “Issuer”) has not provided an Annual Report with respect to the above-named Bonds as required by Section 137.11 of Resolution No. 21-06-__, adopted June 17, 2021, by the Issuer. [The Issuer anticipates that the Annual Report will be filed by _____.]

Dated: _____

U.S. BANK NATIONAL ASSOCIATION,
on behalf of Sacramento Municipal Utility District

cc: Sacramento Municipal Utility District

Vice President Rose then turned to Discussion Calendar Item 13, to certify that the Station H Substation Project (Project) Final Environmental Impact Report (FEIR) complies with the California Environmental Quality Act (CEQA); adopt the Mitigation Monitoring and Reporting Plan for the Project; adopt the California Environmental Quality Act Findings and Statement of Overriding Considerations in Connection with Station H Substation Project; and approve the Project.

Emily Bacchini, Manager, Environmental Services, provided a presentation on Item 13. A copy of the slides used in her presentation is attached hereto.

No public comment was received on agenda item 13.

After some discussion, Director Tamayo moved for approval of Discussion Calendar Item 13, Director Fishman seconded, and Resolution No. 21-06-11 was unanimously approved.

RESOLUTION NO. 21-06-11

WHEREAS, this Board has adopted policies stating this Board is committed to meeting customers' electrical energy needs (SD-4); demonstrating environmental leadership through community engagement, continuous improvement in pollution prevention, carbon reduction, energy efficiency, and conservation (SD-7); and providing a power supply that is sustainable (SD-9); and

WHEREAS, the **Station H Substation Project (Project)** proposes to construct a new substation in the City of Sacramento on the northeast corner of 6th Street and H Street in downtown Sacramento in the current location of the Station A Substation yard, with the Station A building remaining vacant and utilized independent of Station H; and

WHEREAS, Station A is nearing the end of its service life and will be replaced with the new Station G currently being constructed on an adjacent property; and

WHEREAS, upon completion of the Station G substation, SMUD proposes to decommission Station A and remove all electrical substation-related equipment from within the historical Old Folsom Powerhouse Sacramento Station A building and the outdoor substation yard in order to then construct Station H, which is critical to ensuring SMUD can serve expected load growth within the downtown area; and

WHEREAS, as required by the **California Environmental Quality Act (CEQA)**, a **Notice of Preparation** was made available for public review from November 4, 2020, to December 8, 2020, and a public meeting was held on November 16, 2020, with one member of the public in attendance; and

WHEREAS, the **Project Draft Environmental Impact Report (DEIR)** was released for a 45-day public review period from March 17, 2021, through April 30, 2021, and a public meeting was held on April 8, 2021, with one member of the public in attendance; and

WHEREAS, during the **CEQA** process, SMUD consulted with four Native American Tribes, sent letters to 500 members of the public and agencies,

and four comments were received from local agencies during the comment period; and

WHEREAS, the **Project Final Environmental Impact Report (Project FEIR)** provides the **CEQA** analysis for the **Project**, and the **Mitigation Monitoring and Reporting Plan** incorporated environmental avoidance, mitigation and improvement measures; and

WHEREAS, the **Project FEIR** was prepared and issued for public review for a 10-day period on June 7, 2021; and

WHEREAS, Tribal consultation was completed, and all comments received during the public review period have been responded to as appropriate and incorporated into the **Project FEIR** and **Mitigation Monitoring and Reporting Plan**, which will require certification by the SMUD Board of Directors; and

WHEREAS, all impacts other than to Tribal Cultural resources (e.g., aesthetics and visual resources, air quality, cultural, biological, geology, climate change, hazards, hydrology, noise, utilities, wildfire) will either experience no impacts or can be mitigated to less-than-significant levels with the implementation of the **Mitigation Monitoring and Reporting Plan**; and

WHEREAS, the **Project FEIR** identifies potentially significant and unavoidable impacts to Tribal cultural resources that may result from construction and operation of the **Project** that will require the SMUD Board of Directors to make a **Statement of Overriding Considerations** when certifying the **Project FEIR** and approving the **Project**; and

WHEREAS, the **Project FEIR** and **Mitigation Monitoring and Reporting Plan** are located in the records of SMUD under the custody of the Environmental Services Department; **NOW THEREFORE**,

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

Section 1. This Board has reviewed and considered the information in the **Station H Substation Project (Project) Final Environmental Impact Report (FEIR)** and **Mitigation Monitoring and Reporting Plan** and (1) certifies that the **Project FEIR** complies with the **California Environmental**

Quality Act (CEQA); (2) adopts the Mitigation Monitoring and Reporting Plan, as set forth in Attachment I; (3) adopts the California Environmental Quality Act Findings and Statement of Overriding Considerations in Connection With Station H Substation Project as set forth in Attachment J; and (4) approves the Project.

Section 2. The Environmental Services Department is directed to file with the County Clerk of Sacramento County, a Notice of Determination, which shall set forth the information required by **CEQA**.

Approved: June 17, 2021

INTRODUCED: DIRECTOR TAMAYO				
SECONDED: DIRECTOR FISHMAN				
DIRECTOR	AYE	NO	ABSTAIN	ABSENT
BUI-THOMPSON	X			
ROSE	X			
FISHMAN	X			
HERBER	X			
KERTH	X			
TAMAYO	X			
SANBORN	X			

Sacramento Municipal Utility District Station H Substation Project

Final Environmental Impact Report • June 2021
State Clearinghouse #2020110057

Powering forward. Together.



Sacramento Municipal Utility District

Station H Substation Project

Final Environmental Impact Report

State Clearinghouse #2020110057

June 2021

Lead Agency:

Sacramento Municipal Utility District
6201 S Street, MS B209
Sacramento, CA 95817-1899

or

P.O. Box 15830 MS B209
Sacramento, CA 95852-1830
Attn: Rob Ferrera
(916) 732-6676 or rob.ferrera@smud.org

Prepared by:

Ascent Environmental
455 Capitol Mall, Suite 300
Sacramento, CA 95814
Contact: Cori Resha
Cori.Resha@ascentenvironmental.com

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Acronyms and Abbreviations

AB	Assembly Bill
ADL	aerially deposited lead
Basin Plan	Fifth Edition of the Water Quality Control Plan
BMP	best management practices
CCR	California Code of Regulations
Central Valley Water Board	Central Valley Regional Water Quality Control Board
City	City of Sacramento's
CSS	combined sewer system
Draft EIR	draft environmental impact report
DTSC	Department of Toxic Substances Control
Final EIR	final environmental impact report
IS	Initial Study
MMRP	Mitigation Monitoring and Reporting Program
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
project	Station H Substation Project
SMUD	Sacramento Municipal Utility District
SQIP	Stormwater Quality Improvement Plan
the Board	Board of Directors
USACE	United States Army Corps of Engineers
WDR	Waste Discharge Requirement

1 Introduction

On March 17, 2021, the Sacramento Municipal Utility District (SMUD) released for public review the draft environmental impact report (Draft EIR) for the proposed Station H Substation Project (project). The EIR describes the existing conditions of the project site (the existing Station A Substation), analyzes the potential environmental impacts of the project, and identifies mitigation measures where necessary and available to avoid or reduce the magnitude of potentially significant impacts of the project. As part of the project, SMUD would decommission and remove outdated Station A equipment that is currently present at the project site and replace the existing equipment within the outdoor area between the historic Station A building and the Mercy Housing Community to the east with new outdoor substation equipment.

1.1 Public Review and Response to Comments

In accordance with Sections 15087 and 15105 of the State CEQA Guidelines, the Draft EIR was circulated for public review and comment to lead and responsible agencies, as well as members of the public, for 45 days (March 17, 2021 through April 30, 2021). SMUD also held a public meeting on April 8, 2021 to receive comments on the Draft EIR. Written comment letters received on the Draft EIR are provided in their entirety in Chapter 2, "Comments and Responses to Comments."

Responses to each of the comments received are provided in this document as part of the final environmental impact report (Final EIR). None of the comments require changes to the text of the Draft EIR. Therefore, there are no changes that constitute "significant new information," which would require recirculation of the Draft EIR. Significant new information is defined in Section 15088.5(a) of the State CEQA Guidelines as follows:

- (1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
- (2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
- (3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.
- (4) The Draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

None of these circumstances have arisen from comments on the Draft EIR; therefore, recirculation is not required.

The Draft EIR, Final EIR, and associated appendices are available for review online at: <https://www.smud.org/stationh>

and at the following locations:

Sacramento Municipal Utility District
Customer Service Center
6301 S Street
Sacramento, CA 95817

Sacramento Municipal Utility District
East Campus Operations Center
4401 Bradshaw Road
Sacramento, CA 95827

As required by State CEQA Guidelines Section 15088(b), SMUD has provided a printed or electronic copy (through the SMUD's website; see prior discussion) to each public agency that submitted written comments on the Draft EIR with written responses to that public agency's comments at least 10 days prior to consideration of the Final EIR for certification.

1.2 Organization of the Responses to Comments

Chapter 2 of the Final EIR consists of the written comments received on the Draft EIR, and presents responses to environmental issues raised in the comments (as required by State CEQA Guidelines Section 15132). The focus of the responses to comments is on the disposition of significant environmental issues that are raised in the comments, as required by Section 15088(c) of the State CEQA Guidelines.

Each comment letter has been reproduced with individual comments bracketed and numbered. Responses to the comments follow each letter. For example, the response to the second comment of the first letter would be indicated as Response to Comment 1-2.

1.3 Comments that Require Responses

Section 15088(c) of the State CEQA Guidelines specifies that the focus of the responses to comments shall be on the disposition of significant environmental issues. Responses are not required on comments regarding the merits of the project or on issues not related to the project's environmental impacts. Comments on the merits of the proposed project or other comments that do not raise environmental issues will be reviewed by SMUD's Board of Directors (the Board) before an action is taken on the project. The responses address environmental issues and indicate where issues raised are not environmental or address the merits of the projects. In the latter instance, no further response is provided.

1.4 Project Decision Process

This document and the Draft EIR together constitute the Final EIR, which will be considered by the Board before a decision on whether to approve the project. If the Board decides to approve the project, it must first certify that the Final EIR was completed in compliance with CEQA's requirements, was reviewed and considered by the Board, and reflects the Board's independent judgment and analysis, as required by State CEQA

Guidelines Section 15090. The Board would then be required to adopt findings of fact on the disposition of each significant environmental impact, as required by State CEQA Guidelines Section 15091. If significant and unavoidable impacts (those that cannot be mitigated to a less-than-significant level) would result from the project and the Board chooses to approve the project, the Board would need to adopt a statement of overriding considerations, pursuant to State CEQA Guidelines Section 15093, explaining the overriding factors that the Board deems allow the project to move forward. In the case of the proposed Station H Substation Project, there would be significant and unavoidable impacts related to Tribal cultural resources. A Mitigation Monitoring and Reporting Program, which is required by CEQA Guidelines Section 15091(d), has been included as part of Chapter 3 of this Final EIR.

1.5 Project Updates

As discussed in Section 1.1, “Public Review and Response to Comments,” above, CEQA requires recirculation of an EIR when the lead agency adds “significant new information” to an EIR, regarding changes to the project description or the environmental setting, after public notice is given of the availability of a draft EIR for public review under State CEQA Guidelines, California Code of Regulations (CCR) Section 15087, but before EIR certification (State CEQA Guidelines CCR Section 15088.5[a]). Recirculation is not required unless the EIR is changed in a way that would deprive the public of the opportunity to comment on significant new information, including a new significant impact in which no feasible mitigation is available to fully mitigate the impact (thus resulting in a significant and unavoidable impact), a substantial increase in the severity of a disclosed environmental impact, or development of a new feasible alternative or mitigation measures that would clearly lessen environmental impacts but that the project proponent declines to adopt (State CEQA Guidelines CCR Section 15088.5[a]). Recirculation is not required when the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR (State CEQA Guidelines CCR Section 15088.5[b]).

Since release of the Draft EIR, SMUD has continued to coordinate with the Native American Tribes under AB 52. At this time, SMUD and the Tribes have agreed that AB 52 consultation has been completed, though SMUD will continue to coordinate with the Tribes regarding implementation of the mitigation measures as discussed below.

1.5.1 Tribal Consultation Update

Assembly Bill (AB) 52 requires that lead agencies undertaking CEQA consult with California Native American Tribes upon the Tribes’ written request and evaluate in the EIR the potential for projects to affect Tribal cultural resources. Section 3.1, “Tribal Cultural Resources,” of the Draft EIR describes the consultation that has occurred between the tribes and SMUD pursuant to AB 52. In particular, the Draft EIR (refer to pages 3.1-8 and 3.1-9) summarizes the consultation process that occurred prior to release of the Draft EIR for public review. During the Draft EIR public review period, SMUD continued to coordinate with the Tribes, including submitting a draft of the

treatment plan required by Mitigation Measure 3.1-1a (found on page 3.1-13 of the Draft EIR) for Tribes to review. Additionally, SMUD and the Tribes have continued discussions regarding the implementation of Mitigation Measures 3.1-1b and 3.1-1c (found on pages 3.1-13 and 3.1-14 of the Draft EIR).

Based on these further communications, Tribal consultation under AB 52 has been completed. This project update does not constitute significant new information that would require recirculation of the document because no new significant or substantially more severe environmental impacts that cannot be mitigated to a less-than-significant level through mitigation already included in the Draft EIR have been identified.

2 Comments and Responses to Comments

This chapter contains the comment letters received during the public review period for the Draft EIR, which concluded on April 30, 2021. In conformance with Section 15088(a) of the State CEQA Guidelines, written responses were prepared addressing comments on environmental issues received from reviewers of the Draft EIR.

2.1 Commenters on the Draft EIR

Table 2-1 below indicates the alpha-numerical designation for the comment letters received, the author of the comment letter, and the date of the comment letter. Comment letters have been numbered in the order they were received by SMUD.

Table 2-1 List of Commenters

Letter Number	Commenter	Date
<i>State</i>		
S1	California Department of Toxic Substances Control Gavin McCreary, Project Manager, Site Evaluation and Remediation Unit	March 19, 2021
S2	Central Valley Regional Water Quality Control Board Angela Nguyen-Tan, Environmental Scientist	April 23, 2021
<i>Local</i>		
L1	Sacramento Fire Department King Tunson, Program Specialist, Fire Planning Entitlements/Administration	March 18, 2021
L2	Sacramento Metropolitan Air Quality Management District Rachel DuBose, Air Quality Planner/Analyst	April 29, 2021

2.2 Comments and Responses on the Draft EIR

The written comments received on the Draft EIR and the responses to those comments are provided in this section of the Final EIR. The comment letters received are reproduced in their entirety and followed by the response(s) to the letter. Each comment within the letters is indicated by a line bracket and an identifying number in the margin of the comment letter. The responses that follow the letter are numbered, corresponding to the comment number in the bracketed letter.

All comments and provided herein are included within the record for consideration by the SMUD Board of Directors (the Board) as part of the Station H Substation Project.

State



Jared Blumenfeld
Secretary for
Environmental Protection



Department of Toxic Substances Control

Meredith Williams, Ph.D.
Director
8800 Cal Center Drive
Sacramento, California 95826-3200



Gavin Newsom
Governor

Letter
S1

March 19, 2021

Mr. Rob Ferrera
Sacramento Municipal Utility District
6201 S Street
Sacramento, CA 95817
Rob.Ferrera@smud.org

DRAFT ENVIRONMENTAL IMPACT REPORT FOR STATION H SUBSTATION
PROJECT – DATED MARCH 2021 (STATE CLEARINGHOUSE NUMBER:
2020110057)

Mr. Ferrera:

The Department of Toxic Substances Control (DTSC) received a Draft Environmental Impact Report (EIR) for Station H Substation Project (Project). The Lead Agency is receiving this notice from DTSC because the Project includes one or more of the following: groundbreaking activities, work in close proximity to a roadway, work in close proximity to mining or suspected mining or former mining activities, presence of site buildings that may require demolition or modifications, importation of backfill soil, and/or work on or in close proximity to an agricultural or former agricultural site.

S1-1

DTSC recommends that the following issues be evaluated in the EIR Hazards and Hazardous Materials section:

1. The EIR should acknowledge the potential for historic or future activities on or near the project site to result in the release of hazardous wastes/substances on the project site. In instances in which releases have occurred or may occur, further studies should be carried out to delineate the nature and extent of the contamination, and the potential threat to public health and/or the environment should be evaluated. The EIR should also identify the mechanism(s) to initiate any required investigation and/or remediation and the government agency who will be responsible for providing appropriate regulatory oversight.
2. Refiners in the United States started adding lead compounds to gasoline in the 1920s in order to boost octane levels and improve engine performance. This practice did not officially end until 1992 when lead was banned as a fuel additive in California. Tailpipe emissions from automobiles using leaded gasoline contained lead and resulted in aerially deposited lead (ADL) being deposited in

S1-2

S1-3

Mr. Rob Ferrera
March 19, 2021
Page 2

and along roadways throughout the state. ADL-contaminated soils still exist along roadsides and medians and can also be found underneath some existing road surfaces due to past construction activities. Due to the potential for ADL-contaminated soil DTSC, recommends collecting soil samples for lead analysis prior to performing any intrusive activities for the project described in the EIR.	S1-3 cont.
3. If any sites within the project area or sites located within the vicinity of the project have been used or are suspected of having been used for mining activities, proper investigation for mine waste should be discussed in the EIR. DTSC recommends that any project sites with current and/or former mining operations onsite or in the project site area should be evaluated for mine waste according to DTSC's 1998 Abandoned Mine Land Mines Preliminary Assessment Handbook (https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/11/aml_handbook.pdf).	S1-4
4. If buildings or other structures are to be demolished on any project sites included in the proposed project, surveys should be conducted for the presence of lead-based paints or products, mercury, asbestos containing materials, and polychlorinated biphenyl caulk. Removal, demolition and disposal of any of the above-mentioned chemicals should be conducted in compliance with California environmental regulations and policies. In addition, sampling near current and/or former buildings should be conducted in accordance with DTSC's 2006 <i>Interim Guidance Evaluation of School Sites with Potential Contamination from Lead Based Paint, Termiticides, and Electrical Transformers</i> (https://dtsc.ca.gov/wpcontent/uploads/sites/31/2018/09/Guidance_Lead Contamination_050118.pdf).	S1-5
5. If any projects initiated as part of the proposed project require the importation of soil to backfill any excavated areas, proper sampling should be conducted to ensure that the imported soil is free of contamination. DTSC recommends the imported materials be characterized according to DTSC's 2001 <i>Information Advisory Clean Imported Fill Material</i> (https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/SMP_FS_Cleanfill-Schools.pdf).	S1-6
6. If any sites included as part of the proposed project have been used for agricultural, weed abatement or related activities, proper investigation for organochlorinated pesticides should be discussed in the EIR. DTSC recommends the current and former agricultural lands be evaluated in accordance with DTSC's 2008 <i>Interim Guidance for Sampling Agricultural Properties (Third Revision)</i> (https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/Ag-Guidance-Rev-3-August-7-2008-2.pdf).	S1-7
DTSC appreciates the opportunity to comment on the EIR. Should you need any assistance with an environmental investigation, please submit a request for Lead Agency Oversight Application, which can be found at: https://dtsc.ca.gov/wp-	S1-8

Mr. Rob Ferrera
March 19, 2021
Page 3

[content/uploads/sites/31/2018/09/VCP_App-1460.doc](#). Additional information regarding voluntary agreements with DTSC can be found at: <https://dtsc.ca.gov/brownfields/>.

If you have any questions, please contact me at (916) 255-3710 or via email at Gavin.McCreary@dtsc.ca.gov.

S1-8
cont.

Sincerely,



Gavin McCreary
Project Manager
Site Evaluation and Remediation Unit
Site Mitigation and Restoration Program
Department of Toxic Substances Control

cc: (via email)

Governor's Office of Planning and Research
State Clearinghouse
State.Clearinghouse@opr.ca.gov

Mr. Dave Kereazis
Office of Planning & Environmental Analysis
Department of Toxic Substances Control
Dave.Kereazis@dtsc.ca.gov

<i>Letter S1 Response</i>	<i>California Department of Toxic Substances Control Gavin McCreary, Project Manager March 19, 2021</i>
S1-1	The comment introduces the Department of Toxic Substances Control's (DTSC's) jurisdiction over certain activities that may be part of the project. The comment is introductory in nature and does not address the content, analysis, or conclusions in the Draft EIR. No further response is required.
S1-2	<p>The comment states that the EIR should acknowledge the potential for historic or future activities on or near the project site to result in the release of hazardous wastes/substances on the project site.</p> <p>As discussed on pages 3-9 and 3-10 of the Draft EIR, small quantities of hazardous materials such as fuels and lubricants would be used during project construction and the project would be required to comply with existing laws and regulations regarding the transportation, use, and disposal of hazardous materials. Also, SMUD would conduct testing of soils to be removed from the project site and ongoing groundwater testing (performed by others) would continue to take place in the South Plume Groundwater Study Area. Finally, the project is not located on an active site included on a list of hazardous materials sites. For these reasons, the project would not result in significant impacts related to hazards and hazardous materials, and this issue is not discussed further in the Draft EIR.</p>
S1-3	The comment states that soils could be contaminated with aurally deposited lead (ADL), and DTSC recommends collecting soil samples for lead analysis prior to performing any intrusive activities for the project. As discussed in Response to Comment S1-2, SMUD would conduct testing of soils prior to their removal from the project site. Should any contamination be identified during on-site testing, SMUD would follow all applicable regulations regarding transportation and disposal of the contaminated soil.
S1-4	The comment states that proper investigation for mine waste should be discussed if any sites within the project area or sites located within the vicinity of the project have been used or are suspected of having been used for mining activities. As discussed on page 65 of the Initial Study (IS) prepared for the project and included as Appendix B of the Draft EIR, the soils underneath the project site are classified as MRZ-1, which indicates no significant mineral deposits are located beneath ground surface at the project site. Also, based on the known history of the site as an electrical substation and previous Native American and Chinese use of the site, it is not likely that the project site has been used for mining activities.

- S1-5 The comment states that surveys should be conducted for the presence of lead-based paints or products, mercury, asbestos containing materials, and polychlorinated biphenyl caulk. The comment further states that removal, demolition, and disposal of any of these chemicals should be conducted in compliance with California environmental regulations and policies.
- As discussed in Chapter 3, “Project Description,” of the Draft EIR, the project would include the removal of existing equipment but would not include demolition of on-site structures that may contain the materials listed by the commenter. Also, SMUD will evaluate soil samples during project construction to determine whether there is any soil contamination. As discussed on pages 56 and 57 of the IS (Appendix B of the Draft EIR), should any hazardous materials or conditions be discovered during project construction activities, the project would comply with existing laws and regulations related to the use, disposal, and transport of hazardous materials.
- S1-6 The comment states that sampling should be conducted on imported soil to ensure that it is free from contamination. As stated on page 2-7 of the Draft EIR, SMUD anticipates excavation and removal of existing soil and import either backfill soil or virgin aggregate base to re-establish grade within the site, though removal and import volumes are not yet known. SMUD will adhere to all applicable regulatory guidance regarding imported soil, including DTSC’s 2001 *Information Advisory Clean Imported Fill Material* (DTSC 2001).
- S1-7 The comment states that proper investigation for organochlorinated pesticides should be discussed if any sites included as part of the proposed project have been used for agricultural, weed abatement, or related activities. As discussed in Chapter 3, “Project Description,” of the Draft EIR, the project site is in a highly developed area of downtown Sacramento and has been the site of outdoor electrical facilities for approximately 70 years. Thus, it is unlikely that the project site was ever used for agricultural activities that could have involved modern organochlorinated pesticides, and no further investigation is needed.
- S1-8 The comment provides contact information should SMUD require additional information or assistance from DTSC. As the comment does not address the content, analysis, or conclusions in the Draft EIR, no further response is required.

**Letter
S2**

Central Valley Regional Water Quality Control Board

23 April 2021

Rob Ferrera
Sacramento Municipal Utility District
6201 S Street
Sacramento, CA 95817
rob.ferrera@smud.org

**COMMENTS TO REQUEST FOR REVIEW FOR THE DRAFT ENVIRONMENTAL
IMPACT REPORT, STATION H SUBSTATION PROJECT, SCH#2020110057,
SACRAMENTO COUNTY**

Pursuant to the State Clearinghouse's 17 March 2021 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Draft Environmental Impact Report* for the Station H Substation Project, located in Sacramento County.

S2-1

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

I. Regulatory Setting**Basin Plan**

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

S2-2

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of

KARL E. LONGLEY ScD, P.E., CHAIR | PATRICK PULUPA, ESQ., EXECUTIVE OFFICER

11020 Sun Center Drive #200, Rancho Cordova, CA 95670 | www.waterboards.ca.gov/centralvalley

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Sacramento County

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Administrative Law (OAL) and in some cases, the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues. For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:
http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/

S2-2
cont.**Antidegradation Considerations**

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Implementation Policy is available on page 74 at:

https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_2018_05.pdf

In part it states:

Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.

S2-3

This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements**Construction Storm Water General Permit**

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit), Construction General Permit Order No. 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). For more information on the Construction General Permit, visit the State Water Resources Control Board website at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

S2-4

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Phase I and II Municipal Separate Storm Sewer System (MS4) Permits¹

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

S2-5

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ. For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml

S2-6

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACE). If a Section 404 permit is required by the USACE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements. If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACE at (916) 557-5250.

S2-7

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic

S2-8

¹ Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

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General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications. For more information on the Water Quality Certification, visit the Central Valley Water Board website at:
https://www.waterboards.ca.gov/centralvalley/water_issues/water_quality/certification/

S2-8
cont.**Waste Discharge Requirements – Discharges to Waters of the State**

If USACE determines that only non-jurisdictional waters of the State (i.e., “non-federal” waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation. For more information on the Waste Discharges to Surface Water NPDES Program and WDR processes, visit the Central Valley Water Board website at:
https://www.waterboards.ca.gov/centralvalley/water_issues/waste_to_surface_water/

S2-9

Projects involving excavation or fill activities impacting less than 0.2 acre or 400 linear feet of non-jurisdictional waters of the state and projects involving dredging activities impacting less than 50 cubic yards of non-jurisdictional waters of the state may be eligible for coverage under the State Water Resources Control Board Water Quality Order No. 2004-0004-DWQ (General Order 2004-0004). For more information on the General Order 2004-0004, visit the State Water Resources Control Board website at:
https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2004/wqo/wqo2004-0004.pdf

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Threat General Order) 2003-0003 or the Central Valley Water Board’s Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Threat Waiver) R5-2018-0085. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

S2-10

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf



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For more information regarding the Low Threat Waiver and the application process, visit the Central Valley Water Board website at:
https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2018-0085.pdf

S2-10
cont.

Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Limited Threat Discharges to Surface Water* (Limited Threat General Order). A complete Notice of Intent must be submitted to the Central Valley Water Board to obtain coverage under the Limited Threat General Order. For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:

S2-11

https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0076-01.pdf

NPDES Permit

If the proposed project discharges waste that could affect the quality of surface waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit. For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at: <https://www.waterboards.ca.gov/centralvalley/help/permit/>

S2-12

If you have questions regarding these comments, please contact me at (916) 464-0335 or Angela.Nguyen-Tan@waterboards.ca.gov.

S2-13

Angela Nguyen-Tan
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research,
Sacramento

<i>Letter S2 Response</i>	<i>Central Valley Regional Water Quality Control Board Angela Nguyen-Tan, Environmental Scientist April 23, 2021</i>
S2-1	The comment presents introductory information regarding the Central Valley Regional Water Quality Control Board (Central Valley Water Board) and its jurisdiction over certain activities that may be part of the project. The comment is introductory in nature and does not address the content, analysis, or conclusions in the Draft EIR; no further response is required.
S2-2	The comment provides an overview of the regulatory responsibility of the Central Valley Water Board, including its requirement to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act and provides regulatory background. The comment does not address the content, analysis, or conclusions in the Draft EIR; no further response is required.
S2-3	<p>The comment states that all wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The comment also states that environmental review document should evaluate potential impacts to both surface and groundwater quality. As stated on page 59 of the IS (Appendix B of the Draft EIR), drainage from the project flows into the City of Sacramento's (City's) combined sewer system (CSS) where it flows to a wastewater treatment plant and is eventually discharged to the Sacramento River. As such, the applicable water quality standards are listed in the Fifth Edition of the Water Quality Control Plan (Basin Plan) for the Sacramento River and San Joaquin River Basins.</p> <p>The City's Grading, Erosion, and Sediment Control Ordinance (Title 15, City of Sacramento Municipal Code, Chapter 15.88) includes specific standards for project construction related to erosion control. Although the substation component of this project is exempt from this ordinance pursuant to Government Code § 53091(d), SMUD and its contractors will comply with the substance of these standards both during and following the completion of project construction.</p>
S2-4	The comment states that dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit), Construction General Permit Order No. 2009-0009-DWQ. As stated on page 59 of the IS (Appendix B of the Draft

EIR), because the project is not expected to disturb more than one acre of land, coverage would not be needed under the Construction General Permit. However, consistent with City requirements, the project would be required to implement best management practices (BMPs) intended to reduce pollutants in stormwater and other non-point source runoff. The City's Grading, Erosion, and Sediment Control Ordinance (Title 15, City of Sacramento Municipal Code, Chapter 15.88) includes specific standards for project construction related to erosion control. Although the substation component of this project is exempt from this ordinance pursuant to Government Code § 53091(d), SMUD and its contractors will comply with the substance of these standards both during and following the completion of project construction.

- S2-5 The comment states that Phase I and II Municipal Separate Storm Sewer System (MS4) permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using BMPs. As noted on page 59 of the IS (Appendix B of the Draft EIR), stormwater at the project site drains to the City's CSS where it is then conveyed to one of two facilities for primary treatment before discharge to the Sacramento River. CSS flows and discharges are currently regulated by the provisions of Waste Discharge Requirement Order No. R5-2015-0045 (NPDES No. CA0079111).
- S2-6 The comment states that stormwater discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ. The project would include the rebuilding of the site for continued use as an electrical substation, which would not discharge stormwater associated with industrial activity. The City's Grading, Erosion, and Sediment Control Ordinance (Title 15, City of Sacramento Municipal Code, Chapter 15.88) includes specific standards for project construction related to erosion control. Although the substation component of this project is exempt from this ordinance pursuant to Government Code § 53091(d), SMUD and its contractors will comply with the substance of these standards both during and following the completion of project construction.
- S2-7 The comment states that a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACE) if the project would involve the discharge of dredged or fill material in navigable waters or wetlands. As discussed on page 40 of the IS (Appendix B of the Draft EIR), the project site does not contain any wetland, stream, or other aquatic habitat that could be considered jurisdictional waters of the United States or state and all project activities would take place within previously developed areas.

- S2-8 The comment states that a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities if a USACE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States. As discussed in Response to Comment S2-7, the project site does not contain any wetland, stream, or other aquatic habitat that could be considered jurisdictional waters of the United States or state, and no permits from USACE or other federal agency(ies) related to disturbance of waters of the United States would be required.
- S2-9 The comment states that if USACE determines that only non-jurisdictional waters of the State (i.e., “non-federal” waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. As discussed on page 40 of the IS (Appendix B of the Draft EIR), the project site does not contain any wetland, stream, or other aquatic habitat that could be considered jurisdictional waters of the United States or state and all project activities would take place within previously developed areas.
- S2-10 The comment states that if the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Threat General Order) 2003-0003 or the Central Valley Water Board’s Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Threat Waiver) R5-2018-0085. As discussed on page 61 of the IS (Appendix B of the Draft EIR), should dewatering be required during project construction, water would be collected and treated prior to discharge, in accordance with City requirements.
- S2-11 The comment states that if the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Please see Response to Comment S2-10.
- S2-12 The comment states that if the proposed project discharges waste that could affect the quality of surface waters of the State, other than into a community sewer system, the proposed project will require coverage under an NPDES permit. As discussed on page 59 of the IS (Appendix B of the Draft EIR), drainage from the project site flows into the City of Sacramento’s CSS. Therefore, the project would not require coverage under an NPDES permit.

- S2-13 The comment provides contact information should SMUD have any questions about the Central Valley Water Board's comments. As the comment does not address the content, analysis, or conclusions in the Draft EIR, no further response is required.

Local

Letter
L1

From: King Tunson <ktunson@sfd.cityofsacramento.org>
Sent: Friday, March 26, 2021 12:02 PM
To: Rob Ferrera <Rob.Ferrera@smud.org>; Scott Johnson <SRJohnson@cityofsacramento.org>
Cc: Sarai Ochoa <sochoa@cityofsacramento.org>
Subject: [EXTERNAL] RE: SMUD Station H Draft EIR

CAUTION: This email originated from outside of SMUD. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Rob,

Thanks for providing the document. I've reviewed and don't have any comments.

King Tunson
Program Specialist
Fire Planning Entitlements/Administration
Sacramento Fire Department
5770 Freeport Blvd, Ste 200
Sacramento, CA 95822
Office (916) 808-1358
Fax (916) 808-1677
ktunson@sfd.cityofsacramento.org

L1-1

*Letter
L1
Response*

*Sacramento Fire Department
King Tunson, Program Specialist, Fire Planning
Entitlements/Administration
March 18, 2021*

L1-1

The comment states that the Sacramento Fire Department does not have any comments on the Draft EIR. As the comment does not address the content, analysis, or conclusions in the Draft EIR, no further response is required.

Letter
L2

CAUTION: This email originated from outside of SMUD. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Rob,
The Sac Metro Air District has reviewed the Station H DEIR and has no comments.
Best regards,
Rachel DuBose

L2-1

Rachel DuBose
Air Quality Planner/Analyst
Desk: (916) 874-4876
www.AirQuality.org
 [@AQMD](mailto:Rachel.DuBose@AQMD)

*Letter
L2
Response*

*Sacramento Metropolitan Air Quality Management District
Rachel DuBose, Air Quality Planner/Analyst
April 29, 2021*

L2-1

This comment states that the Sacramento Metropolitan Air Quality Management District does not have any comments on the Draft EIR. As the comment does not address the content, analysis, or conclusions in the Draft EIR, no further response is required.

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3 Mitigation Monitoring and Reporting Program

This mitigation monitoring and reporting program (MMRP) summarizes the mitigation measures, implementation schedule, and responsible parties for monitoring the mitigation measures required of the proposed Station H Substation Project, as set forth in the EIR prepared for the project.

Section 21081.6 of the California Public Resources Code and Section 15091(d) and Section 15097 of the State CEQA Guidelines require public agencies “to adopt a reporting or monitoring program for changes to the project which it has adopted or made conditions of project approval to mitigate or avoid significant effects on the environment.” An MMRP is required for the project because the EIR for the project identified potentially significant adverse impacts related to construction and operation of the project, and mitigation measures have been identified to reduce most of those impacts to a less-than-significant-level.

This MMRP will be adopted by SMUD if it approves the project and will be kept on file at SMUD’s Customer Service Center at 6301 S Street, Sacramento, CA 95817; and at SMUD’s East Campus Operations Center at 4401 Bradshaw Road, Sacramento, CA 95827. SMUD will use this MMRP to ensure that identified mitigation measures, adopted as a condition of project approval, are implemented appropriately.

3.1 Mitigation Implementation and Monitoring

SMUD will be responsible for monitoring the implementation of mitigation measures designed to minimize impacts associated with the project. While SMUD has ultimate responsibility for ensuring implementation, others may be assigned the responsibility of actually implementing the mitigation. SMUD will retain the primary responsibility for ensuring that the project meets the requirements of this MMRP and other permit conditions imposed by participating regulatory agencies.

SMUD will designate specific personnel who will be responsible for monitoring implementation of the mitigation that will occur during project construction. The designated personnel will be responsible for submitting documentation and reports to SMUD on a schedule consistent with the mitigation measure and in a manner necessary for demonstrating compliance with mitigation requirements. SMUD will ensure that the designated personnel have authority to require implementation of mitigation requirements and will be capable of terminating project construction activities found to be inconsistent with mitigation objectives or project approval conditions.

SMUD and its appointed contractor will also be responsible for ensuring that its construction personnel understand their responsibilities for adhering to the performance requirements of the mitigation plan and other contractual requirements related to the implementation of mitigation as part of project construction. In addition to the prescribed mitigation measures, Table 3-1 lists each identified environmental resource being affected (in the same order and using the same numbering system as in the EIR), the associated CEQA checklist question (used as the thresholds of significance in the EIR),

the corresponding monitoring and reporting requirement, the party responsible for ensuring implementation of the mitigation measure and monitoring effort, and the project component to which the mitigation measure applies.

If an issue addressed in the EIR does not result in mitigation, it is not included in the table.

3.2 Mitigation Enforcement

SMUD will be responsible for enforcing mitigation measures. If alternative measures are identified that would be equally effective in mitigating the identified impacts, implementation of these alternative measures will not occur until agreed upon by SMUD.

3.3 Reporting

SMUD shall, or may require the developer to, prepare a monitoring report upon completion of the project describing the compliance of the activity with the required mitigation measures. Information regarding inspections and other requirements shall be compiled and explained in the report. The report shall be designed to simply and clearly identify whether mitigation measures have been adequately implemented. At a minimum, each report shall identify the mitigation measures or conditions to be monitored for implementation, whether compliance with the mitigation measures or conditions has occurred, the procedures used to assess compliance, and whether further action is required. The report shall be presented to SMUD's Board of Directors.

3.4 Regulatory Considerations

In addition to the mitigation measures set forth in this MMRP, SMUD complies with all applicable regulations and statutes, including but not limited to the following:

- The City of Sacramento's noise restrictions (Title 8, City of Sacramento Municipal Code, Chapter 8.68), which restricts the days and hours of construction noise, will be followed.
- The City's Grading, Erosion, and Sediment Control Ordinance (Title 15, City of Sacramento Municipal Code, Chapter 15.88) includes specific standards for project construction related to erosion control. Although the substation component of this project is exempt from this ordinance pursuant to Government Code § 53091(d), SMUD and its contractors will comply with the substance of these standards both during and following the completion of project construction.
- Should groundwater be encountered during project construction, testing would occur in accordance with DTSC and Regional Water Quality Control Board (RWQCB) requirements prior to dewatering activities. This may include seeking coverage under RWQCB's General Order for Dewatering (R5-2013-0074). If dewatering activities are needed, they would include the potential use of Baker tanks and/or filtration bags, if needed, to treat water prior to discharge into the City's stormdrain system and/or sewer system.

It should be noted that this discussion of regulatory requirements is not intended to be all-inclusive; site specific conditions and activities may require compliance with other regulations or statutes.

3.5 Mitigation Monitoring and Reporting Program Table

The categories identified in the attached MMRP table are described below.

Checklist Section – This column identifies which CEQA issue area the mitigation measure is attributed to in the EIR.

Impact or Environmental Criteria – This column provides the verbatim text of the impact statement included in the EIR or the CEQA Appendix G checklist questions for issues not further evaluated in the EIR.

Mitigation Measure – This column provides the verbatim text of the adopted mitigation measure.

Implementation Duration – This column identifies when the mitigation measure shall be implemented (e.g., prior to construction, during construction, prior to occupancy, etc.).

Monitoring Duration – This column identifies the period within which monitoring shall be conducted.

Responsibility – This column identifies the party(ies) responsible for implementation and/or enforcing compliance with the requirements of the mitigation measure.

Applicable Project Component – This column identifies with what component or under what conditions the mitigation measure should be implemented (e.g., during high wind conditions, construction within wetlands, etc.).

Checklist Section	Impact or Environmental Criteria	Mitigation Measure	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
3.18 Tribal Cultural Resources	Impact 3.1-1: Cause a substantial adverse change in the significance of a Tribal cultural resource, including human remains.	Mitigation Measure 3.1-1a: Prepare and implement a treatment plan. Before ground disturbance associated with the project, SMUD shall, in cooperation with UAIC, Wilton Rancheria, Lone Band of Miwok Indians, and Shingle Springs Band of Miwok Indians, finalize a treatment plan specific to the site. The treatment plan shall include, but is not limited to:	Prior to ground disturbance	During construction activities	SMUD	SMUD
	Impact 3.2-3: Change the significance of a prehistoric archaeological resource.	<ul style="list-style-type: none"> • testing, • excavation strategy, • research design, • Tribal monitoring, • resource significance assessment methods, • discovery, preservation, and evaluation methods, • a burial treatment agreement, • reporting requirements, and • health and safety procedures. <p>The testing portion of the treatment plan shall be implemented once Station A has been safely decommissioned; if resources are discovered during testing, the treatment plan would continue to be implemented throughout ground disturbing activities on the project site.</p>				
		Mitigation Measure 3.1-1b: Prepare and implement worker cultural resources awareness and respect training program. A cultural resources respect training program will be provided to all construction personnel active on the project site prior to implementation of earth moving activities. A representative or representatives from culturally affiliated Native American Tribe(s) will be	Prior to and during construction activities (ground disturbance)	During construction activities (ground disturbance)	SMUD	SMUD

Checklist Section	Impact or Environmental Criteria	Mitigation Measure	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
		invited to participate in the development and delivery of the cultural resources awareness and respect training program in coordination with a qualified archaeologist meeting the United States Secretary of Interior guidelines for professional archaeologists. The program will include relevant information regarding sensitive Tribal cultural resources, including protocols for resource avoidance, applicable laws regulations, and the consequences of violating them. The program will also underscore the requirement for confidentiality and culturally-appropriate treatment of any find of significance to Native Americans and protocols, consistent, to the extent feasible, with Native American Tribal values.				
		Mitigation Measure 3.1-1c: Memorialize the Tribal cultural values of the project area through public education and awareness. To acknowledge the importance of the project area, particularly the area surrounding <i>Wanoho Pagan</i> , to California Native American Tribes, SMUD shall implement the following additional measures, regardless of whether Tribal cultural deposits related to P-34-2359 are encountered during project implementation: 1. In coordination with UAIC, Wilton Rancheria, Lone Band of Miwok Indians, and Shingle Springs Band of Miwok Indians, SMUD shall develop a program with the American River College Native American Resource Center to benefit Native American students by enhancing areas of need or potential and shall support the program with a financial contribution. The contribution shall begin in 2021 and span a 3-year period. The program and contribution will	Prior to operation	Prior to operation	SMUD	SMUD

Checklist Section	Impact or Environmental Criteria	Mitigation Measure	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
		<p>be developed with the American River College Native American Resource Center.</p> <p>2. In coordination with UAIC, Wilton Rancheria, Lone Band of Miwok Indians, and Shingle Springs Band of Miwok Indians, SMUD shall commission a piece of art or other appropriate monumentation to represent the Tribal cultural values of the project area. The art piece could be in the form of a mural, sculpture, informative plaque, or other representation agreed to by the Tribes.</p>				
3.5 Cultural Resources	Impact 3.2-1: Change in the significance of a historical resource.	<p>Mitigation Measure 3.2-1b: Comply with the Secretary of the Interior's Standards.</p> <ul style="list-style-type: none"> For all interior repairs to the Station A building that do not alter the external visual appearance of the building, review by an architectural historian is not required. For minor exterior repairs to the Station A building that do not alter the visual appearance of the building—such as tuck pointing—if the repairs are conducted in compliance with the Secretary's Standards and consistent with the "Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings" (Weeks and Grimmer 1995), then review by an architectural historian is not required. For larger exterior repairs to the Station A building—such as external sheer walls—repairs shall be conducted in compliance with the Secretary's Standards and consistent with the "Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines 	During construction activities	During construction activities	Contractor	SMUD

Checklist Section	Impact or Environmental Criteria	Mitigation Measure	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
		for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings” (Weeks and Grimmer 1995), and an architectural historian shall be retained to confirm that the repairs do not result in a change to the design of the Station A building such that the building would no longer qualify as a historical resource.				
3.5 Cultural Resources	Impact 3.2-2: Change the significance of a historic-period archaeological resource.	<p>Mitigation Measure 3.2-2: Halt ground-disturbing activity upon discovery of historic-period archaeological features.</p> <p>In the event that a historic-period archaeological site (such as concentrated deposits of bottles or bricks with makers marks, amethyst glass, or other historic refuse) is uncovered during grading or other construction activities, all ground-disturbing activity within 100 feet of the discovery shall be halted until a qualified archaeologist can assess the significance of the find. SMUD will be notified of the potential find and a qualified archeologist shall be retained to investigate its significance. Any previously undiscovered resources found during construction will be recorded on appropriate California Department of Parks and Recreation 523 forms and evaluated for significance under all applicable regulatory criteria. If the archaeologist determines that the find does not meet the CRHR standards of significance for cultural resources, construction may proceed. If the find is determined to be significant by the qualified archaeologist (i.e., because the find is determined to constitute either a historical resource or a unique archaeological resource), the archaeologist shall work with SMUD to follow accepted professional standards such as further testing for evaluation or data recovery, as necessary.</p>	During construction activities (ground disturbance)	During construction activities (ground disturbance)	Contractor	SMUD

Checklist Section	Impact or Environmental Criteria	Mitigation Measure	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
		If artifacts are recovered from significant historic-period archaeological resources, they shall be housed at a qualified curation facility. The results of the identification, evaluation, and/or data recovery program for any unanticipated discoveries shall be presented in a professional-quality report that details all methods and findings, evaluates the nature and significance of the resources, analyzes and interprets the results.				
3.3 Air Quality	<p>Conflict with or obstruct implementation of the applicable air quality plan?</p> <p>Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?</p>	<p>Mitigation Measure 3.3-1: Implement SMAQMD Basic Construction Emission Control Practices.</p> <p>During construction, the contractor shall comply with and implement SMAQMD's Basic Construction Emission Control Practices, which includes SMAQMD-recommended BMPs and BACT, for controlling fugitive dust emissions. Measures to be implemented during construction include the following:</p> <ul style="list-style-type: none"> • Water all exposed surfaces at least two times daily. Exposed surfaces include, but are not limited to, soil piles, graded areas, unpaved parking areas, staging areas, and access roads. • Cover or maintain at least two (2) feet of freeboard space on haul trucks transporting soil, sand, or other loose material on the site. Cover any haul trucks that will be traveling along freeways or major roadways. • Use wet power vacuum street sweepers to remove any visible track-out mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited. 	During construction activities	During construction activities	Contractor	SMUD

Checklist Section	Impact or Environmental Criteria	Mitigation Measure	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
		<ul style="list-style-type: none"> Limit vehicle speed on unpaved roads to 15 miles per hour. All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used. Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes (required by California Code of Regulations Title 13, Sections 2449[d][3] and 2485). Provide clear signage that posts this requirement for workers at the entrances to the site. Maintain all construction equipment in proper working condition according to manufacturer's specifications. Equipment will be checked by a certified mechanic and determined to be running in proper condition before it is operated. 				
3.4 Biological Resources	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California	<p>Mitigation Measure 3.4-1: Avoid disturbance of nesting birds</p> <p>If construction will occur during the nesting season (between February 1 and August 31), a SMUD project biologist/biological monitor will conduct pre-construction nesting bird surveys to determine if birds are nesting in the work area or within 0.25 mile for Swainson's hawk and 500 feet for all other nesting birds of the project site.</p> <p>The pre-construction nesting bird surveys will identify on-site bird species and any nest-building behavior. If no nesting Swainson's hawks are found on or within 0.25 mile or if no nesting birds are found on or within 500 feet of the project site during the pre-</p>	Prior to construction activities	Prior to construction activities	Qualified biologist	SMUD

Checklist Section	Impact or Environmental Criteria	Mitigation Measure	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
	Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	<p>construction clearance surveys, construction activities may proceed as scheduled.</p> <p>If pre-nesting behavior is observed, but an active nest of common nesting bird has not yet been established (e.g., courtship displays, but no eggs in a constructed nest), a nesting bird deterrence and removal program will be implemented. Such deterrence methods include removal of previous year's nesting materials and removal of partially completed nests in progress. Once a nest is situated and identified with eggs or young, it is considered to be "active" and the nest cannot be removed until the young have fledged.</p> <p>If active Swainson's hawk nests are found within the nest survey area, the construction contractor shall avoid impacts on such nests by establishing a no-disturbance buffer around the nest. Monitoring of the nest by a qualified biologist during construction activities shall be required if the activity has the potential to adversely affect the nest. Based on guidance for determining a project's potential for impacting Swainson's hawks (Swainson's hawk Technical Advisory Committee 2000), projects in urban areas have a low risk of adversely affecting nests greater than 600 feet from project activities. Therefore, 600 feet is anticipated to be the adequate buffer size for protecting nesting Swainson's hawks from disturbances associated with the proposed project. However, the qualified biologist shall consult with the California Department of Fish and Wildlife to confirm the adequacy of the no-disturbance buffer and/or if the buffer is reduced based on the biologist professional judgement.</p>				

Checklist Section	Impact or Environmental Criteria	Mitigation Measure	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
		<p>If an active nest of common bird species is found in or within 500 feet of the project site during construction, a “No Construction” buffer zone will be established around the active nest (usually a minimum radius of 50 feet for passerine birds and 500 feet for raptors) to minimize the potential for disturbance of the nesting activity. The project biologist/biological monitor will determine and flag the appropriate buffer size required, based on the species, specific situation, tolerances of the species, and the nest location. Project activities will resume in the buffer area when the project biologist/biological monitor has determined that the nest(s) is (are) no longer active or the biologist has determined that with implementation of an appropriate buffer, work activities would not disturb the bird’s nesting behavior.</p> <p>If special-status bird species are found nesting on or within 500 feet of the project site, the project biologist/biological monitor shall notify SMUD’s project manager to notify CDFW or USFWS, as appropriate, within 24 hours of first nesting observation.</p>				
3.13 Noise and Vibration	Generation of excessive groundborne vibration or groundborne noise levels? ¹	<p>Mitigation Measure 3.13-a: Implement measures to reduce ground vibration</p> <p>To reduce vibration impacts from construction activities, SMUD will require the design-build team and engineers to implement the following measures:</p> <ul style="list-style-type: none"> To the extent feasible, earthmoving and ground-impacting operations (e.g., pile drilling) will be phased so as not to occur simultaneously in areas close to sensitive receptors. The total vibration level produced could be significantly 	Prior to construction activities	During construction activities	Contractor and qualified acoustical engineer	SMUD
3.5 Cultural Resources	Impact 3.2-1: Change in the significance of a historical resource.					

¹ The evaluation of this impact included consideration of SMUD’s compliance with the construction-related noise restrictions enumerated in the City of Sacramento Noise Ordinance (Title 8, City of Sacramento Municipal Code, Chapter 8.68).

Checklist Section	Impact or Environmental Criteria	Mitigation Measure	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
		<p>less when each vibration source is operated at separate times.</p> <ul style="list-style-type: none"> Where there is flexibility in the location of activating involving the use of heavy-duty construction equipment, especially auger drill rigs for installing auger cast displacement piles, the equipment will be operated as far away from vibration-sensitive receptors as reasonably possible. 				
		<p>Mitigation Measure 3.13-b: Develop and implement a vibration control plan</p> <p>A vibration control plan will be developed by SMUD's design-build team to be submitted to and approved by SMUD prior to initiating any pile drilling activities. Applicable elements of the plan will be implemented before, during, and after pile drilling activity. The plan will consider all potential vibration-inducing activities that would occur and require implementation of sufficient measures to ensure that nearby sensitive receptors, including the historic Station A building, are not exposed to vibration levels that would result in structural damage. Items that will be addressed in the plan include, but are not limited to, the following:</p> <ul style="list-style-type: none"> Identification that the maximum allowable vibration levels at nearby buildings consist of Caltrans-recommended standards with respect to the prevention of architectural building damage, specifically: 0.25 in/sec PPV for the historic Station A building. SMUD or its contractor will conduct pre-construction surveys to identify any pre-existing 	Prior to construction activities	During construction activities	Contractor and qualified acoustical engineer	SMUD

Checklist Section	Impact or Environmental Criteria	Mitigation Measure	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
		<p>structural damage to the historic Station A building.</p> <ul style="list-style-type: none"> SMUD will identify minimum setback requirements for different types of ground vibration-producing activities (e.g., pile drilling) for the purpose of preventing damage to nearby structures and preventing negative human response will be established based on the proposed construction activities, locations, and the maximum allowable vibration levels identified above. Factors to be considered include the specific nature of the vibration producing activity, local soil conditions, and the fragility/resiliency of the nearby structures. Initial setback requirements can be breached if a project-specific, site specific analysis is conducted by a qualified geotechnical engineer or ground vibration specialist that indicates that no structural damage would occur at nearby buildings or structures. The construction contractor will monitor and document all pile drilling-generated vibration levels at the Station A building to ensure that applicable thresholds are not exceeded. The construction contractor will submit recorded vibration data on a twice-weekly basis to SMUD. If it is found at any time by the design-build team or SMUD that thresholds are exceeded, pile drilling will cease in that location and methods will be implemented to reduce vibration to below applicable thresholds, or an alternative construction method will be used at that location. 				

Checklist Section	Impact or Environmental Criteria	Mitigation Measure	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
3.17 Traffic and Transportation	Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	Mitigation Measure 3.17-1: Traffic Control Plan Prior to project construction within or adjacent to public roadways, SMUD's construction contractor shall develop a traffic control plan for the project and submit the plan to the City of Sacramento's Department of Public Works. The plan shall identify temporary lane, sidewalk, bicycle lane, and transit stop closures and provide information regarding how access and connectivity will be maintained during construction activities. The plan shall include details regarding traffic controls that would be employed, including signage, detours, and flaggers. The traffic control plan shall be implemented by the contractor during construction to allow for the safe passage of vehicles, pedestrians, and cyclists along the project route.	Prior to construction	During construction activities	Contractor	SMUD
	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?					
	Result in inadequate emergency access?					

4 References

Chapter 1, Introduction

No references cited.

Chapter 2, Comments and Responses

California Department of Toxic Substances Control. 2001 (October). Information Advisory Clean Imported Fill Material Fact Sheet. Available:
<https://dtsc.ca.gov/information-advisory-clean-imported-fill-material-fact-sheet/>.
Accessed May 12, 2021.

Chapter 3, Mitigation Monitoring and Reporting Program

No references cited.

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**CALIFORNIA ENVIRONMENTAL QUALITY ACT FINDINGS AND
STATEMENT OF OVERRIDING CONSIDERATIONS
IN CONNECTION WITH**

Station H Substation Project

SACRAMENTO MUNICIPAL UTILITY DISTRICT, STATION H SUBSTATION

I. Introduction

The Sacramento Municipal Utility District (SMUD) is lead agency under the California Environmental Quality Act (CEQA) for purposes of the Station H Substation Project, hereafter the Project. CEQA prohibits an agency from approving or carrying out a project for which significant effects have been identified, unless the agency can make one or more of a set of three findings set forth in Public Resources Code (PRC) section 21081, subdivision (a):

- (1) Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant effects on the environment.
- (2) Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency.
- (3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report. (See also California Code of Regulations [CCR] Title 14, section 15091.)

When significant effects are subject to a finding under paragraph (3) of subdivision (a), it means that before approving the project the lead agency must find that specific overriding economic, legal, social, technological, or other benefits of the project outweigh the significant effects on the environment. (PRC section 21081, subd.(b).)

CEQA requires public agencies to prepare a program for monitoring or reporting on the revisions which it requires in the project and the measures it has imposed to mitigate or avoid significant environmental effects. (CCR Title 14, section 15097, subd. (a).)

Under PRC section 21002.1, subdivision (d), when issuing an approval for an aspect of a project for which a lead agency has performed CEQA review, a responsible agency considers only the aspects of the project that the agency is required by law to carry out

or approve. SMUD, therefore, provides the following CEQA findings and mitigation monitoring and reporting plan (MMRP) (Attachment 1) that concern potentially significant impacts to resources identified by the lead agency as part of the CEQA review and in fulfillment of CCR Title 14, section 15097, subd. (a).

II. CEQA Compliance

SMUD, as the lead agency pursuant to CEQA, has prepared a Draft and Final Environmental Impact Report (EIR) for the proposed Station H Substation Project (Project). The SMUD Board of Directors (Board) hereby issues these Findings and concurrently certifies the EIR.

The Final EIR has been assigned State Clearinghouse Number 2020110057. The Final EIR consists of both the Draft EIR, as amended through responses to comments, as well as a volume with formal responses to comments received on the Draft EIR and a MMRP. The Final EIR assesses the potential environmental effects of implementation of the Project, identifies the means to eliminate or reduce potentially significant adverse environmental impacts, and evaluates a reasonable range of alternatives to the Project. The Final EIR also responds to comments on the Draft EIR, explains Project updates, and includes a MMRP that outlines the substance and timing of mitigation measures required for the Project.

Pursuant to PRC section 21081 and CCR Title 14, section 15090, the Board hereby certifies that it completed the following activities prior to taking action related to activities/phases evaluated under the Station H Substation Project EIR: the Board has received the Final EIR; the Board has reviewed and considered the information contained in the Final EIR and received through public comments; and the Board has considered all additional written and oral statements received prior to or at its public hearing on the Final EIR. The Board additionally certifies that the Final EIR was completed in compliance with CEQA (PRC section 21000 et seq.), the CEQA Guidelines (CCR Title 14, section 15000 et seq.), and SMUD's policies and procedures for the implementation of CEQA and that the Final EIR reflects the SMUD Board of Directors' independent judgment and analysis. The conclusions presented in these Findings are based on the Final EIR and other evidence in the administrative record.

The Findings set forth below pertain to the certification of the EIR for the Station H Substation Project.

Findings

Having received, reviewed, and considered the Final EIR and all other information in the administrative record, the Board hereby adopts the following Findings for the Station H



Substation Project EIR in compliance with CEQA, the CEQA Guidelines, and SMUD's procedures for implementing CEQA. The Board adopts these Findings and Statement of Overriding Considerations in conjunction with its approval of the Station H Substation Project EIR, as set forth below.

a. Project Description and Background

Located at the corner of H and 6th Streets in the city of Sacramento, SMUD's Station A electrical substation is nearing the end of its service life and is being replaced by the new Station G electrical substation (currently under construction) on an adjacent property to the north. Upon completion of Station G, SMUD is proposing to decommission Station A and remove all electrical substation related equipment from within the historic Old Folsom Powerhouse Sacramento Station A building (historic Station A building) and the outdoor substation yard. Following the removal of all Station A equipment, SMUD would construct a new electrical substation (Station H) at the same location of the outdoor substation along the north side of H Street between 6th Street and 7th Street in downtown Sacramento.

Once equipment associated with Station A has been decommissioned and the existing yard has been cleared, new equipment would be assembled and installed onsite. The proposed substation would include two 115 kV underground transmission lines, two 115/21 kV transformers and a metal building structure with a total of nine 21 kV circuit breakers. Station H would tie into the new Station G (currently under construction) via two new 115 kV transmission lines to be located within Government Alley, immediately north of the project site. The proposed electrical equipment to be located on site is anticipated to be no taller than existing Station A equipment currently located at the site, which is approximately 30 feet tall.

As part of the project, SMUD may use limited amounts of Sulfur Hexafluoride (SF₆), a common insulating gas for high-voltage electrical systems, at the project site. Use of the proposed switchgear equipment would comply with recordkeeping, reporting, and leakage emission limit requirements in accordance with California Air Resources Board regulations for reduction of SF₆ emissions. As part of substation operations and maintenance activities, SMUD would monitor existing substation equipment to accurately and immediately identify any SF₆ leaks and immediately repair leaks that are discovered. SMUD is also an active member of the SF₆ Emission Reduction Partnership, which focuses on reducing emissions of SF₆ from transmission and distribution sources.

A canopy structure is proposed to be located between the new Station H substation yard and the historical Station A building. The canopy would be approximately the same height as the existing equipment in the outdoor area with a maximum height expected to be approximately 30 feet in height at its tallest point. The canopy roof would be angled and is designed to shield the control building in the event that bricks fall from the exterior of

the Station A building. Prior to the decommissioning of Station A, the structural integrity of the historic Station A building would be evaluated to determine whether upgrades would be required to prevent damage to new substation equipment. Should the study determine that the structural failure of the Station A building would not occur or upgrades could be completed that would ensure structural integrity, the canopy may not be needed.

Operation and access of the new substation generally would be similar to the existing Station A substation yard. Maintenance workers and other SMUD employees would periodically access the site through Government Alley. The historical Station A building would remain unoccupied; however, SMUD personnel would periodically conduct routine checks and maintenance, and the Station A building would be used for storage.

The decommissioning of Station A is anticipated to begin in the second half of 2022 and would be completed by early 2023. The construction of Station H is anticipated to begin soon after the decommission of Station A and would be completed in 2024. Construction intensity and hours would be in accordance with the City's Noise Ordinance, contained in Title 8, Chapter 8.68 of the Sacramento City Code. Construction would be limited to the hours between 7 a.m. and 6 p.m. Monday through Saturday, and between the hours of 9 a.m. and 6 p.m. on Sunday.

b. Absence of Significant New Information

CEQA Guidelines section 15088.5 requires a lead agency to recirculate an EIR for further review and comment when significant new information is added to the EIR after public notice is given of the availability of the draft EIR but before certification. New information includes: (i) changes to the project; (ii) changes in the environmental setting; or (iii) additional data or other information. CEQA Guidelines section 15088.5 further provides that "[n]ew information added to an EIR is not 'significant' unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement."

Comments received on the Draft EIR generally identified standard regulatory requirements, as discussed in Chapter 2, "Comments and Responses to Comments," of the Final EIR. Each comment has been responded to in the Final EIR and none of the comments triggered the need to recirculate the Draft EIR.

Having reviewed the information contained in the Draft and Final EIR, and in the administrative record, including all comments received, as well as the requirements under CEQA Guidelines section 15088.5 and interpretive judicial authority regarding recirculation of draft EIRs, The Board hereby finds that no significant new information was added to the Draft EIR after the public review period. The Board specifically finds that: no

new significant environmental impact would result from the project or from the implementation of a mitigation measure; no substantial increase in the severity of an environmental impact would result, or if such an increase would result, SMUD has adopted mitigation measures to reduce the impact to a level of insignificance; SMUD has not declined to adopt any feasible project alternative or mitigation measures considerably different from others previously analyzed that would clearly lessen the environmental impacts of the project; and the Draft EIR is not so fundamentally and basically inadequate in nature that it precluded meaningful public review.

Having reviewed the information in the Draft EIR, Final EIR, and administrative record, the Board finds that no new significant information was added to the EIR following public review, and recirculation of the EIR is therefore unnecessary and not required by CEQA.

c. Environmental Impacts Summary

As required by CEQA and the CEQA Guidelines, the following section summarizes the direct, indirect, and cumulative environmental impacts of the Project identified in the Final EIR and includes the Board's Findings regarding those impacts and any mitigation measures set forth in the Final EIR, adopted by the Board, and incorporated as requirements of the Project. These Findings summarize the determinations of the Final EIR with respect to the Project's impacts before and after mitigation and do not attempt to describe the full analysis of each environmental impact considered in the Final EIR. Instead, the Findings provide a summary of each impact, describe the applicable mitigation measures identified in the Final EIR and adopted by the Board, and state the Board's Findings regarding the significance of each impact with the adopted mitigation measures. The Final EIR contains a full explanation of each impact, mitigation measure, and the analysis that led SMUD to its conclusions on that impact. These Findings hereby incorporate by reference the discussion and analysis in the Final EIR, which support the Final EIR's determinations regarding the Project's environmental impacts and mitigation measures. In making these Findings, the Board ratifies, adopts, and incorporates by reference the Final EIR's analysis, determinations, and conclusions relating to environmental impacts and mitigation measures. The substantial evidence supporting these findings and conclusions is set forth in the Final EIR and the record of proceedings.

The Board hereby adopts, and incorporates as conditions of approval, the mitigation measures set forth in the findings below to reduce or avoid the potentially significant impacts of the Project. In adopting the mitigation measures described below, the Board intends to adopt each of the mitigation measures recommended in the Final EIR. Accordingly, in the event that a mitigation measure recommended in the Final EIR has been inadvertently omitted from these Findings, that mitigation measure is hereby adopted and incorporated by reference in the Findings. Additionally, in the event that the description of mitigation measures set forth below fails accurately to capture the

substance of a given mitigation measure due to a clerical error (as distinct from specific and express modification by the Board through these Findings), the language of the mitigation measure as set forth in the Final EIR shall govern.

1. Significant and Unavoidable Adverse Impacts and Related Mitigation Measures

Pursuant to PRC section 21081(b) and CEQA Guidelines section 15093, where the lead agency identifies significant adverse environmental impacts that cannot feasibly be mitigated to a less-than-significant level, the lead agency may nonetheless approve the project if it finds that specific economic, legal, social, technological, or other benefits of the project outweigh the unavoidable significant environmental impacts.

Tribal Cultural Resources

Impact 3.1-1: Cause a substantial adverse change in the significance of a Tribal cultural resource, including human remains. The NCIC records search and consultation with Wilton Rancheria, UAIC, Lone Band of Miwok Indians, and Shingle Springs Band of Miwok Indians identified two Tribal cultural resources (P-24-5225 and P-34-2359) as described under AB 52. Because project-related, ground-disturbing activities could result in damage to Tribal cultural resources, the project could cause a potentially significant impact.

Mitigation Measure 3.1-1a: Prepare and implement a treatment plan.

Before ground disturbance associated with the project, SMUD shall, in cooperation with UAIC, Wilton Rancheria, Lone Band of Miwok Indians, and Shingle Springs Band of Miwok Indians, finalize a treatment plan specific to the site. The treatment plan shall include, but is not limited to:

- testing,
- excavation strategy,
- research design,
- Tribal monitoring,
- resource significance assessment methods,
- discovery, preservation, and evaluation methods,
- a burial treatment agreement,
- reporting requirements, and
- health and safety procedures.

The testing portion of the treatment plan shall be implemented once Station A has been safely decommissioned; if resources are discovered during testing, the treatment plan would continue to be implemented throughout ground disturbing activities on the project site.

Mitigation Measure 3.1-1b: Prepare and implement worker cultural resources awareness and respect training program.

A cultural resources respect training program will be provided to all construction personnel active on the project site prior to implementation of earth moving activities. A representative or representatives from culturally affiliated Native American Tribe(s) will be invited to participate in the development and delivery of the cultural resources awareness and respect training program in coordination with a qualified archaeologist meeting the United States Secretary of Interior guidelines for professional archaeologists. The program will include relevant information regarding sensitive Tribal cultural resources, including protocols for resource avoidance, applicable laws regulations, and the consequences of violating them. The program will also underscore the requirement for confidentiality and culturally-appropriate treatment of any find of significance to Native Americans and protocols, consistent, to the extent feasible, with Native American Tribal values.

Mitigation Measure 3.1-1c: Memorialize the Tribal cultural values of the project area through public education and awareness.

To acknowledge the importance of the project area, particularly the area surrounding *Wanoho Pakan*, to California Native American Tribes, SMUD shall implement the following additional measures, regardless of whether Tribal cultural deposits related to P-34-2359 are encountered during project implementation:

1. In coordination with UAIC, Wilton Rancheria, Lone Band of Miwok Indians, and Shingle Springs Band of Miwok Indians, SMUD shall develop a program with the American River College Native American Resource Center to provide education about the history and culture of, among other things, Tribal resources, practices, landscapes and identity within and around the project area, which will benefit Native American students by enhancing areas of need or potential and shall support the program with a financial contribution. The contribution shall begin in 2021 and span a 3-year period. The program and contribution will be developed with the American River College Native American Resource Center.
2. In coordination with UAIC, Wilton Rancheria, Lone Band of Miwok Indians, and Shingle Springs Band of Miwok Indians, SMUD shall commission a piece of art or other appropriate monumentation to represent the Tribal cultural values of the project area. The art piece could be in the form of a mural, sculpture, informative plaque, or other representation agreed to by the Tribes.

Finding: The Board finds that there are no feasible mitigation measures that will reduce the potential identified significant impact to a level below significant. Pursuant to Public Resources Code section 21081(a)(1) and CEQA Guidelines section 15091(a)(1), specific

economic, legal, social, technological, or other considerations make any mitigation measures infeasible. In consultation with the Tribes, staff determined that due to the Tribes consideration of the sacredness of the land in addition to the potential for disturbing important Tribal cultural resources that mitigation will not reduce the impacts to less than significant. Therefore, this impact would remain significant and unavoidable. However, pursuant to Public Resources Code section 21081(b), see Statement of Overriding Considerations for the specific overriding economic, legal, social, technological, and other benefits of the Project that outweigh this significant and unavoidable impact.

Impact 3.1-2: Potential for the Station H Substation project, in combination with other development, to contribute to a significant cumulative impact to Tribal cultural resources including human remains. The Station H Substation project, in combination with other cumulative development in the area, could result in impacts to Tribal cultural resources in the area. Even with the implementation of project-specific mitigation measures, the potential remains for indigenous archaeological and Tribal cultural resources to be damaged, and as a result, the project's potential contribution would remain cumulatively considerable. Potential impacts would, therefore, be significant.

Implement Mitigation Measures 3.1-1a, b, and c listed above.

Finding: The Board finds that there are no feasible mitigation measures that will reduce the identified significant impact to a level below significant. Pursuant to Public Resources Code section 21081(a)(1) and CEQA Guidelines section 15091(a)(1), specific economic, legal, social, technological, or other considerations make any mitigation measures infeasible. Therefore, this impact would remain significant and unavoidable. However, pursuant to Public Resources Code section 21081(b), see Statement of Overriding Considerations for the specific overriding economic, legal, social, technological, and other benefits of the Project that outweigh this significant and unavoidable impact.

2. Issues for which the Project would have a Less-than-Significant Impact with Project-specific Mitigation Measures Incorporated

Pursuant to PRC section 21081(a)(1) and CEQA Guidelines section 15091(a)(1), the following potentially significant impacts identified in the Final EIR will be reduced to less-than-significant impacts through the implementation of the mitigation measures hereby incorporated into the Project.

Cultural Resources

Impact 3.2-1: Change in the significance of a historical resource. The Station A building has been identified as a historical resource. The project could include possible structural stabilization upgrades to the building. Additionally, construction-related

groundborne vibration could result in damage to the buildings. Therefore, there would be a potentially significant impact on the historical resource.

Mitigation Measure 3.2-1a: Limit ground vibration during construction.

Implement Mitigation Measures 3.13-a: Implement measures to reduce ground vibration; and Mitigation Measure 3.13-b: Develop and implement a vibration control plan.

Mitigation Measure 3.2-1b: Comply with the Secretary of the Interior's Standards.

- For all interior repairs to the Station A building that do not alter the external visual appearance of the building, review by an architectural historian is not required.
- For minor exterior repairs to the Station A building that do not alter the visual appearance of the building—such as tuck pointing—if the repairs are conducted in compliance with the Secretary's Standards and consistent with the "Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings" (Weeks and Grimmer 1995), then review by an architectural historian is not required.
- For larger exterior repairs to the Station A building—such as external sheer walls—repairs shall be conducted in compliance with the Secretary's Standards and consistent with the "Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings" (Weeks and Grimmer 1995), and an architectural historian shall be retained to confirm that the repairs do not result in a change to the design of the Station A building such that the building would no longer qualify as a historical resource.

Finding: The Board finds that implementation of the Station H Project could damage historical resources. Adoption and incorporation of Mitigation Measures 3.2-1a and 3.2-1b into the Project would reduce potential impacts from groundborne vibration on historical resources to a less-than-significant level. Therefore, the Project with mitigation will not cause significant impacts to a historical resource.

Impact 3.2-2: Change the significance of a historic-period archaeological resource.

Results of the records search for the project site did not indicate any known historic-period archaeological sites or materials. However, project-related ground-disturbing activities could result in the discovery or damage of undiscovered historic-period archaeological resources. This would be a potentially significant impact.

Mitigation Measure 3.2-2: Halt ground-disturbing activity upon discovery of historic-period archaeological features.

In the event that a historical-period archaeological site (such as concentrated deposits of bottles or bricks with makers marks, amethyst glass, or other historic refuse) is uncovered during grading or other construction activities, all ground-disturbing activity within 100 feet of the discovery shall be halted until a qualified archaeologist can assess the significance of the find. SMUD will be notified of the potential find and a qualified archeologist shall be retained to investigate its significance. Any previously undiscovered resources found during construction will be recorded on appropriate California Department of Parks and Recreation 523 forms and evaluated for significance under all applicable regulatory criteria. If the archaeologist determines that the find does not meet the CRHR standards of significance for cultural resources, construction may proceed. If the find is determined to be significant by the qualified archaeologist (i.e., because the find is determined to constitute either a historical resource or a unique archaeological resource), the archaeologist shall work with SMUD to follow accepted professional standards such as further testing for evaluation or data recovery, as necessary. If artifacts are recovered from significant historic-period archaeological resources, they shall be housed at a qualified curation facility. The results of the identification, evaluation, and/or data recovery program for any unanticipated discoveries shall be presented in a professional-quality report that details all methods and findings, evaluates the nature and significance of the resources, analyzes and interprets the results.

Finding: The Board finds that implementation of the Station H Project could damage historical-period archaeological resources. Adoption and incorporation of Mitigation Measure 3.2-2 into the Project would reduce potential impacts to archaeological resources to a less-than-significant level. Therefore, the Project with mitigation will not cause significant impacts to historic-period archaeological resources.

Impact 3.2-3: Change the significance of a prehistoric archaeological resource. Results of the NCIC records search identified P-34-2359 as a prehistoric archaeological resource. Because project-related ground-disturbing activities could result in damage to this resource, this would be a potentially significant impact.

Mitigation Measure 3.2-3: Identify and protect prehistoric archaeological resources.

Implement Mitigation Measures 3.1-3a: Prepare and implement a treatment plan; and Mitigation Measure 3.1-3b: Prepare and implement worker cultural resources awareness and respect training program.

Finding: The Board finds that implementation of the Station H Project could damage prehistoric archaeological resources. Adoption and incorporation of Mitigation Measure 3.2-3 into the Project would reduce potential impacts to prehistoric archaeological

resources to a less-than-significant level. Therefore, the Project with mitigation will not cause significant impacts to prehistoric archaeological resources.

Impact 3.2-4: Potential for the Station H Substation project, in combination with other development, to contribute to a significant cumulative impact to cultural resources. The Station H Substation project, in combination with other cumulative development in the area, could result in impacts to cultural resources in the area. Through the implementation of project-specific mitigation measures, the contribution of the project would not be cumulatively considerable with respect to historical resources and archaeological resources. Potential impacts would be significant.

See Mitigation Measures 3.2-1a, 3.2-1b, 3.2-2, and 3.2-3.

Finding: The Board finds that implementation of the Station H Project could result in significant cumulative impacts to cultural resources. Adoption and incorporation of Mitigation Measures 3.2-1a, 3.2-1b, 3.2-2, and 3.2-3 into the Project would reduce potential cumulative impacts to cultural resources to a less-than-significant level. Therefore, the Project with mitigation will not cause significant cumulative impacts to cultural resources.

Air Quality

IS Checklist Impact 3.3-a: Conflict with or obstruct implementation of the applicable air quality plan? As shown in Table 3.3-2 of the IS, project construction would generate daily emissions of PM₁₀ and PM_{2.5} in excess of the SMAQMD thresholds during construction activities. Therefore, the impact of construction activities would be potentially significant.

Mitigation Measure 3.3-1: Implement SMAQMD Basic Construction Emission Control Practices.

During construction, the contractor shall comply with and implement SMAQMD's Basic Construction Emission Control Practices, which includes SMAQMD-recommended BMPs and BACT, for controlling fugitive dust emissions. Measures to be implemented during construction include the following:

- Water all exposed surfaces at least two times daily. Exposed surfaces include, but are not limited to, soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two (2) feet of freeboard space on haul trucks transporting soil, sand, or other loose material on the site. Cover any haul trucks that will be traveling along freeways or major roadways.

- Use wet power vacuum street sweepers to remove any visible track-out mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speed on unpaved roads to 15 miles per hour.
- All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes (required by California Code of Regulations Title 13, sections 2449[d][3] and 2485). Provide clear signage that posts this requirement for workers at the entrances to the site.
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. Equipment will be checked by a certified mechanic and determined to be running in proper condition before it is operated.

Finding: The Board finds that implementation of the Station H Project would result in temporary construction-generated emissions of air pollutants in excess of SMAQMD thresholds. Adoption and incorporation of Mitigation Measure 3.3-1 into the Project will reduce the impact to a less-than-significant level. Therefore, the Project with mitigation will not cause significant air quality impacts during construction activities associated with project implementation.

IS Checklist Impact 3.3-b: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? Sacramento County is currently in nonattainment for federal and State ozone, State PM₁₀, and federal PM_{2.5}. Ozone impacts are the result of cumulative emissions from numerous sources in the region and transport from outside the region. Ozone is formed in chemical reactions involving NO_x, ROG, and sunlight. Particulate matter also has the potential to cause significant local problems during periods of dry conditions accompanied by high winds, and during periods of heavy earth disturbing activities. Particulate matter (PM₁₀ and PM_{2.5}) may have cumulative local impacts if, for example, several unrelated grading or earth moving activities are underway simultaneously at nearby sites. This impact would be potentially significant.

Mitigation Measure 3.3-1: Implement SMAQMD Basic Construction Emission Control Practices.

During construction, the contractor shall comply with and implement SMAQMD's Basic Construction Emission Control Practices, which includes SMAQMD-

recommended BMPs and BACT, for controlling fugitive dust emissions. Measures to be implemented during construction include the following:

- Water all exposed surfaces at least two times daily. Exposed surfaces include, but are not limited to, soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two (2) feet of freeboard space on haul trucks transporting soil, sand, or other loose material on the site. Cover any haul trucks that will be traveling along freeways or major roadways.
- Use wet power vacuum street sweepers to remove any visible track-out mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speed on unpaved roads to 15 miles per hour.
- All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes (required by California Code of Regulations Title 13, sections 2449[d][3] and 2485). Provide clear signage that posts this requirement for workers at the entrances to the site.
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. Equipment will be checked by a certified mechanic and determined to be running in proper condition before it is operated.

Finding: The Board finds that implementation of the Station H Project would result in temporary construction-generated emissions of air pollutants in excess of SMAQMD thresholds. Adoption and incorporation of Mitigation Measure 3.3-1 into the Project will reduce the cumulative impact to a less-than-significant level. Therefore, the Project with mitigation will not cause significant cumulative air quality impacts during construction activities associated with project implementation.

Biological Resources

IS Checklist Impact 3.4-a: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

Project construction could include removal of one of the landscape trees and therefore has the potential to result in direct removal of bird nests. Additionally, construction activities occurring during the nesting season (between approximately February 1 and August 31), such as demolition, ground disturbance, and presence of construction equipment and crews, could generate noise and visual stimuli that may result in disturbance to active bird nests, if present, potentially resulting in nest abandonment.

Mitigation Measure 3.4-1: Avoid disturbance of nesting birds.

If construction will occur during the nesting season (between February 1 and August 31), a SMUD project biologist/biological monitor will conduct pre-construction nesting bird surveys to determine if birds are nesting in the work area or within 0.25 mile for Swainson's hawk and 500 feet for all other nesting birds of the project site.

The pre-construction nesting bird surveys will identify on-site bird species and any nest-building behavior. If no nesting Swainson's hawks are found on or within 0.25 mile or if no nesting birds are found on or within 500 feet of the project site during the pre-construction clearance surveys, construction activities may proceed as scheduled.

If pre-nesting behavior is observed, but an active nest of common nesting bird has not yet been established (e.g., courtship displays, but no eggs in a constructed nest), a nesting bird deterrence and removal program will be implemented. Such deterrence methods include removal of previous year's nesting materials and removal of partially completed nests in progress. Once a nest is situated and identified with eggs or young, it is considered to be "active" and the nest cannot be removed until the young have fledged.

If active Swainson's hawk nests are found within the nest survey area, the construction contractor shall avoid impacts on such nests by establishing a no-disturbance buffer around the nest. Monitoring of the nest by a qualified biologist during construction activities shall be required if the activity has the potential to adversely affect the nest. Based on guidance for determining a project's potential for impacting Swainson's hawks (Swainson's hawk Technical Advisory Committee 2000), projects in urban areas have a low risk of adversely affecting nests greater than 600 feet from project activities. Therefore, 600 feet is anticipated to be the adequate buffer size for protecting nesting Swainson's hawks from disturbances associated with the proposed project. However, the qualified biologist shall consult with the California Department of Fish and Wildlife to confirm the adequacy of the no-disturbance buffer and/or if the buffer is reduced based on the biologist professional judgement.

If an active nest of common bird species is found in or within 500 feet of the project site during construction, a “No Construction” buffer zone will be established around the active nest (usually a minimum radius of 50 feet for passerine birds and 500 feet for raptors) to minimize the potential for disturbance of the nesting activity. The project biologist/biological monitor will determine and flag the appropriate buffer size required, based on the species, specific situation, tolerances of the species, and the nest location. Project activities will resume in the buffer area when the project biologist/biological monitor has determined that the nest(s) is (are) no longer active or the biologist has determined that with implementation of an appropriate buffer, work activities would not disturb the bird’s nesting behavior.

If special-status bird species are found nesting on or within 500 feet of the project site, the project biologist/biological monitor shall notify SMUD’s project manager to notify CDFW or USFWS, as appropriate, within 24 hours of first nesting observation.

Finding: The Board finds that implementation of the Station H Project could disturb nesting avian species as a result of construction. Adoption and incorporation of Mitigation Measure 3.4-1 into the Project will reduce the impact to a less-than-significant level. Therefore, the Project with mitigation will not cause significant impacts to nesting avian species.

Noise and Vibration

IS Checklist Impact 3.13-b: Generation of excessive groundborne vibration or groundborne noise levels? Because construction would be temporary and would occur during the less sensitive daytime hours, human annoyance associated with construction vibration would have a less-than-significant impact. However, because of the potential for structural damage at the historic Station A building, this impact would be potentially significant.

Mitigation Measure 3.13-a: Implement measures to reduce ground vibration.

To reduce vibration impacts from construction activities, SMUD will require the design-build team and engineers to implement the following measures:

- To the extent feasible, earthmoving and ground-impacting operations (e.g., pile drilling) will be phased so as not to occur simultaneously in areas close to sensitive receptors. The total vibration level produced could be significantly less when each vibration source is operated at separate times.
- Where there is flexibility in the location of activating involving the use of heavy-duty construction equipment, especially auger drill rigs for installing auger cast

displacement piles, the equipment will be operated as far away from vibration-sensitive receptors as reasonably possible.

Mitigation Measure 3.13-b: Develop and implement a vibration control plan.

A vibration control plan will be developed by SMUD's design-build team to be submitted to and approved by SMUD prior to initiating any pile drilling activities. Applicable elements of the plan will be implemented before, during, and after pile drilling activity. The plan will consider all potential vibration-inducing activities that would occur and require implementation of sufficient measures to ensure that nearby sensitive receptors, including the historic Station A building, are not exposed to vibration levels that would result in structural damage. Items that will be addressed in the plan include, but are not limited to, the following:

- Identification that the maximum allowable vibration levels at nearby buildings consist of Caltrans-recommended standards with respect to the prevention of architectural building damage, specifically: 0.25 in/sec PPV for the historic Station A building.
- SMUD or its contractor will conduct pre-construction surveys to identify any pre-existing structural damage to the historic Station A building.
- SMUD will identify minimum setback requirements for different types of ground vibration-producing activities (e.g., pile drilling) for the purpose of preventing damage to nearby structures and preventing negative human response will be established based on the proposed construction activities, locations, and the maximum allowable vibration levels identified above. Factors to be considered include the specific nature of the vibration producing activity, local soil conditions, and the fragility/resiliency of the nearby structures. Initial setback requirements can be breached if a project-specific, site specific analysis is conducted by a qualified geotechnical engineer or ground vibration specialist that indicates that no structural damage would occur at nearby buildings or structures.
- The construction contractor will monitor and document all pile drilling-generated vibration levels at the Station A building to ensure that applicable thresholds are not exceeded. The construction contractor will submit recorded vibration data on a twice-weekly basis to SMUD. If it is found at any time by the design-build team or SMUD that thresholds are exceeded, pile drilling will cease in that location and methods will be implemented to reduce vibration to below applicable thresholds, or an alternative construction method will be used at that location.

Finding: The Board finds that implementation of the Station H Project could generate vibration that could damage the historic Station A building. Adoption and incorporation of Mitigation Measures 3.13-a and 3.13-b into the Project would reduce the impact to a less-than-significant level. Therefore, the Project with mitigation will not cause damage to a historic resource from groundborne vibration.

Traffic and Transportation

IS Checklist Impact 3.17-a: Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities? Project construction would temporarily interfere with existing vehicle, transit, bicycle, and pedestrian circulation as it would include temporary closures of roads, sidewalks, and bike lanes. Section 12.20.030 of the Sacramento Municipal Code requires. Because project construction activities could affect the existing circulation system, this impact would be potentially significant.

Mitigation Measure 3.17-1: Traffic Control Plan.

Prior to project construction within or adjacent to public roadways, SMUD's construction contractor shall develop a traffic control plan for the project and submit the plan to the City of Sacramento's Department of Public Works. The plan shall identify temporary lane, sidewalk, bicycle lane, and transit stop closures and provide information regarding how access and connectivity will be maintained during construction activities. The plan shall include details regarding traffic controls that would be employed, including signage, detours, and flaggers. The traffic control plan shall be implemented by the contractor during construction to allow for the safe passage of vehicles, pedestrians, and cyclists along the project route.

Finding: The Board finds that implementation of the Station H Project would potentially temporarily interfere with the existing circulation system during construction activities. Adoption and incorporation of Mitigation Measure 3.17-1 into the Project will reduce the impact to a less-than-significant level. Therefore, the Project with mitigation will not cause significant transportation impacts related to the circulation system.

IS Checklist Impact 3.17-c: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? Project construction would require temporary closure of vehicle lanes as well as sidewalks, bike lanes, and transit stops. This impact would be potentially significant.

Mitigation Measure 3.17-1: Traffic Control Plan.

Prior to project construction within or adjacent to public roadways, SMUD's construction contractor shall develop a traffic control plan for the project and submit the plan to the City of Sacramento's Department of Public Works. The plan shall identify temporary lane, sidewalk, bicycle lane, and transit stop closures and provide information regarding how access and connectivity will be maintained during construction activities. The plan shall include details regarding traffic controls that would be employed, including signage, detours, and flaggers. The traffic control plan shall be implemented by the contractor during construction to allow for the safe passage of vehicles, pedestrians, and cyclists along the project route.

Finding: The Board finds that implementation of the Station H Project would potentially temporarily interfere with the safe movement in the area during construction activities. Adoption and incorporation of Mitigation Measure 3.17-1 into the Project will reduce the impact to a less-than-significant level. Therefore, the Project with mitigation will not cause significant transportation impacts related to transportation hazards.

d. Alternatives

In compliance with CEQA and the CEQA Guidelines, Chapter 5, "Alternatives" of the Draft EIR evaluated a reasonable range of alternatives to the Project, including the No Project Alternative, followed by identification of an environmentally superior alternative. The EIR examined each alternative's feasibility and ability to meet the following Project Objectives:

- Provide safe and reliable electrical service to existing and proposed development in the downtown Sacramento area.
- Meet SMUD's goals of ensuring electrical service reliability in the downtown Sacramento area by 2024.
- Provide greater operational flexibility between circuits and substations in the area.
- Maximize the use of available SMUD property and resources.
- Minimize impacts to nearby sensitive receptors.
- Minimize potential conflicts with existing planning efforts within the City of Sacramento.

Potential alternatives found to be clearly infeasible, including a No Ground Disturbance Alternative, were rejected because they would not achieve most of the basic project objectives without further environmental review in Section 5.2.3 of the Draft EIR.

The No Project Alternative (Alternative A) and Alternatives that might have been feasible and that would attain many of the Project Objectives to some extent – including Alternative B (Site Reorientation) and Alternative C (Off-Site Alternative) – were carried forward and analyzed with regard to whether they would reduce or avoid significant impacts of the Project.

In connection with certification of the Final EIR for the Project, the Board certifies that it has independently reviewed and considered the information on alternatives provided in the Final EIR and the record of proceedings. The Board finds that no new alternatives have been identified and that the feasibility of the analyzed alternatives has not changed since the Draft EIR was circulated for public review. The Board certifies that it has independently reviewed and considered the information on alternatives provided in the Final EIR and the administrative record, and find, for the reasons set forth below, that each of the following alternatives cannot feasibly attain, either at all or to the same extent as the proposed Project, one or more of the Project Objectives, is otherwise infeasible or fails to avoid or substantially lessen the significant effects of the Station H Substation Project.

1. Alternative A (No Project)

Under this alternative, no new substation equipment would be installed within the yard of the former Station A. It is assumed that the existing equipment would continue to be used until it is no longer considered viable and then likely decommissioned and removed. Under this alternative, SMUD would not be able to provide reliable and safe electrical service to the anticipated level of development within the downtown Sacramento area.

This alternative would not meet any of the objectives identified above for the Project. Because this alternative would not attain any project objectives and for the reasons set forth above, Alternative A is rejected by the Board from further consideration.

2. Alternative B (Site Reorientation)

Under this alternative, new substation uses would be reoriented to maximize the distance between the known Tribal cultural resources and on-site ground disturbance. This would involve the removal of existing Station A equipment and abandonment in place of any subsurface equipment associated with Station A that is present within 35 feet of the southern boundary of the project site. Where feasible, any equipment to be placed within this area would be installed on concrete pads to minimize ground disturbance. Where feasible, all necessary subsurface utilities would also be routed north from the project site and then westward along Government Alley. This alternative would not remove any existing or otherwise planned subsurface utilities, including those associated with Station G, that extend through the eastern portion of the project site.

This alternative would achieve most of the project objectives but not to the degree of the project. It would not maximize the use of available SMUD property and resources and would not minimize impacts on nearby sensitive receptors. It would also potentially conflict with existing planning efforts within the City of Sacramento, such as the Central City Design Guidelines which requires utility connections to be designed to minimize their occurrence and mitigate their visual impact (City of Sacramento 2018:4-12). This alternative would also not meet the project objective of providing greater operational flexibility between circuits and substations in the area because no ground disturbance on the project site would necessitate additional connections in Government Alley, which is already crowded with various utility connections. Due to the site restrictions associated with this alternative, the overall capacity of the onsite substation would be reduced (up to one half of capacity), and depending on future development and electrical service needs in the area, the construction of additional substation facilities within the downtown Sacramento area may be required at a later date. Because this alternative would not attain project objectives and for the reasons set forth above, Alternative B is rejected by the Board from further consideration.

3. Alternative C (Off-Site Alternative)

Under this alternative, a new substation would be constructed at an offsite location generally north of Station G and south of the Union Pacific Railroad (UPRR) tracks. This analysis assumes an off-site location would be generally located north of Station G based on current development (i.e., currently undeveloped or under-utilized land). In addition, because of the challenges associated with routing substation lines under the UPRR tracks, it is further assumed that any off-site alternative location would need to be located south of the UPRR tracks. Based on these locational constraints development of a substation would impact the planning and approved development that is underway or has currently been completed on these parcels within this area. Obtaining approvals for the substation would be very difficult with this alternative. Given the feasibility considerations associated with off-site locations (e.g., cost increases and logistical challenges due to proximity to connecting infrastructure) that would come with locating the substation more distant to the service area and the required transmission infrastructure, this analysis focuses on a potential site that represents the nearest feasible off-site location as it would represent the least increase in impacts related to construction length and disturbance area. This is considered to be consistent with CEQA Guidelines Section 15126.6 and the intent/purpose of alternatives within an EIR. As potential off-site locations get farther away from the existing connections near Station G and H Street, there would be greater environmental effects from the increased construction.

The parcels located within the aforementioned area sites are zoned C-3 (Central Business District Zone), similar to the project site. The parcels are located within the Railyards Specific Plan (RSP) area. Currently, the parcels are mostly vacant but are within the RSP and planned for future development. Further, none of the parcels are

currently owned or otherwise controlled by SMUD. Existing equipment at the former Station A would be removed and subsurface facilities would be abandoned in place. However, this alternative would not remove any existing or otherwise planned subsurface utilities, including those associated with Station G, that extend through the eastern portion of the project site.

This alternative would require trenching to connect an off-site substation facility to existing infrastructure at the southeastern corner of the current Station A yard along H Street. Because of existing utility lines in 6th Street, the new connections required for this alternative would likely need to travel east along G Street, south along 7th Street, and west along H Street to the southeastern corner of the Station A yard for a range of approximately 1,000 feet to 2,000 feet of trenching and/or boring. Along 7th Street, there are light rail tracks located within the street, as well as numerous underground dry and wet utilities, which could require the installation of project features at greater depth (i.e., deeper excavation). Depending on the location of an off-site alternative, SMUD may be required to bore beneath these features if open trenching is not feasible, which would require the negotiation of easements to install necessary connections.

This alternative would achieve most of the project objectives but not to the degree of the project. By locating the new substation farther away from Station G and existing connections, Alternative C would not provide maximum operational flexibility. Because an offsite parcel is not owned or controlled by SMUD, this alternative would also not maximize the use of available SMUD properties and resources.

Because SMUD has long been planning for the reuse of the Station A yard, the location of Alternative C would require substantial changes to planned infrastructure and connections. These changes could take a substantial amount of time such that this alternative would not meet SMUD's goal of ensuring electrical service reliability in the downtown Sacramento area by 2024. Finally, this alternative would not minimize impacts to nearby sensitive receptors because it would require a greater amount of construction (including 1,000 to 2,000 feet of trenching, boring, and underground utility installation) and disruption to roadways, bike lanes, sidewalks, and, potentially, to existing light rail tracks along H Street. Because this alternative would not attain project objectives and for the reasons set forth above, Alternative C is rejected by the Board from further consideration.

4. Environmentally Superior Alternative

CCR section 15126.6 suggests that an EIR should identify the “environmentally superior” alternative. “If the environmentally superior alternative is the ‘no project’ alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” As shown in Summary of Project Impacts, Impact 3.1-1 (Change the significance of a Tribal cultural resources) and Impact 3.1-2 (Potential for the Station H

Substation project, in combination with other development, to contribute to a significant cumulative impact to Tribal cultural resources) would be significant and unavoidable. Feasible mitigation is available for all other potentially significant impacts associated with project implementation.

When considering objectives, the proposed project would best meet the project objectives, as stated in Chapter 2, "Project Description." In contrast, Alternative B would not minimize impacts on nearby sensitive receptors, nor would it maximize the use of available SMUD resources and property to the extent of the project. Similarly, Alternative C, by relocating a substation needed for SMUD to provide reliable and safe electrical service in the area, would limit SMUD's operational flexibility by locating this substation at a greater distance from Station G, which is currently under construction. Furthermore, while it would be expected to reduce impacts to the known resources along H Street, the site is located within an archaeologically sensitive area and could result in impacts to previously unknown cultural and Tribal cultural resources.

Consistent with CEQA Guidelines (CCR section 15126.6 [e][2]), because the environmentally superior alternative was identified as the No Project Alternative, another environmentally superior alternative shall be identified. Based on the environmental analysis contained in this Draft EIR, Alternative B would result in lesser impacts compared to the project. However, and as noted above, Alternative B could still result in significant and unavoidable impacts on archaeological, historical, and Tribal cultural resources. Therefore, the environmental impact differences between the project and Alternative B are not substantial enough that one is clearly environmentally superior over the other.

e. Additional Findings

1. These Findings incorporate by reference in their entirety the text of the Final EIR prepared for the Station H Substation project. Without limitation, this incorporation is intended to elaborate on the scope and nature of the Project, related mitigation measures, and the basis for determining the significance of such impacts.
2. All of the environmental effects of the Station H Substation Project have been adequately addressed in the Final EIR and have been mitigated or avoided, where feasible.
3. Section 15093(b) of the CEQA Guidelines provides that when the decision of the public agency results in the occurrence of significant impacts that are not avoided or substantially lessened, the agency must state in writing the reasons to support its actions. The Findings adopted by the Board, in connection with its approval of the Station H Substation Project and certification of the associated EIR, addressed all of the potentially significant impacts associated with implementation of the Station H Substation Project. The EIR concluded that the Tribal cultural resources impacts

(project-specific and cumulative) associated with the Project would be potentially significant and unavoidable even with the adoption of identified mitigation measures. As a result, the adoption of a Statement of Overriding Considerations for the Station H Substation is required.

4. CEQA Guidelines section 15074 requires the Lead Agency approving a Project to adopt an MMRP for changes to the Project that it adopts or makes a condition of Project approval in order to ensure compliance during Project implementation. The Board adopts the MMRP for Station H Substation Project and the specific mitigation measures will be monitored in conjunction with SMUD's Final EIR MMRP and Reporting process.

f. Record of Proceedings

For purposes of CEQA and these Findings, the record of proceedings for the Project (Record of Proceedings) consists of the following documents and other evidence, at a minimum:

- The Notice of Preparation (NOP) distributed on November 4, 2020 and comments received during its 30-day public review;
- The EIR for the Project, including, without limitation, the Draft EIR, Final EIR, and all of its appendices;
- All studies, EIRs, maps, rules, regulations, guidelines, permits and other documents and materials incorporated by reference in any portion of the EIR;
- All presentation materials from every noticed public meeting and public hearing for the Project;
- The MMRP for the proposed Project;
- Matters of common knowledge, including but not limited to federal, state and local laws and regulations, including, without limitation, SMUD's adopted CEQA Procedures and other adopted plans, policies and programs;
- Any documents expressly cited in these Findings and/or in the Statement of Overriding Considerations; and
- All materials not otherwise identified which are expressly required to be in the Record of Proceedings by PRC section 21167.6(e).

g. Custodian and Location of Records

The documents and other materials which constitute the Record of Proceedings are located at SMUD Headquarters. Copies of those documents are and at all relevant times have been and will be available upon request at the Customer Service Center (6300 S Street, Sacramento, CA 95817). The custodian of the Record of Proceedings may be contacted as follows:

Rob Ferrera
Sacramento Municipal Utility District
6201 S Street, MS B203
Sacramento, CA 95817-1899
(916) 732-6676
rob.ferrera@smud.org

This information is provided in compliance with PRC section 21081.6(a)(2) and CEQA Guidelines section 15091(e).

III. Project Benefits

The fundamental purpose of the Station H Substation Project is to provide safe and reliable electrical service to existing and proposed development in the downtown Sacramento area. The additional capacity provided by the Station H Substation Project will help meet the anticipated growth in electric demand, meet SMUD's goals of ensuring the reliability of electrical service in the downtown Sacramento area, provide greater operational flexibility between circuits and substations in the area, maximize the use of available SMUD property and resources, minimize impacts to nearby sensitive receptors, and minimize potential conflicts with existing planning efforts within the City of Sacramento. SMUD has long-anticipated the continued use of the project site for substation purposes, which has been a key component of SMUD's efforts for planning to meet future electrical service demand in the downtown Sacramento area.

a. Need for Power in SMUD's Downtown Service Area

SMUD generates, transmits, and distributes electric power to a 900-square-mile service area that includes most of Sacramento County and small portions of Placer and Yolo counties. The City of Sacramento estimates that between 2012 and 2035, it is expected to grow by approximately 165,000 residents and 86,000 jobs (City of Sacramento 2014:3-5). As the city continues to grow, SMUD will need to provide electricity for this expanding base of customers. Without the additional transforming capacity that would be provided by the new Station H, SMUD would not be able to fully provide for the electrical needs of this projected growth, which is critical for the continued buildout and development of the surrounding area, and to support the expanding cultural and business needs of the City

and its people. As the sole electrical utility in the City, SMUD has a legal obligation to serve this load.

b. Electrical Reliability

Responsibility for maintaining safe, reliable, and dependable operation of the electric grid in California is divided among various “balancing authorities,” including Balancing Authority of Northern California (BANC), of which SMUD is a principal member. A balancing authority assumes responsibility for operational and system reliability for electric customers within a specific electrical and geographic area. The Station H Substation is a necessary component of SMUD’s future plans for electrical reliability.

c. Environmental Benefits

The existing equipment at Station A is nearing the end of its useful life and needs to be replaced. The replacement of existing equipment will allow SMUD to take advantage of newer technologies by installing and operating new, more efficient equipment. As a general rule, newer equipment is more efficient and provides a corresponding benefit to the environment. By replacing the outdated equipment with newer equipment, SMUD will improve the efficiency of its operations.

During removal of the existing equipment, SMUD will test soil samples from the project site to determine if there is any soil contamination of the site. Prior to construction of the new Station H substation, SMUD would remove and/or remediate and contaminated soils.

As discussed in the EIR, there are known Tribal cultural resources in close proximity to the Station H Substation project site and it is possible that the Project could disturb Tribal cultural resources that may be located beneath the Project site. As part of its mitigation commitment, SMUD is developing a treatment plan for the site that will include Tribal monitoring, worker respect training, and methods for preservation and protection. SMUD will also develop a program encompassing historical tribal cultural information about the project area with the American River College Native American Resource Center to benefit Native American students as well as commission a piece of art or other appropriate monumentation to represent the Tribal cultural values of the Project area. While no measures are available to reduce Project impacts to a less-than-significant level, these measures will protect resources to the maximum extent feasible and enhance awareness of Tribal cultural values.

Finding: The SMUD Board finds the approval of the proposed Station H Substation Project will result in continuing and enhanced benefits to SMUD customers in form of an important and reliable power supply.

IV. Statement of Overriding Considerations

This section of the findings document addresses the requirement in CEQA Guidelines section 15093. It requires the approving agency to balance the benefits of a proposed project against its unavoidable significant impacts and to determine whether the impacts are acceptably overridden by the project benefits. As described below, unavoidable significant impact would occur in the areas of Tribal cultural resources.

a. Tribal Cultural Resources

Under the proposed Station H Substation Project, SMUD will engage in ground-disturbing activities during the construction of the substation. Given the close proximity of known Tribal cultural resources, it is possible that Project activities could disturb previously-unknown Tribal cultural resources that may extend from the known site to beneath the project site. SMUD will implement mitigation measures designed to minimize impacts on Tribal cultural resources, but acknowledges that potential impacts could be significant and unavoidable. While implementation of these measures, such as the treatment plan required by Mitigation Measure 3.1-1a, seeks to reduce impacts by implementing a testing plan, Tribal monitoring, and other means, the potential remains for unknown resources or their immediate surroundings to be inadvertently affected. Because all feasible mitigation has been included and no additional measures are available to SMUD to ensure that previously undiscovered Tribal cultural resources will not be affected, impacts on Tribal cultural resources are considered significant and unavoidable.

Finding: The SMUD Board finds that the project benefits identified in Section III above outweigh the unavoidable significant adverse environmental effect on Tribal cultural resources. The project benefits described in Section III are hereby determined to be, independent of other potential project benefits, a basis for overriding all significant and unavoidable environmental impacts identified in the Final EIR and in these findings.

V. Summary

Based on the foregoing findings and the information contained in the record, it is hereby determined that:

1. The Project will result in a significant and unavoidable impact related to Tribal cultural resources, but project benefits identified in Section III outweigh the unavoidable significant adverse environmental effects.
2. The environmentally superior alternative would lessen the significant and unavoidable impacts of the proposed project. However, the environmentally superior alternative,



Station H Substation Project CEQA Findings June 2021

as well as the other alternatives evaluated in the EIR, are rejected as infeasible because they fail to achieve project objectives.

This determination reflects the Board's independent judgment and analysis.

References

City of Sacramento. 2014 (August). *City of Sacramento 2035 General Plan Update Draft Master Environmental Impact Report*. SCH #2012122006. Prepared by Ascent Environmental, Inc., Sacramento, CA.

———. 2018. *Sacramento Central City Design Guidelines*. Sacramento, CA.

Swainson's Hawk Technical Advisory Committee. 2000 (May 31). *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley*.

Vice President Rose then turned to Informational Items 14 through 16 and stated that any public comment on informational items could be provided during the general public comment period.

With regard to agenda item 14, the Financial Report regarding April 2021 Financial Results and Operations Data, no clarifying questions were forthcoming.

With regard to agenda item 15, the Audit Report regarding Green-e® Energy Annual Verification, no clarifying questions were forthcoming.

Jennifer Davidson, Chief Financial Officer, gave a presentation on agenda item 16, a summary of SMUD's current Power Supply Costs. A copy of the slides used in her presentation is attached hereto.

Vice President Rose then turned to agenda item 17, statements from the public regarding items not on the agenda. He stated that in accordance with the Emergency Board Meeting Procedures, public comment for items not on the agenda would be provided to the Board electronically and placed into the record if received within two hours after the meeting ended.

Mark Graham requested 10 minutes to address the Board at the Rate Hearing on the CEO & GM Report and his alternative to it. He stated the Board should examine Article XIII C of the California Constitution, and he asked the Board to review the materials he sent to them.

Vice President Rose requested that Mr. Graham provide his request to speak at the rate hearing via the proper channels and thanked him for his comments.

Public comment was received, a copy of which is attached to these minutes, from the following members of the public:

- Evelyn Cotton
- Jennifer (McSwain) Puckett

Vice President Rose then turned to Directors' Reports.

Vice President Rose reported on his tour of the UC Davis Lighting Technology Center and encouraged other Board members to schedule a tour. He then reported that his community meeting for Ward 1 on the Zero Carbon Plan had gone well, and he reported on his participation in the Orangevale

Chamber of Commerce Facebook Live Morning Show where he had a good conversation with the Executive Director about the 2030 Zero Carbon Plan.

Director Fishman reported on his participation in a listening session that staff conducted with members of the community about making sure that disadvantaged communities are not left behind as SMUD moves forward with the 2030 Zero Carbon Plan. He thanked staff for putting it together and all of the participants who were there.

Director Kerth reported on his attendance at the listening session and thanked staff for reaching out. He said it was a good start, but there was more work to do. He then reported on the Ward 5 community meeting on the 2030 Zero Carbon Plan as well as his meeting with a representative of Capital College and Career Academy, a blended high school, technical school, and college program for young people to enter the construction trades industry.

Director Herber reported on the community meeting for Ward 4 on the 2030 Zero Carbon Plan as well as her attendance at the Burnett Awards for the Sacramento History Museum where the Iceland Ice Skating Rink built by the Kerth Family was honored. She announced there would be a fundraiser on Monday, June 28th for My Sister's House where she would be performing with other elected officials and noted that former SMUD Board member Genevieve Shiroma would also be honored. She then reported on her attendance at the SMUD Black Employee Resource Group meeting on Juneteenth featuring guest speaker Tyrone Roderick Williams.

Director Tamayo reported on his attendance at the environmental justice listening session and noted it was a very well-run event. He stated there still were a number of people that needed to be included and invited, and he looked forward to future events. He reported on his presentation to the local chapter of the International Association of Plumbing and Mechanical Officials where he spoke on electrification. He then reported he was honored to be a presenter at the Filipino Fiesta that honored the contributions of Filipino health workers during the COVID crisis. He noted that California Attorney General

Rob Bonta, the first Filipino Attorney General and constitutional officer, spoke on the need to recognize the positive contributions of the Filipino community.

Director Sanborn reported on her participation in the Tree Foundation event honoring Ray Tretheway. She then reported on her presentation of the 2030 Zero Carbon Plan to the Mow Better group and her attendance at the Effie Yeaw Nature Center gala and fundraiser. She then reported on her brief attendance at the Women Who Mean Business award ceremony where Brandy Bolden was one of the recipients. She then reported on her presentation to the Kiwanis Club of Sacramento on the 2030 Zero Carbon Plan and thanked Ed Hamzawi and Sarah Elsevier for their work on it. She concluded by thanking the Sustainable Communities group for their assistance in getting an air conditioning unit placed for the Sacramento Children's Receiving Home.

Paul Lau, Chief Executive Officer and General Manager, congratulated Chief Customer Officer Brandy Bolden for being recognized by the *Sacramento Business Journal* as a Woman Who Means Business. He then reported on the following items:

- 1) **Excessive Heat Warning.** With an excessive heat warning in effect through Saturday, we are monitoring the situation closely and preparing across the company. All generation facilities are operational, and we do not anticipate issues meeting our customers' energy needs, barring a regional or state grid emergency. We have additional crews and staff across the company on standby to respond in the event of any heat-related outages to support restoration. We issued a press release earlier in the week with tips for staying cool and comfortable. We are also using our social media channels to keep customers informed, and the Customer Contact Center is ready to adjust staffing to support operations if needed. While our reservoirs in the Upper American River Project are lower than normal, hydroelectric generation should not be affected. For balancing

authority and transmission operations, a Restricted Maintenance Operations declaration was issued for SMUD for yesterday through Sunday. This ensures transmission and generation assets are not taken out of service for maintenance during the heat wave.

2) **High-speed Electric Vehicle Chargers.** I am pleased to report that SMUD is teaming up with the Sacramento Regional Transit District and American Growth and Infrastructure Corp., or AGI, to provide high-speed electric vehicle chargers with on-site solar and battery storage at the Power Inn Light Rail Station. This network integrated charging station for Sacramento's energy electric vehicle market features the fastest level 3 Direct Current, or DC, chargers in the industry. The chargers are made by Siemens and are capable of recharging light and medium duty vehicles in a matter of minutes. State Treasurer Fiona Ma and Sacramento Mayor Darrell Steinberg will be joining us for a plug-in ceremony on Tuesday, June 22, at 9 a.m. The partnerships and the speed with which we made this pilot program a reality are important parts of plan to eliminate carbon from our power supply by 2030. As the Board well knows, vehicle and building electrification are key components of our Zero Carbon Plan. The Power Inn site addresses social and environmental equity issues with its location in one of Sacramento's historically under-resourced areas. The new charging mobility hub will use between 20 to 30 parking spots at the Power Inn light rail station. The first phase of the project will include 10 high-speed charging stations for up to 20 vehicles, the installation of solar canopies, Wi-Fi and broadband accessibility, and future battery storage for public and private use. AGI will pay for the costs of the equipment and installation and provide a revenue-sharing model with Sacramento RT from

the electric charging usage. SMUD will provide the hub with electricity. The station is expected to open in October 2021.

- 3) **Board Video.** Tonight's Board video takes a look at the great work SMUD's Building Leadership Team performed in partnering with Food Literacy Center to promote healthy nutrition habits among students in underserved communities. The Building Leadership Talent, or BLT, program was formed more than 10 years ago to develop future SMUD leaders. Working together on a community project is an integral part of the BLT training.

Vice President Rose requested the Summary of Board Direction, but there were no items.

Director Herber stated she had forgotten to say Happy Pride to everyone and noted that as the LGBTQ person on the Board, she wanted to call attention to celebrate pride.

Director Sanborn asked to take a moment to recognize that SMUD has recently lost a 30-year employee, Mike Hewitt, and she wanted to take a moment to honor him. She read from a message that had been sent to SMUD employees regarding a message Mike had written the night he passed away and asked that it be shared with all employees:

I wouldn't trade my time at SMUD for anything. I had the opportunity to hire, promote, train, mentor and challenge so many of you. It's been humbling. Good luck on your 2030 challenge. You'll knock it out of the park. My love to all the staff!

No further business appearing, Vice President Rose adjourned the meeting at 8:13 p.m.

Approved:

President

Assistant Secretary

Exhibit to Agenda Item #2

Youth Energy Summit Projects Presentation.

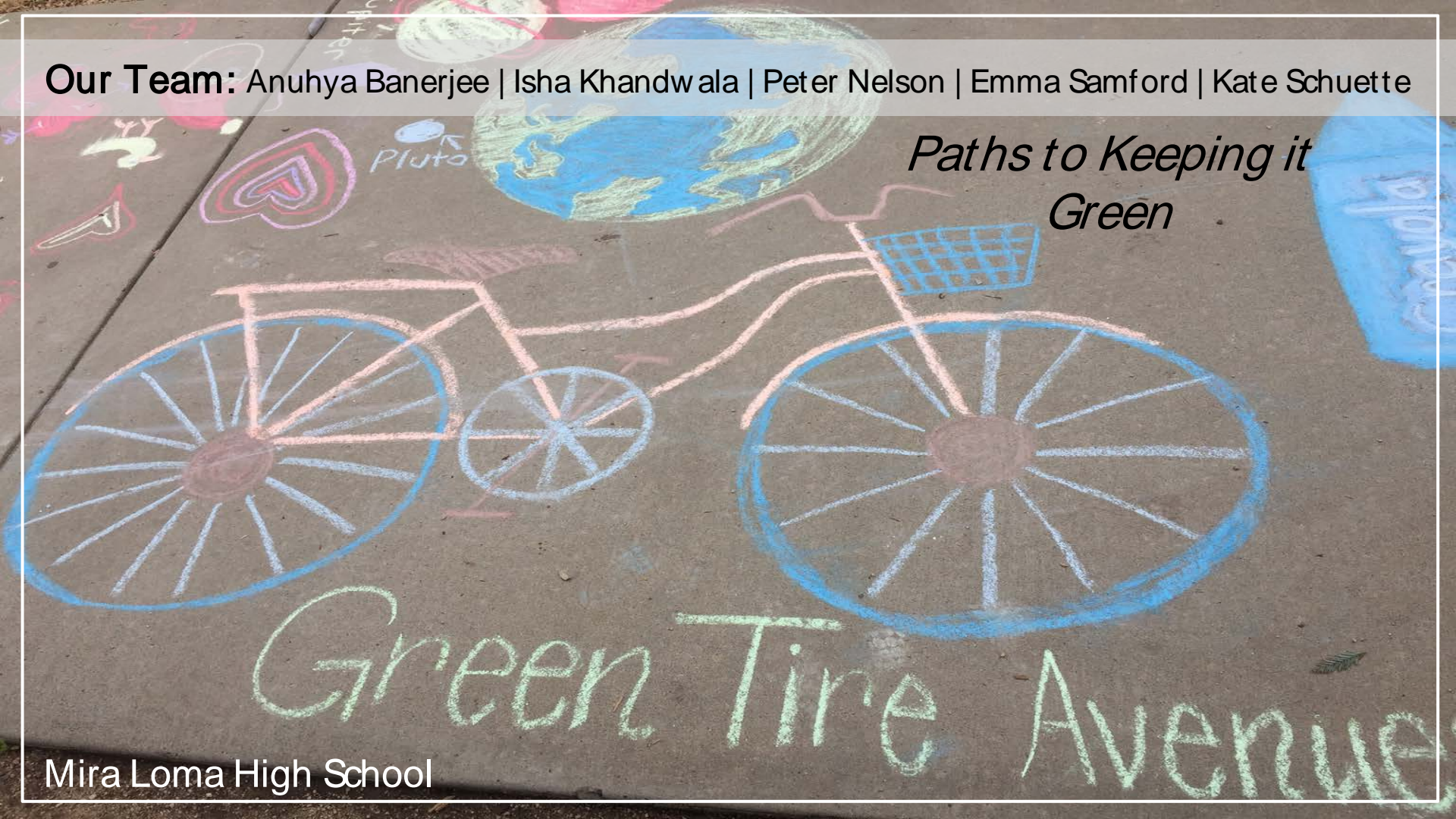
Board of Directors Meeting

Thursday, June 17, 2021, scheduled to begin at 5:30 p.m.

Virtual Meeting (online)

Our Team: Anuhya Banerjee | Isha Khandwala | Peter Nelson | Emma Samford | Kate Schuette

*Paths to Keeping it
Green*



Mira Loma High School

Overall Concept + Goals

Scan QR code to see our storybook!
QR Code on all slides *are the same*



01

Identifying problems

Discovering who bears the consequences of current practices



03

Sustained impact

Our activities and impacts continue past the 2021 Y.E.S.



02

Foundations

We wanted long lasting, positive, and viable endeavors that help NorCal



04

Resources

Using what's available to commit to outreach with target audience

Identified problem: Lack of accessibility to information on the transportation footprint *for children*

Hands On Experience.



Benefitting
Our
Earth



2021

Let's Chalk about Sustainable Transport

- quantitative and qualitative outcome/ impact
- scope of issue
- new goals, new plan



Emma



Green Tires - Sidewalk Chalk Event

✉ Invite



12 people responded



Event by Emma Samford

📍 O Donnell Heritage Park

🕒 Friday, March 19, 2021 at 3 PM PDT

💰 Price: Free

🌐 Public · Anyone on or off Facebook

This is an event planned with a few of my friends at a chance for a scholarship through the SMUD student program. We are promoting green transportation through the action of walking, biking, etc. in opt of cars. We are hosting a sidewalk chalk event where all you need to do is bring yo kids and they can draw with sidewalk chalk, ride bikes, or play at the park to actively encourage the use of sidewalks when discussing transportation through reaching out to younger generations. It is advised that you bring your own chalk as well, however chalk will be provided at the park if necessary. We also ask that you bring a mask and abide by current COVID safety precautions, hand sanitizer will be provided. Hope to see you there! 😊 See Less



O Donnell Heritage Park
Charleston Dr, Carmichael

Go With Friends

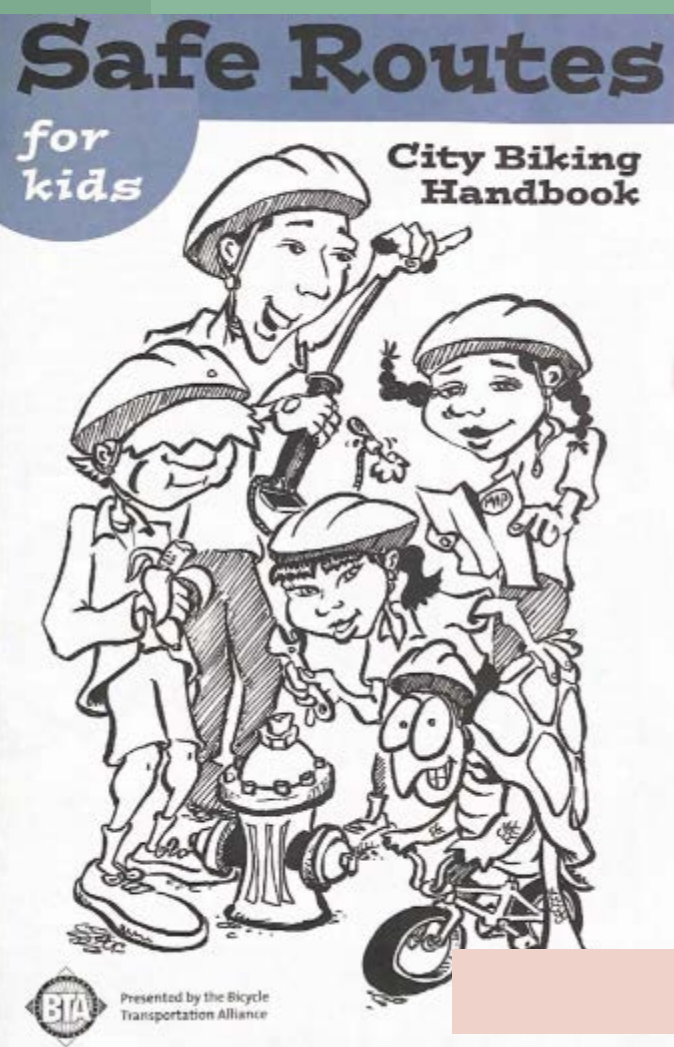
9
WENT

3
INTERESTED



9 Went · 3 Interested

Expanding youth education programs: bike safety education should be a routine part of education, for students of all ages.



Raising Awareness.



Let's
Chalk
Creativity

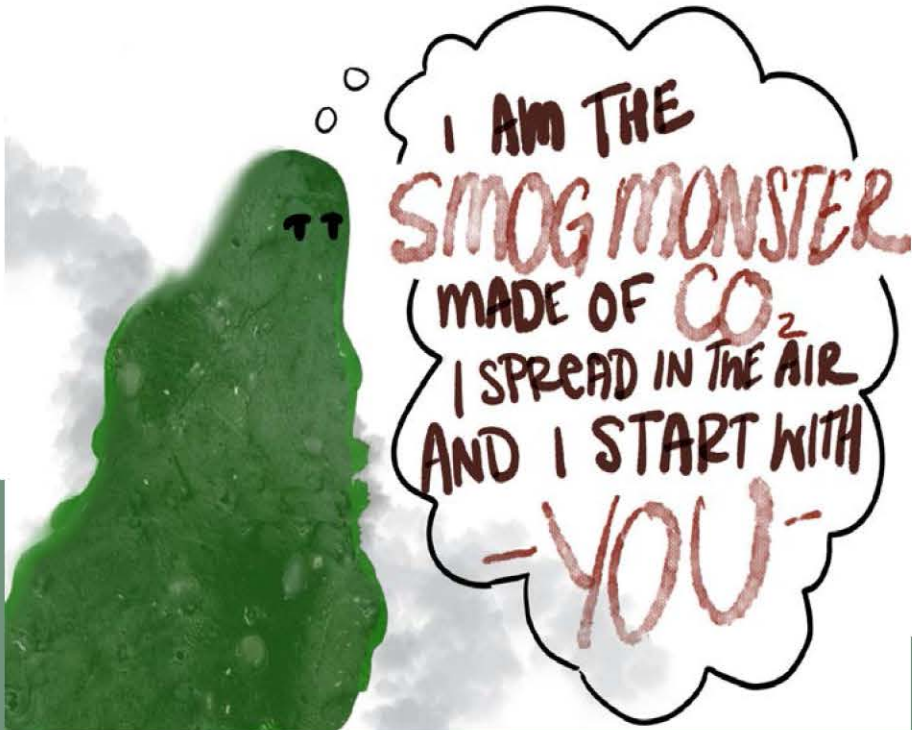


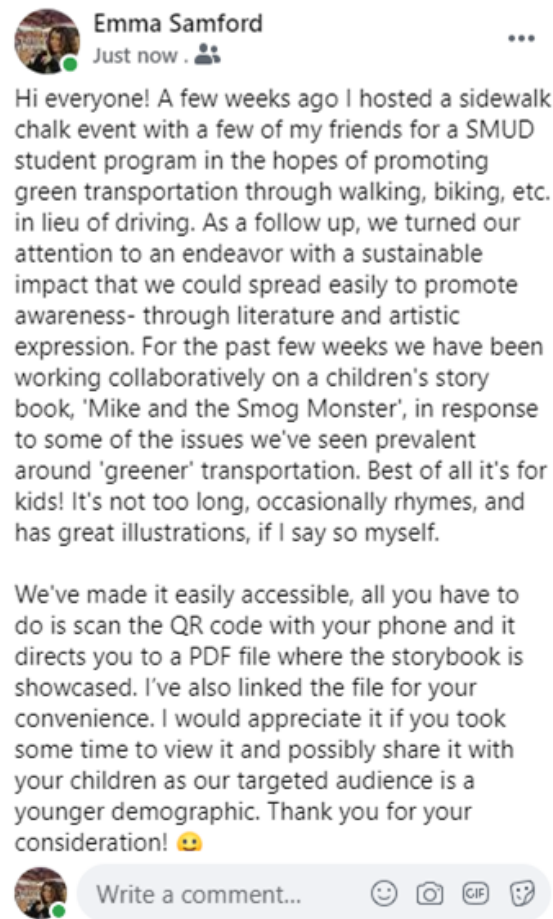
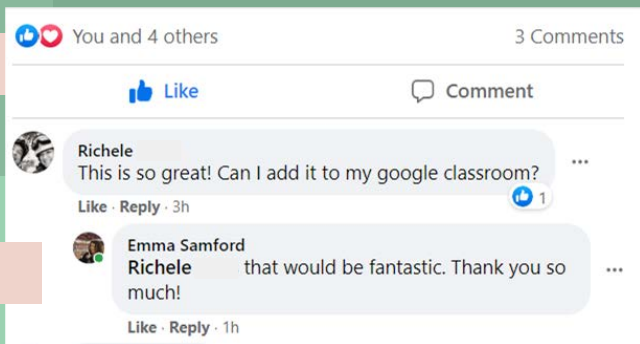
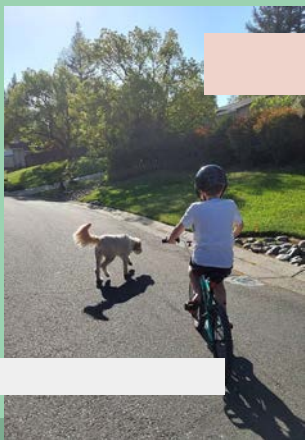
Educating
Community
Persistence

2021



Storybook: Mike and the Smog Monster





H
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How It's Going...

- ❖ What we did...
 - Spread to family and friends
 - National Bike Month
 - Elementary schools
 - Perfected as an Earth Day activity!
 - Special Ed Classrooms!
 - Achieved based on feedback
 - SacLibrary
- ❖ Future: Lots of potential!
 - Sequel to the story
 - Extend on Bike Safety



Cycling-Earth GIF drawn by team member- Isha K.

How We Got Here...



Collaboration

Made valuable and professional connections for the future



Our ideas changed...a lot...

Large range of ideas → focused to one problem/demographic = more effective activities





IT STARTS WITH MIKE,
AND CONTINUES WITH YOU.

CAN YOU REDUCE CARBON EMISSIONS
THROUGH BIKING TOO?



Thank You !



Exhibit to Agenda Item #9

Approve August 31, 2021, as the date for the **Public Hearing for considering the Chief Executive Officer and General Manager's Report and Recommendation (CEO & GM Report) on Rates and Services (Volumes 1 and 2)** dated June 17, 2021, and the **CEO & GM Report on Open Access Transmission Tariff (Volume 1)** dated June 17, 2021.

Board of Directors Meeting

Thursday, June 17, 2021, scheduled to begin at 5:30 p.m.

Virtual Meeting (online)

2021 Rate Process

Board meeting on June 17, 2021

- Staff will release the Chief Executive Officer & General Manager's Report and Recommendations on Rates and Services and Open Access Transmission Tariff
- Board resolution vote to approve public hearing date

Rate Process Timeline

Public
Outreach
Period
75 Days

Date	Milestone
June 15	Request a public hearing date at the Finance & Audit Committee meeting
June 17	Set public hearing date and release GM Report*
July 8	Public Outreach Rate Workshop #1 at 5:30 p.m. (ZoomGov/Granicus)
July 27	Public Outreach Rate Workshop #2 at 10 a.m. (ZoomGov/Granicus)
August 31	Public hearing and rates resolution drafted at 5:30 p.m. (ZoomGov/Granicus)
September 16	Board resolution vote

Three public notices are schedule to be published on June 22, June 25 and June 30
If needed, staff will host a third public workshop on August 5 at 5:30 p.m. (virtual)

Executive Summary

- Overview of Rate Design Approach
- Recommendations:
 - 2022 and 2023 Rate Increases
 - Solar and Storage Rate
 - Optional Critical Peak Pricing (CPP) Rate
 - Miscellaneous Rates Changes
- Informational (Programs and Fees):
 - Interconnection Fee
 - Storage Incentive Program
 - Virtual Net Energy Metering Program

Transformational Leadership

- Builds on SMUD's long-term support for solar industry
- Balanced approach to support all technologies and customer investments needed to achieve zero carbon
- Enables wide-ranging customer choice
- 2030 Zero Carbon Plan: Transformational and Industry-Leading
- Rates and Programs: Industry-Leading to achieve the Transformation

2022 and 2023 Rate Recommendations

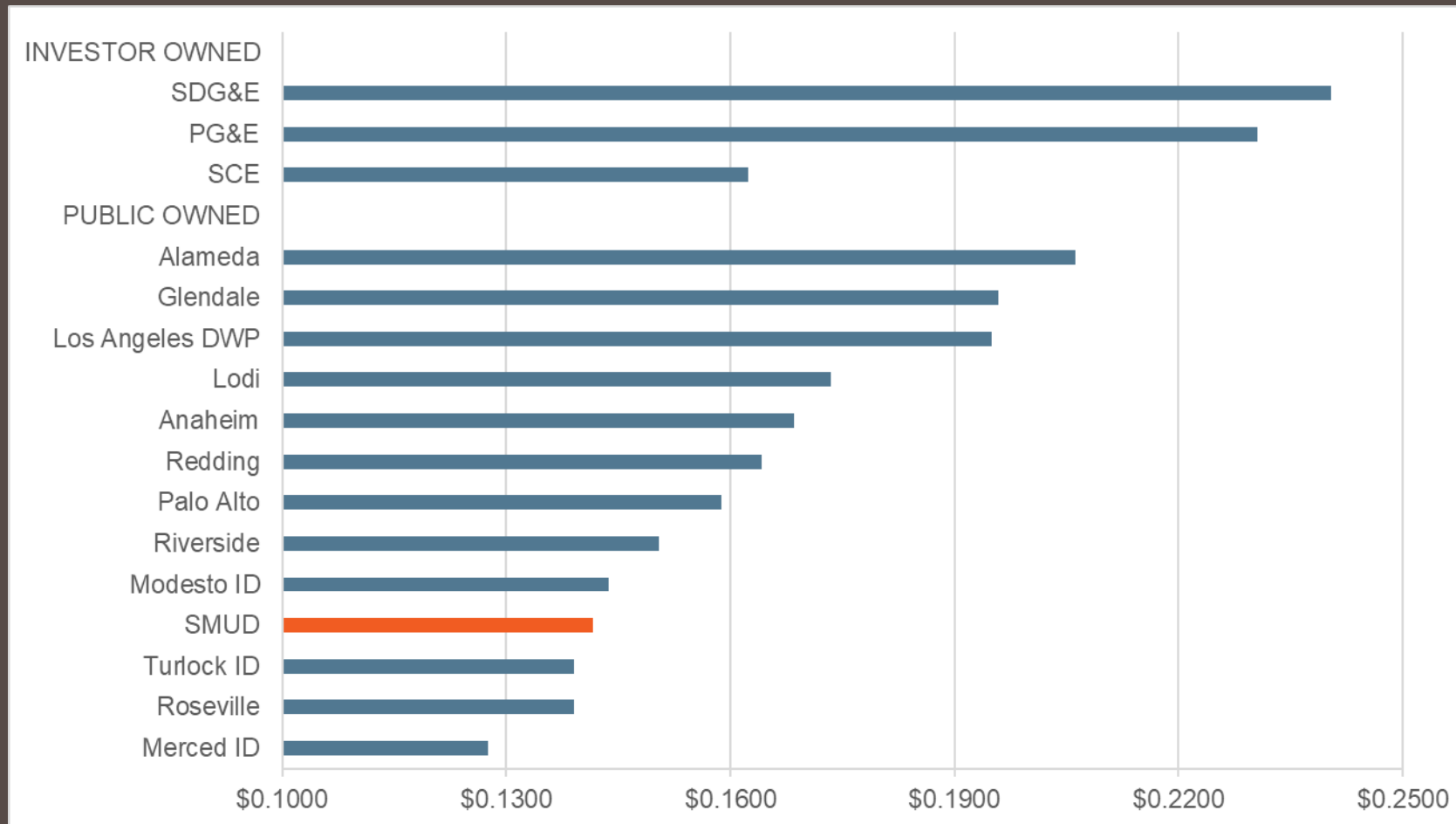
Rates Proposal

Rate Proposal	Rates & Effective Date	Customer Groups Impacted
2022 – 2023 Rate Increases	1.5% effective on 3/1/2022 2.0% effective on 1/1/2023	All Customers

- The proposed increase is well below the forecasted rate of inflation; SMUD is committed to keeping rate increases within inflation
- Major drivers for rate proposal:
 - Wildfire prevention and mitigation
 - Infrastructure improvements to maintain high reliability
 - Clean energy compliance requirements
 - Increased operating costs, including materials and labor costs
- Continued internal focus on cost savings and efficiencies to minimize rate increases

For more details, please see the Rate Increase Drivers section in the GM Report.

2020 Average System Rate Comparison (\$/kWh)



Source: EIA 861M 2020 and self-reported annual data from the 2020 EIA 861 annual survey

Bill Impacts with Proposed Rates

Sample Monthly Bill Impacts			
Size	Average Monthly Bill	1.5% Rate Impact in 2022	2.0% Rate Impact in 2023
Small Commercial (20 – 299 kW)	\$2,921	\$44	\$59
Medium Commercial (500 – 999 kW)	\$25,906	\$389	\$526
Large Commercial (>1,000 kW)	\$91,623	\$1,374	\$1,860
Agriculture (Ag & Pumping)	\$351	\$5	\$7
Average residential at 750 kWh usage	\$126.44	\$1.91	\$2.57

Customers on our low-income Energy Assistance Program Rate (EAPR) & Medical Equipment Discount (MED) rate will see slightly different bill impacts than standard rate customers.

Amounts may reflect minor rounding differences

Solar & Storage Rate and Recommendations

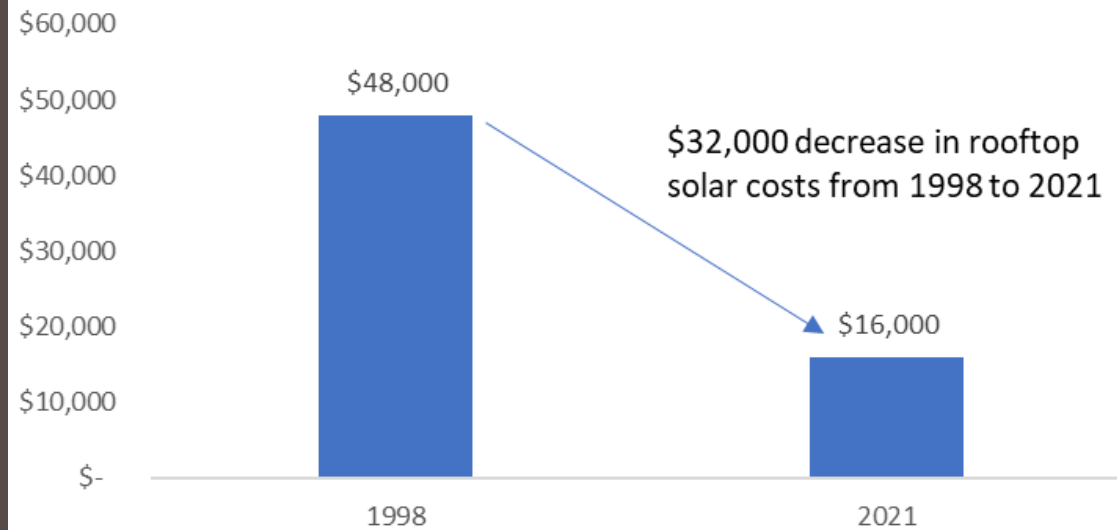
Net Energy Metering (NEM) 1.0 was successful in reducing rooftop solar costs

Rooftop solar prices (per watt)

1998 ~\$12 per Direct
Current Watt (Wdc)*

2021 ~\$4 (national average)

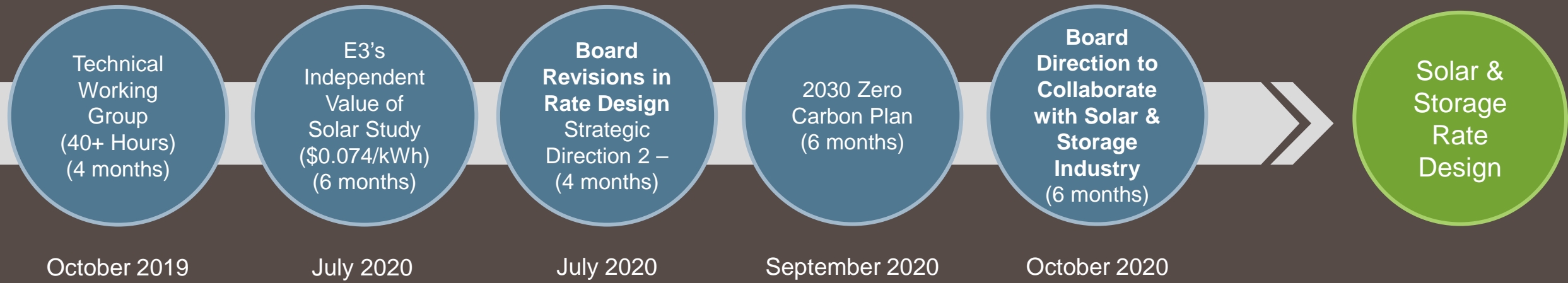
Decrease in rooftop solar customer's cost to
install a 4 kilowatt (kW) system



Note: Rate proposal recommends continued NEM 1.0 rate for existing customers through 2030.

* (NREL US DOE SunShot Initiative) reflects a 1998 price of about \$12.00/Wdc for ≤10kW)

Two-Year Collaborative Rate Design Journey



2 Years of SMUD Staff working with Customers, Stakeholders, and the Solar & Storage Industry to develop the Solar & Storage Rate.

Solar and Storage Rate – NEW Solar Customers

Rate Proposal	Rate Effective Date	Customer Groups Impacted
Solar and Storage Rate	January 1, 2022	All Solar and Storage customers approved for interconnection on or after 1/1/2022

- Rate is designed to accelerate storage adoption and transform the market from solar only to solar and storage.
- Proposal will benefit all our customers and help SMUD achieve the 2030 Zero Carbon Plan.
- Excess power can be sold back to SMUD for \$0.074/kWh no matter the time-of-day or season.
- SMUD will reevaluate this value every 4 years (2026 & 2030) and the value will not be revised more than +/- 30%.
- **Staff is recommending to the Board that all NEM 1.0 customers continue on the NEM 1.0 legacy rate through 2030.**

For more details, please see the Changes to Net Energy Metering section in the GM Report.

Excess Power Sold Back to SMUD \$0.074/kWh

What makes up the \$0.074/kWh?

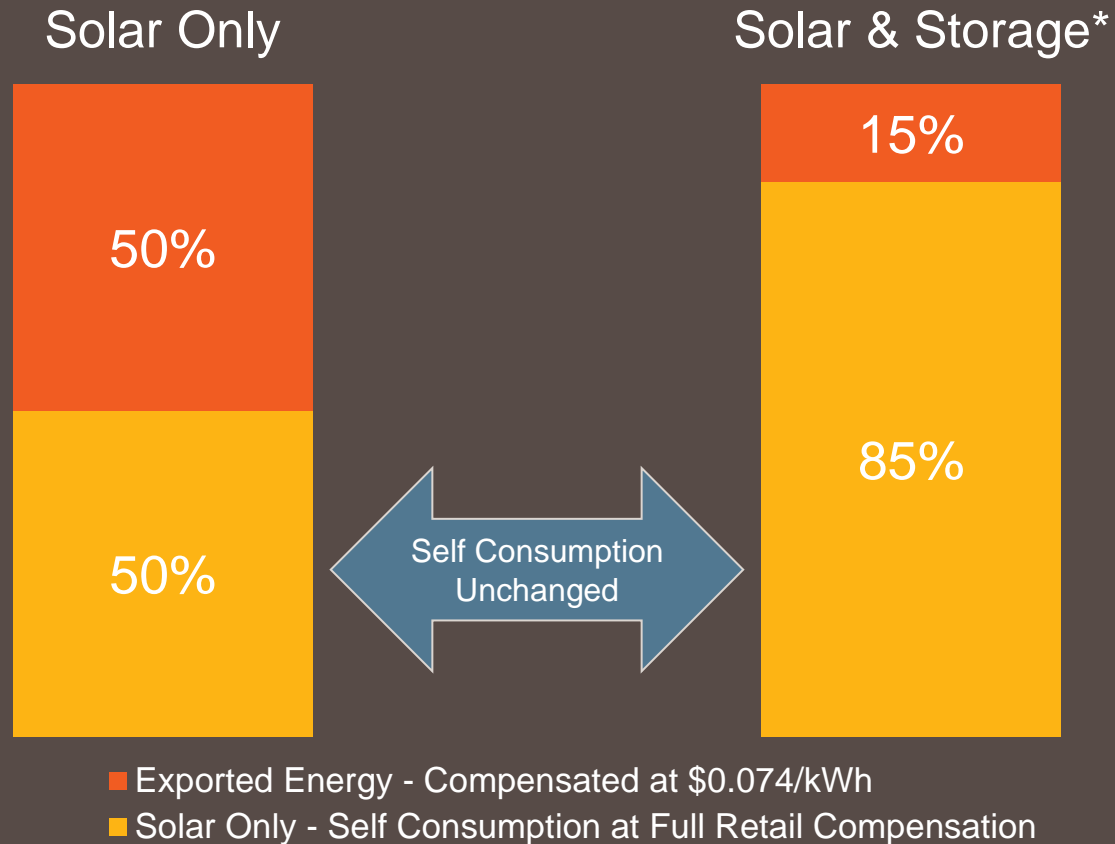
- SMUD is recognizing rooftop customer's excess energy avoids generating this power from a powerplant
- By avoiding powerplant generation SMUD can avoid the following related costs:
 - Carbon / Greenhouse Gases
 - Natural Gas
 - Capacity (Transmission, Distribution, & Generation)



SMUD is recognizing rooftop customer's excess energy provides a **unique indirect benefit of avoiding disturbing** land for a utility size solar plant.

For more details, please see the Changes to Net Energy Metering section in the GM Report.

Solar and Storage Rate encourages self-consumption

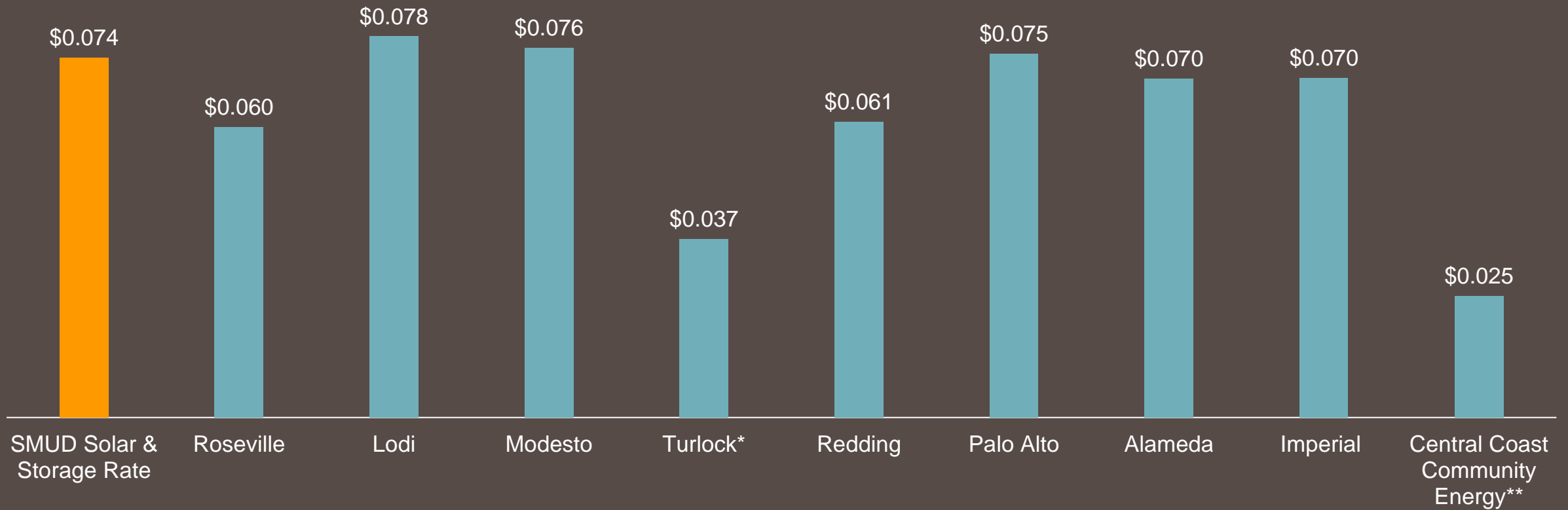


Key Takeaway:

85% of the generation retains retail value

* Projected values after solar and storage adoption. Each customer's energy usage will directly impact their respective percentage of self-consumption and exported energy.

Export Rate Comparison among other utilities (\$/kWh)



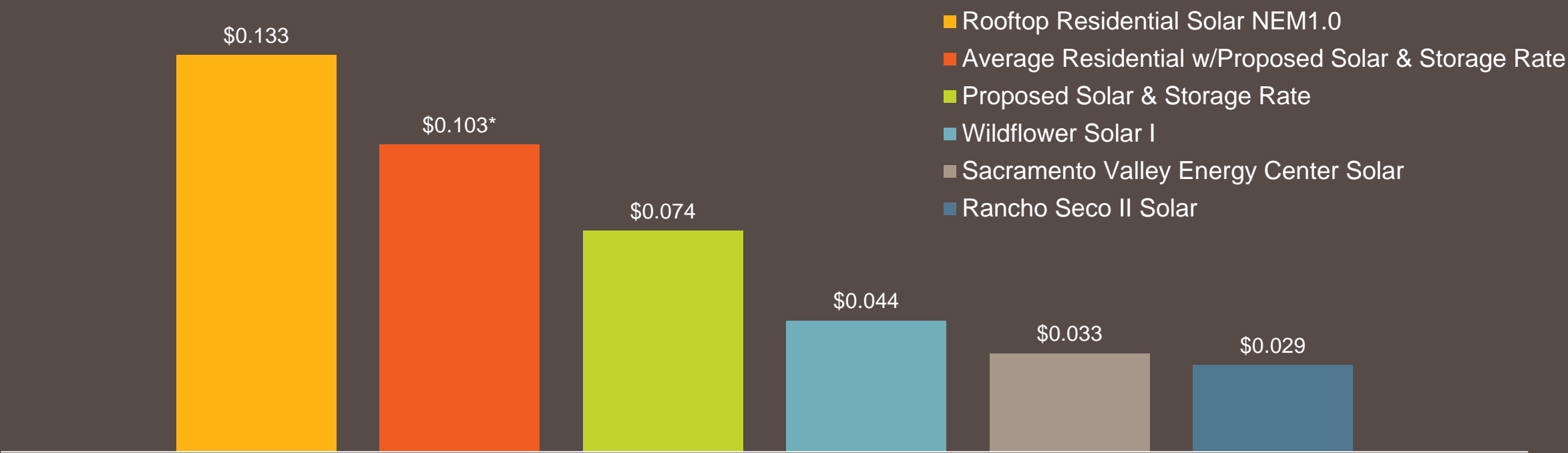
* Represents the average of on-peak and off-peak prices

** Central Coast Community Energy is a proposed rate is not a Publicly Owned Utility

All figures are being rounded for graphical purposes

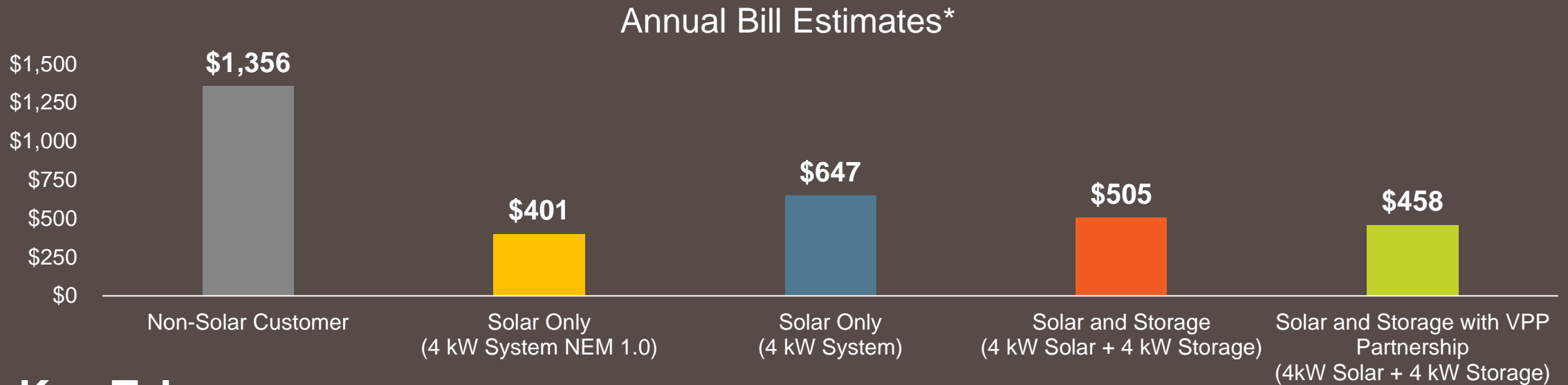
How does the new Solar and Storage Compare to Other Local SMUD's Solar Resources?

Solar Export Compared to other local solar resources (\$/kWh)



**Effective rate, based on assumed portion of solar generation is consumed on site by the customer and remainder sold back to SMUD at Solar & Storage Rate*

Customer bill impacts before and after the Solar & Storage Rate



Key Takeaway:

Investing Solar and Storage and becoming a Virtual Power Plant (VPP) partner adds the most value for the customer and the greatest impact in helping SMUD achieve the 2030 Zero Carbon Plan

* Bill Impacts include System Infrastructure Fixed Charge. Illustrative example, this is not reflective for all customers.

Optional Critical Peak Pricing Rate Recommendation

Optional Critical Peak (CPP) Pricing Rate

Rate Proposal	Effective Date	Customer Groups Impacted
Critical Peak Pricing Rate (CPP)	6/1/2022	<p>Optional Rate for Residential Customers</p> <ol style="list-style-type: none">Up to 30,000 customers<ul style="list-style-type: none">Customers with a SMART ThermostatSolar and Storage CustomersStorage Only Customers

- Much like a Time of Day (TOD) rate, customers will pay a bit less during non-peak hours, but pay a premium during a CPP event
- Encourages storage customers to use their batteries to maximize their return on investment
- Encourages all customers to reduce energy use during CPP event
- CPP events will only be called during Summer months (Jun – Sep)

For more details, please see the Residential Critical Peak Pricing Rate section in the GM Report.

Solar & Storage Rate Supporting Programs and Fees

Staff Will Implement Interconnection Fees on 1/1/2022 for New Solar Customers

Start date: January 1, 2022

Residential (Majority)	Residential
$\leq 10\text{kW}$ - \$475	$> 10\text{kW}$ - 20kW - \$900

Commercial	Commercial (Majority)	Commercial (Cost based)
$\leq 100\text{kW}$ - \$2,500	$> 100\text{kW}$ - $\leq 500\text{kW}$ - \$3,300	$> 500\text{kW}$ - \$5,000

Note: This is a direct cost recovery fee for SMUD to cover expenses related to technical document review, validation of system sizes, onsite inspections, integration into SMUD's distribution system, and processing of application.

Supporting Programs

Promote solar and storage adoption

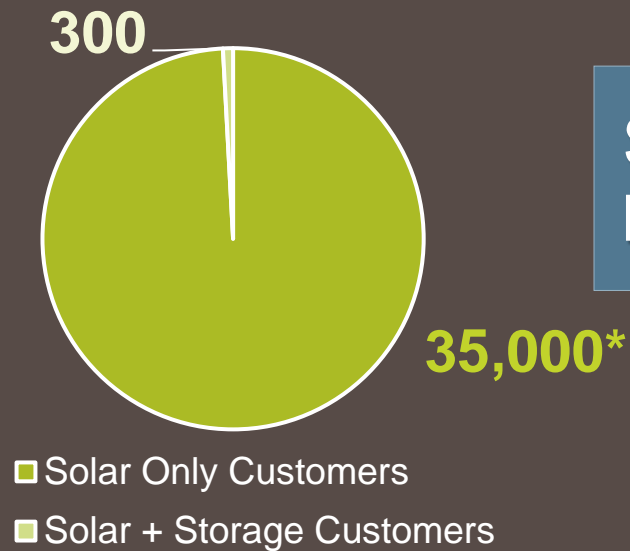
Solar and Storage Rate Supporting Programs & Incentives	Description	Incentive Level	Customer Groups
Storage Incentive Program	Battery incentive	Up to \$500	Customers with solar and/or storage
	Battery incentive with Critical Peak Pricing (CPP)	Up to \$1,500	Residential Customers with solar and/or storage
	Battery incentive with Virtual Power Plant (VPP)*	Up to \$2,500	Customers with solar and/or storage
Virtual Net Energy Metering (VNEM)	Virtual solar for multifamily residences	N/A	Under-resourced Communities
	SMUD is committed to bringing the benefits of solar to under-resourced multi-family dwelling communities		

* Virtual Power Plant customers will see on going “grid benefit” payments that align with grid service costs

SMUD's Leadership – Transforming the Solar Market to Solar & Storage

NEM 1.0

22 years = 300 storage customers or <1% adoption rate

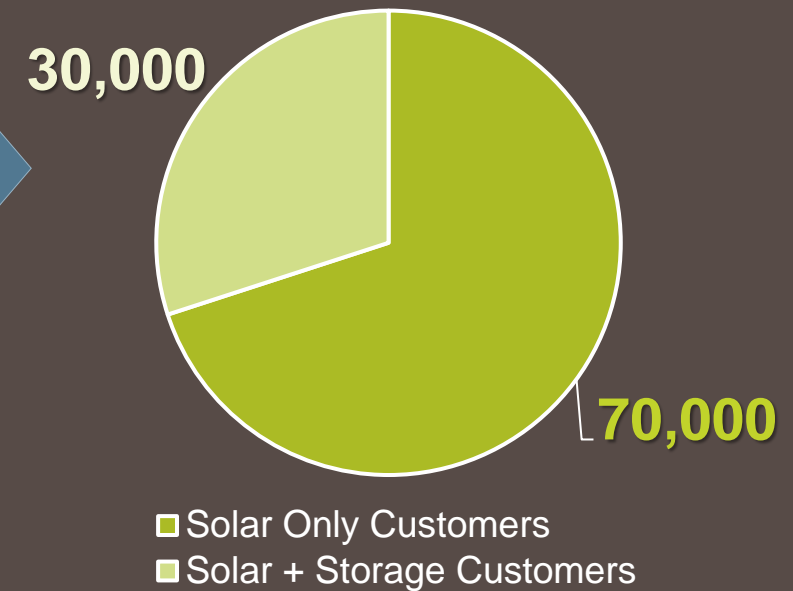


* As of Mar 2021

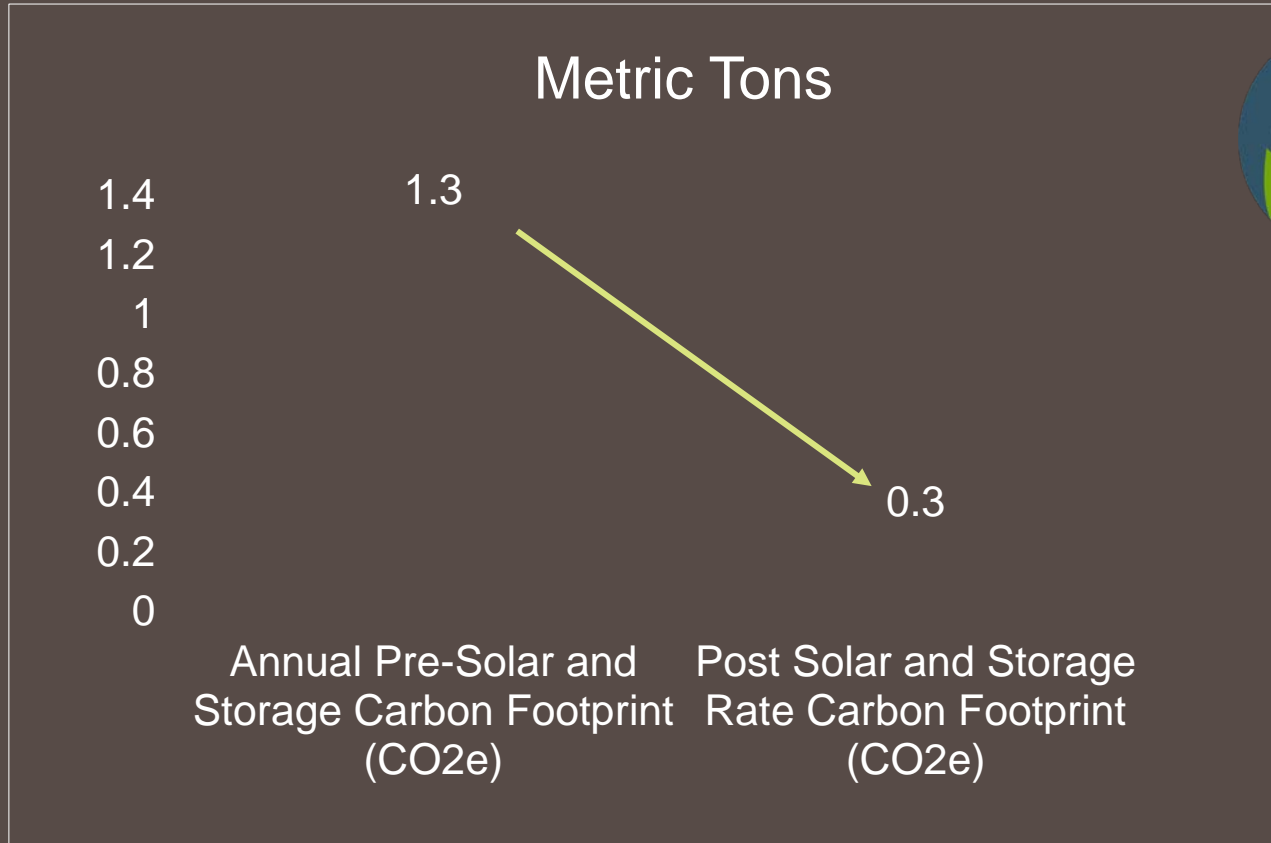
\$25M in storage / battery incentives

Solar & Storage Rate

9 years = 30,000 storage customers



Customer's carbon footprint before and after the Solar & Storage Rate



Decrease of 1 Metric Ton (CO2e)* per household for 30,000 customers would be equivalent to removing 7,500 gasoline cars off the road!

* CO2e – Carbon Dioxide Equivalent term for describing different greenhouse gases in a common unit
<https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle>

Open Access Transmission Tariff (OATT) Update

- The last update to the Open Access Transmission Tariff was approved in 2017
- The proposal includes Ancillary Services price increases to the following schedules:
 - **Schedule 1:** includes, scheduling, system control and dispatch service
 - Proposed rate change from \$267.21/MW to \$361.72/MW of reserved capacity per month
 - **Schedule 2:** includes reactive supply and voltage control from generation or other sources service
 - Proposed rate change from \$76.94/MW to \$80.38/MW of reserved capacity per month

For more details, please see OATT Volume 1 of the GM Report.

Outreach objectives & priorities



Identified target audiences



Community & Business Leaders

Chambers, CBOs, Pbids



Neighborhood & Faith Based

HOAs, Rotary, Kiwanis, Large Churches, etc.



Elected Officials

City and County elected officials



Industry & Environmental Groups

Energy industry, environmental, etc.

Customized for each audience

Outreach strategy & approach

Reach out to 750+ groups to provide menu of options to share an overview of the Rate Action proposal. Efforts will include email communication and personalized phone outreach to groups as needed.

Opportunities will be provided including choices of newsletter articles, slide decks/collateral, videos or an opportunity to host SMUD for a virtual meeting.

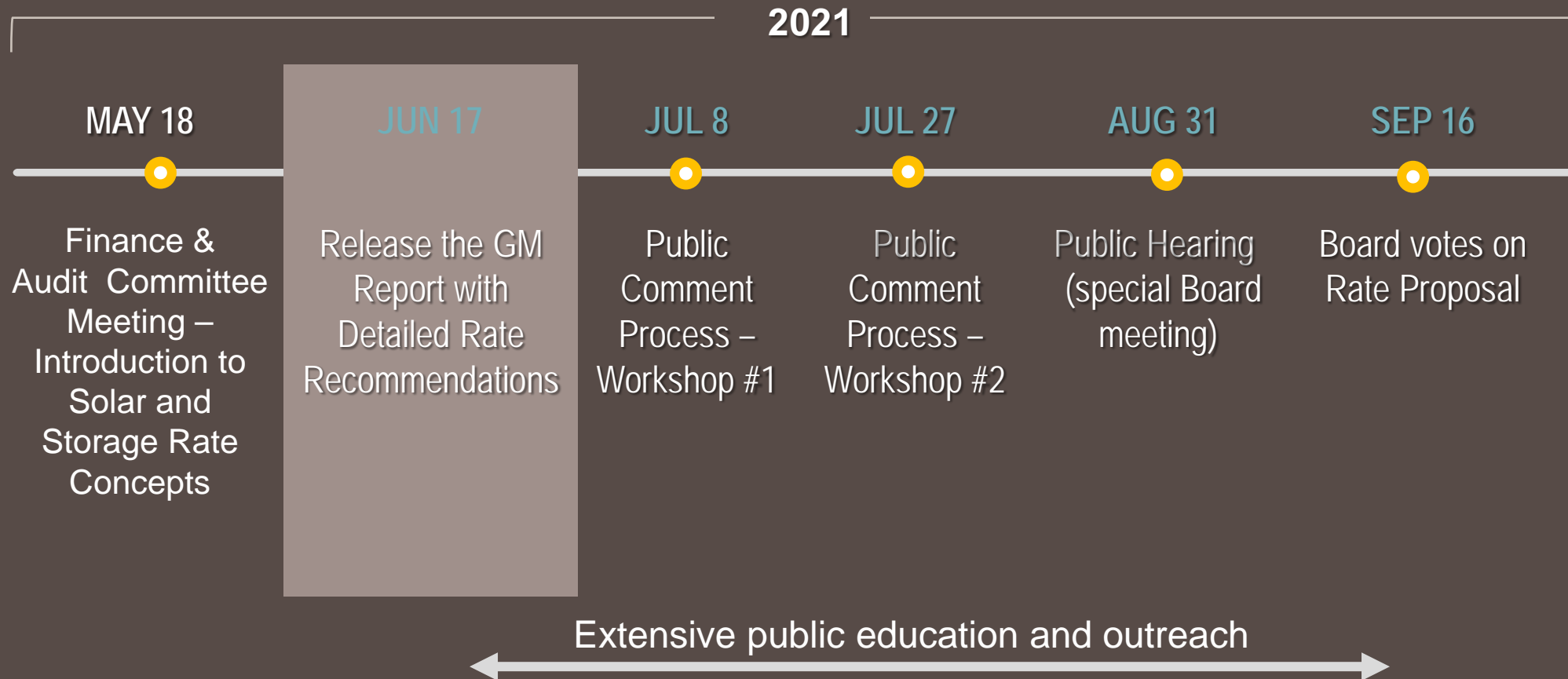
For groups requesting a meeting, we will tailor presentations based on audience type and time allotted and identify most appropriate presenter.

Emphasis on balanced outreach across SMUD territory to reach customers. Will prioritize some solar-dense communities and groups who have expressed interest in the past to make sure they are receiving information.

Integrated communications campaign



Rate Process Timeline



Requested Action

Approve August 31, 2021, as the date for the Public Hearing for considering the Chief Executive Officer and General Manager's Report and Recommendation ("CEO & GM Report") on Rates and Services (Volumes 1 and 2), dated June 17, 2021, and CEO & GM Report on Open Access Transmission Tariff (Volume 1), dated June 17, 2021.

Questions?



From: [Katie Elder](#)
To: [Public Comment](#)
Subject: [EXTERNAL] 6/17 mtg Agenda Item 6 written comment: Wildfire Mitigation Plan
Date: Saturday, June 12, 2021 5:11:55 PM

CAUTION: This email originated from outside of SMUD. Do not click links or open attachments unless you recognize the sender and know the content is safe.

We would ask you to modify the plan to be more aggressive with homeowners in Folsom near the SMUD 69kv distribution feeder. We know that SMUD has recommended taking a neighbor's tree out that is right at the property line. She refuses because "it is a healthy tree that gives her shade." A SMUD crew comes every three years to trim the tree away from the 69kv line. This then encourages the new growth to come my direction and is now over my roof. Our neighbor brags that SMUD does her favors because they have taken out so many of her trees. The tree also drops a horrific quantity of dry needles requiring a trip onto my roof to clean and with the heightened fire danger we clean it multiple times per year. They also drop in the space between my house and the fence so that I can to clean those up several times per year. A spark would easily have enough fuel to start a fire were I not to constantly clean up these needles and hot lines would fall there if the tree blew onto them. I believe we filled an entire green waste bucket with them and that's after cleaning up maybe 6 weeks ago. We have also noticed that even once SMUD trims, the bend/spread in that tree under high wind conditions still puts it awfully close to that overhead line. Always safety first?? What about my safety? And the neighborhood's? The drought, climate change and fire safety require being more aggressive with recalcitrant homeowners. And when a crew trims a tree at a property line, please take into account the neighbor's concerns about the direction of new growth.

Thank you very much

Catherine and Ralph Elder
Folsom

Exhibit to Agenda Item #12

Approve the issuance of **SMUD 2021 Series I Revenue Refunding Bonds**, authorize the distribution of the **Preliminary Official Statement**, and authorize the Chief Executive Officer/General Manager to execute documents necessary to complete the refunding transaction, including the **Bond Purchase Agreement**.

Board of Directors Meeting

Thursday, June 17, 2021, scheduled to begin at 5:30 p.m.

Virtual Meeting (online)

Bond Refunding Transaction & Authorization

- Approve Issuance of the 2021 Series I Refunding Bonds
 - Purpose: to refund remaining \$127 million of 2011 X bonds
 - Issue approximately \$106 million of fixed rate bonds maturing from 2022 to 2028
 - Termination of forward starting interest rate swap (hedge) entered in 2019
 - Savings: **\$23 million NPV savings** - over \$3 million per year through 2028
- Approve all necessary financing documents including:
 - Preliminary Official Statement (primary disclosure document)
 - Bond Purchase Agreement

SB 450: Public Disclosure Requirement Related to Bond Issuance

Government Code Section 5852.1 requires a Good Faith Estimate of Costs provided by Underwriter/Financial Advisor

2021 Series I Refunding Bonds

– True Interest Cost (TIC)	1.16%
– Cost of Issuance	\$712,250
– Bond Proceeds	\$130,385,954
– Total Payment Amount (All Debt Service and Fees)	\$133,568,985**

***Note: “Total Payment Amount” on Refunded bonds was \$157 million, producing savings of \$23 million*

Bond Sale Schedule

June 17 th	Board Approval
June 18 th	Post POS/Begin marketing bonds
June 23 rd	Pricing
July 14 th	Closing

Questions?

Exhibit to Agenda Item #13

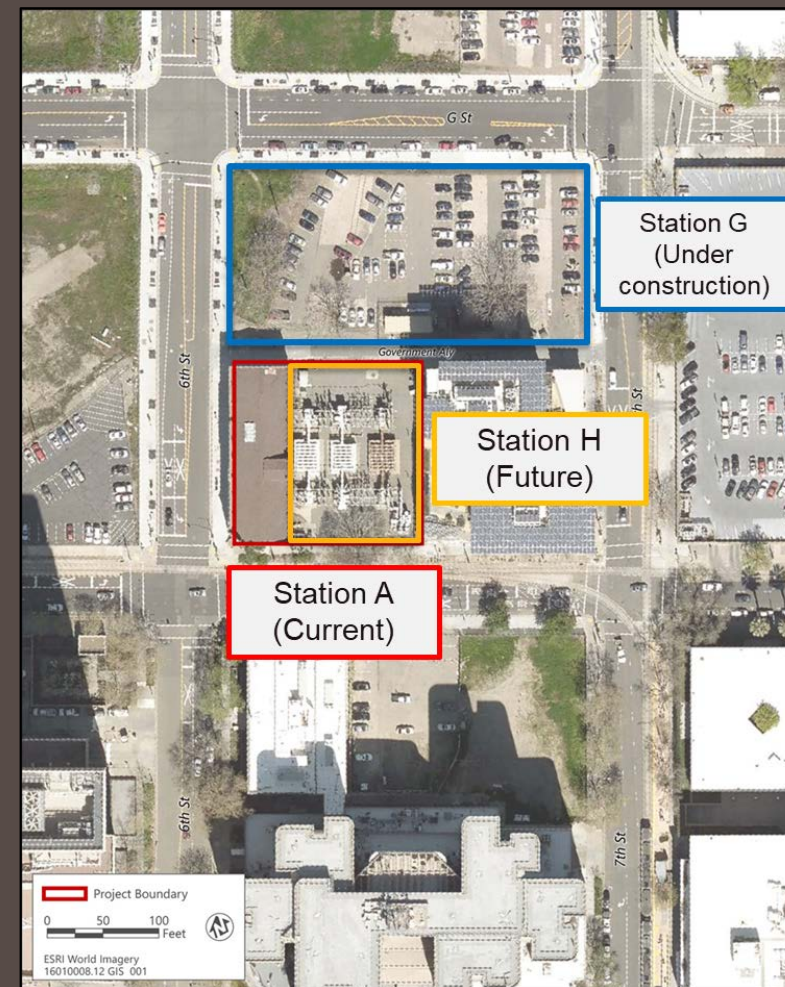
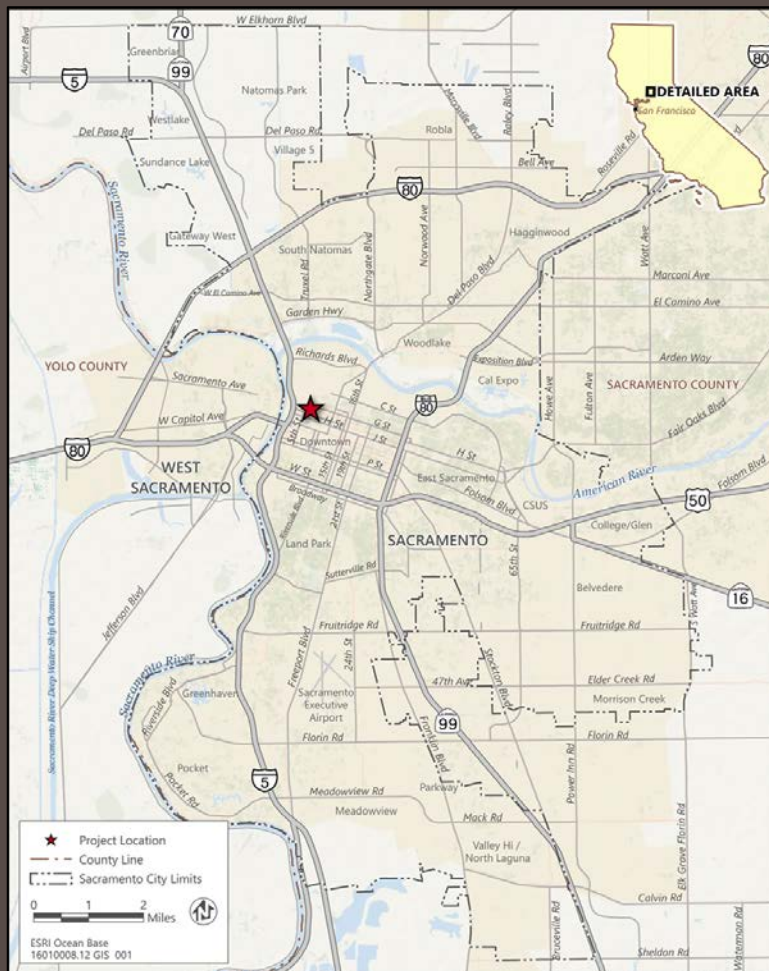
Certify that the Station H Substation Project (Project) Final Environmental Impact Report (FEIR) complies with the California Environmental Quality Act (CEQA); adopt the Mitigation Monitoring and Reporting Plan for the Project; adopt the California Environmental Quality Act Findings and Statement of Overriding Considerations in Connection with Station H Substation Project; and approve the Project.

Board of Directors Meeting

Thursday, June 17, 2021, scheduled to begin at 5:30 p.m.

Virtual Meeting (online)

Station H Project Overview



Project Description

- Remove and dismantle Station A Substation Yard
 - Historic Station A Building will remain.
- New Station H substation will include:
 - Two 115/21kV transformers.
 - Two underground 115kV lines to connect Station H to Station G.
 - Canopy between new Station H and Historic Station A Building, if needed.

Public Review Process – Notice of Preparation (NOP) and Draft Environmental Impact Report (EIR)

- NOP 30-day public comment period (11/4/20 – 12/8/20)
- Draft EIR 45-day public comment period (3/17/21 – 4/30/21)
- Published at SMUD.org, Sacramento Bee
- Mailed to landowners within 500 feet of the project site; Native American Tribes; Local Agencies
- Available at CSC, ECOC
- Public Meetings
 - Scoping Meeting (11/16/20)
 - Draft EIR Public Meeting (4/8/21)

NOP and Draft EIR Commenters and Issues

- NOP
 - Native American Heritage Commission
 - City of Sacramento
 - Derrick Lim
- EIR
 - Department of Toxic Substance Control
 - Central Valley Regional Water Quality Control Board
 - City of Sacramento Fire Department
 - Sacramento Metropolitan Air Quality Management District

Alternatives Analysis

- Project alternatives analyzed
 - No project alternative
 - Site reorientation
 - Off-site alternative
- The preferred alternative is the project as described in the draft and final environmental impact report (EIR)

Mitigation Monitoring and Reporting Program

- Project will implement 10 mitigation measures that will reduce all but one potentially significant impact to a less-than-significant level.
- Mitigation Measures:
 - Air Quality
 - Biological Resources
 - Cultural Resources
 - Tribal Cultural Resources (Significant and Unavoidable)
 - Noise and Vibration
 - Transportation

Significant and Unavoidable Impacts

- Tribal Cultural Resources:
 - Site is considered sacred Tribal land.
 - Excavation activities may result in disturbance of Tribal cultural resources.

AB 52, Tribal Consultation

- Staff held 6 meetings with the Tribes.
- Tribes were provided both the cultural resource and Tribal cultural resource EIR chapters before publication and staff was able to incorporate all comments and recommendations.
- Tribes provided SMUD with the approved treatment plan developed for the Courthouse project located on the adjacent parcel across 6th St and H St.
- Subsequently, the Tribes did not comment on the draft EIR or attend the public meetings.

Tribal Cultural Resource Mitigation

- Design and implement a treatment plan
 - Developed in collaboration with the Tribes.
 - Tribal Monitors onsite during testing and project excavation work.
- All workers will receive Environmental and Cultural Respect training
 - To be developed with the Tribes and project archeologist.
- Artwork will be commissioned for the site to recognize local Tribes.
- SMUD will contribute financial and program development support to American River College's Native American Resource Center.

Standard for Statement of Overriding Considerations

- A project may be approved even though unmitigable impacts would be sustained. A “statement of overriding considerations” is required, which states that even though a project would result in one or more unavoidable adverse impacts, specific economic, social or other stated benefits are sufficient to warrant project approval. The statement explains the justification for proceeding with the project despite the significant adverse environmental impacts.
- A statement of overriding considerations provides specific reasons why the benefit of a proposed project outweighs the adverse effect. If the benefits of a project outweigh the unavoidable adverse environmental effects, those effects may be considered “acceptable” [CEQA Guidelines Section 15093 (a)].

SMUD Benefits to Justify Statement of Overriding Considerations

- The existing equipment at Station A is nearing the end of its useful life and needs to be replaced. The replacement of existing equipment allows SMUD to take advantage of newer technologies by installing and operating new, more efficient equipment. Generally, newer equipment is more efficient and provides a benefit to the environment. By replacing with newer equipment, SMUD will improve the efficiency of its operations.
- Limiting the need for extensive ground disturbance around the project area which may create further significant and unavoidable impacts.

SMUD Board Alternatives

- Certify the EIR for the Station H Substation project, adopt the Findings and Statement of Overriding Considerations, adopt the Mitigation Monitoring and Reporting Program, and approve the project.
- Return to staff for further study.
- Reject the proposal and CEQA analysis.

Requested SMUD Board Action

- Certify the California Environmental Quality Act (CEQA) Environmental Impact Report;
- Adopt the Findings and Statement of Overriding Considerations;
- Adopt the Mitigation Monitoring and Reporting Program; and
- Approve the Project.

Exhibit to Agenda Item #16

Provide the summary of SMUD's current Power Supply Costs.

Board of Directors Meeting

Thursday, June 17, 2021, scheduled to begin at 5:30 p.m.

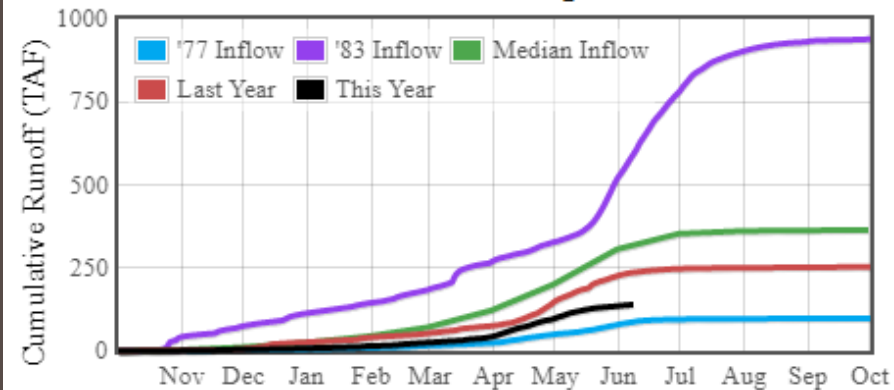
Virtual Meeting (online)

Precipitation Levels

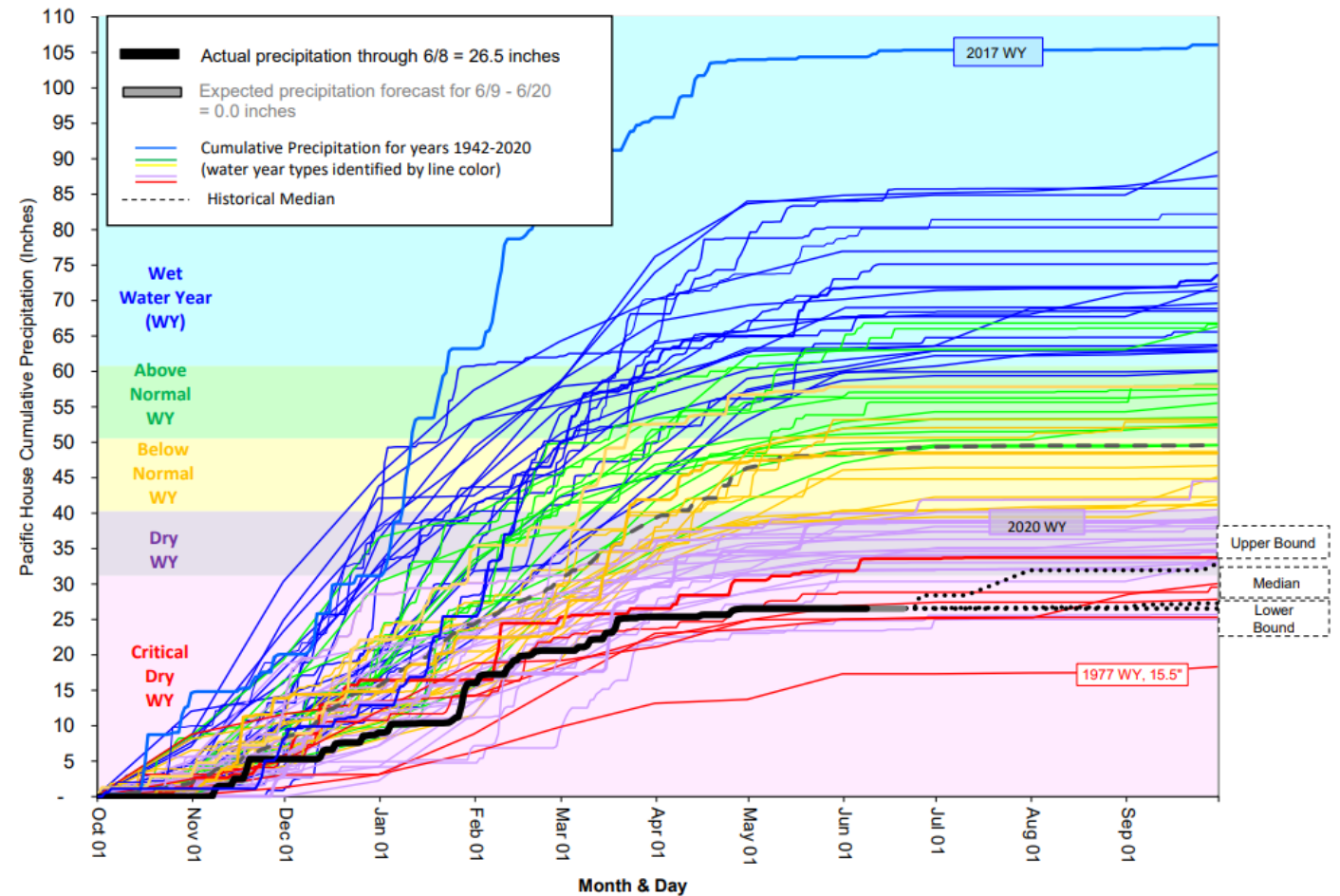
Precipitation Pacific House
Plan vs. Actual/Forecast

Month	Plan	Actual	Difference
Oct-20	2.13"	0.00"	-2.13"
Nov-20	7.61"	5.30"	-2.31"
Dec-20	7.45"	6.08"	-1.37"
Jan-21	9.29"	8.18"	-1.11"
Feb-21	8.49"	5.09"	-3.40"
Mar-21	6.76"	4.92"	-1.84"
Apr-21	4.42"	1.44"	-2.98"
May-21	1.91"	0.00"	-1.91"
Total	48.06"	31.01"	-17.05"

Cumulative runoff into storage reservoirs



Comparison of 2021 WY Precipitation to History (1942-2020 WYs)



Commodity Budget: Mitigations & Forecast

SMUD has in place financial mitigation tools that hedge against hydroelectric uncertainty

- HRSF Balance - \$74.7M
 - WY (Apr20-Mar21) forecasted withdrawal \$18.6M
- RSF WAPA Balance - \$44.7M
 - 2021 forecasted transfer out of the WAPA RSF \$8.7M

HRSF – Hydro Rate Stabilization Fund
RSF – Rate Stabilization Fund
WY – Water Year

2021 Commodity Costs Forecast vs. Budget (in millions)			
Forecast		Budget	Difference
\$	436	\$	441
		\$	(5)

Hydro Performance as of May 31, 2021			
	Forecasted (GWh)	2021 Budget (GWh)	Variance (GWh)
UARP	780	1,558	-778
WAPA	475	661	-186
UARP + WAPA	1,255	2,219	-964

UARP – Upper American River Project
WAPA – Western Area Power Administration

From: [Evelyn Cotton](#)
To: [Public Comment](#)
Subject: [EXTERNAL] I can appreciate the free tree service. I love trees and they serve many purposes,BUT,WHEN YOU GIVE CITIZENS FREE TREES,YOU SHOULD HAVE SOMEONE TO MAKE SURE THEY DO PROPER UPKEEP OF THEM AND KEEP THEM TRIMMED BACK,AS NOT TO CAUSE PROBLEMS IN...
Date: Friday, June 4, 2021 9:01:11 AM

CAUTION: This email originated from outside of SMUD. Do not click links or open attachments unless you recognize the sender and know the content is safe.

From: [Jenn Mcswain](#)
To: [Public Comment](#)
Subject: [EXTERNAL] Big balance bills
Date: Tuesday, June 8, 2021 5:14:29 PM

CAUTION: This email originated from outside of SMUD. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello,

Our economy was shut down due to covid and Governor Newsome, So now the people who are left without there jobs have these huge smud bills and according to your website your policies will resume in august which will be shutting people down who can't pay their bill. This shut down is not the peoples fault! This shut down is Gavin newsome's fault. So you can send my smud balance to him. He left us high and dry with no way to go back to work, because he wants to continue ignoring covid numbers and science to continue his control over California. I can't afford anything because of him, So you resuming your policies to shut us down will affect millions of people. All of our balances need to be sent to Gavin newsome! This is his fault!!! Not ours!! He keeps my kids out of school! He keeps my job shut down!! He keeps this going!! Not us!! We cannot be held responsible for a man who wants to control our lives!! I pay what I can on my smud bill and is still \$1,700.00 dollars!! While Gavin newsmen never lost his pay check for his job!! We lost ours!! This is not ok and smud needs to figure out a plan to fix Gavin newsome's mess!! If our jobs were never messed with, if our economy was never shut down. This would've never happened!!!

SSS No.
. SCS 21-116

BOARD AGENDA ITEM

STAFFING SUMMARY SHEET

Committee Meeting & Date Finance & Audit – 07/13/21
Board Meeting Date July 15, 2021

TO					TO				
1.	Alan Sparks				6.				
2.	Roberts Adams				7.				
3.	Casey Fallon				8.				
4.	Gary King				9.	Legal			
5.	Jennifer Davidson				10.	CEO & General Manager			

Consent Calendar	X	Yes		No If no, schedule a dry run presentation.	Budgeted	X	Yes		No (If no, explain in Cost/Budgeted section.)
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FROM (IPR)	DEPARTMENT	MAIL STOP	EXT.	DATE SENT
Andrew Littlefield	Warehouse Operations	EA404	7278	7/2/21

NARRATIVE:

Requested Action: Authorize the Chief Executive Officer and General Manager to award a contract to Anixter Inc. for pole line hardware and electrical supplies for a five-year term from July 20, 2021, to July 19, 2026, for an amount not-to-exceed \$25,000,000.

Summary: Request for Proposal No. Doc2833034689 was issued in March 2021 to solicit qualified firms to supply SMUD with pole line hardware and other electrical supplies over the next five (5) years. When implemented, this multi-year strategic alliance agreement is expected to support SMUD's ongoing requirements for critical pole line hardware inventory materials. Additionally, benefits of this strategic alliance agreement include, but are not limited to:

- Unit price reduction
- Consistent product quality
- Implementation of Quarterly Business Reviews for performance
- Focus on environmental sustainability
- Joint process improvement effort with supplier

Total cost savings based on the supplier negotiation and recommended award is \$1,025,388 over the 5-year contract period or 4%.

Board Policy: BL-8, Delegation to the CEO & GM with respect to Procurement;
(Number & Title) SD-7, Environmental Leadership

Recommendation: Award to Highest Evaluated Responsive Proposer.

Award to:
Anixter Inc.
6350 Goodyear Road
Benicia, CA 94510

Proposers Notified by Procurement: 34
Proposers Downloaded: 6
Pre-Proposal Conference Attendance: 6
Proposals Received: 4

Responsive Proposals Received	P/F	10 Points SEED	45 Points Technical	45 Points Pricing	Total Score	Overall Rank	Proposal Amount	Evaluated Proposal Amount	Proposed Award Amount
Anixter Inc.	P	0	39.17	43.24	82.41	1	\$16,605,331.53	\$16,605,331.53	\$25,000,000
One Source Distributors	P	0	23.50	45.00	68.50	2	\$15,955,687.01	\$15,955,687.01	
Graybar Electric Company	P	0	34.17	32.21	66.38	3	\$22,288,407.90	\$22,288,407.90	

Non-Responsive Proposals Received Proposal Amount

Lekson Inc. \$0

Comments: Lekson Inc. only submitted pricing for a small portion of the optional materials and did not submit pricing for the primary bid schedule, which was a requirement.

Supplier Diversity Program: No certified SEED suppliers participated in this RFP. Anixter is self-performing this work.

Benefits: SMUD will create savings of \$1,025,388 over the five-year contract term. SMUD will establish a strategic partnership with this key supplier.

Cost/Budgeted: \$25,000,000; Budgeted for 2021-2026 by Warehouse Operations (expenses are allocated to Business Units based on usage).

Alternatives:

1. Extend the contract end dates to our existing pole line hardware and electrical supplies contracts. This approach would not produce the most competitive unit prices for SMUD.
2. Use the Bid Request solicitation type instead of the RFP type. The approach would not allow SMUD to negotiate pricing and evaluate other factors that bring value to SMUD including environmental impact, product quality, and customer service.

Affected Parties: Warehouse Operations, Supply Chain Services, Anixter Inc.

Coordination: Warehouse Operations and Joshua Williams, and Supply Chain Services.

Presenter: Casey Fallon, Director, Procurement, Warehouse & Fleet

Additional Links:

SUBJECT

FIVE YEAR INVENTORY REQUIREMENTS AWARD FOR POLE LINE HARDWARE

ITEM NO. (FOR LEGAL USE ONLY)

5

ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.

RESOLUTION NO. _____

WHEREAS, in March 2021, SMUD issued Request for Proposal No. Doc2833034689 (RFP) to solicit qualified firms to supply SMUD with pole line hardware and other electrical supplies over the next five years; and

WHEREAS, four proposals submitted in response to the RFP were evaluated; **NOW, THEREFORE**,

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

Section 1. As a result of such examination, **Anixter Inc.** is hereby determined and declared to be the highest evaluated responsive proposer to provide pole line hardware and other electrical supplies over the next five years.

Section 2. The Chief Executive Officer and General Manager, or his designee, is authorized, on behalf of SMUD, to award a contract to **Anixter Inc.** to provide pole line hardware and other electrical supplies for a five-year term from July 20, 2021, to July 19, 2026, for an amount not-to-exceed \$25,000,000.

Section 3. The Chief Executive Officer and General Manager, or his designee, is authorized to make future changes to the terms and conditions of the contract that, in his prudent judgment: (a) further the primary purpose of the contract; (b) are intended to provide a net benefit to SMUD; and (c) do not exceed the authorized contract amount and applicable contingencies.

SSS No. SCS 21-145

BOARD AGENDA ITEM

STAFFING SUMMARY SHEET

Committee Meeting & Date
Finance & Audit – 07/13/21Board Meeting Date
July 15, 2021

TO				TO			
1.	Tasha Crawford	6.	Frankie McDermott				
2.	Robert Adams	7.	Gary King				
3.	Casey Fallon	8.	Jennifer Davidson				
4.	Brad Gacke	9.	Legal				
5.	Ross Gould	10.	CEO & General Manager				
Consent Calendar		Budgeted					
X	Yes	X	Yes				
<i>No If no, schedule a dry run presentation.</i>		<i>No (If no, explain in Cost/Budgeted section.)</i>					
FROM (IPR)		DEPARTMENT					
Andrew McDermott		Procurement					
MAIL STOP		EXT.					
EA404		5862					
DATE SENT		6/25/21					

NARRATIVE:

Requested Action: Approve Contract Change No. 06 to Contract No. 4500096911 with Securitas Critical Infrastructure Services, Inc. (Securitas) for Rancho Seco security services to extend the contract expiration date by five years from August 1, 2021, to August 1, 2026, and increase the contract amount by \$15,000,000, from \$10,900,000 to \$25,900,000.

Summary: This contract was awarded on a competitive basis to Securitas Critical Infrastructure Services, Inc. in August 2016 under Board Resolution 16-06-03 to provide security services and operations support for SMUD's Rancho Seco facility. The original contract was awarded for the period from August 1, 2016 to August 1, 2021, for an amount not-to-exceed \$10,000,000. Contract Change No. 1 exercised the escalation provision based on the U.S. Bureau of Labor Statistics, Employee Cost Index. Contract Change No. 2 exercised the Board contingency to increase the contract by \$900,000 to provide additional staffing resources in accordance with the updated Security Procedure. Contract Change No. 3, No. 4, and No. 5 exercised the escalation provision based on the U.S. Bureau of Labor Statistics. Contract Change No. 6 is requested to extend the expiration date from August 1, 2021 to August 1, 2026 and increase the contract from \$10,900,000 to \$25,900,000.

Securitas has provided a proposal for all previous solicitations for Rancho Seco Security Services and has been highest evaluated proposer each time. The initial award was in 2009, and, since then, they have established themselves as a valued strategic partner to SMUD. They have fine-tuned their base monthly staffing and support services, helped SMUD maintain regulatory compliance for the Nuclear Regulatory Commission (NRC) sites with zero incidents, and provided operational support above and beyond the typical security services framework. All in support of providing the most cost effective and efficient service offering to SMUD. This change is requested to continue to leverage the strategic partnership between SMUD and Securitas to continue to work collaboratively over the life of the contract. Market research indicates rates for this service are expected to vastly increase over the next five years. To ensure SMUD continues to receive the highest level of service, it is in SMUD's best interest to extend and increase this contract to secure competitive pricing and continue the strategic partnership with Securitas.

Currently, the contract balance is approximately \$613,000.

Contract Actions	Amount	Cumulative Total	Description
Original Contract	\$10,000,000	\$10,000,000	
Change No. 01	\$0.00	\$10,000,000	Exercised U.S.BLS provision
Change No. 02	\$900,000	\$10,900,000	Added contingency
Change No. 03	\$0.00	\$10,900,000	Exercised U.S.BLS provision
Change No. 04	\$0.00	\$10,900,000	Exercised U.S.BLS provision
Change No. 05	\$0.00	\$10,900,000	Exercised U.S.BLS provision
Pending Change No. 06	\$15,000,000	\$25,900,000	Adds funds and extends expiration

Board Policy: <i>(Number & Title)</i>	BL-8; Delegation to the CEO & GM with respect to Procurement; SD-17 Enterprise Risk Management; This Agreement reduces the risk associated with SMUD's obligation to maintain compliance with increasingly complex NRC Regulations and provides active state-of-the-art security oversight, training, and equipment for the Rancho Seco facility.
Comments:	Price negotiations have resulted in a 9% (\$780,000) reduction in cost to SMUD as a result of this contract change.
Benefits:	To continue to provide SMUD with the means to maintain a high level of support for meeting the operational security requirements of the Rancho Seco facility based on federally mandated security support for Independent Spent Fuel Storage Installation (ISFSI).
Cost/Budgeted:	\$15,000,000; Budgeted for 2021-2026 by Rancho Seco.
Alternatives:	Issue a solicitation which could result in significant price increases and potentially lose the historical knowledge and partnership Securitas has provided for over a decade.
Affected Parties:	Power Generation, Supply Chain Services, and Contractor.
Coordination:	Power Generation and Contract Manger, Legal, and Supply Chain Services.
Presenter:	Casey Fallon, Director, Procurement, Warehouse & Fleet

Additional Links:

SUBJECT	Approve Contract Increase and Extend Term for Rancho Seco Security Services	ITEM NO. (FOR LEGAL USE ONLY) 6
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ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.

RESOLUTION NO. _____

WHEREAS, by Resolution No. 16-06-03, adopted on June 2, 2016, this Board authorized the Chief Executive Officer and General Manager to award Contract No. 4500096911 to **Securitas Critical Infrastructure Services, Inc. (Securitas)** in the amount of \$10,000,000 to provide Rancho Seco security services for a five (5) year period from approximately August 1, 2016, to August 1, 2021; and

WHEREAS, Contract Change No. 1 exercised the escalation provision based on the U. S. Bureau of Labor Statistics, Employee Cost Index; and

WHEREAS, Contract Change No. 2 increased the contract by the allowed contingency amount of \$900,000 to provide additional staffing resources in accordance with the updated Security Procedure; and

WHEREAS, Contract Change No. 3 exercised the escalation provision based on the U. S. Bureau of Labor Statistics, Employee Cost Index; and

WHEREAS, Contract Change No. 4 exercised the escalation provision based on the U. S. Bureau of Labor Statistics, Employee Cost Index; and

WHEREAS, Contract Change No. 5 exercised the escalation provision based on the U. S. Bureau of Labor Statistics, Employee Cost Index; and

WHEREAS, **Securitas** has established themselves as a valued strategic partner to SMUD by fine tuning their base monthly staffing and support services, helping SMUD maintain regulatory compliance for the **Nuclear Regulatory Commission (NRC)** sites with zero incidents, and providing operational support above and beyond the typical security services framework; and

WHEREAS, market research indicates rates for this service are expected to vastly increase over the next five years; and

WHEREAS, extending the contract for an additional five years and increasing the contract amount by \$15,000,000 is in SMUD's best interests to secure competitive pricing and to continue the strategic partnership with **Securitas**; **NOW**, **THEREFORE**,

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

Section 1. That this Board approves Contract Change No. 6 to Contract No. 4500096911 with **Securitas Critical Infrastructure Services, Inc.** for Rancho Seco security services to extend the contract expiration date by five years from August 1, 2021, to August 1, 2026, and increase the contract amount by \$15,000,000, from \$10,900,000 to \$25,900,000.

Section 2. The Chief Executive Officer and General Manager, or his designee, is authorized to make future changes to the terms and conditions of the contract that, in his prudent judgment: (a) further the primary purpose of the contract; (b) are intended to provide a net benefit to SMUD; and (c) do not exceed the authorized contract amounts and applicable contingencies.

SSS No.
SCS 21-138

BOARD AGENDA ITEM STAFFING SUMMARY SHEET

Committee Meeting & Date
Finance & Audit - 07/13/21
Board Meeting Date
July 15, 2021

TO					TO				
1.	Tasha Crawford				6.	Gary King			
2.	Robert Adams				7.	Jennifer Davidson			
3.	Casey Fallon				8.				
4.	Ross Gould				9.	Legal			
5.	Frankie McDermott				10.	CEO & General Manager			
Consent Calendar		X	Yes	No If no, schedule a dry run presentation.		Budgeted		X	Yes
FROM (IPR)		DEPARTMENT		MAIL STOP		EXT.		DATE SENT	
Dan Manfredi		Supply Chain		EA404		6283		6/24/2021	

NARRATIVE:

Requested Action: Approve increase to the aggregate contract not-to-exceed amount for gas pipeline professional engineering services by \$3 million, from \$2 million to \$5 million, for Contract No. 4500113214 with Alisto Engineering Group (Alisto) and Contract No. 4500113213 with Gas Transmission Systems, Inc. (GTS).

Summary: The original contracts were awarded on a competitive basis for the period January 1, 2019, to December 31, 2022, with two optional one-year extensions, for a not-to-exceed aggregate amount of \$1,500,000. Contract Change 1 to 4500113213 (GTS) added a subcontractor and new labor classifications. Contract Change 1 to 4500113214 (Alisto) and Contract Change 2 to 4500113213 (GTS) increased the total contract aggregate amount by \$500,000 to \$2,000,000. This Board action item will authorize the CEO & General Manager to approve the requested total aggregate contract amount increase from \$2,000,000 to \$5,000,000.

The gas pipeline professional engineering services contractors are nearing the funding limit due to efforts supporting the design and installation of two 2020 interconnections to convey natural gas supply on behalf of another utility (Resolution No. 20-01-05). In addition, The Pipeline and Hazardous Materials Safety Administration (PHMSA) operated under the Department of Transportation introduced the "Mega Rule" effective July 1, 2020, which is one of the most significant regulatory changes in the pipeline regulatory body, promulgating SMUD's proactive response to implement a Material Verification program, which is currently underway. In addition, SMUD's 2030 Zero Carbon Plan will require the engineering analysis and evaluation of numerous pipeline segment material properties to verify blending and possible conversion to biofuels, hydrogen mixtures or all-hydrogen solutions to meet the plan's goals.

Currently, the aggregate balance is approximately \$150,000.

Contract Actions	Amount	Cumulative Total	Description
Original Aggregate Amount	\$1,500,000	N/A	New Awards
Contract Change 1 to 4500113213 (GTS)	\$0	N/A	Add subcontractor and new labor classifications
Contract Change 1 to 4500113214 (Alisto) / Contract Change 2 to 4500113213 (GTS)	\$500,000	\$2,000,000	Increase Total Aggregate Amount
Pending Board approval	\$3,000,000	\$5,000,000	Increase Total Aggregate Amount

Board Policy: BL-8, Delegation to the CEO & GM with respect to Procurement; SD-4, Reliability; SD-6, Safety;
(Number & Title) SD-13, Economic Development Policy

Benefits: This administrative change will provide SMUD with 2 qualified Contractors to support SMUD's 2030 Zero Carbon Plan. The current contract billing rates are fixed throughout the 3-year term plus option years. SMUD considers these rates to be fair and reasonable.

Cost/Budgeted: \$5,000,000; Budgeted for 2021 through 2025 by Power Generation.

Alternatives: SMUD crews could hire internal engineering staff to perform the services; however, the onboarding time would delay projects and jeopardize meeting the 2030 goals.

Affected Parties: Power Generation, Supply Chain Services, and Contractor.

Coordination: Power Generation, Kevin Hudson, and Supply Chain Services.

Presenter: Ross Gould, Director, Power Generation

Additional Links:

SUBJECT

**Approve Aggregate Contract Increase for
Gas Pipeline Professional Engineering Services**

ITEM NO. (FOR LEGAL USE ONLY)

7

ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.

RESOLUTION NO. _____

WHEREAS, Contract No. 4500113214 with **Alisto Engineering Group (Alisto)** and Contract No. 4500113213 with **Gas Transmission Systems, Inc. (GTS)** (collectively, the **Contracts**) were awarded on a competitive basis in January 2019 to provide gas pipeline professional engineering services for the period from January 1, 2019, to December 31, 2022, for an aggregate not-to-exceed amount of \$1,500,000 with two optional one-year extensions; and

WHEREAS, Contract Change 1 to **GTS** Contract No. 4500113213 added a new subcontractor, **NorthStar Design Solutions**, and two labor classifications to the Contractor's Rate Schedule; and

WHEREAS, Contract Change 1 to **Alisto** Contract No. 4500113214 and Contract Change 2 to **GTS** Contract No. 4500113213 increased the total aggregate contract amount by \$500,000 from \$1,500,000 to \$2,000,000; and

WHEREAS, by Resolution No. 20-01-05, adopted on January 16, 2020, this Board authorized the execution of a **Gas Transmission Service Agreement (Agreement)** with **Pacific Gas and Electric Company (PG&E)** for the transmission of **PG&E** gas through the SMUD pipeline to allow **PG&E** to continue its gas service to the **Procter & Gamble Company** and **Air Products and Chemicals, Incorporated** facilities, and to take such other actions as may be necessary and appropriate to implement that **Agreement**; and

WHEREAS, the spending rate under the **Contracts** is nearing the funding limit due to efforts supporting the design and installation of two 2020 interconnections to convey natural gas supply related to the **Agreement**; and

WHEREAS, the **Pipeline and Hazardous Materials Safety**

Administration (PHMSA) operated under the Department of Transportation introduced the “Mega Rule” effective July 1, 2020, which is one of the most significant regulatory changes in the pipeline regulatory body, promulgating SMUD’s proactive response to implement a Material Verification program, which is currently underway; and

WHEREAS, increasing the aggregate contract amount for the **Contracts** will allow SMUD to continue forward without jeopardizing the ability to meet its 2030 Zero Carbon Plan goals; **NOW, THEREFORE**,

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

Section 1. That this Board hereby authorizes the Chief Executive Officer and General Manager, or his designee, to increase the aggregate contract not-to-exceed amount for gas pipeline professional engineering services by \$3 million, from \$2 million to \$5 million, for Contract No. 4500113214 with **Alisto Engineering Group** and Contract No. 4500113213 with **Gas Transmission Systems, Inc.**

Section 2. The Chief Executive Officer and General Manager, or his designee, is authorized to make future changes to the terms and conditions of the Contracts that, in his prudent judgment: (a) further the primary purpose of the Contracts; (b) are intended to provide a net benefit to SMUD; and (c) do not exceed the authorized contract amounts and applicable contingencies.

BOARD AGENDA ITEM

STAFFING SUMMARY SHEET

TO					TO					
1.	Frankie McDermott				6.					
2.	Stephen Clemons				7.					
3.					8.					
4.					9.	Legal				
5.					10.	CEO & General Manager				
Consent Calendar		<input checked="" type="checkbox"/>	Yes	No <i>If no, schedule a dry run presentation.</i>		Budgeted	<input checked="" type="checkbox"/>	Yes	No <i>(If no, explain in Cost/Budgeted section.)</i>	
FROM (IPR) Laura Lewis				DEPARTMENT Office of the General Counsel				MAIL STOP 308	EXT. 6123	DATE SENT 07/02/21
NARRATIVE:										
<p>Requested Action: Adopt criteria to adjust SMUD ward boundaries using the 2020 data released by the U.S. Census Bureau and set schedule for public redistricting workshops.</p> <p>Summary: The Municipal Utility District (MUD) Act and Elections Code require that the Board adjust SMUD's ward boundaries every 10 years following the release of data by the Census Bureau. SMUD is required to complete its redistricting effort no later than May 6, 2022. Federal judicial decisions and the Voters Right Act of 1985 set forth the federal requirements for redistricting, including direction to apportion wards with a maximum population deviation under 10 percent and a prohibition on redistricting in a manner which results in a denial or abridgement of the right to vote. California Elections Code section 22000 sets forth the criteria the Board should consider in adjusting ward boundaries.</p> <p>Adopt the following criteria (based on legal requirements) to develop new ward boundaries:</p> <ul style="list-style-type: none"> Adjust ward boundaries so they are, as far as practicable, equal in population such that the population deviation between the largest and smallest wards does not exceed 10%; Consider geography and topography; Consider cohesiveness, contiguity, integrity and compactness of territory; Consider communities of common interest: contiguous populations which share common social and economic interests that should be included within a single district for purposes of its effective and fair representation. <p>Board Policy: Governance Process GP-3, Board Job Description – j) Take such other actions as may be required by law. <i>(Number & Title)</i></p> <p>Benefits: Comply with state and federal requirements; adjust ward boundaries to account for changes in population.</p> <p>Cost/Budgeted: Contained in the Corporate/Legal Budget – most costs are for internal labor.</p> <p>Alternatives: None – action must be taken to comply with the law.</p> <p>Affected Parties: SMUD, Board of Directors, Public</p> <p>Coordination: Executive Office, Board Office, Legal Department, Community Engagement, Sustainable Communities, Grid Planning & Operations, IT, and Communications & Marketing</p> <p>Presenter: Joe Schofield, Deputy General Counsel</p>										
Additional Links:										
SUBJECT Adopt Criteria to Adjust SMUD Ward Boundaries								ITEM NO. (FOR LEGAL USE ONLY) 8		

RESOLUTION NO. _____

WHEREAS, SMUD is required to redistrict its wards every 10 years to reflect updated data from the United States Census Bureau; and

WHEREAS, the deadline for SMUD to adopt updated ward boundaries for the pending census data is May 6, 2022; and

WHEREAS, the orderly development of boundaries requires an understanding of the appropriate criteria upon which to establish them; and

WHEREAS, public input is important for the development of political election boundaries; **NOW, THEREFORE**,

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

Section 1. The following criteria are hereby approved for use in developing ward boundaries using the most recent federal census data:

- Adjust wards so they are, as far as practicable, equal in population such that the population deviation between the largest and smallest wards does not exceed 10%;
- Consider geography and topography;
- Consider cohesiveness, contiguity, integrity, and compactness of territory;
- Consider communities of common interest: contiguous populations which share common social and economic interests that should be included within a single district for purposes of its effective and fair representation.

Section 2. To ensure opportunities for public feedback on the development of new ward boundaries, staff shall schedule two public workshops to be held at SMUD or via virtual meeting in accordance with local, state, and federal guidelines and recommendations in place for containment of COVID-19 for the

presentation of proposed boundary maps, with the first workshop expected to be held in late October/early November 2021 and the second workshop expected to be held in late November/early December 2021.

SSS No.

BOARD AGENDA ITEM

STAFFING SUMMARY SHEET

Committee Meeting & Date

Policy July 14, 2021

Board Meeting Date

July 15, 2021

TO				TO			
1.	Claire Rogers			6.			
2.	Brandy Bolden			7.			
3.	Jennifer Davidson			8.			
4.	Stephen Clemons			9.	Legal		
5.	Jose Bodipo-Memba			10.	CEO & General Manager		
Consent Calendar		x	Yes	No		If no, schedule a dry run presentation.	
Budgeted		x	Yes	No		(If no, explain in Cost/Budgeted section.)	
FROM (IPR)				DEPARTMENT		MAIL STOP	EXT.
Jose Bodipo-Memba				Sustainable Communities		A354	6493
DATE SENT				6/24/2021			

NARRATIVE:

Requested Action: Accept the monitoring report for Strategic Direction SD-13, Economic Development Policy.

Summary: The annual Economic Development Report summarizes accomplishments and status of SD-13 performance by SMUD for the period of January 1 – December 31, 2020.

Board Policy: Strategic Direction SD-13, Economic Development policy states: “Promoting the economic vitality of our region and the growth of our customer base is a key value of SMUD. Therefore, SMUD shall exercise strategic leadership and actively participate in regional economic development.”
(Number & Title)

Benefits: Provides information on SMUD’s overall compliance with Economic Development to the Board of Directors and Executive Team so they can evaluate compliance with specific Board Policy. Also, provides an opportunity to make recommendations or policy revisions, as necessary.

Cost/Budgeted: N/A

Alternatives: Provide the Board with written reports and communication through the CEO & General Manager.

Affected Parties: Board of Directors, Executive Team & staff.

Coordination: Economic Development develops the report with information from SEED, Sustainable Communities, New Business Development, Commercial Development, Pricing and Commercial Delivery.

Presenter: Jose Bodipo-Memba, Director, Sustainable Communities

Additional Links:

SUBJECT

Annual Monitoring Report for SD-13, Economic Development Policy

ITEM NO. (FOR LEGAL USE ONLY)

9

ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

OFFICE MEMORANDUM

TO: Board of Directors

DATE: July 6, 2021

FROM: Claire Rogers *CR 7/6/21*

**SUBJECT: Audit Report No. 28007405
Board Monitoring Report; SD-13, Board Monitoring Report**

Audit and Quality Services (AQS) received the SD-13 *Board Monitoring Report* 2020 Annual Board Monitoring Report and performed the following:

- A review of the information presented in the report to determine the possible existence of material misstatements;
- Interviews with report contributors and verification of the methodology used to prepare the monitoring report; and
- Validation of the reasonableness of a selection of the report's statements and assertions.

During the review, nothing came to AQS' attention that would suggest the SD Board Monitoring report did not fairly represent the source data available at the time of the review.

CC:

Paul Lau

Board Monitoring Report 2020

SD-13, Economic Development



1. Purpose & Background

Strategic Direction 13 (SD-13) Economic Development states that:

“Promoting the economic vitality of our region and the growth of our customer base is a key value of SMUD. Therefore, SMUD shall exercise strategic leadership and actively participate in regional economic development.

Specifically:

- a) SMUD shall promote innovation while maintaining rate affordability and balancing the other strategic directions.
- b) SMUD shall align its economic development activities with regional economic development initiatives.
- c) SMUD shall assist in retaining, recruiting and growing commercial and industrial rate-paying customers.
- d) SMUD shall offer economic development rates and program incentives.
- e) SMUD shall offer a contracting program for certified small businesses who are rate-paying customers.

2. Executive summary

SMUD is in compliance with SD-13, Economic Development.

SMUD continues to be a nationally recognized leader in corporate citizenship for our long-standing commitment to the economic health of the greater Sacramento region. In 2020, we enhanced our support for and engagement with the business community to support their needs during the COVID-19 pandemic. As our business community partners struggled, we pivoted and adapted our support to meet their evolving needs. We leveraged key partnerships to support a shared vision of economic recovery, deliver greater collective impact and advance an inclusive economy. Additionally, we aligned our economic development efforts with SMUD’s vision to be a trusted and powerful partner in achieving an inclusive, zero carbon economy. We leveraged our relationships to accelerate innovation, ensure energy affordability and reliability, protect the environment, eliminate greenhouse gas emissions, catalyze economic and workforce development, promote environmental justice, and enhance community vitality for all.

Our strategy to enhance the economic vitality of the Sacramento region is comprehensive. Key tactics to engage, inform and support the regional business community include:

- Advancing SMUD’s 2030 Zero Carbon Goal in regional economic development efforts
- Broadening support of the region’s emerging innovation ecosystem, including the California Mobility Center
- Supporting business formation, attraction, retention and expansion efforts
- Providing business development resources for entrepreneurs
- Improving the Supplier Education and Economic Development (SEED) contracting program for local small businesses
- Continuing to offer and enhance economic development rates
- Providing program energy efficiency and electrification incentives and rebates

- Expanding partnerships with local agencies and non-profits to facilitate community development
- Deploying significant resources to support a Sustainable Communities plan that can be replicated and measured for effectiveness and impact
- Ensuring our commercial and industrial service connection costs are in-line with other West Coast electric utilities
- Supporting the developer community

With the global pandemic of 2020, business innovation and development are even more critical for the sustainability and vitality of our region. This is why SMUD continues to invest in and support key organizations that promote new business creation, innovative technologies, and knowledge transfer with our higher-level institutions. SMUD has identified CleanStart, Hacker Lab, InnoGrove, and Startup Sac as leaders in this space and are proud to work with them to showcase our efforts and drive new business initiatives. This year, the Sacramento Urban Technology Lab (SUTL) showcased SMUD's efforts to drive innovations in Future Mobility via the CA Mobility Center (CMC), Internet of Things (IoT) and CyberSecurity. This work creates continued opportunities to leverage SMUD's research and development and New Business Development efforts to advance strategic goals and objectives of the company.

Through outreach and education, SMUD's Supplier Education and Economic Development (SEED) team teaches local small businesses how to contract with SMUD and positively impact their bottom line. SEED offers incentives to local small businesses that participate in SMUD's competitive bid process. It also helps prime contractors find local sub-contractors, which helps them gain a competitive edge when developing their bids or proposals. In 2020, the SEED program partnered with Supply Chain Services, conducting a variety of outreach and education events and awarding 24.01% of SMUD's contracts to SEED-certified small businesses, exceeding the Board-established goal of 20%. One hundred twenty-two (122) SEED contracts were awarded in 2020, totaling \$74,658,580.

SMUD works with over 50 local economic development organizations to enhance regional economic vitality. Our leadership roles in the Greater Sacramento Economic Council (GSEC), Valley Vision, Sacramento Metro Chamber, Urban Land Institute, Downtown Sacramento Partnership, Sacramento Black Chamber, Sacramento Asian Pacific Chamber, SACOG, SacPAC and many others help ensure our activities support the region's efforts to attract, retain and expand companies in our service area. It also means SMUD has a seat at the table early on in economic development conversations. Other major tactics to encourage regional economic development include our dedicated Commercial Development team and participation in business walks.

Business attraction was a key economic development focus in 2020. We participated in 12 new business attraction, retention and expansion projects, supporting four wins and the creation of an estimated 420 jobs within our service area. Projects included a sales and service center for electric school buses, another two arms of Amazon, and the expansion of an industrial machine manufacturer.

3. Information about our 2020 efforts to achieve the specific elements outlined in SD-13 is provided in the following section.

- a) SMUD shall promote innovation while maintaining rate affordability and balancing the other strategic directions.**

As SMUD continued to strategically invest in electrification and transportation, we focused on opportunities to promote awareness, innovation and job creation with local startups in these critical areas. The California Mobility Center (CMC) is a catalyzing investment in the region, which was woven into all of our collaborations, from keynote addresses with our CleanStart partner, to showcases with Startup Sacramento, to career pathway and entrepreneurship programs with Hacker Lab. All of these efforts are increasing investments to develop new solutions in these areas.

The New Business Development (NBD) Team planned, incorporated and launched a new nonprofit corporation, the CMC. The CMC applied for and received IRS tax exempt 501(c)(3) status. Additionally, the CMC rebranded itself and launched a new website. It secured a lease for its initial 25,000 square foot manufacturing and prototyping facility at Depot Park and procured its initial baseline equipment that will be commissioned by Q1 2021. Numerous service provider contracts were executed with additional contractors and consultants that will support the CMC and CMC clients. An affiliated venture capital fund was established to support CMC clients needing investment support. Lastly, the CMC workforce training program was launched in Q4 in partnership with community-based organizations, adult learning centers, Los Rios Community College District and Sacramento State University. The Workforce Pathways Partnerships Program was partly funded by a \$1.4 million CARES Act grant from the City of Sacramento designed to get people back to work who have been displaced from various industries due to the impact of COVID 19.

SMUD's growth and deeper focus on its Sustainable Communities program and the existing synergy with Economic Development resulted in a merging of efforts as Economic Development was re-organized into the Sustainable Communities team this year. Our co-investment with Hacker Lab continued into its second year, with SMUD's funding helping Hacker Lab secure CARES relief dollars to drive further innovation in our underserved communities. Detailed information about our 2020 partnerships that promote innovation is provided in Appendix A.

SMUD continues to effectively balance our goal of fostering innovation with our commitment to keeping rates low. SMUD's average rates will remain competitive even after the adopted rate increases for 2020 and 2021. In 2020, SMUD's system average rate was 35.7% below PG&E. PG&E's 2020 General Rate Case Phase I that was approved by the CPUC included revenue requirement increases for calendar year 2020 through 2022. The annual revenue requirement increase that would have taken effect on January 1, 2020 has been amortized over 3-years and is being put into PG&E's electric rates starting March 1, 2021. A detailed summary of SMUD's rate competitiveness is provided in Appendix A.

b) SMUD shall align its economic development activities with regional economic development initiatives

Supporting the local economy through the COVID-19 pandemic was a regional priority in 2020. SMUD engaged at the highest levels in regional economic recovery initiatives and took direct action to reach our commercial customers. SMUD partnered with the Sacramento Metro Chamber to underwrite/launch its COVID-19 Business and Economic Task Force briefings, which were initially daily virtual convenings of more than 50 local representatives across all level of government, industry and community leadership. The Task Force transitioned to weekly calls and served as the go-to source of information for the latest COVID-19 relief and support efforts for businesses in Sacramento County. SMUD leveraged the opportunity to share information about our programs and services to support impacted businesses and gather information to share directly with our customers. SMUD played a key

role in the development and execution of the State Sprint effort to develop a prioritized list of resources needed to advance the regional economy during and after the pandemic. Through our engagement, we were able to position the CMC as a key priority for investment and showcase SMUD's Sustainable Communities Resource Priorities Map. That effort was organized by the Sacramento Asian Pacific Chamber of Commerce in partnership with GSEC, SACOG, Valley Vision, the Sacramento Metro Chamber and City of Sacramento. SMUD also joined forces with Sac State, Los Rios Community College District, UC Davis, UC Davis Health System and Aggie Square to form an Anchor Institution Coalition to explore workforce and economic development pathways to support the greater Sacramento Region. The economic, intellectual, and human capital places an anchor institution in a unique position to improve and enrich the surrounding community in partnership with other key place-based stakeholders from sectors such as government, business, and faith, as well as community-based organizations and local residents. We provided resources to implement the Capital Region Prosperity Strategy and served as the program chair of the Internal Study Mission. Also, we remained in constant contact with all our business community partners to lend support.

SMUD launched an overarching awareness campaign focused on delivering actionable information and resources to our business customers. The main objective of our SMUD "Here to Help" campaign was to maximize the use of direct and targeted digital tools to provide support to small and midsize business customers. Our small and midsize businesses were significantly impacted by the COVID-19 global pandemic and state-enforced closure mandates. For a detailed description of SMUD's "Here to Help" campaign, see Appendix B.

SMUD plays a critical role in GSEC with SMUD's CEO serving on its Executive Committee and staff members serving as active members of its Economic Development Directors' Task Force. Through these roles, SMUD provided indirect support in the attraction of four companies that will create 420 jobs in SMUD's service territory. Detailed information about SMUD's role in key regional economic development organizations is provided in Appendix C.

To promote workforce and equitable economic and community development, SMUD continues targeting economic development, community/environmental health, and neighborhood outreach activities in vulnerable and under-resourced communities through its Sustainable Communities program. SMUD has invested over \$5 million into this effort, leveraging partnerships to increase impact in these areas of need. Additional information regarding Sustainable Communities can be found in Appendix B.

c) SMUD shall assist in retaining, recruiting and growing commercial and industrial rate-paying customers

The Commercial Development team actively engaged with 220 commercial, mixed-use and residential project developers throughout our service territory.

Staff from numerous departments partnered with the Sacramento Metro Chamber and the Capital Region Small Business Development Center (SBDC). To support the creation and growth of small businesses, the SBDC helped 21 businesses start up, retained 9,080 jobs, created 470 new jobs and helped businesses access \$85.9 million in capital during 2020.

d) SMUD shall offer economic development rates and program incentives

In 2020, SMUD offered an Economic Development Rate (EDR) to incentivize the attraction, retention and expansion of businesses within our service area. A description of the current EDR can be found in Appendix D.

SMUD conducted strategic outreach and engagement to developers and builders of residential subdivisions and multifamily developments about its Smart Homes program offerings and incentives for All Electric, SolarShares as well as discussing newer technologies such as battery storage.

e) SMUD shall offer a contracting program for certified small businesses who are rate-paying customers

Our SEED program offered certified small businesses incentives to participate in SMUD's competitive bid process. It also helped prime contractors find local subcontractors to gain an advantage in developing their bids or proposals.

Our SEED team held 31 workshops, orientations or panel discussions and coordinated participation in over 62 outreach events, reaching approximately 9,237 people with information about SEED.

SMUD's annual goal is to award 20% of all contracts to certified small businesses. We exceeded that goal in 2020, awarding 24.01% of contracts to SEED qualified vendors, totaling \$74,658,580.

The SEED team also coordinated the Business Advisory Council (BAC). The BAC raises local business awareness about contracting with SMUD and makes recommendations for improvements to our contracting process. SMUD hosts quarterly meetings for over 35 member agencies, including regional Chambers of Commerce and Property and Business Improvement Districts.

For more information about our 2020 efforts to promote our SEED program, and the achievement of our SEED goals, please see Appendix E.

- 4. Challenges:** The regulatory climate in California, particularly the costs of doing business and regulatory compliance, are often cited as reasons why companies choose to locate in other states. Additionally, the Sacramento Area saw a very low vacancy rate for industrial real estate in 2020, which hindered our ability to attract large employers. SMUD is actively working with regional and state partners, such as GSEC, GO-Biz and the California Association of Local Economic Development, to address the state and local regulatory challenges that limit our ability to attract or develop new businesses.

The COVID-19 pandemic also continues to pose a significant economic challenge for the Sacramento region and the full effect is yet to be realized. The percentage of employees that will remain working from home will impact the demand for office space and traditional business attraction efforts. We may also need to reevaluate the way we support the existing business community as it recovers from the pandemic.

- 5. Recommendation:** It is recommended that the Board accept the Monitoring Report for SD-13, Economic Development.

APPENDIX A

SMUD shall promote innovation while maintaining rate affordability and balancing the other strategic directions.

SMUD's approach to innovation includes investments in the knowledge economy that complement business development efforts.

For corporations and startups alike, achieving success and growth depends on a support network and ecosystem in which to collaborate. SMUD's approach is to continue to identify the problem solvers within our community, and strategically invest in their programs that will grow our region's knowledge economy. Key 2020 developments in the partnerships Economic Development and Partnerships supports in the innovative entrepreneurship ecosystem include:

CleanStart Inc. focuses on building a clean tech hub in the Sacramento region. COVID-19 forced CleanStart to make a drastic change in programming. In 2020, instead of holding their Clean Tech Showcase, they focused their first CleanTech monthly meetup program on clean mobility with then-CEO Arlen Orchard as a panelist speaker. CleanStart hosted over 60 virtual events, impacting almost 2,000 attendees and covering topics such as solar, energy efficiency, and the future of ratepayer's interactions with utility companies. Five of these events featured presentations by SMUD senior leadership and subject matter experts. Also, four clean tech companies that received support from CleanStart received CalSEED funding in 2020.

Hacker Lab is an all-in-one makerspace, coworking facility and workforce incubator that has come to be one of the most recognized centers for innovation in the region. SMUD continues to invest in their programs end-to-end, including their maker education programs, entrepreneurship business accelerator, and their career pathway development program, to support the dreams of underserved Sacramentans. Leveraging SMUD's investment, the organization secured CARES funding from the City of Sacramento and expanded their Pathways program to create a 2-month program supporting 75 participants who had lost their income due to COVID-19.

Despite COVID-19 forcing the organization to close down their two remote campuses in Rancho Cordova and Rocklin to focus on programming at the main campus in midtown Sacramento, the organization made an amazing impact within our region, providing 1:1 mentorship for over 120 small business owners and supporting 860 participants with free, online classes for the community on topics including soft skill development, resume and job hunting, entrepreneurship, CAD design, website development, and digital marketing.

InnoGrove was one of the hardest-hit by the global pandemic. This partner was unable to hold their traditional STEM-related summer camps or game design workshops due to COVID restrictions. However, due to their unique configuration, SMUD's investment was able to ensure their doors remained open for essential businesses that operated out of their co-working space. InnoGrove pivoted further by focusing on activities that support startup companies as well as those that support women in tech. SMUD funding supported "I Am Remarkable," a curriculum to help minorities and women learn self-promotion and overcome "imposter syndrome." The organization conducted workshops for approximately 50 participants and plans to aggressively expand the program in 2021. InnoGrove's ongoing sponsorship includes a seat on their Board of Directors, as well as access to their co-working facilities and other visibility and recognition benefits.

Our partnership with **Startup Sac** expanded in 2020, providing additional opportunities to showcase SMUD's investment in the innovation community. Startup Sac is engaged in the acceleration of Sacramento's startup and innovation ecosystem through educating, empowering and connecting startups to founders and innovators. This year, the organization collaborated with

the City of Sacramento to host its Sacramento Urban Technology Lab (SUTL). This virtual event included speakers, panels of industry experts and thought leaders, and showcased companies who are advancing technology in the areas of focus: 1) CyberSecurity and IoT; 2) Future Mobility; and 3) Digital Health and Life Science. SMUD was heavily showcased in the technology and mobility events, with SME and senior leaders speaking or leading panel discussions.

In addition to the SUTL showcase, Startup Sac held a total of 24 events, supporting 613 businesses, including nine Startup Sac Happy Hour Events featuring 10 veteran founders and 409 attendees and holding eight Startup Sac Office Hours with a total of 211 attendees.

Commitment to Low Rates:

SMUD continues to maintain rates that are below PG&E's, both at a system level and by rate class.

Figure 1: Compares SMUD and PG&E system average rates for the past two years. On a system average basis, SMUD's system average rates have averaged 29% below PG&E's since 2011.

Figure 1 – Summary of SMUD and PG&E Rate Comparison in \$/kWh

				Average Annual Rate		Difference	Difference
Customer		Rate Categories		PG&E	SMUD	Below PG&E*	Below PG&E*
Class	Description	PG&E	SMUD	2020	2020	2020	2019
Residential	Standard	E-1	R-TOD	\$0.2631	\$0.1645	-37.5%	-39.8%
	Low Income	CARE***	EAPR & EAPRMED**	\$0.1593	\$0.1134	-28.8%	-32.2%
All Residential				\$0.2297	\$0.1584	-31.0%	-34.7%
Small Commercial****	<= 20 kW	A-1	GFN/GSN_T	\$0.2694	\$0.1567	-41.8%	-41.6%
	21 - 299 kW	A-6	GSS_T	\$0.2558	\$0.1451	-43.3%	-43.4%
Medium Commercial****	300 - 499 kW	A-10	TOU-3	\$0.2378	\$0.1342	-43.6%	-42.4%
	500 - 999 kW	E-19	TOU-2	\$0.2075	\$0.1259	-39.4%	-38.8%
Large Commercial****	=> 1 MW	E-20	TOU-1	\$0.1672	\$0.1074	-35.8%	-35.1%
Lighting	Traffic Signals	TC-1	TS	\$0.2559	\$0.1231	-51.9%	-52.0%
	Street Lighting	various	SLS,NLGT	\$0.3052	\$0.1490	-51.2%	-50.2%
Agriculture	Ag & Pumping	AG	ASN/D,AON/D	\$0.2517	\$0.1388	-44.8%	-38.4%
System Average				\$0.2223	\$0.1429	-35.7%	-36.5%

* Projected 2020 average prices for SMUD with rates effective 10-01-20. PG&E average prices in 2020 reflect rates effective 10/01/20, per Advice Letter 5958-E. The rate difference in year 2019 reflects PG&E average rates as of 10-01-19, per Advice Letter 5644-E dated 09-23-19, and SMUD rates effective 01-01-19.

** CARE vs EAPR includes EAPR & EAPRMED customers.

*** There is no indication from PG&E that their CARE rates include customers who have a medical allowance only.

**** Commercial rates include WAPA credits. The revenue forecast does not consider economic development discounts for year 2020.

As shown in Figure 1, the rate competitiveness by class varies for the different customer classes and is at least 28.8% below comparable PG&E class average rates. Since the creation of the annual rate monitoring report in 2007, SMUD has consistently maintained rates that were more than 18% below PG&E.

APPENDIX B

SMUD shall align its economic development activities with regional economic development initiatives.

Leadership Roles: Throughout 2020, SMUD staff held visible leadership roles in regional economic development initiatives and organizations, helping ensure regional stakeholders are working in concert on business development, attraction, retention and expansion efforts and that

our efforts are aligned with regional priorities. SMUD's leadership roles in regional economic development organizations included:

- Business Environmental Resource Center, Advisory Committee
- California Capital, Loan Advisory Committee
- Capital Region Prosperity Plan, Steering Committee
- Carmichael Chamber of Commerce, Board President
- Capital Region Small Business Development Center, Advisory Board
- Cleaner Air Partnership, Executive Committee
- Downtown Sacramento Partnership, Board of Directors
- Folsom Tourism and Economic Development Corporation, Board of Directors
- Greater Sacramento Economic Council, Board of Directors
- Greater Sacramento Economic Council, Economic Development Directors Taskforce
- Greater Sacramento Urban League, Board of Directors
- Grow Sacramento Fund, Loan Advisory Committee
- Hacker Lab, Board of Directors
- Internal Study Mission, Program Chair
- Metro EDGE, Leadership Council
- Midtown Business Association, Board of Directors
- North State Building Industry Association, Board of Directors
- North Sacramento Chamber of Commerce, Board of Directors
- Power Inn Alliance, Board President
- Project Attain, Board of Directors
- R Street Sacramento Partnership, Board of Directors
- Sacramento Construction Management Education Foundation, Executive Committee
- Sacramento Asian Pacific Chamber of Commerce, Board of Directors
- Sacramento Black Chamber of Commerce, Board of Directors
- Sacramento Employment and Training Agency (SETA)/Sac Works, Board of Directors
- Sacramento Employment and Training Agency, Board of Directors
- Sacramento Metro Chamber of Commerce, Executive Committee
- Sacramento Metro Chamber, Economic Development Policy Committee Co-Chair
- State Sprint, Steering Committee
- The River District, Board of Directors
- Urban Land Institute, Board President
- Valley Vision, Executive Committee

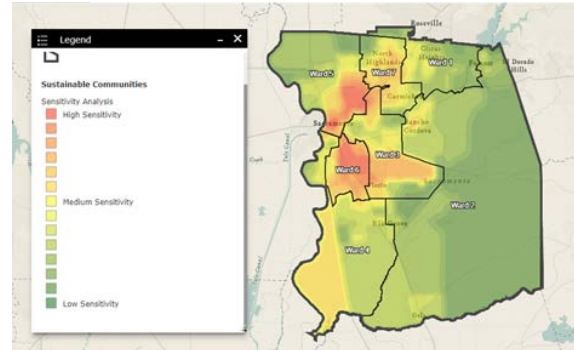
Sustainable Communities Program: With our Sustainable Communities program, SMUD fully embraces the notion that we are more than a utility – that we can and will play an active role in improving the quality of life in our region and in all our neighborhoods.

An important corollary to Sustainable Communities is our Board-adopted Climate Emergency Resolution requiring SMUD to work toward our most ambitious goal — 2030 Zero Carbon. A few years ago, a Brookings Institute Report–Charting a Course to the Sacramento Region's Future Economic Prosperity– found that between 2006 and 2016, the Sacramento metropolitan statistical area (MSA) ranked in the bottom-third of the 100 largest metro areas in composite rankings measuring improvements in growth, prosperity, and inclusion, three critical elements of regional economies that work for everybody. These long-term trends reflect the downturn during the Great Recession and suggest it was deeper and more sustained in the Sacramento MSA than in other parts of the nation.

Through Sustainable Communities, we're partnering with policy makers, transit, technology companies, health care providers and community-based organizations to leverage our investments to create collective impact to enhance workforce training, transportation access, clean energy, job creation and inclusive economic development in under-resourced neighborhoods.

SMUD's Sustainable Communities Priority Map

To deploy comprehensive resources for our communities most in need, we must align our region's investments toward the goal of creating and supporting healthy, vibrant, and economically sustainable neighborhoods. Our Sustainable Communities Resource Priorities Map helps analyze current data to indicate the local areas most likely to be underserved or in distress by lack of community development, income, housing, employment opportunities, transportation, medical treatment, nutrition, education, and clean environment. The data sets highlighted in the Resource Priorities Map include key indicators that would best aid in identifying and targeting communities with a greater sensitivity to social, economic, and environmental vulnerabilities.



SMUD is partnering with the California Mobility Center (CMC) and Community Based Organizations (La Familia Counseling Center, Inc., Asian Resources, Inc., and Greater Sacramento Urban League) to provide job readiness and technical training to over 300 community participants to prepare them for careers in the clean mobility sector. The goal of the CMC is to develop an innovation hub for clean mobility, creating an environment and support system for start-ups and established mobility companies to collaborate on advanced techniques that will accelerate the adoption of clean mobility technology. The CMC provides an atmosphere where clean mobility start-ups can grow and drive new business opportunities and economic development to communities that have been left out of the technology boom. These new business opportunities will also require a trained workforce; the infrastructure that is used to design and manufacture clean mobility vehicles will also be used to train priority populations.

SMUD and its Promise Zone partners graduated 25 students from the inaugural “Energy Career Pathways” solar training class. The class recruited participants from underserved communities and helped them access high-paying solar jobs by demonstrating proficiency in the areas of energy industry knowledge, solar installation and the social, teamwork, and safety skills needed to be successful in the workforce. Despite the challenges presented by the onset of the COVID-19 pandemic, several students were hired-on by solar companies immediately upon graduating. SMUD and its partners continue to work with graduates on job placement, with a total of 12 placements to date. As part of the program, trainees installed two solar trees each at The Greater Sacramento Urban League and the Simmons Community Center. The installation of these solar trees not only serves to beautify our community and help to promote renewable energy, but they also provide class participants with hands-on experience building solar structures. After a short hiatus due to COVID-19 restrictions, SMUD restarted an expanded program in 2021 with a new partner, Grid Alternatives.

In its third year, the Shine program, which is now aligned with our Sustainable Communities program, invests in projects that support community development, neighborhood beautification, encourages regional collaboration, and provides more comprehensive support for local nonprofits supporting our historically under-resourced neighborhoods. In 2020, 124 organizations submitted applications, compared to 94 in 2019. We received requests for over

\$4.4 million in funding for projects ranging from education to neighborhood revitalization to energy efficiency. Shine will support 29 projects totaling \$620,000 for implementation of program services in 2021. This reflects an increase in funding from the prior year and will help support our non-profit partners. For example, the River District is receiving \$30,000 to provide a safer and more sanitary environment to encourage pedestrian and bicycle use in the District as a main artery serving commuters to and from the Downtown Sacramento area. By improving the lighting to the pedestrian and bike tunnels, adding a mural to the underpass and securing cleaning equipment and supplies for the area, the community traveling along these pathways will increase as will accessibility to the businesses and services nearby.

In order to assist our economic development partners impacted by lost revenue from COVID-19, SMUD advanced \$2.1 million in the form of a 3-year pre-payment to stabilize and ensure their continued operations.

Our Community Resource Liaison (CRL) program, previously referred to as the Loaned Executive program, is designed for SMUD employees to spend up to a year working for our nonprofit or chamber of commerce partners while remaining a SMUD employee. CRLs are responsible for managing and implementing innovative strategies to promote and improve business, increase membership participation and community relationships by creating opportunities that promote the organization's programs as well as SMUD's programs and services. There were five community partners participating in the Program in 2020: the Sacramento Hispanic Chamber of Commerce, the Sacramento Black Chamber of Commerce, the Sacramento Rainbow Chamber of Commerce, the Rancho Cordova Chamber of Commerce and The City of Refuge. The commitment of the CRL Program enhanced these organizations' ability to implement new services, design and develop new programs, extend and increase current program offerings and gain more community engagement by expanding their reach. Additionally, SMUD provided direct staff technical, marketing/communications, and administrative support to the Carmichael Chamber of Commerce and GSEC.

COVID-19 Small and Midsize Business Support: In the early months of 2020 our Small and Midsize Business (SMB) Team continued their "normal" business practices, actively engaging with customers in-person and on the phone, providing personalized assistance and tailored energy advice and solutions to meet individual customer needs. Surprisingly, throughout 2020, SMB customers took advantage of a variety of SMUD incentive programs, including Express Energy Solutions, Complete Energy Solutions and the Custom Incentive Program.

However, as the year progressed and COVID-19 global pandemic spread, SMUD issued stay at home/remote work orders. The SMB team pivoted its messaging under the marketing campaign of "Here to Help." Our SMUD "Here to Help" campaign was an overarching awareness campaign focused on delivering actionable information and resources to our business customers during the national pandemic. The main objective of the campaign was to maximize the use of direct and targeted digital tools to provide support to the small and midsize business customers. Our small and midsize businesses were significantly impacted by the COVID-19 global pandemic and state-enforced closure mandates. Key executions under the "Here to Help" campaign were:

- SMUD.org/BizResources – landing page featuring local, state and national business resources
- Business Re-invented social media – customer highlight features to give hope to businesses by providing examples of those who had pivoted and were successful
- SMB Strategic Account Advisor awareness campaign - targeted digital, audio + streaming to alert small & midsize businesses they had a personal contact at SMUD to assist them
- Virtual Energy Assessment – business shift from in-person to online energy assessments

- Meet the Buyers & Business Resource Expo – first ever SMUD virtual expo expanded not only to promote doing business with SMUD but also to educate our customers on new technologies and programs offered by SMUD
- Business Bill Tips video - FAQs explainer video, as more customers were taking a closer look at their bill and wondering how they could save money

The “Here to Help” Campaign addressed the following:

- Proactively informing our business community about COVID-19 support resources and related information
- Raising customer awareness that their business primary point of contact, their Strategic Account Advisor (i.e., account manager), is available to support and assist
- Development of new business customer digital tools
- Enhancing awareness of availability of digital tools
- For the safety of our employees and our community, shifted education and advisory services from in-person to digital platforms
- Reinforcing our mission that “we are all in this together”

APPENDIX C

SMUD shall assist in retaining, recruiting and growing commercial and industrial rate-paying customers.

Projects announced in 2020 include four new companies creating 420 new jobs:

- **Lion Electric** – The opening of this company at McClellan created 20 new jobs.
- **Inductive Automation** – An expansion creating 100 new Sacramento jobs.
- **Amazon** – Another arm of this company opened a division at McClellan for food distribution creating 200 jobs.
- **Amazon** – A new facility in Elk Grove creating 100 jobs.

Business Walks: Early in 2020 the SMUD Small and Midsize Business Team (SMB) supported the following business walks:

- 2.12.2020 – Mack Road Partnership
- 2.19.2020 – Stockton Blvd Partnership
- 2.24.2020 – Florin Road Partnership

With the onset of the COVID-19 global pandemic in March 2020, a number of businesses had to significantly alter their standard practices, and local Chambers had to pivot to a virtual space. Along that vein, the business walks were halted due to safety concerns.

In lieu of the business walks, the SMB Team continued their proactive outreach efforts through a series of bi-weekly emails to over 5,000 small and midsize business customers. The emails focused on energy saving tips, local assistance programs, Federal and State loans, available grants and links to informative webinars focused on the struggles of small and midsize businesses. These outreach emails not only resulted in positive feedback from customers but led to customers reaching out for assistance in other ways, thereby strengthening their relationship with their Strategic Account Advisor and developing more of a “partnership” relationship with SMUD.

Commercial Development: Over the course of 2020, our Commercial Development team actively engaged with approximately 220 commercial, mixed-use and residential project developers throughout our service area. Some highlights include:

- Strategic outreach on SMUD bundled programs to developers and builders.
- Managing the Statewide Community Infrastructure Program (SCIP) which allows development projects to levy property taxes to finance eligible infrastructure expenses. In 2020, SMUD processed two acquisition agreements for SMUD Fees and Infrastructure. SMUD anticipates an uptick in projects gaining SCIP approval in 2021.
- Distribution of “Developer Connections” e-newsletters. The open and read rate is consistently at 30% or higher.
- Commencement of SMUD’s Central City 21kV extension plan to support future development projects currently under construction with an estimated completion of 2022.

Central City Growth: The Central City continued to see sustained growth in 2020, especially focused on single- and multi-family development. Development projects located in the Central City face unique challenges based on space constraints and increases in high density development and finding room for SMUD facilities is site-specific. 17Central located at the former Sacramento Ballet building kicked off construction by D&S Development, which consists of 107 units and ground floor retail. The California Fruit Building is scheduled to finish construction of a boutique hotel in a historic building close to the Golden 1 Center, and is expected to begin taking reservations in 2021. The Mansion Inn project began construction adjacent to the California Governor’s Mansion, consisting of 190 units and ground floor retail. The project is anticipated to be completed in late 2021. 1430 Q Street, the mixed-use project adjacent to the lively R Street corridor, completed construction and began occupying rental units. The Fort Sutter Hotel completed construction of their midtown hotel in 2020, near the Sutter Medical Complex in midtown and began formally taking reservations in early 2021. New construction and significant building renovations continued to be robust in 2020; at the close of the year, over 92 development projects or significant building renovation projects were being coordinated by SMUD’s Commercial Development team within the central city zone, which covers roughly seven square miles.

SMUD also formally kicked off its coordination efforts with UC Davis’ Medical Center Campus expansion. The proposed development includes Aggie Square, the region’s first innovation hub with over 1 million square feet of research, wet labs, commercial space and housing. The development models Atlanta’s Tech Square aimed at attracting top talent, innovation and companies.

2020 continued the substantial growth for development north of downtown. At Metro Air Park, NorthPoint Development LLC, based out of Kansas City, Missouri, completed construction of two buildings. The first building, a 1.13 million square foot Walmart Distribution Center, was completed in late 2020 as well as a 600,000 square foot SC Johnson warehouse. NorthPoint began construction of a 1.3 million square foot Amazon distribution facility, slated for completion in mid-2021. Buzz Oates completed construction of their first phase at Metro Air Park, a 500,000-square foot building at the intersection of Elverta at Metro Air Parkway. SMUD has received eight new SMUD Rule 16 applications for new buildings that are anticipated to begin construction in 2021 at Metro Air Park. North Lake master plan at Hwy 99 and W. Elkhorn Blvd (formerly Greenbriar) began construction of site improvements and models homes. First home sales are anticipated in 2021. At buildout, North Lake will have over 2,100 residential units. SMUD has significant infrastructure planned for North Lake and Metro Air Park and is working to extend 69kV facilities in the area to support four new substations. At completion, the substations will equate to 250MW of new capacity in the area to accommodate future growth.

In addition, the Commercial Development team worked closely in numerous, high-profile developments, the Railyards, the Department of General Services’ Richards Boulevard Office Complex, Folsom South, California Military HQ Campus and on additional infrastructure

coordination to support development in Rio del Oro, the Sunridge Specific Plan Area along Douglas Road and Sunrise Blvd in Rancho Cordova.

The Revenue Operations, DG Interconnection team turned to technology during 2020 to realize another successful year supporting SMUD's existing and future indoor cultivation customers. As an essential business, the cannabis industry continued to grow its presence in SMUD's territory as evidenced by an 83% increase in revenue directly correlated to the increase in facilities coming online exceeding \$1M in December 2020.

The first "mixed light" or greenhouse facility is ramping up its operations and is expected to reach full scale in Q2 2021. This innovative approach to controlled environment horticulture and its large footprint of over 180,000 square feet of plants was a new, exciting opportunity for SMUD.

2020 marked the second year of SMUD's partnership with the Greater Sacramento Urban League's Cannabis Opportunity Reinvestment and Equity (CORE) program. The purpose of this program is to provide equitable access to the cannabis industry through education and training. Members of the program receive support and guidance in developing their facilities. They are taught best practices in using energy efficiently and how to take advantage of SMUD's resources including energy efficiency incentives, program resources, and a dedicated Strategic Account Advisor to provide ongoing support and direction. We have now presented to 45 graduates and continue to support those adversely affected by the disproportionate enforcement of cannabis regulation. As a result of the program, participants have been provided the education, tools, and support required to build successful businesses in the cannabis industry ranging from multi-faceted incubator facilities to the brick-and-mortar dispensaries.

APPENDIX D

SMUD shall offer economic development rates and program incentives.

SMUD offers economic incentives to help attract new businesses and expand existing ones to grow the regional economy. Incentives range from helping design new construction to offering energy-efficient upgrades for equipment and proposing our Economic Development Rate (EDR).

Economic Development Rate: Customers that exceed 299kw for three consecutive months may qualify for the EDR. This rate has multiple options for our customers, including a frontloaded rate to help reduce initial operating costs, or a fixed discount over the ten-year period. Customers who locate in a disadvantaged community have the same options, but with a larger discount. Additionally, an economic impact study is performed by the Greater Sacramento Economic Council. This ensures the customer is aware of other economic development programs and incentives.

Size	Term	Industry Requirements	Job Requirements	Full Service Requirement	Discount
300kW+	10 years	No limitations	No minimum requirement	No	Two options for customers to choose: Standard EDR <u>Opt A:</u> 6% for years 1-5, declining 1% per year for years 6-10 <u>Opt B:</u> 4.5% for 10 years Rate for Disadvantaged Communities <u>Opt A:</u> 8% for years 1-5, declining 1.5% per year for years 6-10 <u>Opt B:</u> 6% for 10 years

Program Incentives: SMUD offered several energy efficiency and Go Electric business incentives to help meet the financial responsibility goals and growing sustainability needs of our commercial customers. Our Integrated Design Solutions, Custom Energy Efficiency, Complete Energy Solutions, and Express Energy Solutions (EES) programs offered incentives to help customers install new energy-saving equipment and make energy efficiency modifications to their buildings. We offered new Go Electric rebates for businesses upgrading to cleaner and more efficient technologies for water heating, space heating, cooking, and new building construction. The effort is part of SMUD's goal to achieve 100% net-zero-carbon by 2030. We also offered assistance with energy management and incentives for load shifting and curtailment.

Our Small and Medium Business (SMB) Team provided EES incentives to 549 commercial customers, for a combined total program energy savings of 17.8 GWh and demand savings of 3.95 MW.

APPENDIX E

SMUD shall offer a contracting program for certified small businesses who are rate-paying customers.

In 2020, we exceeded our SEED Program goal of awarding at least 20% of all contracts to certified small businesses. Specifically, we awarded 24.01% through 122 SEED contracts totaling over \$74 million.

Award Type	2020		
	Total PO \$	PO Count	Program %
SEED Prime	\$ 49,274,589.85	30	66%
SEED Sub-Contractors	\$ 23,479,105.71	0	31%
Sheltered Market	\$ 1,243,558.89	10	2%
Exempt	\$661,328.31	82	1%
Grand Total	\$74,658,580.76	122	100%

Note: The acronym PO refers to "Purchase Orders."

The SEED team focused its efforts on the following key outreach initiatives:

- **Availability Study:** Following the original 2005 study, the SEED team launched a new business Availability Study (awarded to a SEED vendor) to provide an overview of the current regional business market. Due to COVID-19, data collection efforts were halted for six (6) months. The results will inform our business outreach strategy and may also be used by other internal partners. The SEED team also continues to analyze outreach efforts by ward segments to identify opportunities of engagement
- **Business Advisory Committee (BAC):** SEED hosted four quarterly meetings in 2020 for BAC business organization leaders, raising awareness about the SEED program, sponsored events, incentives, commercial programs and contracts awarded to BAC members' constituents. This included over 49 SMUD contracts to BAC members totaling over \$88 million dollars (\$7 million more than in 2019).

- **How to Do Business with SMUD:** The SEED team pivoted under COVID-19 to a virtual format and collaborated with community partners to deliver 11 workshops to raise awareness of SMUD's procurement program and encourage future participation.
- **"Meet the Buyers" Conference:** In its 9th year, SEED's annual Meet the Buyers Conference pivoted to a virtual conference format. SEED partnered with the SMB team to expand the event to the Meet the Buyers & Business Resource Expo and included commercial program/resource information. The successful event drew a record 494 registrants, offering 10 panel sessions and education workshops, over 35 speakers and 17 virtual exhibitors. The event was very well-received, with survey results confirming a 93% "met or exceeded expectations" event satisfaction level.
- **SEED Ambassador Program:** The program engages designated employees within SMUD business units in promoting the use of SEED vendors in their workgroup's contracting activities. The program has over 35 participants and continues to see more referrals from employees, who have also been active in Meet the Buyers and Business Advisory Committee meetings.
- **Sheltered Market Initiatives:** The SEED team continually explores innovative ways to foster small business participation in solicitations and worked closely with Supply Chain to identify 10 sheltered market contracting opportunities in the areas of commodities and professional services. The contracts are specific only to verified SEED vendors and totaled approximately \$1,243,558. Fifty-five percent (55%) of the sheltered market opportunities were 2-to-4-year contracts.
- **SEED Quarterly Newsletter:** The SEED team distributed over 457 electronic copies of the quarterly newsletter to external partners and SEED Ambassadors to highlight SEED program resources and contracting opportunities. It features information including free government contracting services, SEED supplier success stories, recent contract awards, upcoming bid opportunities, and small business events and workshops, and it is also available on smud.org.
- **Social Media:** The SEED team collaborated with Marketing and Corporate Communications to submit social media content on a regular basis to promote small business solicitation opportunities and events.
- **Procurement Platform Transition to Ariba:** The SEED team collaborated with Procurement for the implementation and deployment of Ariba and will continue to be involved through 2021. SEED is pivotal in addressing and identifying solutions for supplier experience and enhancements. Since Ariba's April 2020 launch, SEED has 96 vendors registered in the new system and will continue to utilize EBSS (Electronic Bid Solicitation System) and Ariba as Ariba transitions to maximum feature functionality.
- **SEED Awarded as DGS' "Reciprocity Partner of the Year"**
The CA Department of General Services (DGS) recognized SMUD's SEED program as its inaugural "Reciprocity Partner of the Year" awardee at its annual State Agency Recognition Awards. This new category award is provided to an agency which uses DGS' small business certification and which supports small business contracting and DVBE communities.

RESOLUTION NO. _____

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

This Board accepts the monitoring report for **Strategic Direction SD-13, Economic Development Policy**, substantially in the form set forth in **Attachment _____** hereto and made a part hereof.

SSS No. GP 21-008

BOARD AGENDA ITEM

STAFFING SUMMARY SHEET

Committee Meeting & Date
Policy Committee Meeting
July 14, 2021Board Meeting Date
July 15, 2021

TO					TO						
1.	Claire Rogers				6.						
2.	Frankie McDermott				7.						
3.	Jennifer Davidson				8.						
4.	Stephen Clemons				9.	Legal					
5.					10.	CEO & General Manager					
Consent Calendar		X	Yes	No If no, schedule a dry run presentation.		Budgeted		X	Yes	No (If no, explain in Cost/Budgeted section.)	
FROM (IPR)				DEPARTMENT				MAIL STOP		EXT.	
Maria Veloso Koenig				Distribution Planning & Operations				EA403		5794	
DATE SENT											
6/25/21											
NARRATIVE:											
<p>Requested Action: Accept the monitoring report for Strategic Direction SD-14, System Enhancement.</p> <p>Summary: The purpose is to provide the Board with the annual update on SD-14, System Enhancement, for the year 2020. The information in the monitoring report could be used by the Board to determine if the policy needs to be revised or further developed. If so, those items could be scheduled for subsequent meetings.</p> <p>Board Policy: SD-14, System Enhancement. (Number & Title)</p> <p>Benefits: Allows the Board of Directors a better understanding of Board Policies and gives them an opportunity to make revisions if necessary.</p> <p>Cost/Budgeted: In June 2020, the Board approved suspension of funding new projects under SD-14 for 2020, 2021 and 2022 (Resolution 20-06-23). Previously committed projects, a total of four, under the Policy would continue to be funded during these years. The total 2020 budget for these four projects was \$4.2 million, and the 2020 actual spending was approximately \$216,000.</p> <p>Alternatives: Provide the Board written reports and communications through the General Manager & CEO.</p> <p>Affected Parties: N/A</p> <p>Coordination: Grid Assets; Local Government Affairs</p> <p>Presenter: Maria Veloso Koenig; Director, Distribution Planning & Operations</p>											

Additional Links:

SUBJECT

SD-14 System Enhancement Monitoring Report

ITEM NO. (FOR LEGAL USE ONLY)

10

ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

OFFICE MEMORANDUM

TO: Board of Directors

DATE: July 6, 2021

FROM: Claire Rogers *CR 7/6/21*

**SUBJECT: Audit Report No. 28007406
Board Monitoring Report; SD-14: System Enhancement**

Audit and Quality Services (AQS) received the SD-14 *System Enhancement* 2020 Annual Board Monitoring Report and performed the following:

- A review of the information presented in the report to determine the possible existence of material misstatements;
- Interviews with report contributors and verification of the methodology used to prepare the monitoring report; and
- Validation of the reasonableness of a selection of the report's statements and assertions.

During the review, nothing came to AQS' attention that would suggest the SD Board Monitoring report did not fairly represent the source data available at the time of the review.

CC:

Paul Lau

Board Monitoring Report 2020

SD-14, System Enhancement



1) Background

Strategic Direction 14, the System Enhancement Board policy states that:

As a community-owned utility, SMUD recognizes that the relocation or underground placement of primary voltage power lines may be desirable to local jurisdictions to improve aesthetics, economic vitality, safety and disabled access. Therefore, it is a key value of SMUD to make selected distribution system enhancements, such as permanent relocation or underground placement of primary power lines below 69 kV.

- a) SMUD will, at its expense and where technically feasible, permanently relocate or underground existing overhead distribution facilities provided the governing body of the city or county in which the electric facilities are and will be located has:
 - i) Identified, after consultation with SMUD, a specific system enhancement project;
 - ii) Determined the project is in the public interest;
 - iii) Ensured all existing overhead communication facilities related to the project will also be permanently relocated or placed underground;
 - iv) Obtained and provided SMUD with all easements necessary for the project.
- b) After achievement of core financial targets, SMUD will annually commit up to one-half of one percent of its annual gross electric sales revenue to system enhancements. The proposed projects will be subject to SMUD's annual budget approval process, and uncommitted funds from any given year will not be carried over to future years. Funding will be assigned to projects brought forward by local cities or counties based on applying the following criteria (not in order of preference):
 - i) Project scale and/or cost when measured against available District resources.
 - ii) Requesting entity has developed full scope, obtained all necessary easements, and development plan for customer service conversion from overhead to underground, as required.
 - iii) Extent to which the costs are borne by others.

2) Executive summary

SD-14 states that SMUD “*will annually commit up to one-half of one percent of its annual gross electric sales revenue to system enhancements.*” However, in light of SMUD’s financial challenges caused by COVID-19, on June 9, 2020 the Board of Directors approved suspension of funding *new* projects under SD-14 for 2020, 2021 and 2022 (Resolution 20-06-03). Previously committed projects (a total of four) under the Policy will continue to be funded during these years.

SMUD is in compliance with SD-14, System Enhancement.

The planning and execution of SD-14 projects is typically a multi-year process that starts with a preliminary work scope that is used to determine a ballpark cost estimate, to the finalization of the work scope that includes a detailed design and detailed cost estimate. After necessary permits and easements are obtained, the project is released for execution/construction. Tables 1 and 2 below show the committed projects that were in progress in 2020, and they continue to progress. The budget for these four projects is included in the approved 2021- 2023 operational plan.

Table 1: Committed projects with preliminary work scope

Local Jurisdiction	Project Title	2020 Project Budget	Ballpark Cost Estimate	2020 Project Spend	Project Status
Citrus Heights	Auburn Blvd. Rusch Park to I-80 (0.75 mile)	\$1,250K	\$2,500K	\$18K	2022 planned construction start date
Elk Grove	Elk Grove Blvd b/w Waterman & School Streets (~0.5 mile)	\$81K	\$1,000K	\$0K	2022 planned construction start date

Table 2: Committed projects with final work scope/detailed design

Local Jurisdiction	Project Title	2020 Project Budget	Total Cost Estimate	2020 Project Spend	Project Status
Sacramento County	Hazel Avenue Phase 3 Sunset to Madison (0.7 mile)	\$2,009K	\$1,443K	\$52K	in construction; expected to be done Q3/Q4 2021
Sacramento County	Fair Oaks Blvd Landis to Angelina (0.3 mile)	\$813K	\$361K	\$146K	completed on March 2021

The 2020 budget for the Hazel Avenue Phase 3 and Fair Oaks Blvd projects were based on preliminary work scope and ballpark cost estimates since the schedule, detailed design and detailed cost estimates were not yet available for the 2020 enterprise budget development. The cost estimates for these two projects are based on the final work scope and detailed design.

On June 18, 2021, SMUD received a letter from the city of Citrus Heights stating that due to conflicts with Federal funding requirements, they will forego utilizing SD-14 funds for its project on Auburn Blvd (Rusch Park to I-80). SMUD staff and Citrus Heights staff have initiated discussions regarding options to address this issue.

As needed, staff continued education efforts with local jurisdictions regarding the policy and the process for SD-14 funding consideration and implementation.

3) Additional supporting information

Since the adoption of the SD-14 policy, nine projects have been funded through the policy for a total of \$10.6 million. Table 3 lists the projects completed by year.

Table 3: Completed Projects Since Policy Adoption

Local Jurisdiction	Project Description	SMUD Construction Completion	SMUD Project Cost
Sacramento County	North Highlands Town Ctr. at Watt Ave. & Freedom Park Dr. (0.5 mile)	2012	\$1.1 M
City of Sacramento	7 th St. b/w North B & Richards Blvd. (1,500 ft.)	2012	\$1.3 M

City of Sacramento	Richards Blvd. b/w North 5 th & North 7 th Streets (1,000 ft.)	2012	\$1.2 M
Citrus Heights	Auburn Blvd. b/w Sylvan Corners & Rusch Park (1 mile)	2013	\$2.6 M
City of Sacramento	16th and O Streets (1,000 ft.)	2013	\$0.3 M
Sacramento County	Fair Oaks Blvd. b/w Landis Ave. & Engle Rd. (0.5 mile)	2016	\$1.2 M
Sacramento County	Hazel Avenue Phase 2 b/w Curragh Downs & Sunset Ave. (1 mile)	2017	\$2.3 M
City of Sacramento	Ice Blocks Project R Street b/w 16th & 18th Streets (1,000 ft.)	2017	\$0.47 M
City of Sacramento	Sutter Village (~200 feet)	2019	\$0.12 M

Total: \$10.6 M

4) Challenges

There were no challenges encountered with the implementation of the Board policy in 2020.

5) Recommendation

It is recommended that the Board accept the 2020 Monitoring Report for SD-14, System Enhancement.

6) Appendices

The photographs below show several locations from the Hazel Avenue, Phase 2 (Curragh Downs Drive to Sunset) Project.

Before Construction



Post Construction



RESOLUTION NO. _____

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

This Board accepts the monitoring report for **Strategic Direction SD-14, System Enhancement**, substantially in the form set forth in **Attachment ____** hereto and made a part hereof.

SSS No. BOD 2021-012

BOARD AGENDA ITEM

STAFFING SUMMARY SHEET

Committee Meeting & Date Policy – July 14, 2021
Board Meeting Date July 15, 2021

TO					TO							
1.	Jennifer Davidson				6.							
2.	Stephen Clemons				7.							
3.					8.							
4.					9.	Legal						
5.					10.	CEO & General Manager						
Consent Calendar		<input checked="" type="checkbox"/>	Yes	No <i>If no, schedule a dry run presentation.</i>		Budgeted		<input checked="" type="checkbox"/>	Yes	No <i>(If no, explain in Cost/Budgeted section.)</i>		
FROM (IPR) Heidi Sanborn / Donna Lofton					DEPARTMENT Board Office					MAIL STOP B304	EXT. 5079	DATE SENT 7/7/21

NARRATIVE:

Requested Action: Discuss proposed revisions to Governance Process GP-1, Purpose of Board; Governance Process GP-2, Governance Focus; Governance Process GP-3, Board Job Description; and Governance Process GP-7, Guidelines for Board Member Behavior.

Summary: A schedule to monitor Board policies was agreed upon by the Policy Monitoring Ad Hoc Committee. Monitoring established policies creates a better understanding of the policies and gives the Board an opportunity to make corrections, additions, or changes, if necessary.

The Board conducted a review of GP-1, GP-2, GP-3, and GP-7 at the May 12, 2021, Policy Committee and asked Board Consultant Eric Douglas to provide proposed revisions for discussion at a future meeting. A redline copy of the proposed revisions for each policy, as well as a “clean” copy, are attached.

Board Policy: *(Number & Title)* This monitoring supports GP-2 Governance Focus which states that the Board will direct, evaluate, and inspire the organization through the establishment of written policies which reflect the Board’s values.

Benefits: Monitoring policies helps ensure the policies are current and in keeping with the current will of the Board.

Cost/Budgeted: N/A

Alternatives: Not review these policies at this time.

Affected Parties: Board of Directors

Coordination: Board Office, Executive Office, Legal

Presenter: Eric Douglas, Board Consultant

Additional Links:

SUBJECT Proposed Revisions to GP-1, GP-2, GP-3 and GP-7	ITEM NO. (FOR LEGAL USE ONLY) 11
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ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.

SMUD BOARD POLICY	
Category: Governance Process	Title: Purpose of Board
	Policy Number: GP-1
Date of Adoption: December 19, 2002	Resolution No. 02-12-14
Revision Date: October 16, 2003	Resolution No. 03-10-14
Revision Date: November 3, 2005	Resolution No. 05-11-04
<u>Revision Date: July 15, 2021</u>	<u>Resolution No. 21-07-XX</u>

The Board is the legislative body of the Sacramento Municipal Utility District. It operates under the provisions of the Municipal Utility District Act of the State of California (the MUD Act) and all other applicable statutes and laws.

The purpose of the Board of Directors is to:

- a) Identify and define the purpose, values and vision of SMUD, ~~along with the quantitative and qualitative results that SMUD is to achieve,~~ and communicate them in the form of policy.
- b) Identify and define those quantitative and qualitative results or conditions of SMUD that are acceptable and not acceptable to the Board and communicate them in the form of policy.
- c) Monitor the organization's performance against the results that the Board has established for SMUD.
- d) Make certain operational decisions as designated by law.
- e) Hire, evaluate and, when necessary, discharge the CEO/General Manager.

Monitoring Method: Board Report
Frequency: Annual

SMUD BOARD POLICY	
Category: Governance Process	Title: Purpose of Board
	Policy Number: GP-1
Date of Adoption: December 19, 2002	Resolution No. 02-12-14
Revision Date: October 16, 2003	Resolution No. 03-10-14
Revision Date: November 3, 2005	Resolution No. 05-11-04
Revision Date: July 15, 2021	Resolution No. 21-07-XX

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- d) Make certain operational decisions as designated by law.
- e) Hire, evaluate and, when necessary, discharge the CEO/General Manager.

Monitoring Method: Board Report
Frequency: Annual

DRAFT

RESOLUTION NO. _____

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

This Board approves the revisions to **Governance Process GP-1**,
Purpose of Board, substantially in the form set forth in **Attachment ____**.

SSS No. BOD 2021-012

BOARD AGENDA ITEM

STAFFING SUMMARY SHEET

Committee Meeting & Date Policy – July 14, 2021
Board Meeting Date July 15, 2021

TO				TO							
1.	Jennifer Davidson			6.							
2.	Stephen Clemons			7.							
3.				8.							
4.				9.	Legal						
5.				10.	CEO & General Manager						
Consent Calendar		<input checked="" type="checkbox"/>	Yes	No <i>If no, schedule a dry run presentation.</i>		Budgeted		<input checked="" type="checkbox"/>	Yes	No <i>(If no, explain in Cost/Budgeted section.)</i>	
FROM (IPR) Heidi Sanborn / Donna Lofton				DEPARTMENT Board Office				MAIL STOP B304		EXT. 5079	
								DATE SENT 7/7/21			

NARRATIVE:

Requested Action: Discuss proposed revisions to Governance Process GP-1, Purpose of Board; Governance Process GP-2, Governance Focus; Governance Process GP-3, Board Job Description; and Governance Process GP-7, Guidelines for Board Member Behavior.

Summary: A schedule to monitor Board policies was agreed upon by the Policy Monitoring Ad Hoc Committee. Monitoring established policies creates a better understanding of the policies and gives the Board an opportunity to make corrections, additions, or changes, if necessary.

The Board conducted a review of GP-1, GP-2, GP-3, and GP-7 at the May 12, 2021, Policy Committee and asked Board Consultant Eric Douglas to provide proposed revisions for discussion at a future meeting. A redline copy of the proposed revisions for each policy, as well as a “clean” copy, are attached.

Board Policy: *(Number & Title)* This monitoring supports GP-2 Governance Focus which states that the Board will direct, evaluate, and inspire the organization through the establishment of written policies which reflect the Board’s values.

Benefits: Monitoring policies helps ensure the policies are current and in keeping with the current will of the Board.

Cost/Budgeted: N/A

Alternatives: Not review these policies at this time.

Affected Parties: Board of Directors

Coordination: Board Office, Executive Office, Legal

Presenter: Eric Douglas, Board Consultant

Additional Links:

SUBJECT Proposed Revisions to GP-1, GP-2, GP-3 and GP-7	ITEM NO. (FOR LEGAL USE ONLY) 12
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ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.

SMUD BOARD POLICY	
Category: Governance Process	Title: Governance Focus
	Policy Number: GP-2
Date of Adoption: December 19, 2002	Resolution No. 02-12-14
Revision Date: October 16, 2003	Resolution No. 03-10-14
Revision Date: November 3, 2005	Resolution No. 05-11-05
Revision Date: December 21, 2006	Resolution No. 06-12-13
Revision Date: October 16, 2008	Resolution No. 08-10-08
Revision Date: May 17, 2012	Resolution No. 12-05-09
<u>Revision Date: July 15, 2021</u>	<u>Resolution No. 21-07-XX</u>

The Board will govern with an emphasis on: (i) outward vision rather than an internal preoccupation; (ii) encouragement of diversity in viewpoints; (iii) strategic leadership more than administrative detail; (iv) clear distinction of Board and General Manager roles; (v) collaborative rather than individual decisions; (vi) the future rather than past or present; and (vii) proactive thinking.

Specifically:

- a) The Board will cultivate a sense of group responsibility. ~~The Board~~It will be responsible for excellence in governing. The Board will be an initiator of policy. ~~The Board will~~ and use the expertise of individual members to enhance the ability of the Board as a body.
- b) The Board will direct, evaluate and inspire the organization through the establishment of written policies reflecting the Board's values. The Board's major policy focus will be on SMUD's intended impacts outside the organization, not on the administrative or programmatic means of achieving those effects.

- c) Continual Board development will include orientation of new Board members in the Board's governance policies and processes, periodic re-orientation of existing Board members, and regular Board discussion of process improvement.
- d) The Board will regularly discuss and evaluate its performance. Self-monitoring will include comparison of Board activities and discipline to policies adopted by the Board. It will be up to the ~~board~~Board president or committee chair to determine the appropriate manner of this feedback and evaluation.

Monitoring Method: Board Report
Frequency: Semi-Annual

SMUD BOARD POLICY	
Category: Governance Process	Title: Governance Focus
	Policy Number: GP-2
Date of Adoption: December 19, 2002	Resolution No. 02-12-14
Revision Date: October 16, 2003	Resolution No. 03-10-14
Revision Date: November 3, 2005	Resolution No. 05-11-05
Revision Date: December 21, 2006	Resolution No. 06-12-13
Revision Date: October 16, 2008	Resolution No. 08-10-08
Revision Date: May 17, 2012	Resolution No. 12-05-09
Revision Date: July 15, 2021	Resolution No. 21-07-XX

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Specifically:

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- d) The Board will regularly discuss and evaluate its performance. Self-monitoring will include comparison of Board activities and discipline to policies adopted by the Board. It will be up to the Board president or committee chair to determine the appropriate manner of this feedback and evaluation.

Monitoring Method: Board Report
Frequency: Semi-Annual

DRAFT

RESOLUTION NO. _____

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

This Board approves the revisions to **Governance Process GP-2, Governance Focus**, substantially in the form set forth in **Attachment ____**.

SSS No. BOD 2021-012

BOARD AGENDA ITEM

STAFFING SUMMARY SHEET

Committee Meeting & Date Policy – July 14, 2021
Board Meeting Date July 15, 2021

TO					TO							
1.	Jennifer Davidson				6.							
2.	Stephen Clemons				7.							
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4.					9.	Legal						
5.					10.	CEO & General Manager						
Consent Calendar		<input checked="" type="checkbox"/>	Yes	No <i>If no, schedule a dry run presentation.</i>		Budgeted		<input checked="" type="checkbox"/>	Yes	No <i>(If no, explain in Cost/Budgeted section.)</i>		
FROM (IPR) Heidi Sanborn / Donna Lofton					DEPARTMENT Board Office					MAIL STOP B304	EXT. 5079	DATE SENT 7/7/21

NARRATIVE:	
<p>Requested Action:</p> <p>Summary:</p> <p>Board Policy: <i>(Number & Title)</i></p> <p>Benefits:</p> <p>Cost/Budgeted:</p> <p>Alternatives:</p> <p>Affected Parties:</p> <p>Coordination:</p> <p>Presenter:</p>	<p>Discuss proposed revisions to Governance Process GP-1, Purpose of Board; Governance Process GP-2, Governance Focus; Governance Process GP-3, Board Job Description; and Governance Process GP-7, Guidelines for Board Member Behavior.</p> <p>A schedule to monitor Board policies was agreed upon by the Policy Monitoring Ad Hoc Committee. Monitoring established policies creates a better understanding of the policies and gives the Board an opportunity to make corrections, additions, or changes, if necessary.</p> <p>The Board conducted a review of GP-1, GP-2, GP-3, and GP-7 at the May 12, 2021, Policy Committee and asked Board Consultant Eric Douglas to provide proposed revisions for discussion at a future meeting. A redline copy of the proposed revisions for each policy, as well as a “clean” copy, are attached.</p> <p>This monitoring supports GP-2 Governance Focus which states that the Board will direct, evaluate, and inspire the organization through the establishment of written policies which reflect the Board’s values.</p> <p>Monitoring policies helps ensure the policies are current and in keeping with the current will of the Board.</p> <p>N/A</p> <p>Not review these policies at this time.</p> <p>Board of Directors</p> <p>Board Office, Executive Office, Legal</p> <p>Eric Douglas, Board Consultant</p>

Additional Links:

SUBJECT Proposed Revisions to GP-1, GP-2, GP-3 and GP-7	ITEM NO. (FOR LEGAL USE ONLY) 13
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ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.

SMUD BOARD POLICY

Category:	Governance Process	Title: BOARD JOB DESCRIPTION
		Policy Number: GP-3
Date of Adoption:	December 19, 2002	Resolution No. 02-12-14
Revision Date:	October 16, 2003	Resolution No. 03-10-14
Revision Date:	December 1, 2005	Resolution No. 05-12-11
Revision Date:	March 5, 2009	Resolution No. 09-03-05
Revision Date:	December 3, 2009	Resolution No. 09-12-04
Revision Date:	January 20, 2010	Resolution No. 11-01-07
Revision Date:	April 3, 2014	Resolution No. 14-04-03
Revision Date:	June 19, 2014	Resolution No. 14-06-06
Revision Date:	April 20, 2017	Resolution No. 17-04-08
<u>Revision Date:</u>	<u>July 15, 2021</u>	<u>Resolution No. 21-07-XX</u>

The specific job duty of Board members as elected representatives is to ensure appropriate organizational performance.

Specifically, the Board shall:

- a) Produce and maintain written policies that ensure high quality of governance and clear roles in decision-making between Board and staff.
- b) Regularly monitor and evaluate the performance of the CEO/General Manager.
- c) Seek to understand the strategic viewpoints and values of our customers, owners, the community and other interested stakeholders.
- d) Develop and adopt Strategic Direct~~ion~~ive policies for SMUD that define the outcomes the Board wants SMUD to achieve – and refine those Directionsves as conditions warrant while recognizing the importance of providing predictable policy direction to the CEO/General Manager and staff.
- e) ~~Conduct a comprehensive review of the Strategic Directives every three years (or sooner, if circumstances warrant) commencing in 2013.~~ Review the Strategic Direct~~ions~~ves regularly, on the timetable specified in each policy, and

communicate to the CEO/General Manager whether the Board finds SMUD to be in compliance. For the purpose of this policy, compliance is defined as substantially meeting the requirements of the Strategic Directionve.

- f) Adopt the SMUD budget on an annual basis.
- g) Serve as ambassadors for SMUD and build relationships throughout SMUD's service territory and the region.
- h) Contract with an external independent auditor to audit SMUD's finances and procedures; such audits are to be performed on an annual basis.
- i) Set the rates, rules and regulations for services and commodities provided by SMUD.
- j) Take such other actions as may be required by law.

Monitoring Method: Board Report
Frequency: Annual

SMUD BOARD POLICY		
Category:	Governance Process	Title: BOARD JOB DESCRIPTION
		Policy Number: GP-3
Date of Adoption:	December 19, 2002	Resolution No. 02-12-14
Revision Date:	October 16, 2003	Resolution No. 03-10-14
Revision Date:	December 1, 2005	Resolution No. 05-12-11
Revision Date:	March 5, 2009	Resolution No. 09-03-05
Revision Date:	December 3, 2009	Resolution No. 09-12-04
Revision Date:	January 20, 2010	Resolution No. 11-01-07
Revision Date:	April 3, 2014	Resolution No. 14-04-03
Revision Date:	June 19, 2014	Resolution No. 14-06-06
Revision Date:	April 20, 2017	Resolution No. 17-04-08
Revision Date:	July 15, 2021	Resolution No. 21-07-XX

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- a) Produce and maintain written policies that ensure high quality of governance and clear roles in decision-making between Board and staff.
- b) Regularly monitor and evaluate the performance of the CEO/General Manager.
- c) Seek to understand the strategic viewpoints and values of our customers, owners, the community and other interested stakeholders.
- d) Develop and adopt Strategic Direction policies for SMUD that define the outcomes the Board wants SMUD to achieve – and refine those Directions as conditions warrant while recognizing the importance of providing predictable policy direction to the CEO/General Manager and staff.
- e) Review the Strategic Directions regularly, on the timetable specified in each policy, and communicate to the CEO/General Manager whether the Board finds SMUD to

be in compliance. For the purpose of this policy, compliance is defined as substantially meeting the requirements of the Strategic Direction.

- f) Adopt the SMUD budget on an annual basis.
- g) Serve as ambassadors for SMUD and build relationships throughout SMUD's service territory and the region.
- h) Contract with an external independent auditor to audit SMUD's finances and procedures; such audits are to be performed on an annual basis.
- i) Set the rates, rules and regulations for services and commodities provided by SMUD.
- j) Take such other actions as may be required by law.

Monitoring Method: Board Report
Frequency: Annual

DRAFT

RESOLUTION NO. _____

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

This Board approves the revisions to **Governance Process GP-3, Board
Job Description**, substantially in the form set forth in **Attachment ____**.

SSS No. BOD 2021-012

BOARD AGENDA ITEM

STAFFING SUMMARY SHEET

Committee Meeting & Date Policy – July 14, 2021
Board Meeting Date July 15, 2021

TO				TO							
1.	Jennifer Davidson			6.							
2.	Stephen Clemons			7.							
3.				8.							
4.				9.	Legal						
5.				10.	CEO & General Manager						
Consent Calendar		<input checked="" type="checkbox"/>	Yes	No <i>If no, schedule a dry run presentation.</i>		Budgeted		<input checked="" type="checkbox"/>	Yes	No <i>(If no, explain in Cost/Budgeted section.)</i>	
FROM (IPR) Heidi Sanborn / Donna Lofton				DEPARTMENT Board Office				MAIL STOP B304		EXT. 5079	
								DATE SENT 7/7/21			

NARRATIVE:

Requested Action: Discuss proposed revisions to Governance Process GP-1, Purpose of Board; Governance Process GP-2, Governance Focus; Governance Process GP-3, Board Job Description; and Governance Process GP-7, Guidelines for Board Member Behavior.

Summary: A schedule to monitor Board policies was agreed upon by the Policy Monitoring Ad Hoc Committee. Monitoring established policies creates a better understanding of the policies and gives the Board an opportunity to make corrections, additions, or changes, if necessary.

The Board conducted a review of GP-1, GP-2, GP-3, and GP-7 at the May 12, 2021, Policy Committee and asked Board Consultant Eric Douglas to provide proposed revisions for discussion at a future meeting. A redline copy of the proposed revisions for each policy, as well as a “clean” copy, are attached.

Board Policy: *(Number & Title)* This monitoring supports GP-2 Governance Focus which states that the Board will direct, evaluate, and inspire the organization through the establishment of written policies which reflect the Board’s values.

Benefits: Monitoring policies helps ensure the policies are current and in keeping with the current will of the Board.

Cost/Budgeted: N/A

Alternatives: Not review these policies at this time.

Affected Parties: Board of Directors

Coordination: Board Office, Executive Office, Legal

Presenter: Eric Douglas, Board Consultant

Additional Links:

SUBJECT Proposed Revisions to GP-1, GP-2, GP-3 and GP-7	ITEM NO. (FOR LEGAL USE ONLY) 14
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ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.

SMUD BOARD POLICY	
Category: Governance Process	Title: Guidelines for Board Member Behavior
	Policy Number: GP-7
Date of Adoption: December 19, 2002	Resolution No. 02-12-14
Revision Date: October 16, 2003	Resolution No. 03-10-14
Revision Date: April 6, 2006	Resolution No. 06-04-06
Revision Date: March 20, 2008	Resolution No. 08-03-05
<u>Revision Date: July 15, 2021</u>	<u>Resolution No. 21-07-XX</u>

The Board and its members should act in an ethical, businesslike, productive, and lawful manner. Board members should avoid even the appearance of impropriety to ensure and maintain public confidence in SMUD.

Specifically:

- a) Board members shall conduct themselves in accordance with all laws.
- b) Board members should conduct themselves with civility and respect at all times with one another, with staff, and with members of the public.
- c) Board members are expected to demonstrate loyalty to the interests of SMUD owners and ratepayers. This supersedes any conflicting loyalty such as that to advocacy or interest groups and membership on other Boards or staffs. It also supersedes the personal interest of any Board member acting as a consumer of the organization's activities.
- d) Board members may not attempt to exercise individual authority over the organization except as explicitly set forth in Board policies.
 - i) Board members ~~must~~should recognize the lack of authority vested in them as individuals in their interactions with the CEO/General Manager or with staff, except where explicitly Board authorized.

- ii) In their interactions with the public, press or other entities, Board members should recognize the same limitation and the inability of any Board member to speak for the Board or for other Board members except to repeat explicitly stated Board decisions.
- e) Board members shall at all times endeavor to express their individual opinions in a responsible manner, without causing harm to SMUD, to SMUD's owners and customers, or to other Board members and staff.
 - i) Each member of the Board is expected to support the Board's decision-making authority ~~legitimacy and authority of the decisions of the Board concerning any matter~~, irrespective of the member's personal position.
 - ii) Board members retain the right to criticize the decisions of SMUD, but in doing so should make it clear that it is their opinion, and not the opinion of the Board or other Board members, and so long as it complies with the limitations set forth in these policies. Board members are encouraged to notify the CEO/General Manager in advance when they plan to speak publicly in opposition to SMUD decisions and policies.
- f) Members should prepare themselves for Board deliberations.
- g) Board members shall discourage former Board members from attempting to influence the Board, individual Board members or staff, on behalf of any third party (other than a governmental entity) from whom the former Board member is receiving compensation, on any matter that the former Board member substantially participated in during his or her tenure with the Board. This provision shall not apply to: (i) communications by a former Board member acting in his or her capacity as an individual or customer ratepayer and for which the Board member receives no compensation; or (ii) communications with a former Board member who has not been a Board member for more than two years.

Monitoring Method: Board Report
Frequency: Semi-Annual

DRAFT

SMUD BOARD POLICY	
Category: Governance Process	Title: Guidelines for Board Member Behavior
	Policy Number: GP-7
Date of Adoption: December 19, 2002	Resolution No. 02-12-14
Revision Date: October 16, 2003	Resolution No. 03-10-14
Revision Date: April 6, 2006	Resolution No. 06-04-06
Revision Date: March 20, 2008	Resolution No. 08-03-05
Revision Date: July 15, 2021	Resolution No. 21-07-XX

The Board and its members should act in an ethical, businesslike, productive, and lawful manner. Board members should avoid even the appearance of impropriety to ensure and maintain public confidence in SMUD.

Specifically:

- a) Board members shall conduct themselves in accordance with all laws.
- b) Board members should conduct themselves with civility and respect at all times with one another, with staff, and with members of the public.
- c) Board members are expected to demonstrate loyalty to the interests of SMUD owners and ratepayers. This supersedes any conflicting loyalty such as that to advocacy or interest groups and membership on other Boards or staffs. It also supersedes the personal interest of any Board member acting as a consumer of the organization's activities.
- d) Board members may not attempt to exercise individual authority over the organization except as explicitly set forth in Board policies.
 - i) Board members should recognize the lack of authority vested in them as individuals in their interactions with the CEO/General Manager or with staff, except where explicitly Board authorized.

- ii) In their interactions with the public, press or other entities, Board members should recognize the same limitation and the inability of any Board member to speak for the Board or for other Board members except to repeat explicitly stated Board decisions.
- e) Board members shall at all times endeavor to express their individual opinions in a responsible manner, without causing harm to SMUD, to SMUD's owners and customers, or to other Board members and staff.
 - i) Each member of the Board is expected to support the Board's decision-making authority, irrespective of the member's personal position.
 - ii) Board members retain the right to criticize the decisions of SMUD, but in doing so should make it clear that it is their opinion, and not the opinion of the Board or other Board members, and so long as it complies with the limitations set forth in these policies. Board members are encouraged to notify the CEO/General Manager in advance when they plan to speak publicly in opposition to SMUD decisions and policies.
- f) Members should prepare themselves for Board deliberations.
- g) Board members shall discourage former Board members from attempting to influence the Board, individual Board members or staff, on behalf of any third party (other than a governmental entity) from whom the former Board member is receiving compensation, on any matter that the former Board member substantially participated in during his or her tenure with the Board. This provision shall not apply to: (i) communications by a former Board member acting in his or her capacity as an individual or customer and for which the Board member receives no compensation; or (ii) communications with a former Board member who has not been a Board member for more than two years.

Monitoring Method: Board Report
Frequency: Semi-Annual

RESOLUTION NO. _____

**BE IT RESOLVED BY THE BOARD OF DIRECTORS
OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:**

This Board approves the revisions to **Governance Process GP-7, Guidelines for Board Member Behavior**, substantially in the form set forth in **Attachment ____**.