Board of Directors
Meeting
Agenda

Date: May 21, 2020
Time: 5:30 p.m.
Location: Virtual Meeting (online)
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 make general public comment (items not on the agenda) or comment on a specific agenda item 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 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, noting the agenda item number in the subject line. The Board President may read comments for items on the agenda into the record, in his discretion, based upon such factors as the length of the agenda, the number of e-mail comments received, and whether the Board is in danger of losing a quorum. 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.

May 21, 2020 – 5:30 p.m.

Call to Order.
   a. Roll Call.

1. Approval of the Agenda.

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

Consent Calendar:

2. Approve Board member compensation for service rendered at the request of the Board (pursuant to Resolution 18-12-15) for the period of April 16, 2020, through May 15, 2020.

3. Approval of the minutes of the meeting of April 16, 2020.

   ★ ★ ★ ★ ★ ★ ★
Informational Items:

4. Provide the Board with the financial results from the three-month period ended March 31, 2020.  
   *Presenter: Lisa Limcaco*

   *Presenter: Claire Rogers*

6. Provide the Board with a briefing on COVID-19 operational and financial impacts to customers, employees, and operations, and an update on actions taken.  
   *Presenter: Arlen Orchard*

7. Provide the Summary of SMUD’s current Power Supply Costs.  
   *Presenter: Jennifer Davidson*

   * * * * * * *

Discussion Calendar:

8. Adopt resolution calling election for Directors for Wards 1, 2, and 5 and request Sacramento County and Placer County to consolidate that election with the November 3, 2020, general election.  
   *Presenter: Laura Lewis*

9. Authorize the Chief Executive Officer and General Manager to award a contract to Mountain F. Enterprises, Inc. for Transmission Corridor Vegetation Management Services during the period of May 25, 2020, to December 31, 2023, with one optional one-year extension for a total not-to-exceed amount of $28,681,814.  
   *(Frankie McDermott)*  
   *Presenter: Attila Miszti*

10. Authorize the Chief Executive Officer and General Manager to award contracts to Aspen Environmental Group, Ascent Environmental, Inc., Area West Environmental, Inc., and AECOM Technical Services, Inc. to provide Environmental and California Environmental Quality Act (CEQA) support services from June 1, 2020, to May 31, 2023, with one optional two-year extension for a total not-to-exceed aggregate amount of $6 million.  
    *(Gary King)*  
    *Presenter: Ammon Rice*

11. Discuss Board meeting schedule and potential amendments to the Emergency Board Meeting Procedures.  
    *Presenter: President Kerth*

    * * * * * * *

Public Comment:

12. Items not on the agenda.
Board Reports:

13. Directors' Reports.

* * * * * * *

Summary of Board Direction

* * * * * * *

ANNOUNCEMENT OF CLOSED SESSION AGENDA

1. Conference with Legal Counsel – Existing Litigation.

Pursuant to Section 54956.9(d)(1) of the Government Code:

Solano County Superior Court Case No. FCS051564

2. Conference with Legal Counsel – Significant Exposure to Litigation.

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

One case.

3. Conference with Legal Counsel – Anticipated Litigation.

Pursuant to Section 54956.9(d)(4) 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 pursuant to Resolution No. 20-03-06. If still in effect in June, the below Board Committee meetings will be canceled.

June 9, 2020  Strategic Development Committee and Special Board of Directors Meeting  Auditorium*  5:30 p.m.
June 10, 2020  Policy Committee and Special Board of Directors Meeting  Auditorium  5:30 p.m.
June 16, 2020  Finance and Audit Committee and Special Board of Directors Meeting  Auditorium  5:30 p.m.
June 17, 2020  Energy Resources & Customer Services Committee and Special Board of Directors Meeting  Auditorium  5:30 p.m.

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 pursuant to Resolution No. 20-03-06. If still in effect in June, the below Board meeting will be held remotely (online).

June 18, 2020  Auditorium  6:00 p.m.

Pursuant to Resolution No. 20-03-06 adopted on March 17, 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 his 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.

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 April 16, 2020, through May 15, 2020.
The Board of Directors of the Sacramento Municipal Utility District met in regular session via virtual meeting (online) at 5:36 p.m.

Roll Call:

Presiding: President Kerth

Present: Directors Rose, Bui-Thompson, Fishman, Herber, Tamayo, and Sanborn

Present also were Arlen Orchard, Chief Executive Officer and General Manager; Laura Lewis, Chief Legal Officer and General Counsel and Secretary, and members of SMUD’s executive management; and SMUD employees and visitors.

President Kerth called for the approval of the agenda. Vice President Bui-Thompson moved for approval of the agenda, Director Fishman seconded, and the agenda was unanimously approved.

President Kerth called for public comment on the consent calendar. Ms. Lewis stated that public comment had been received for agenda item 3 from Mark Graham and read the comment into the record, a copy of which is attached to these minutes.

President Kerth then addressed the consent calendar consisting of Items 2 through 4. Director Sanborn moved for approval of the consent calendar, Director Herber seconded, and Resolution No. 20-04-01 was unanimously approved.
RESOLUTION NO. 20-04-01

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 March 16, 2020, through April 15, 2020.

Approved: April 16, 2020

<table>
<thead>
<tr>
<th>DIRECTOR</th>
<th>AYE</th>
<th>NO</th>
<th>ABSTAIN</th>
<th>ABSENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>KERTH</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROSE</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUI-THOMPSON</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FISHMAN</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HERBER</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAMAYO</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SANBORN</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
President Kerth then turned to Informational Items 5 through 7.

Lisa Limcaco, Assistant Controller, gave a presentation on agenda item 5 regarding SMUD’s financial statements through February 29, 2020, and update on year-to-date precipitation totals with associated impacts on commodity budget and Rate Stabilization Funds. A copy of the slides used in her presentation is attached hereto.

Director Herber asked if the net purchased power was over budget due to less rain.

Ms. Limcaco confirmed that low rain in the summer months along with favorable pricing for purchased power led to increase in purchased power.

Ms. Lewis stated public comment had been received on agenda item 5 and read comments, copies of which are attached to these minutes, from the following members of the public into the record:

- Melissa Andrews
- Noah Davidson, ForceOne Fitness
- Jeff Durbin
- Richard Lee
- Julie Ostoich
- Kim Glazzard
- Ginny Linn

With regard to agenda item 6, the Quarterly Report on the Status of Recommendations as of March 31, 2020, no clarifying questions or public comment were forthcoming.

Mr. Orchard gave a presentation on agenda item 7, a briefing on COVID-19 operational and financial impacts to customers, employees, and operations, and an update on actions taken. A copy of the slides used in his presentation is attached hereto.

No public comment was forthcoming on agenda item 7.

President Kerth then turned the meeting to Discussion Calendar Items 8a and 8b, to authorize the issuance of the 2020 Series H Revenue Bonds, the distribution of the Preliminary Official Statement, and the Chief Executive
Officer and General Manager’s execution of all necessary documents, including the Bond Purchase Agreement and to authorize the issuance of 2020 Series I Taxable Refunding Bonds, the distribution of the Preliminary Official Statement, and the Chief Executive Officer and General Manager’s execution of all necessary documents, including the Bond Purchase Agreement, and as an alternative to issuing 2020 Series I Taxable Refunding Bonds, authorize the Chief Executive Officer and General Manager to enter into interest rate swaps or similar agreements to provide for refunding savings or hedge interest rate risk relating to a future refunding of the 2013 Series A & B Revenue Bonds.

Russell Mills, Treasurer, provided a presentation. A copy of the slides used in his presentation is attached to these minutes.

Ms. Lewis stated public comment had been received on agenda item 8 and read comments, copies of which are attached to these minutes, from the following members of the public into the record:

- Whitney Leeman
- Mark Graham
- David Wright

After some discussion, Director Rose moved for approval of Discussion Calendar Items 8a and 8b, Vice President Bui-Thompson seconded, and Resolution Nos. 20-04-02 and 20-04-03 were unanimously approved.
SACRAMENTO MUNICIPAL UTILITY DISTRICT

RESOLUTION NO. 20-04-02

SIXTY-THIRD SUPPLEMENTAL RESOLUTION
AUTHORIZING THE ISSUANCE OF
ELECTRIC REVENUE BONDS, 2020 SERIES H
AND
ELECTRIC REVENUE REFUNDING BONDS, 2020 SERIES I (FEDERALLY TAXABLE)

(Supplemental To Resolution No. 6649
Adopted January 7, 1971)

Adopted: April 16, 2020
# TABLE OF CONTENTS

## ARTICLE CXXXIV
**2020 BONDS**

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>134.01</td>
<td>Authorization and Terms of 2020 Bonds</td>
<td>2</td>
</tr>
<tr>
<td>134.02</td>
<td>Redemption of 2020 Bonds</td>
<td>4</td>
</tr>
<tr>
<td>134.03</td>
<td>Deposits to Interest Fund and Principal Account</td>
<td>5</td>
</tr>
<tr>
<td>134.04</td>
<td>2020 Series H Sinking Fund</td>
<td>5</td>
</tr>
<tr>
<td>134.05</td>
<td>2020 Series I Sinking Fund</td>
<td>6</td>
</tr>
<tr>
<td>134.06</td>
<td>Form of 2020 Bonds</td>
<td>7</td>
</tr>
<tr>
<td>134.07</td>
<td>Issuance of 2020 Bonds</td>
<td>7</td>
</tr>
<tr>
<td>134.08</td>
<td>Refunding of 2020 Bonds</td>
<td>7</td>
</tr>
<tr>
<td>134.09</td>
<td>Use of Depository</td>
<td>8</td>
</tr>
<tr>
<td>134.10</td>
<td>Tax Covenants</td>
<td>9</td>
</tr>
<tr>
<td>134.11</td>
<td>Terms of 2020 Bonds Subject to the Master Resolution</td>
<td>10</td>
</tr>
<tr>
<td>134.12</td>
<td>Continuing Disclosure</td>
<td>10</td>
</tr>
</tbody>
</table>

## ARTICLE CXXXV
**INSURANCE PROVISIONS**

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>135.01</td>
<td>Insurance Agreements</td>
<td>11</td>
</tr>
</tbody>
</table>

## ARTICLE CXXXVI
**AMENDMENT OF MASTER RESOLUTION**

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>136.01</td>
<td>Amendment of Master Resolution</td>
<td>11</td>
</tr>
</tbody>
</table>

APPENDIX A - FORM OF BOND

APPENDIX B - FORM OF PROPOSED AMENDMENTS TO MASTER RESOLUTION
RESOLUTION NO. 20-04-02

Sixty-Third Supplemental Resolution
(Supplemental To Resolution No. 6649,
Adopted January 7, 1971)
Authorizing the Issuance of
Electric Revenue Bonds, 2020 Series H and
Electric Revenue Refunding Bonds, 2020 Series I (Federally Taxable)

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, including the District’s commercial paper notes (the “Notes”);

WHEREAS, the District has determined to issue its 2020 Series H 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 (the “2020 Series H Bonds”), to (i) finance and refinance improvements and additions to the District’s Electric System, including through the payment of all or a portion of the District’s outstanding Notes, (ii) if and to the extent specified in the Sales Certificate, refund certain series and maturities of the District’s Electric Revenue Bonds (to be identified in the Sales Certificate) (the “Refunded Bonds”), (iii) pay costs of issuance (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 has also determined to issue its Electric Revenue Refunding Bonds, 2020 Series I (Federally Taxable), in one or more series or subseries (as specified in the Sales Certificate) in an aggregate principal amount not to exceed the principal amount described herein (the “2020 Series I Bonds” and, collectively with the 2020 Series H Bonds, the “2020 Bonds”), to (i) refund the Refunded Bonds, (ii) pay costs of issuance (to the extent specified in the Sales Certificate), and (iii) 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 2020 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 136.01 of this Sixty-Third Supplemental Resolution, and the District intends to issue the 2020 Bonds with the provision that each holder of the 2020 Bonds by purchasing the 2020 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 CXXXIV

2020 BONDS

Section 134.01 Authorization and Terms of 2020 Bonds.

(a) The Board hereby authorizes the issuance of revenue bonds of the District for the purpose of (i) financing and refinancing improvements and additions to the District’s Electric System, including through the payment of all or a portion of the District’s outstanding Notes, and (ii) 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, 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 fifty-ninth 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 Bonds, 2020 Series H” (herein called the “2020 Series H Bonds”). The 2020 Series H 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 2020 Series H 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 2020 Series H Bonds, or any portion thereof, may not thereafter be transferred except as set forth in Section 134.09.
(c) 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, 2020 Series I (Federally Taxable)” (herein called the “2020 Series I Bonds” and, collectively with the 2020 Series H Bonds, the “2020 Bonds”). The 2020 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 2020 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 2020 Series I Bonds, or any portion thereof, may not thereafter be transferred except as set forth in Section 134.09.

(d) The 2020 Bonds shall be issued in such aggregate principal amount (not to exceed $660,000,000), 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 2020 Bonds (the “Sales Certificate”). If all or any portion of the 2020 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 (the “Chief Executive Officer and General Manager”), any Member of the Executive Committee of the District (each a “Member of the Executive Committee”), the Treasurer of the District (the “Treasurer”), the Secretary of the District (the “Secretary”) or the Chief Financial Officer of the District (the “Chief Financial 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 2020 Bonds, or to provide for the issuance of any of the 2020 Bonds if, in the judgment of the Chief Executive Officer and General Manager, any Member of the Executive Committee, the Treasurer, the Secretary or the Chief Financial Officer, after consulting with its financial advisor, bond counsel and District counsel, such insurance, rating or provision is reasonable. The Chief Executive Officer and General Manager, any Member of the Executive Committee, the Treasurer, the Secretary or the Chief Financial Officer 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.

(e) Notwithstanding the foregoing, the Sales Certificate shall not specify (i) a true interest cost on all 2020 Bonds bearing interest at fixed rates of interest in excess of 4.50%;
or (ii) a maturity date for any 2020 Bond later than forty (40) years after the dated date of such 2020 Bond.

(f) Interest on the 2020 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.

(g) Pursuant to Section 5.04 of the Master Resolution, the Sales Certificate shall specify whether the 2020 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 2020 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 2020 Bonds or applicable series thereof, and is hereby pledged solely to the payment of the 2020 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.

(h) The Sales Certificate shall designate the series, amounts and maturity or sinking fund payment dates of the Refunded Bonds.

Section 134.02 Redemption of 2020 Bonds. The 2020 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 2020 Bonds will not be subject to redemption).

(a) Notice of Redemption. If any of the 2020 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 2020 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 2020 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-Third Supplemental Resolution, (1) publication of any notice of redemption shall not be required with respect to the 2020 Bonds, so long as such 2020 Bonds are in full book-entry form, (2) any notice of redemption of the 2020 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 2020 Bonds shall be subject to the provisions of Article IV of the Master Resolution.

Section 134.03 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 2020 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 134.04 2020 Series H 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 “2020 Series H Sinking Fund.” On or before each minimum sinking fund payment date for any 2020 Series H Bonds set forth in the Sales Certificate, the Treasurer shall deposit in the 2020 Series H 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 2020 Series H 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 2020 Series H 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 2020 Series H 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 2020 Series H Bonds as such moneys in the 2020 Series H Sinking Fund shall suffice to redeem at a redemption price equal to the principal amount thereof (except that accrued interest on such 2020 Series H Bonds so called for redemption shall be paid from the Interest Fund). All 2020 Series H 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 2020 Series H Bonds shall operate to impair or affect the obligation of the District to make minimum sinking fund
payments for 2020 Series H 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 2020 Series H 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 2020 Series H Bonds theretofore purchased or redeemed through the operation of the 2020 Series H Sinking Fund or otherwise (together with any moneys then in the 2020 Series H Sinking Fund) equals or exceeds the aggregate amount of minimum sinking fund payments for 2020 Series H Bonds then and theretofore required to be made pursuant to this Section.

(c) Any moneys remaining in the 2020 Series H Sinking Fund after all 2020 Series H Bonds have been retired shall be returned to the District for any lawful District use.

Section 134.05 2020 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 “2020 Series I Sinking Fund.” On or before each minimum sinking fund payment date for any 2020 Series I Bonds set forth in the Sales Certificate, the Treasurer shall deposit in the 2020 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 2020 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 2020 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 2020 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 2020 Series I Bonds as such moneys in the 2020 Series I Sinking Fund shall suffice to redeem at a redemption price equal to the principal amount thereof (except that accrued interest on such 2020 Series I Bonds so called for redemption shall be paid from the Interest Fund). All 2020 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 2020 Series I Bonds shall operate to impair or affect the obligation of the District to make minimum sinking fund payments for 2020 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 2020 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 2020 Series I Bonds theretofore purchased or redeemed through the operation of the 2020 Series I Sinking Fund or otherwise (together with any moneys then in the 2020 Series I Sinking Fund) equals or exceeds the aggregate amount of minimum sinking fund payments for 2020 Series I Bonds then and theretofore required to be made pursuant to this Section.
purchased or redeemed through the operation of the 2020 Series I Sinking Fund or otherwise (together with any moneys then in the 2020 Series I Sinking Fund) equals or exceeds the aggregate amount of minimum sinking fund payments for 2020 Series I Bonds then and theretofore required to be made pursuant to this Section.

(e) Any moneys remaining in the 2020 Series I Sinking Fund after all 2020 Series I Bonds have been retired shall be returned to the District for any lawful District use.

Section 134.06 Form of 2020 Bonds. The 2020 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-Third Supplemental Resolution. The series or subseries designations, numbers, maturity dates, interest rates, redemption provisions and other terms of the 2020 Bonds shall be inserted therein in conformity with the Sales Certificate.

Section 134.07 Issuance of 2020 Bonds.

(a) At any time after the adoption of this Sixty-Third Supplemental Resolution and the execution and delivery of the Sales Certificate, the District may execute and deliver the 2020 Bonds in the aggregate principal amount set forth in the Sales Certificate, but not to exceed the aggregate principal amount described in Section 134.01(d).

(b) The Trustee shall authenticate and deliver the 2020 Bonds upon written order of the District.

(c) The proceeds of the sale of the 2020 Bonds shall be set aside and applied by the Treasurer as set forth in the Sales Certificate.

Section 134.08 Refunding of 2020 Bonds. If Refunding Bonds are issued for the purpose of refunding 2020 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 2020 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 2020 Bonds then outstanding at or before their maturity date, provided that, in the case of 2020 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 2020 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 2020 Bonds as above
provided, then said 2020 Bonds shall not be considered to be outstanding Bonds for any purpose of the Master Resolution or of this Sixty-Third Supplemental Resolution.

Section 134.09 Use of Depository. Notwithstanding any provision of the Master Resolution or this Sixty-Third Supplemental Resolution to the contrary:

(a) The 2020 Bonds shall be initially issued as provided in Section 134.01. Registered ownership of the 2020 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 134.09(a) hereof, upon receipt of all outstanding 2020 Bonds by the Trustee, together with a Certificate of the District to the Trustee, a single new 2020 Bond shall be executed and delivered for each maturity of each series of 2020 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 134.09(a) hereof, upon receipt of all outstanding 2020 Bonds by the Trustee together with a Certificate of the District to the Trustee, new 2020 Bonds shall be executed, authenticated and delivered in such denominations and registered in the names of such persons as are requested in such Certificate of the District, subject to the limitations of Section 134.09(a) hereof, provided the Trustee shall not be required to deliver such new 2020 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 134.09(a) hereof, the 2020 Bonds shall be transferred as provided in Article II of the Master Resolution.

(c) In the case of partial redemption or refunding of the 2020 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 2020 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 2020 Bonds.

(d) The District and the Trustee shall be entitled to treat the person in whose name any 2020 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 2020 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 2020 Bond.

(e) So long as the outstanding 2020 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 2020 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 134.10 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 2020 Series H 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 2020 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 2020 Series H 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 2020 Series H 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 2020 Series H Bonds. Capitalized terms in this Section not otherwise defined in the Master Resolution or this Sixty-Third 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 2020 Series H 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-Third Supplemental Resolution or the consent at any time of the Bondholders.

(d) This Section 134.10 shall be inapplicable to the 2020 Series I Bonds and shall also be inapplicable to the 2020 Series H Bonds, if any, issued bearing interest included in gross income for federal income tax purposes, as set forth in the Sales Certificate.

Section 134.11 Terms of 2020 Bonds Subject to the Master Resolution.

(a) Except as in this Sixty-Third Supplemental Resolution expressly provided, every term and condition contained in the Master Resolution shall apply to this Sixty-Third Supplemental Resolution and to the 2020 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-Third Supplemental Resolution.

(b) This Sixty-Third 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 134.12 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 2020 Bonds (the “Continuing Disclosure Agreement”). Notwithstanding any other provision of the Master Resolution or this Sixty-Third 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 2020 Bonds upon receipt of indemnity satisfactory to the Trustee or any Holder of 2020 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 2020 Bonds (including persons holding 2020 Bonds through nominees, depositaries or other intermediaries).
ARTICLE CXXXV

INSURANCE PROVISIONS

Section 135.01 Insurance Agreements. Each Insurance Agreement, if any, is hereby incorporated in this Sixty-Third 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 2020 Bonds, the rights and responsibilities of the District, the Trustee, the applicable Bond Insurer and the holders of the applicable 2020 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-Third Supplemental Resolution.

ARTICLE CXXXVI

AMENDMENT OF MASTER RESOLUTION

Section 136.01 Amendment of Master Resolution. The District intends to amend the Master Resolution substantially in the form of Appendix B to this Sixty-Third Supplemental Resolution (the “Proposed Amendments”). The purchasers of the 2020 Bonds, by virtue of their purchase of the 2020 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: April 16, 2020

<table>
<thead>
<tr>
<th>DIRECTOR</th>
<th>AYE</th>
<th>NO</th>
<th>ABSTAIN</th>
<th>ABSENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>KERTH</td>
<td>✗</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROSE</td>
<td>✗</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUI-THOMPSON</td>
<td>✗</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FISHMAN</td>
<td>✗</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HERBER</td>
<td>✗</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAMAYO</td>
<td>✗</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SANBORN</td>
<td>✗</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX A

FORM OF BOND

No. R-_________  $___________

SACRAMENTO MUNICIPAL UTILITY DISTRICT
ELECTRIC REVENUE [REFUNDING] BOND
2020 SERIES [H/I] [(FEDERALLY TAXABLE)]

<table>
<thead>
<tr>
<th>Maturity</th>
<th>Interest Per Annum</th>
<th>Date</th>
<th>CUSIP</th>
</tr>
</thead>
</table>

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 August 15, 2020. 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-Third Supplemental Resolution, adopted April 16, 2020, authorizing the issuance of the 2020 Series [H/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 2020 Series [H/I] Bonds are not subject to redemption before August 15, 20__.

On any date on or after August 15, 20__, the 2020 Series [H/I] Bonds are subject to redemption prior to their stated maturities, at the option of the District, from any source of available funds, as a whole or in part, by lot, at a redemption price equal to the principal amount thereof, plus accrued interest to the date fixed for redemption, without premium.

The 2020 Series [H/I] Bonds maturing on August 15, 20__ are subject to mandatory redemption prior to their stated maturity, in part, by lot, from minimum sinking fund payments, on any August 15 on or after August 15, 20__, at the principal amount thereof plus accrued interest thereon to the date fixed for redemption, without premium.] [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 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.”
RESOLUTION NO. 20-04-03 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 SERIES OR SUBSERIES OF THE DISTRICT’S ELECTRIC REVENUE
BONDS AND THE REFUNDING OF ALL OR A PORTION OF ONE OR MORE
SERIES OF THE DISTRICT’S ELECTRIC REVENUE BONDS AND CERTAIN OTHER
MATTERS RELATING THERETO AND AUTHORIZING THE EXECUTION AND
DELIVERY OF ONE OR MORE INTEREST RATE SWAP AGREEMENTS IN
CONNECTION WITH ALL OR A PORTION OF ONE OR MORE SERIES OF THE
DISTRICT’S ELECTRIC REVENUE BONDS OR SUBORDINATED ELECTRIC
REVENUE BONDS

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 Bonds, 2020 Series H and Electric Revenue Refunding Bonds, 2020 Series I (Federally Taxable) (collectively, the “Bonds”), each in one or more subseries, shall be sold to the respective underwriters thereof in negotiated sales at the prices and otherwise upon the terms and conditions determined on the sale dates thereof by the Chief Executive Officer and General Manager, any Member of the Executive Committee, the Treasurer, the Secretary or the Chief Financial Officer, as specified in one or more Sales Certificates relating to the Bonds (the “Sales Certificates”) 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. Each of 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 is authorized and directed to execute and deliver one or more Contracts of Purchase in substantially such form for the Bonds or any series or subseries thereof on behalf of the District, subject to such additions thereto and changes therein as 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, shall approve after consultation with the District’s counsel (such approval to be conclusively evidenced by the Chief Executive Officer and General Manager’s, such Member of the Executive Committee’s, the Treasurer’s, the Secretary’s, the Chief Financial Officer’s or such designee’s 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. Each of 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 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 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, shall approve after consultation with the District’s counsel and subject to such further changes as may be consistent with the Sales Certificates (such approval to be conclusively evidenced by the Chief Executive Officer and General Manager’s, such Member of the Executive Committee’s, the Treasurer’s, the Secretary’s, the Chief Financial Officer’s or such designee’s 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. Each of 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 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 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, shall approve after consultation with the District’s counsel (such approval to be conclusively evidenced by the Chief Executive Officer and General Manager’s, such Member of the Executive Committee’s, the Treasurer’s, the Secretary’s, the Chief Financial Officer’s or such designee’s execution of such Continuing Disclosure Agreements).

Section 5. Bond Insurance. The Chief Executive Officer and General Manager, any Member of the Executive Committee, the Treasurer, the Secretary or the Chief Financial Officer are 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 the officer or officers executing the insurance agreements and the commitments 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 such officer or officers and shall be conclusively evidenced by the execution and delivery of the insurance agreements and insurance commitments. Any actions heretofore taken by the Chief Executive Officer and General Manager, any Member of the Executive Committee, the Treasurer, the Secretary or the Chief Financial Officer in furtherance of this Section are hereby ratified, confirmed and approved.
Section 6. Interest Rate Swap Agreements. The District has previously entered into (i) an ISDA Master Agreement with Morgan Stanley Capital Services LLC (“MSCS”), dated as of October 15, 1996, including the Schedule thereto and the Credit Support Annex to the Schedule thereto, as amended, and certain Confirmations of transactions thereunder (collectively, the “MSCS Interest Rate Swap Agreement”); (ii) an ISDA Master Agreement with J. Aron & Company (“J. Aron”), dated as of October 15, 1996, including the Schedule thereto and the Credit Support Annex to the Schedule thereto, as amended, and certain Confirmations of transactions thereunder (collectively, the “J. Aron Interest Rate Swap Agreement”); (iii) an ISDA Master Agreement with Bank of America, N.A. (“BANA”), dated as of September 15, 2002, including the Schedule thereto and the Credit Support Annex to the Schedule thereto, as amended, and certain Confirmations of transactions thereunder (collectively, the “BANA Interest Rate Swap Agreement”); (iv) an ISDA Master Agreement with The Toronto-Dominion Bank (“TD”), dated as of March 3, 2008, including the Schedule thereto, as amended, and certain Confirmations of transactions thereunder (collectively, the “TD Interest Rate Swap Agreement”); (v) an ISDA Master Agreement with Barclays Bank PLC (“Barclays”), dated as of June 23, 2005, including the Schedule thereto and Credit Support Annex to the Schedule thereto, as amended, and certain Confirmations thereunder (collectively, the “Barclays Interest Rate Swap Agreement”); and (vi) an ISDA Master Agreement with Wells Fargo Bank, N.A. (“Wells Fargo” and, collectively with MSCS, J. Aron, BANA, TD and Barclays, the “Existing Counterparties”), dated as of June 1, 2016, including the Schedule thereto and the Credit Support Annex to the Schedule thereto and certain Confirmations of transactions thereunder (collectively, the “Wells Fargo Interest Rate Swap Agreement” and, collectively with the MSCS Interest Rate Swap Agreement, the J. Aron Interest Rate Swap Agreement, the BANA Interest Rate Swap Agreement, the TD Interest Rate Swap Agreement and the Barclays Interest Rate Swap Agreement, the “Existing Interest Rate Swap Agreements”). Copies of the Existing Interest Rate Swap Agreements are on file with, and may be obtained from, the Treasurer.

In addition, proposed forms of an ISDA Master Agreement between the District and Citibank, N.A. (“Citi”), including the proposed forms of Schedule thereto and proposed forms of Credit Support Annex to the Schedule and the proposed form of Confirmation of transactions thereunder (collectively, the “Citi Interest Rate Swap Agreement”) have been submitted to this meeting.

The District is also considering entering into an ISDA Master Agreement with Royal Bank of Canada (or an affiliate thereof with similar creditworthiness) (“RBC” and, collectively with the Existing Counterparties and Citi, the “Potential Counterparties”), including a Schedule thereto and Credit Support Annex to the Schedule thereto and Confirmations of transactions thereunder, in each case in substantially the form of one or more of the Existing Interest Rate Swap Agreements or the Citi Interest Rate Swap Agreement (collectively, the “RBC Interest Rate Swap Agreement” and, collectively with the Existing Interest Rate Swap Agreements and the Citi Interest Rate Swap Agreement, the “Interest Rate Swap Agreements”).

The Existing Swap Agreements are hereby ratified, confirmed and approved and the Citi Interest Rate Swap Agreement, in the form submitted to this meeting, is hereby approved. Each of 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 is
authorized and directed to execute and deliver one or more Interest Rate Swap Agreements on behalf of the District (including one or more new Confirmations of transactions under the Existing Interest Rate Swap Agreements and any necessary or desirable amendments to the Existing Swap Agreements) in substantially the form of any one or more of the Interest Rate Swap Agreements and with any one or more of the Potential Counterparties, subject to such additions thereto and changes therein as 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, shall approve after consultation with the District’s counsel (such approval to be conclusively evidenced by the Chief Executive Officer and General Manager’s, such Member of the Executive Committee’s, the Treasurer’s, the Secretary’s, the Chief Financial Officer’s or such designee’s execution of such Interest Rate Swap Agreements).

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 each of the Potential Counterparties, including any related guarantee of, or other credit support for, the obligations of such Potential Counterparty, if applicable, and that the Interest Rate Swap Agreements are 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, one or more series of the District’s outstanding Electric Revenue Bonds or Subordinated Electric Revenue Bonds (including the District’s outstanding Subordinated Electric Revenue Bonds, 2019 Series A and/or 2019 Series B), and/or the issuance of 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 one or more series of the District’s outstanding Electric Revenue Bonds or Subordinated Electric Revenue Bonds (including the District’s outstanding Electric Revenue Bonds, 2013 Series A and/or Electric Revenue Refunding Bonds, 2013 Series B). To the extent that the Interest Rate Swap Agreements entered into in connection with the authorization set out in this Resolution are 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 Agreements entered into in connection with the authorization set out in this Resolution.

Section 7. Other Related Actions. The 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: April 16, 2020

<table>
<thead>
<tr>
<th>DIRECTOR</th>
<th>AYE</th>
<th>NO</th>
<th>ABSTAIN</th>
<th>ABSENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>KERTH</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROSE</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUI-THOMPSON</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FISHMAN</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HERBER</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAMAYO</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SANBORN</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SACRAMENTO MUNICIPAL UTILITY DISTRICT

$____________ Electric Revenue Bonds, 2020 Series H

$____________ Electric Revenue Refunding Bonds, 2020 Series I (Federally Taxable)

CONTRACT OF PURCHASE

2020

Honorable Board of Directors
Sacramento Municipal Utility District
6201 S Street
Sacramento, California 95817-1899

Dear Directors:

The undersigned Citigroup Global Markets Inc., Barclays Capital Inc., BofA Securities, Inc., JP Morgan Securities LLC, Goldman, Sachs & Co. 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. Citigroup Global Markets Inc., 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 _______, 2020 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. 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 $____________ aggregate principal amount of the Sacramento Municipal Utility District Electric Revenue Bonds, 2020 Series H (the “2020 Series H Bonds”) and $____________ aggregate principal amount of Sacramento Municipal Utility District Electric Revenue Refunding Bonds, 2020 Series I (Federally Taxable) (the “2020 Series I Bonds” and, together with the 2020 Series H Bonds, the “Bonds”), dated _______, 2020, 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 2020 Series H Bonds shall be $________ (consisting of the principal amount of the 2020 Series H Bonds of $________ plus/minus net original issue premium/discount of $________) and minus an Underwriters’ discount of $________. The purchase price for the 2020 Series I Bonds shall be $________ (consisting of the principal amount of the 2020 Series I Bonds of $________ plus/minus net original issue premium/discount of $________) and minus an Underwriters’ discount of $________.

(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. __________, adopted by the Board of Directors on __________, 2020 (the “Sixty-Third 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) A portion of the proceeds of the 2020 Series H Bonds will be used to finance and refinance improvements and additions to the District’s Electric System, including through the payment of all or a portion of the District’s outstanding commercial paper notes. A portion of the proceeds of the 2020 Series I Bonds will be used to refund all of the District’s outstanding Electric Revenue Bonds, 2013 Series A, and a portion of its outstanding Electric Revenue Refunding Bonds, 2013 Series B.

(d) The District has heretofore delivered to the Underwriters copies of the Preliminary Official Statement dated ________, 2020, 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, the Escrow Agreement (as defined herein), 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 ______, 2020 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 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 Undertaking, the Resolution, the Escrow Agreement, 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 Bonds, the Act, the Undertaking, the Escrow Agreement 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 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 Undertaking, the Escrow Agreement 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, the Escrow Agreement 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 Undertaking, the Escrow Agreement, 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;

(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 Resolution, the Undertaking, the Escrow Agreement, 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 2020 Series H 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, 2019 and December 31, 2018 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 Resolution, the Escrow Agreement, 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 2020 Series H 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-Third 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) [Reserved]

(10) An acceptance of and agreement to the provisions of the Sixty-Third Supplemental Resolution executed by the Trustee under the Resolution in form and substance acceptable to the Underwriters;

(11) A tax certificate related to the 2020 Series H 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 “[___]” and from Fitch Ratings, Inc. (“Fitch”) of not less than “[___]”;

(13) [Reserved];

(14) An opinion of counsel to the Trustee, dated the Closing Date, addressed to the Underwriters, to the effect that (i) the Trustee 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 has been duly authorized, executed and delivered by the Trustee and, assuming due authorization, execution and delivery by the other parties thereto, constitutes the valid and binding obligation of the Trustee 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 principals and to the exercise of judicial discretion in appropriate cases, and to enter into and perform the Undertaking, (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 of its duties and obligations under the Resolution 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 under the Resolution, and the Undertaking and the consummation of the transactions on the part of the Trustee contemplated therein, and the compliance by the Trustee, 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, 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 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) The Escrow Agreement, dated as of _______2020 (the “Escrow Agreement”) by and between the District and U.S. Bank National Association, as escrow agent thereunder (the “Escrow Agent”);

(17) A certificate, dated the Closing Date, signed by a duly authorized officer of the Escrow Agent, satisfactory in form and substance to the Underwriters, to the effect that:

a. the Escrow Agent is a national banking association organized and existing under and by virtue of the laws of the United States of America; having the full power and being qualified to enter into and perform its duties under the Escrow Agreement;

b. the Escrow Agent is duly authorized to enter into the Escrow Agreement, and the Escrow Agreement has been duly executed and delivered by the Escrow Agent;

c. the execution and delivery of the Escrow Agreement and compliance with the provisions on the Escrow Agent’s part contained therein will not conflict with or constitute a breach of, or default under, any law, administrative regulation, judgment, decree, loan agreement, Escrow Agreement, bond, note, resolution, agreement, or other instrument to which the Escrow Agent is a party or is otherwise subject (except that no representation, warranty, or agreement is made with respect to any federal or state securities or Blue Sky laws or regulations), nor will any such execution, delivery, or compliance result in the creation or imposition, under the terms of any such law, administrative regulation, judgment, decree, loan agreement, indenture, bond, note, resolution, agreement, or other instrument, of any lien, charge, or other security interest or encumbrance of any nature whatsoever upon any of the properties or assets held by the Escrow Agent under the lien created by the Escrow Agreement, except as provided by the Escrow Agreement;

d. it has not been served with any action, suit, proceeding, inquiry, or investigation, at law or in equity, before or by any court,
governmental agency, or public board or body, nor is any such action, to the best of the officer’s knowledge after reasonable investigation, threatened against the Escrow Agent, as such but not in its individual capacity, affecting the existence of the Escrow Agent, or the titles of its officers to their offices, or seeking to prohibit, restrain, or enjoin the collection of the funds to be applied to pay the principal, premium, if any, and interest with respect to the Series 2020 I Bonds, or the pledge thereof, or in any way contesting or affecting the validity or enforceability of the Escrow Agreement, or contesting the powers of the Escrow Agent or its authority to enter into, adopt, or perform its obligations under any of the foregoing, wherein an unfavorable decision, ruling, or finding would materially adversely affect the validity or enforceability of the Escrow Agreement;

e. no consent, approval, authorization, or other action by any governmental or regulatory authority having jurisdiction over the Escrow Agent that has not been obtained is or will be required for the consummation by the Escrow Agent of the other transactions contemplated to be performed by the Escrow Agent in connection with the acceptance and performance of the obligations created by the Escrow Agreement; and

f. The Escrow Agent will apply the amount deposited in the escrow fund established under the Escrow Agreement in accordance with the Escrow Agreement;

(18) A verification report issued by [Causey Demgen & Moore P.C.] regarding the sufficiency of the securities and cash on deposit in the escrow fund (as described in the Escrow Agreement) to pay the redemption prices of and the debt service due on the bonds to be refunded by the 2020 Series I Bonds; and

(19) 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 $____________ aggregate principal amount of the 2020 Series H Bonds and the entire $____________ aggregate principal amount of the 2020 Series I 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 2020 Series H Bonds.

5. **Issue Price of the 2020 Series H Bonds.**

(a) The Senior Underwriter, on behalf of the Underwriters, agrees to assist the District in establishing the issue price of the 2020 Series H 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 2020 Series H 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 2020 Series H 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 2020 Series H 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 2020 Series H 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 2020 Series H Bonds of each maturity for which the 10% test has not been satisfied and not allocate any such 2020 Series H 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 2020 Series H Bonds, the Senior Underwriter will neither offer nor sell unsold 2020 Series H 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 2020 Series H 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 2020 Series H 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 2020 Series H 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 2020 Series H 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 2020 Series H 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 2020 Series H 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 2020 Series H 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 2020 Series H Bonds of that maturity or all 2020 Series H 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 2020 Series H 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 2020 Series H 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
any agreement among underwriters relating to the initial sale of the 2020 Series H 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 2020 Series H 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 2020 Series H Bonds of that maturity or all 2020 Series H 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.

The Underwriters acknowledge that sales of any 2020 Series H 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 2020 Series H 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 2020 Series H 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 2020 Series H Bonds to the public),

3. A purchaser of any of the 2020 Series H 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 20 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 2020 Series H 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 2020 Series H 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 Escrow Agreement, 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 of the Escrow Agent (defined herein) 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; 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 Citigroup Global Markets Inc., 444 S. Flower St., Floor 27, Los Angeles, CA 90017, Attention: Steve Dworkin, 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,

CITIGROUP GLOBAL MARKETS INC.
BARCLAYS CAPITAL INC.
BOFA SECURITIES, INC.,
JP MORGAN SECURITIES LLC,
GOLDMAN, SACHS & CO. LLC, and
MORGAN STANLEY & CO. LLC

BY: CITIGROUP GLOBAL MARKETS INC., as Senior Underwriter

___________________________

Steve Dworkin
Managing Director

Accepted: _____, 2020

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By: ___________________________

Russell Mills
Treasurer

[Signature page to Contract of Purchase]
Exhibit A

SACRAMENTO MUNICIPAL UTILITY DISTRICT

$_______ Electric Revenue Bonds, 2020 Series H

<table>
<thead>
<tr>
<th>Maturity (August 15)</th>
<th>Principal Amount</th>
<th>Interest Rate</th>
<th>Yield</th>
<th>Price</th>
</tr>
</thead>
</table>

$_______ Electric Revenue Refunding Bonds, 2020 Series I (Federally Taxable)

<table>
<thead>
<tr>
<th>Maturity (August 15)</th>
<th>Principal Amount</th>
<th>Interest Rate</th>
<th>Yield</th>
<th>Price</th>
</tr>
</thead>
</table>
SACRAMENTO MUNICIPAL UTILITY DISTRICT

Exhibit C to the Contract of Purchase
(Opinion of General Counsel to the Sacramento Municipal Utility District)

______, 2020

Citigroup Global Markets, Inc.
444 S. Flower Street, 27th Floor
Los Angeles, CA 90017

Re: Sacramento Municipal Utility District
$__________ Electric Revenue Bonds, 2020 Series H and $__________
Electric Revenue Refunding Bonds, 2020 Series I (Federally Taxable)

Ladies and Gentlemen:

This opinion is being delivered pursuant to Paragraph 3(d)(6) of the Contract of Purchase (the “Contract of Purchase”), dated ________, 2020, between Citigroup Global Markets, 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 “2020 Series H Bonds” and the “2020 Series I Bonds” respectively, and together, 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. _______, adopted on _______, 2020 (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 (the “Trustee”); (iii) the Escrow Agreement, between the District and U.S. Bank National Association, as escrow agent the “Escrow Agent”, (iv) the Official Statement of the District, dated ________, 2020 (the “Official Statement”) and (iv) 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 Undertaking, the Escrow Agreement, 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 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 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 Undertaking, the Escrow Agreement 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 Contract of Purchase or the Undertaking, or contesting the tax exempt status of interest on the 2020 Series H 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 Undertaking, the Escrow Agreement, 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 2020 Series H 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 _______, 2020, between the District and the Underwriters named therein (the “Contract of Purchase”) with respect to the sale by the District of $__________ aggregate principal amount of its Electric Revenue Bonds, 2020 Series H (the “2020 Series H Bonds”) and $________ aggregate principal amount of its Electric Revenue Refunding Bonds, 2020 Series I (Federally Taxable) (the “2020 Series I Bonds” and, together with the 2020 Series H Bonds, 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 Undertaking, the Escrow Agreement, 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 Undertaking, the Escrow Agreement, 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 2020 Series H 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, 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 of the authorization, execution, delivery or performance by the District of the Bonds, the Resolution, the Undertaking, the Escrow Agreement 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 2020 Series H 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: _______, 2020
Exhibit E to the Contract of Purchase  
(Supplemental Opinion of Bond Counsel) [to be updated]

______, 2020

Citigroup Global Markets, Inc.
444 S. Flower St., Floor 27
Los Angeles, CA 900017

Re: Sacramento Municipal Utility District Electric Revenue Bonds, 2020 Series H and Electric Revenue Refunding Bonds, 2020 Series I (Federally Taxable)  
(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 ________, 2020 (the “Purchase Contract”), between you and the other underwriters named therein and the Sacramento Municipal Utility District (“SMUD”), providing for the purchase of $___________ principal amount of Sacramento Municipal Utility District Electric Revenue Bonds, 2020 Series H (the “2020 Series H Bonds”) and $___________ principal amount of Sacramento Municipal Utility District Electric Revenue Refunding Bonds, 2020 Series I (Federally Taxable) (the “2020 Series I Bonds” and, together with the 2020 Series H Bonds, 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. _________ and Resolution No. _________, each adopted on ________, 2020. 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 ________, with respect to the Bonds (the “Preliminary Official Statement”) and of the official statement of SMUD, dated ________ 2020, 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 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 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 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
2020 BONDS” (except information relating to book-entry or The Depository Trust Company),
“SECURITY FOR THE BONDS,” “TAX MATTERS,” “CERTAIN ERISA
CONSIDERATIONS” 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 and 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 (except as explicitly stated in paragraph 3 above), completeness or fairness of any of
the statements contained in the Preliminary Official Statement or 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 did not extend beyond the date of the Official Statement), 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) as of __________, 2020, 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 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, and (b) as of the date of the Official Statement and as of the date hereof, 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 about (i) any difference in information contained in the Preliminary Official Statement compared to what is contained in the Official Statement, whether or not related to pricing or sale of the Bonds, and whether any such difference is material and should have been included in the Preliminary Official Statement, and (ii) with respect to both the Preliminary Official Statement and the Official Statement, 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 information about Cede & Co., The Depository Trust Company or book-entry, ratings, rating agencies, underwriters, underwriting and the information contained in Appendices B and C 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

$______________ Electric Revenue Bonds, 2020 Series H

The undersigned, on behalf of Citigroup Global Markets Inc., as representative (the “Representative”) of itself, Barclays Capital Inc., BofA Securities, Inc., JP Morgan Securities LLC, Goldman, Sachs & Co. 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.** As of the date of this Certificate, for each Maturity of the General Rule Maturities, 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 ________2020.

(h) **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: ________, 2020

Citigroup Global Markets, Inc.,
as representative of the Underwriting Group

By: ______________________________________
Name: ______________________________________
Schedule A

Sale Prices

General Rule Maturities

___ Not Applicable
___ Maturities Listed Below

$______________ Electric Revenue Bonds, 2020 Series H

<table>
<thead>
<tr>
<th>Maturity (August 15)</th>
<th>Principal Amount</th>
<th>Interest Rate</th>
<th>Yield</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Schedule B

Pricing Wire or Equivalent Communication

___ Not applicable, because there are no Hold-the-Offering-Price Maturities

____ Attached
PRELIMINARY OFFICIAL STATEMENT DATED APRIL __, 2020

NEW ISSUE - FULL BOOK-ENTRY

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 2020 Series H 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 2020 Series H Bonds is not a specific preference item for purposes of the federal alternative minimum tax. In the opinion of Bond Counsel, interest on the 2020 Series I Bonds is exempt from State of California personal income taxes. Bond Counsel observes that interest on the 2020 Series I Bonds is not excluded from gross income for federal income tax purposes under Section 103 of the Code. 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 2020 Bonds. See “TAX MATTERS.”

$_________* $_________*

ELECTRIC REVENUE BONDS ELECTRIC REVENUE REFUNDING BONDS

2020 SERIES H 2020 SERIES I (FEDERALLY TAXABLE)

Dated: Date of Delivery Due: August 15, as shown on the inside cover

The Electric Revenue Bonds, 2020 Series H (the “2020 Series H Bonds”) and the Electric Revenue Refunding Bonds, 2020 Series I (Federally Taxable) (the “2020 Series I Bonds” and, collectively with the 2020 Series H Bonds, the “2020 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 2020 Bonds are being issued to (i) finance and refinance certain improvements and additions to SMUD’s Electric System, (ii) refund certain of SMUD’s outstanding Bonds (as defined herein), and (iii) pay certain costs associated with the issuance of the 2020 Bonds. See “PLAN OF FINANCE.”

The 2020 Bonds will mature in the years and amounts as shown on the inside cover. Interest on the 2020 Bonds will accrue at the rates set forth on the inside cover and be payable on August 15, 2020, and semiannually thereafter on each February 15 and August 15.

The 2020 Bonds are subject to optional and mandatory sinking fund redemption prior to maturity as set forth herein.

[The 2020 Series [H/I] Bonds maturing August 15, 20__ through August 15, 20__ are being designated by SMUD as “Green Bonds” (the “Green Bonds”). See “PLAN OF FINANCE – Green Bonds Project.”]

The 2020 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 2020 Bonds. Individual purchases of interests in the 2020 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 2020 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 2020 Bonds, as described herein. See APPENDIX C – “BOOK-ENTRY SYSTEM.”

The principal of and interest on the 2020 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 2020 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 2020 Bonds are offered when, as and if issued and received by the Underwriters, subject to the approval of the validity of the 2020 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 2020 Bonds will be available for delivery through the facilities of DTC on or about May __, 2020.

Citigroup

BofA Merrill Lynch  Barclays  Goldman Sachs & Co. LLC

J.P. Morgan  Morgan Stanley

April __, 2020

* Preliminary, subject to change.
### SACRAMENTO MUNICIPAL UTILITY DISTRICT
Sacramento, California

**$_____________* ELECTRIC REVENUE BONDS, 2020 SERIES H**

**MATURITY SCHEDULE**

<table>
<thead>
<tr>
<th>Due (August 15)</th>
<th>Amount</th>
<th>Interest Rate</th>
<th>Yield</th>
<th>CUSIP†</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$</td>
<td>%</td>
<td>%</td>
<td></td>
</tr>
</tbody>
</table>

$________  ____% Term 2020 Series H Bonds due August 15, 20__, Priced to Yield ____%, CUSIP†: ____

**$_____________* ELECTRIC REVENUE REFUNDING BONDS, 2020 SERIES I (FEDERALLY TAXABLE)**

**MATURITY SCHEDULE**

<table>
<thead>
<tr>
<th>Due (August 15)</th>
<th>Amount</th>
<th>Interest Rate</th>
<th>Yield</th>
<th>CUSIP†</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$</td>
<td>%</td>
<td>%</td>
<td></td>
</tr>
</tbody>
</table>

$________  ____% Term 2020 Series I Bonds due August 15, 20__, Priced to 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 2020 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 2020 Bonds or as included herein. The CUSIP® number for a specific maturity is subject to being changed after the execution and delivery of the 2020 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 2020 Bonds.

4149-1591-5299.4
SACRAMENTO MUNICIPAL UTILITY DISTRICT
Sacramento, California

BOARD OF DIRECTORS

Rob Kerth, President
Nancy Bui-Thompson, Vice President
Gregg Fishman
Rosanna Herber
Brandon Rose
Heidi Sanborn
Dave Tamayo

OFFICERS AND EXECUTIVES

Arlen Orchard, Chief Executive Officer and General Manager
Nicole Howard, Chief Customer Officer
Stephen Clemons, Chief Information Officer
Gary King, Chief Workforce Officer
Paul Lau, Chief Grid Strategy and Operations Officer
Laura Lewis, Chief Legal Officer and General Counsel
Frankie McDermott, Chief Energy Delivery Officer
Jennifer Davidson, Chief Financial Officer
Russell Mills, Treasurer
Sandra Moorman, 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

KESTREL VERIFIERS
Green Bonds Second Party Opinion

---

1 Arlen Orchard has announced his intent to retire in October 2020 and Sandra Moorman has announced her intent to retire in June 2020. See “INTRODUCTION – Independent Governance” in Appendix A to this Official Statement for more information.
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 2020 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 2020 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 2020 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 2020 Bonds have not been registered or qualified under the securities laws of any state.

IN CONNECTION WITH THE OFFERING OF THE 2020 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 2020 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 2020 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.
<table>
<thead>
<tr>
<th>TABLE OF CONTENTS</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>PLAN OF FINANCE</td>
<td>3</td>
</tr>
<tr>
<td>General</td>
<td>3</td>
</tr>
<tr>
<td>Green Bonds Project</td>
<td>4</td>
</tr>
<tr>
<td>ESTIMATED SOURCES AND USES OF FUNDS</td>
<td>5</td>
</tr>
<tr>
<td>THE 2020 BONDS</td>
<td>5</td>
</tr>
<tr>
<td>Redemption Provisions</td>
<td>5</td>
</tr>
<tr>
<td>DEBT SERVICE SCHEDULE</td>
<td>7</td>
</tr>
<tr>
<td>SECURITY FOR THE BONDS</td>
<td>7</td>
</tr>
<tr>
<td>General</td>
<td>7</td>
</tr>
<tr>
<td>Consent to Amendments to the Resolution</td>
<td>8</td>
</tr>
<tr>
<td>Allocation of Revenues</td>
<td>8</td>
</tr>
<tr>
<td>Rates and Charges</td>
<td>9</td>
</tr>
<tr>
<td>Limitations on Additional Obligations Payable from Revenues</td>
<td>10</td>
</tr>
<tr>
<td>SACRAMENTO MUNICIPAL UTILITY DISTRICT</td>
<td>12</td>
</tr>
<tr>
<td>ABSENCE OF LITIGATION REGARDING THE 2020 BONDS</td>
<td>12</td>
</tr>
<tr>
<td>UNDERWRITING</td>
<td>12</td>
</tr>
<tr>
<td>FINANCIAL ADVISOR</td>
<td>13</td>
</tr>
<tr>
<td>APPROVAL OF LEGAL PROCEEDINGS</td>
<td>13</td>
</tr>
<tr>
<td>VERIFICATION</td>
<td>13</td>
</tr>
<tr>
<td>FINANCIAL STATEMENTS</td>
<td>14</td>
</tr>
<tr>
<td>TAX MATTERS</td>
<td>14</td>
</tr>
<tr>
<td>2020 Series H Bonds</td>
<td>14</td>
</tr>
<tr>
<td>2020 Series I Bonds</td>
<td>16</td>
</tr>
<tr>
<td>CERTAIN ERISA CONSIDERATIONS</td>
<td>18</td>
</tr>
<tr>
<td>CONTINUING DISCLOSURE UNDERTAKING</td>
<td>20</td>
</tr>
<tr>
<td>RATINGS</td>
<td>20</td>
</tr>
<tr>
<td>MISCELLANEOUS</td>
<td>21</td>
</tr>
<tr>
<td>APPENDIX A - INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT</td>
<td>A-1</td>
</tr>
<tr>
<td>APPENDIX B - 2018 AND 2019 CONSOLIDATED FINANCIAL STATEMENTS AND REPORT OF INDEPENDENT ACCOUNTANTS</td>
<td>B-1</td>
</tr>
<tr>
<td>APPENDIX C - BOOK-ENTRY SYSTEM</td>
<td>C-1</td>
</tr>
</tbody>
</table>
OFFICIAL STATEMENT
RELATING TO
SACRAMENTO MUNICIPAL UTILITY DISTRICT

$_________* ELECTRIC REVENUE BONDS
2020 SERIES H

$_________* ELECTRIC REVENUE REFUNDING BONDS
2020 SERIES I (FEDERALLY TAXABLE)

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 $_________* Electric Revenue Bonds, 2020 Series H (the “2020 Series H Bonds”) and $_________* Electric Revenue Refunding Bonds, 2020 Series I (Federally Taxable) (the “2020 Series I Bonds” and, collectively with the 2020 Series H Bonds, the “2020 Bonds”), in connection with the sale by SMUD of the 2020 Bonds. The 2020 Bonds are being issued to (i) finance and refinance certain improvements and additions to SMUD’s Electric System, (ii) refund certain of SMUD’s outstanding Bonds (as defined herein) (the “Refunded Bonds”) and (iii) pay certain costs associated with the issuance of the 2020 Bonds. See “PLAN OF FINANCE.”

The 2020 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 2020 Bonds was authorized on April 16, 2020, by the Board of Directors of SMUD by a Sixty-Third Supplemental Resolution (the “Sixty-Third Supplemental Resolution”) supplemental to the Master Resolution. The Master Resolution and all supplemental resolutions, including the Sixty-Third Supplemental Resolution, are collectively referred to herein as the “Resolution.” See APPENDIX D — “SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION.”

The purchasers of the 2020 Bonds, by virtue of their purchase of the 2020 Bonds, will consent to certain amendments to the Resolution. See “SECURITY FOR THE BONDS – Consent to Amendments to the Resolution.”

The 2020 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 April 1, 2020, Bonds in the aggregate principal amount of $1,778,040,000 were 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 2020 Bonds. The Reserve Fund secures all Bonds issued prior to January 1, 2004 that are currently outstanding

* Preliminary, subject to change.
(and not otherwise deemed to be paid and discharged under the Resolution) and may secure additional Bonds issued in the future.

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 April 1, 2020, 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 2020 Bonds).

As of April 1, 2020, SMUD’s commercial paper notes (the “Notes”) were outstanding in the aggregate principal amount of $50,000,000. 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 2020 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 intends to pay $50,000,000 of the outstanding principal amount of the Notes with the proceeds of the 2020 Bonds. See “PLAN OF FINANCE.”

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, 2019, SMUD served a population of approximately 1.5 million with a total annual retail load of approximately 10,166 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 781 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 1,103 MW, over which SMUD has exclusive control of dispatch, and purchased power with an aggregate generating capacity of approximately 1,330 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 2020 Bonds (the “Continuing Disclosure Agreement”) between SMUD and the Trustee, SMUD will covenant for the benefit of the holders of the 2020 Bonds and owners of beneficial interest in the 2020 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 2020 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**

**General**

SMUD intends to use the proceeds of the 2020 Series H Bonds to (i) finance and refinance certain additions and improvements to its Electric System, including by reimbursing itself for expenditures previously made for such purposes and by paying $50,000,000 of the outstanding principal amount of the Notes issued for such purposes and (ii) pay certain costs associated with the issuance of the 2020 Series H Bonds.

SMUD intends to use the proceeds of the 2020 Series I Bonds to (i) refund all of the $132,020,000 outstanding aggregate principal amount of the Sacramento Municipal Utility District Electric Revenue Bonds, 2013 Series A (the “Refunded 2013 Series A Bonds”) and $75,680,000 of the outstanding aggregate principal amount of the Sacramento Municipal Utility District Electric Revenue Refunding Bonds, 2013 Series B, comprised of such 2013 Series B Bonds maturing on and after August 15, 2024 (the “Refunded 2013 Series B Bonds” and, collectively with the Refunded 2013 Series A Bonds, the “Refunded Bonds”) and (ii) pay certain costs associated with the issuance of the 2020 Series I Bonds.

The issuance of the 2020 Bonds and the refunding of the Refunded Bonds are subject to market and other considerations. Depending on these considerations, SMUD may sell and issue some, none or all of the 2020 Bonds and may refund some, none or all of the Refunded Bonds.

If sold and issued, a portion of the proceeds of the 2020 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, as escrow agent. The moneys so deposited will be sufficient to pay the interest on the Refunded Bonds to their redemption date and to redeem the Refunded Bonds on such redemption date. The moneys so deposited may be invested in direct obligations of the United States of America (the “Federal Securities”) maturing no later than the redemption date for the Refunded Bonds at the written direction of SMUD. Upon deposit, all liability of SMUD with respect to the Refunded Bonds (except for the obligation of SMUD to pay the interest on and principal 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 2020 Bonds and will not be available to pay the principal of or interest on the 2020 Bonds.
Green Bonds Project

The 2020 Series [H/I] Bonds maturing August 15, 20__ through August 15, 20__ are being designated by SMUD as “Green Bonds” (the “Green Bonds”). The purpose of designating such 2020 Series [H/I] Bonds as “Green Bonds” is to allow investors to invest directly in projects SMUD has identified as promoting environmental sustainability. SMUD will use proceeds of the Green Bonds in the amount of approximately $________ to reimburse itself for expenditures previously made to [describe Green Bonds Projects] (the “Green Bonds Projects”).

[Describe Green Bonds Projects]

The Green Bonds Projects includes the following sustainability features and strategies, among others:

- [Describe sustainability features and strategies].

In connection with the issuance of the Green Bonds, SMUD has consulted with Kestrel Verifiers (“Kestrel”), an independent provider of green bond second opinions. Kestrel evaluated SMUD’s green bond transaction as described in this Official Statement and the alignment thereof with relevant industry standards. Kestrel provided views on the robustness and credibility of the Green Bonds within the meaning of the ICMA Green Bond Principles and the United Nations Sustainable Development Goals. Kestrel found that [describe Kestrel findings], SMUD has greatly reduced its environmental impact. [With these [energy savings and increased efficiencies] in the Green Bonds Projects, [emissions from energy use at the Green Bonds Projects will be reduced dramatically]]. A complete copy of the Second Party Opinion of Kestrel is attached as APPENDIX G hereto.

The owners of the Green Bonds do not assume any specific project risk or economic benefit related to the Green Bonds Projects or as a result of the Green Bonds designation.

[Because the proceeds from the Green Bonds will be used to reimburse SMUD for expenditures previously made with respect to the Green Bonds Projects, no additional reporting on or monitoring of the status of the Green Bonds Projects is anticipated, however SMUD currently produces an annual sustainability report, available on the organization’s website.]

The term “Green Bonds” is neither defined in nor related to the Master Resolution or the Sixty-Third Supplemental Resolution. The use of the term in this Official Statement is solely for identification purposes and is not intended to provide or imply that any owner of any 2020 Bond is entitled to any security other than as provided in the Master Resolution and the Sixty-Third Supplemental Resolution. The repayment obligation of SMUD with respect to the 2020 Bonds is not conditioned on the satisfaction of any certification relating to the status of the 2020 Series [H/I] Bonds maturing August 15, 20__ through August 15, 20__ as Green Bonds. See “SECURITY FOR THE BONDS.”

4149-1591-5299.4
ESTIMATED SOURCES AND USES OF FUNDS

The estimated sources and uses of funds with respect to the 2020 Bonds are as follows:

Sources of Funds: 2020 Series H Bonds 2020 Series I Bonds

<table>
<thead>
<tr>
<th></th>
<th>$</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal Amount</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest Fund Release</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMUD Contribution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Sources of Funds</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

Uses of Funds:

<table>
<thead>
<tr>
<th></th>
<th>$</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Costs (including payment of Notes)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refunding of Refunded Bonds</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Costs of Issuance (including Underwriters’ Discount)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Uses of Funds</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

THE 2020 BONDS

The 2020 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 2020 Bonds will accrue from the date of delivery of the 2020 Bonds, and will be payable on August 15, 2020, 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 2020 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 2020 Bonds. Individual purchases of interests in the 2020 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 2020 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 2020 Bonds. See APPENDIX C – “BOOK-ENTRY SYSTEM.”

Redemption Provisions

Optional Redemption. On any date on or after August 15, 20__, the 2020 Bonds maturing on and after August 15, 20__ are subject to redemption prior to their stated maturities at the option of SMUD, from any source of available funds, as a whole or in part, by lot, at the principal amount thereof, without premium, together with accrued interest to the date fixed for redemption.

Mandatory Redemption. The 2020 Series H Bonds maturing on August 15, 20__, are subject to mandatory redemption prior to maturity, in part, by lot, from sinking fund payments required by the Sixty-Third Supplemental Resolution at the principal amount thereof together with the accrued interest thereon to the date fixed for redemption, without premium, as shown below:
### Sinking Fund Payment Dates Principal

<table>
<thead>
<tr>
<th>(August 15)</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$</td>
</tr>
</tbody>
</table>

* Maturity.

The 2020 Series I Bonds maturing on August 15, 20__, are subject to mandatory redemption prior to maturity, in part, by lot, from sinking fund payments required by the Sixty-Third Supplemental Resolution at the principal amount thereof together with the accrued interest thereon to the date fixed for redemption, without premium, as shown below:

### Sinking Fund Payment Dates Principal

<table>
<thead>
<tr>
<th>(August 15)</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$</td>
</tr>
</tbody>
</table>

* Maturity.

**Selection of Bonds for Redemption.** If less than all of a maturity of a series of the 2020 Bonds is to be redeemed, the Trustee shall select the 2020 Bonds of such series and maturity to be redeemed, from the Outstanding 2020 Bonds of such series and maturity not previously called for redemption, by lot in any manner the Trustee deems fair. For so long as the book-entry only system is in effect with respect to the 2020 Bonds, DTC shall select the 2020 Bonds to be redeemed in accordance with the procedures of DTC.

**Notice of Redemption.** Notice of redemption for the 2020 Bonds will be given by publication at least once in financial newspapers or journals, selected by the Trustee, of general circulation in San Francisco, California, Chicago, Illinois, and New York, New York, each such publication to be not less than 20 nor more than 60 days before the date fixed for redemption, if at any time the 2020 Bonds are not in book entry form. Notice also will be mailed to the registered owners of any 2020 Bonds designated for redemption, but failure to mail such notice or any defect therein with respect to any particular 2020 Bond will not affect the validity of the proceedings for the redemption of any other 2020 Bonds. For so long as the book-entry-only system is in effect with respect to the 2020 Bonds, the Trustee will mail notice of redemption solely to DTC or its nominee or its successor. Any failure of DTC or its successor, or of a direct or indirect DTC participant, to notify a beneficial owner of a 2020 Bond of any redemption will not affect the sufficiency or validity of the redemption of any 2020 Bond. See APPENDIX C – “BOOK-ENTRY SYSTEM.” SMUD may instruct the Trustee to give conditional notice of optional redemption, which may be conditioned upon the receipt of moneys or any other event.
DEBT SERVICE SCHEDULE

The following table sets forth the debt service requirements with respect to the 2020 Bonds assuming no early redemptions. See also APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS – Outstanding Indebtedness – Debt Service Requirements.”

<table>
<thead>
<tr>
<th>Calendar Year</th>
<th>2020 Series H Bonds</th>
<th>2020 Series I Bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Principal</td>
<td>Interest</td>
</tr>
<tr>
<td>2020</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>2021</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2024</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2025</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2026</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2027</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2028</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2029</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>2030</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2031</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2032</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2033</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2034</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2035</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2036</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2037</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2038</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2039</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2040</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2041</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

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 2020 Bonds, by virtue of their purchase of the 2020 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 2020 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 2020 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 2020 Bonds, or in any way contesting or affecting the validity of the 2020 Bonds or any of the proceedings of SMUD taken with respect to the 2020 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 2020 Bonds. For a description of certain litigation in which SMUD is involved, see APPENDIX A – “INFORMATION REGARDING SACRAMENTO MUNICIPAL UTILITY DISTRICT – LEGAL PROCEEDINGS.”

UNDERWRITING

Citigroup Global Markets, Inc., BofA Securities, Inc., Barclays Capital Inc., Goldman Sachs & Co. LLC, 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 2020 Bonds from SMUD at an aggregate purchase price of $_________ (being the aggregate principal amount of the 2020 Bonds, plus [net] original issue [premium/discount] of $_______, and less Underwriters’ discount of $______). The Underwriters will be obligated to purchase all 2020 Bonds if any 2020 Bonds are purchased. The Underwriters have agreed to make a public offering of the 2020 Bonds at the initial offering prices set forth on the inside cover page hereof. The 2020 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 2020 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 2020 Bonds.

Citigroup Global Markets Inc., an Underwriter of the 2020 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 2020 Bonds from JPMS at the original issue price less a negotiated portion of the selling concession applicable to any 2020 Bonds that such firm sells.

Morgan Stanley & Co. LLC., an Underwriter of the 2020 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 2020 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 2020 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 2020 Bonds.

APPROVAL OF LEGAL PROCEEDINGS

The validity of the 2020 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 2020 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.

VERIFICATION

Upon delivery of the 2020 Series I Bonds, __________ (the “Verification Agent”) will verify, from the information provided to them, the mathematical accuracy as of the date of the closing of the 2020 Series I Bonds of the computations contained in the provided schedules to determine that the 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.

4149-1591-5299.4
SMUD’s audited, consolidated financial statements for the years ended December 31, 2019 and December 31, 2018 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.

2020 Series H Bonds

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 2020 Series H 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 2020 Series H 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 2020 Series H Bonds is less than the amount to be paid at maturity of such 2020 Series H Bonds (excluding amounts stated to be interest and payable at least annually over the term of such 2020 Series H 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 2020 Series H 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 2020 Series H Bonds is the first price at which a substantial amount of such maturity of the 2020 Series H 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 2020 Series H Bonds accrues daily over the term to maturity of such 2020 Series H 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 2020 Series H Bonds to determine taxable gain or loss upon disposition (including sale, redemption, or payment on maturity) of such 2020 Series H Bonds. Beneficial Owners of the 2020 Series H Bonds should consult their own tax advisors with respect to the tax consequences of ownership of 2020 Series H Bonds with original issue discount, including the treatment of Beneficial Owners who do not purchase such 2020 Series H Bonds in the original offering to the public at the first price at which a substantial amount of such 2020 Series H Bonds is sold to the public.

2020 Series H 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 2020 Series H Bonds. SMUD has covenanted to comply with certain restrictions designed to assure that interest on the 2020 Series H 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 2020 Series H Bonds being included in gross income for federal income tax purposes, possibly from the date of issuance of the 2020 Series H 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 2020 Series H Bonds may adversely affect the value of, or the tax status of interest on, the 2020 Series H 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 2020 Series H 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 2020 Series H 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 2020 Series H 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 2020 Series H Bonds. Prospective purchasers of the 2020 Series H 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 2020 Series H 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 2020 Series H Bonds ends with the issuance of the 2020 Series H Bonds, and, unless separately engaged, Bond Counsel is not obligated to defend SMUD or the Beneficial Owners regarding the tax-exempt status of the 2020 Series H 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 2020 Series H 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 2020 Series H Bonds, and may cause SMUD or the Beneficial Owners to incur significant expense.

2020 Series I Bonds

Interest on the 2020 Series I Bonds is not excluded from gross income for federal income tax purposes under Section 103 of the Code. Bond Counsel is of the opinion that interest on the 2020 Series I Bonds is exempt from State of California personal income taxes. Bond Counsel expresses no opinion regarding any other tax consequences relating to the ownership or disposition of, or the amount, accrual, or receipt of interest on, the 2020 Series I Bonds. A complete copy of the proposed form of opinion of Bond Counsel is set forth in APPENDIX E hereto.

The following discussion summarizes certain U.S. federal income tax considerations generally applicable to U.S. Holders (as defined below) of the 2020 Series I Bonds that acquire their 2020 Series I Bonds in the initial offering. The discussion below is based upon laws, regulations, rulings, and decisions in effect and available on the date hereof, all of which are subject to change, possibly with retroactive effect. Prospective investors should note that no rulings have been or are expected to be sought from the U.S. Internal Revenue Service (the “IRS”) with respect to any of the U.S. federal income tax considerations discussed below, and no assurance can be given that the IRS will not take contrary positions. Further, the following discussion does not deal with U.S. tax consequences applicable to any given investor, nor does it address the U.S. tax considerations applicable to all categories of investors, some of which may be subject to special taxing rules (regardless of whether or not such investors constitute U.S. Holders), such as certain U.S. expatriates, banks, REITs, RICs, insurance companies, tax-exempt organizations, dealers or traders in securities or currencies, partnerships, S corporations, estates and trusts, investors that hold their 2020 Series I Bonds as part of a hedge, straddle or an integrated or conversion transaction, or investors whose “functional currency” is not the U.S. dollar. Furthermore, it does not address (i) alternative minimum tax consequences, (ii) the net investment income tax imposed under Section 1411 of the Code, or (iii) the indirect effects on persons who hold equity interests in a holder. This summary also does not consider the taxation of the 2020 Series I Bonds under state, local or non-U.S. tax laws. In addition, this summary generally is limited to U.S. tax considerations applicable to investors that acquire their 2020 Series I Bonds pursuant to this offering for the issue price that is applicable to such 2020 Series I Bonds (i.e., the price at which a substantial amount of the 2020 Series I Bonds are sold to the public) and who will hold their 2020 Series I Bonds as “capital assets” within the meaning of Section 1221 of the Code. The following discussion does not address tax considerations applicable to any investors in the 2020 Series I Bonds other than investors that are U.S. Holders.

As used herein, “U.S. Holder” means a beneficial owner of a 2020 Series I Bond that for U.S. federal income tax purposes is an individual citizen or resident of the United States, a corporation or other entity taxable as a corporation created or organized in or under the laws of the United States or any state thereof (including the District of Columbia), an estate the income of which is subject to U.S. federal income taxation regardless of its source or a trust where a court within the United States is able to exercise primary supervision over the administration of the trust and one or more United States persons (as defined in the Code) have the authority to control all substantial decisions of the trust (or a trust that has made a valid election under U.S. Treasury Regulations to be treated as a domestic trust). If a partnership holds 2020 Series I Bonds, the tax treatment of such partnership or a partner in such partnership generally will depend upon the status of the partner and upon the activities of the partnership. Partnerships holding 2020 Series I Bonds, and partners in such partnerships, should consult their own tax advisors regarding the tax consequences of an investment in the 2020 Series I Bonds (including their status as U.S. Holders).
Notwithstanding the rules described below, it should be noted that certain taxpayers that are required to prepare certified financial statements or file financial statements with certain regulatory or governmental agencies may be required to recognize income, gain and loss with respect to the 2020 Series I Bonds at the time that such income, gain or loss is recognized on such financial statements instead of under the rules described below (in the case of original issue discount, such requirements are only effective for tax years beginning after December 31, 2018).

Prospective investors should consult their own tax advisors in determining the U.S. federal, state, local or non-U.S. tax consequences to them from the purchase, ownership and disposition of the 2020 Series I Bonds in light of their particular circumstances.

**U.S. Holders**

**Interest.** Interest on the 2020 Series I Bonds generally will be taxable to a U.S. Holder as ordinary interest income at the time such amounts are accrued or received, in accordance with the U.S. Holder’s method of accounting for U.S. federal income tax purposes.

To the extent that the issue price of any maturity of the 2020 Series I Bonds is less than the amount to be paid at maturity of such 2020 Series I Bonds (excluding amounts stated to be interest and payable at least annually over the term of such 2020 Series I Bonds) by more than a de minimis amount, the difference may constitute original issue discount (“OID”). U.S. Holders of 2020 Series I Bonds will be required to include OID in income for U.S. federal income tax purposes as it accrues, in accordance with a constant yield method based on a compounding of interest (which may be before the receipt of cash payments attributable to such income). Under this method, U.S. Holders generally will be required to include in income increasingly greater amounts of OID in successive accrual periods.

2020 Series I Bonds purchased for an amount in excess of the principal amount payable at maturity (or, in some cases, at their earlier call date) will be treated as issued at a premium. A U.S. Holder of a 2020 Series I Bond issued at a premium may make an election, applicable to all debt securities purchased at a premium by such U.S. Holder, to amortize such premium, using a constant yield method over the term of such 2020 Series I Bond.

**Sale or Other Taxable Disposition of the 2020 Series I Bonds.** Unless a nonrecognition provision of the Code applies, the sale, exchange, redemption, retirement (including pursuant to an offer by SMUD) or other disposition of a 2020 Series I Bond will be a taxable event for U.S. federal income tax purposes. In such event, in general, a U.S. Holder of a 2020 Series I Bond will recognize gain or loss equal to the difference between (i) the amount of cash plus the fair market value of property received (except to the extent attributable to accrued but unpaid interest on the 2020 Series I Bond, which will be taxed in the manner described above) and (ii) the U.S. Holder’s adjusted U.S. federal income tax basis in the 2020 Series I Bond (generally, the purchase price paid by the U.S. Holder for the 2020 Series I Bond, decreased by any amortized premium, and increased by the amount of any OID previously included in income by such U.S. Holder with respect to such 2020 Series I Bond). Any such gain or loss generally will be capital gain or loss. In the case of a non-corporate U.S. Holder of the 2020 Series I Bonds, the maximum marginal U.S. federal income tax rate applicable to any such gain will be lower than the maximum marginal U.S. federal income tax rate applicable to ordinary income if such U.S. holder’s holding period for the 2020 Series I Bonds exceeds one year. The deductibility of capital losses is subject to limitations.

**Defeasance of the 2020 Series I Bonds.** If SMUD defeases any 2020 Series I Bond, the 2020 Series I Bond may be deemed to be retired and “reissued” for U.S. federal income tax purposes as a result of the defeasance. In that event, in general, a holder will recognize taxable gain or loss equal to the difference between (i) the amount realized from the deemed sale, exchange or retirement (less any
accrued qualified stated interest which will be taxable as such) and (ii) the holder’s adjusted tax basis in the 2020 Series I Bond.

Information Reporting and Backup Withholding. Payments on the 2020 Series I Bonds generally will be subject to U.S. information reporting and possibly to “backup withholding.” Under Section 3406 of the Code and applicable U.S. Treasury Regulations issued thereunder, a non-corporate U.S. Holder of the 2020 Series I Bonds may be subject to backup withholding at the current rate of 24% with respect to “reportable payments,” which include interest paid on the 2020 Series I Bonds and the gross proceeds of a sale, exchange, redemption, retirement or other disposition of the 2020 Series I Bonds. The payor will be required to deduct and withhold the prescribed amounts if (i) the payee fails to furnish a U.S. taxpayer identification number (“TIN”) to the payor in the manner required, (ii) the IRS notifies the payor that the TIN furnished by the payee is incorrect, (iii) there has been a “notified payee underreporting” described in Section 3406(c) of the Code or (iv) the payee fails to certify under penalty of perjury that the payee is not subject to withholding under Section 3406(a)(1)(C) of the Code. Amounts withheld under the backup withholding rules may be refunded or credited against the U.S. Holder’s federal income tax liability, if any, provided that the required information is timely furnished to the IRS. Certain U.S. holders (including among others, corporations and certain tax-exempt organizations) are not subject to backup withholding. A holder’s failure to comply with the backup withholding rules may result in the imposition of penalties by the IRS.

Foreign Account Tax Compliance Act (“FATCA”) Sections 1471 through 1474 of the Code impose a 30% withholding tax on certain types of payments made to foreign financial institutions, unless the foreign financial institution enters into an agreement with the U.S. Treasury to, among other things, undertake to identify accounts held by certain U.S. persons or U.S.-owned entities, annually report certain information about such accounts, and withhold 30% on payments to account holders whose actions prevent it from complying with these and other reporting requirements, or unless the foreign financial institution is otherwise exempt from those requirements. In addition, FATCA imposes a 30% withholding tax on the same types of payments to a non-financial foreign entity unless the entity certifies that it does not have any substantial U.S. owners or the entity furnishes identifying information regarding each substantial U.S. owner. Under current guidance, failure to comply with the additional certification, information reporting and other specified requirements imposed under FATCA could result in the 30% withholding tax being imposed on payments of interest on the Bonds. In general, withholding under FATCA currently applies to payments of U.S. source interest (including OID) and, under current guidance, will apply to certain “passthru” payments no earlier than the date that is two years after publication of final U.S. Treasury Regulations defining the term “foreign passthru payments.” Prospective investors should consult their own tax advisors regarding FATCA and its effect on them.

The foregoing summary is included herein for general information only and does not discuss all aspects of U.S. federal taxation that may be relevant to a particular holder of 2020 Series I Bonds in light of the holder’s particular circumstances and income tax situation. Prospective investors are urged to consult their own tax advisors as to any tax consequences to them from the purchase, ownership and disposition of 2020 Series I Bonds, including the application and effect of state, local, non-U.S., and other tax laws.

CERTAIN ERISA CONSIDERATIONS

The Employee Retirement Income Security Act of 1974, as amended (“ERISA”), imposes certain restrictions on employee pension and welfare benefit plans subject to ERISA (“ERISA Plans”) regarding prohibited transactions, and also imposes certain obligations on those persons who are fiduciaries with
respect to ERISA Plans. Section 4975 of the Code imposes similar prohibited transaction restrictions on (i) tax-qualified retirement plans described in Section 401(a) and 403(a) of the Code, which are exempt from tax under section 501(a) of the Code and which are not governmental and church plans as defined herein (“Qualified Retirement Plans”), and (ii) Individual Retirement Accounts described in Section 408(b) of the Code (the foregoing in clauses (i) and (ii), “Tax-Favored Plans”). Certain employee benefit plans, such as governmental plans (as defined in Section 3(32) of ERISA), and, if no election has been made under Section 410(d) of the Code, church plans (as defined in Section 3(33) of ERISA), are not subject to ERISA requirements. Additionally, such governmental and non-electing church plans are not subject to the requirements of Section 4975 of the Code. Although assets of such governmental or non-electing church plans may be invested in the 2020 Bonds without regard to the ERISA and Code considerations described below, any such investment may be subject to provisions of applicable federal and state law that are, to a material extent, similar to the requirements of ERISA and Section 4975 of the Code (“Similar Law”).

In addition to the imposition of general fiduciary obligations, including those of investment prudence and diversification and the requirement that a plan’s investment be made in accordance with the documents governing the plan, Section 406 of ERISA and Section 4975 of the Code prohibit a broad range of transactions involving assets of ERISA Plans and Tax-Favored Plans and entities whose underlying assets include plan assets by reason of ERISA Plans or Tax-Favored Plans investing in such entities (collectively, “Benefit Plans”) and persons who have certain specified relationships to the Benefit Plans (such persons are referred to as “Parties in Interest” or “Disqualified Persons”), unless a statutory or administrative exemption is available. Certain Parties in Interest (or Disqualified Persons) that participate in a prohibited transaction may be subject to a penalty (or an excise tax) imposed pursuant to Section 502(i) of ERISA (or Section 4975 of the Code) unless a statutory or administrative exemption is available.

Certain transactions involving the purchase, holding or transfer of the 2020 Bonds might be deemed to constitute prohibited transactions under ERISA and the Code if assets of SMUD were deemed to be assets of a Benefit Plan. Under final regulations issued by the United States Department of Labor (the “Plan Assets Regulation”), the assets of SMUD would be treated as plan assets of a Benefit Plan for the purposes of ERISA and the Code if the Benefit Plan acquires an “equity interest” in SMUD and none of the exceptions contained in the Plan Assets Regulation is applicable. An equity interest is defined under the Plan Assets Regulation as an interest in an entity other than an instrument which is treated as indebtedness under applicable local law and which has no substantial equity features. Although there can be no assurances in this regard, it appears that the 2020 Bonds should be treated as debt without substantial equity features for purposes of the Plan Assets Regulation. However, without regard to whether the 2020 Bonds are treated as an equity interest for such purposes, the acquisition or holding of 2020 Bonds by or on behalf of a Benefit Plan could be considered to give rise to a prohibited transaction if SMUD or the Trustee, or any of their respective affiliates, is or becomes a Party in Interest or a Disqualified Person with respect to such Benefit Plan. The fiduciary of a Benefit Plan that proposes to purchase and hold any 2020 Bonds should consider, among other things, whether such purchase and holding may involve (i) the direct or indirect extension of credit to a Party in Interest, (ii) the sale or exchange of any property between a Benefit Plan and a Party in Interest, and (iii) the transfer to, or use by or for the benefit of, a Party in Interest, of any Benefit Plan assets.

Certain exemptions from the prohibited transaction rules could be applicable depending on the type and circumstances of the plan fiduciary making the decision to acquire a 2020 Bond. Included among these exemptions are: Prohibited Transaction Class Exemption (“PTCE”) 75-1, relating to certain broker-dealer transactions, PTCE 96-23, regarding transactions effected by “in-house asset managers”; PTCE 90-1, regarding investments by insurance company pooled separate accounts; PTCE 95-60, regarding transactions effected by “insurance company general accounts”; PTCE 91-38, regarding
investments by bank collective investment funds; and PTCE 84-14, regarding transactions effected by “qualified professional asset managers.” In addition, Section 408(b)(17) of ERISA and Section 4975(d)(20) of the Code generally provide for a statutory exemption from the prohibitions of Section 406(a) of ERISA and Section 4975 of the Code for certain transactions between Benefit Plans and persons who are Parties in Interest solely by reason of providing services to such Benefit Plans or who are persons affiliated with such service providers, provided generally that such persons are not fiduciaries with respect to “plan assets” of any Benefit Plan involved in the transaction and that certain other conditions are satisfied.

By its acceptance of a 2020 Bond, each purchaser will be deemed to have represented and warranted that either (i) no “plan assets” of any Benefit Plan have been used to purchase such 2020 Bond or (ii) the purchase and holding of such 2020 Bonds is exempt from the prohibited transaction restrictions of ERISA and Section 4975 of the Code pursuant to a statutory exemption or an administrative class exemption.

Any Benefit Plan fiduciary considering whether to purchase 2020 Bonds on behalf of an ERISA Plan should consult with its counsel regarding the applicability of the fiduciary responsibility and prohibited transaction provisions of ERISA and the Code to such investment and the availability of any of the exemptions referred to above. In addition, persons responsible for considering the purchase of 2020 Bonds by a governmental plan or non-electing church plan should consult with its counsel regarding the applicability of any Similar Law to such an investment.

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 2020 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, 2020 (the “Annual Report”), and to provide notices of the occurrence of certain listed events with respect to the 2020 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.

While SMUD has timely filed its annual reports, audited financial statements and listed event notices for each of the last five years as required by its continuing disclosure undertakings, in limited circumstances, these filings were not connected to all of the CUSIP numbers of the bonds subject to the continuing disclosure undertakings.

RATINGS

Fitch Ratings, Inc. (“Fitch”) and S&P Global Ratings (“S&P”) have assigned ratings of “[AA (stable outlook)]” and “[AA (negative outlook)],” respectively, to the 2020 Bonds. Such ratings reflect only the views of such organizations and are not a recommendation to buy, sell or hold the 2020 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 2020 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 2020 Bonds any proposed revision, suspension or withdrawal of any rating on the 2020 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 2020 Bonds.

MISCELLANEOUS

This Official Statement includes descriptions of the terms of the 2020 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 2020 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
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>A-1</td>
</tr>
<tr>
<td>GENERAL</td>
<td>A-1</td>
</tr>
<tr>
<td>INDEPENDENT GOVERNANCE</td>
<td>A-1</td>
</tr>
<tr>
<td>THE SERVICE AREA AND ELECTRIC SYSTEM</td>
<td>A-4</td>
</tr>
<tr>
<td>THE SERVICE AREA</td>
<td>A-4</td>
</tr>
<tr>
<td>THE ELECTRIC SYSTEM</td>
<td>A-4</td>
</tr>
<tr>
<td>BUSINESS STRATEGY</td>
<td>A-4</td>
</tr>
<tr>
<td>GENERAL</td>
<td>A-4</td>
</tr>
<tr>
<td>SERVING SMUD’S CUSTOMERS</td>
<td>A-6</td>
</tr>
<tr>
<td>SUSTAINABLE POWER SUPPLY AND TRANSMISSION</td>
<td>A-7</td>
</tr>
<tr>
<td>ELECTRICITY, NATURAL GAS, AND RELATED HEDGING</td>
<td>A-12</td>
</tr>
<tr>
<td>MANAGING RISKS</td>
<td>A-12</td>
</tr>
<tr>
<td>COMPETITIVE CHALLENGES</td>
<td>A-12</td>
</tr>
<tr>
<td>LEVERAGING CORE COMPETENCIES</td>
<td>A-13</td>
</tr>
<tr>
<td>FACTORS AFFECTING THE REGION</td>
<td>A-14</td>
</tr>
<tr>
<td>PRECIPITATION VARIABILITY</td>
<td>A-14</td>
</tr>
<tr>
<td>STORM DAMAGE</td>
<td>A-15</td>
</tr>
<tr>
<td>WILDFIRES</td>
<td>A-15</td>
</tr>
<tr>
<td>IMPACTS FROM COVID-19 PANDEMIC</td>
<td>A-17</td>
</tr>
<tr>
<td>RATES AND CUSTOMER BASE</td>
<td>A-18</td>
</tr>
<tr>
<td>RATES AND CHARGES</td>
<td>A-18</td>
</tr>
<tr>
<td>RATE STABILIZATION FUNDS</td>
<td>A-19</td>
</tr>
<tr>
<td>LOW INCOME DISCOUNT</td>
<td>A-19</td>
</tr>
<tr>
<td>RATE COMPARISONS</td>
<td>A-21</td>
</tr>
<tr>
<td>ALLOCATION OF REVENUE BY CUSTOMER CLASS</td>
<td>A-23</td>
</tr>
<tr>
<td>CUSTOMER BASE; LARGEST CUSTOMERS</td>
<td>A-24</td>
</tr>
<tr>
<td>POWER SUPPLY AND TRANSMISSION</td>
<td>A-25</td>
</tr>
<tr>
<td>POWER SUPPLY RESOURCES</td>
<td>A-25</td>
</tr>
<tr>
<td>POWER GENERATION FACILITIES</td>
<td>A-26</td>
</tr>
<tr>
<td>FUEL SUPPLY</td>
<td>A-28</td>
</tr>
<tr>
<td>GAS TRANSMISSION</td>
<td>A-30</td>
</tr>
<tr>
<td>GAS STORAGE</td>
<td>A-32</td>
</tr>
<tr>
<td>POWER PURCHASE AGREEMENTS</td>
<td>A-32</td>
</tr>
<tr>
<td>TRANSMISSION SERVICE AGREEMENTS</td>
<td>A-35</td>
</tr>
<tr>
<td>PROJECTED RESOURCES</td>
<td>A-36</td>
</tr>
<tr>
<td>DEMAND SIDE MANAGEMENT PROGRAMS</td>
<td>A-37</td>
</tr>
<tr>
<td>BALANCING AUTHORITY AREA AGREEMENTS</td>
<td>A-40</td>
</tr>
<tr>
<td>POWER POOL AND OTHER AGREEMENTS</td>
<td>A-40</td>
</tr>
<tr>
<td>OTHER AGREEMENTS WITH PG&amp;E</td>
<td>A-41</td>
</tr>
<tr>
<td>SELECTED OPERATING DATA</td>
<td>A-42</td>
</tr>
<tr>
<td>SELECTED FINANCIAL DATA</td>
<td>A-42</td>
</tr>
<tr>
<td>SMUD FINANCIAL INFORMATION</td>
<td>A-42</td>
</tr>
<tr>
<td>FINANCIAL INFORMATION OF SMUD AND THE AUTHORITIES</td>
<td>A-44</td>
</tr>
</tbody>
</table>
# TABLE OF CONTENTS

(continued)

<table>
<thead>
<tr>
<th>Category</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management’s Discussion of SMUD’s Operating Results</td>
<td>A-45</td>
</tr>
<tr>
<td>RANCHO SECO DECOMMISSIONING</td>
<td>A-46</td>
</tr>
<tr>
<td>EMPLOYEE RELATIONS</td>
<td>A-48</td>
</tr>
<tr>
<td>RETIREMENT BENEFITS AND POST-EMPLOYMENT MEDICAL BENEFITS</td>
<td>A-48</td>
</tr>
<tr>
<td>Pension Plans</td>
<td>A-48</td>
</tr>
<tr>
<td>Other Post-Employment Benefits</td>
<td>A-50</td>
</tr>
<tr>
<td>CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS</td>
<td>A-51</td>
</tr>
<tr>
<td>Estimated Capital Requirements</td>
<td>A-51</td>
</tr>
<tr>
<td>Outstanding Indebtedness</td>
<td>A-52</td>
</tr>
<tr>
<td>INSURANCE</td>
<td>A-56</td>
</tr>
<tr>
<td>LEGAL PROCEEDINGS</td>
<td>A-56</td>
</tr>
<tr>
<td>Environmental Litigation</td>
<td>A-56</td>
</tr>
<tr>
<td>North City Environmental Remediation</td>
<td>A-57</td>
</tr>
<tr>
<td>Station E Site Remediation</td>
<td>A-57</td>
</tr>
<tr>
<td>Patua Acquisition Company, LLC</td>
<td>A-57</td>
</tr>
<tr>
<td>Bonneville Power Administration</td>
<td>A-58</td>
</tr>
<tr>
<td>Claim for Accidental Death</td>
<td>A-58</td>
</tr>
<tr>
<td>Other Litigation Matters</td>
<td>A-58</td>
</tr>
<tr>
<td>FERC Administrative Proceedings</td>
<td>A-59</td>
</tr>
<tr>
<td>CPUC Administrative Proceedings</td>
<td>A-59</td>
</tr>
<tr>
<td>DEVELOPMENTS IN THE ENERGY MARKETS</td>
<td>A-60</td>
</tr>
<tr>
<td>Background; Electric Market Deregulation</td>
<td>A-60</td>
</tr>
<tr>
<td>Federal Policy on Cybersecurity</td>
<td>A-60</td>
</tr>
<tr>
<td>Federal Legislation and Regulatory Proceedings</td>
<td>A-61</td>
</tr>
<tr>
<td>State Legislation and Regulatory Proceedings</td>
<td>A-65</td>
</tr>
<tr>
<td>Future Regulation</td>
<td>A-73</td>
</tr>
<tr>
<td>OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY</td>
<td>A-73</td>
</tr>
<tr>
<td>CAISO Market Initiatives</td>
<td>A-73</td>
</tr>
<tr>
<td>Resource Adequacy Filing</td>
<td>A-73</td>
</tr>
<tr>
<td>Energy Imbalance Market</td>
<td>A-73</td>
</tr>
<tr>
<td>Community Choice Aggregation</td>
<td>A-74</td>
</tr>
<tr>
<td>PG&amp;E Bankruptcy</td>
<td>A-75</td>
</tr>
<tr>
<td>Other Factors</td>
<td>A-76</td>
</tr>
</tbody>
</table>
SACRAMENTO MUNICIPAL UTILITY DISTRICT
Sacramento, California

BOARD OF DIRECTORS

Rob Kerth, President
Nancy Bui-Thompson, Vice President
Gregg Fishman
Rosanna Herber
Brandon Rose
Heidi Sanborn
Dave Tamayo

OFFICERS AND EXECUTIVES¹

Arlen Orchard, Chief Executive Officer and General Manager
Nicole Howard, Chief Customer Officer
Stephen Clemons, Chief Information Officer
Gary King, Chief Workforce Officer
Paul Lau, Chief Grid Strategy and Operations Officer
Laura Lewis, Chief Legal Officer and General Counsel
Frankie McDermott, Chief Energy Delivery Officer
Jennifer Davidson, Chief Financial Officer
Russell Mills, Treasurer
Sandra Moorman, Controller

¹ Arlen Orchard has announced his intent to retire in October 2020 and Sandra Moorman has announced her intent to retire in June 2020. See “INTRODUCTION – Independent Governance” in this Appendix A for more information.
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:

<table>
<thead>
<tr>
<th>Name</th>
<th>Occupation</th>
<th>Term Expires</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rob Kerth, President</td>
<td>Business Owner</td>
<td>December 31, 2020</td>
</tr>
<tr>
<td>Nancy Bui-Thompson, Vice President</td>
<td>Director, Transition &amp; Integration – Strategy &amp; Execution, Healthnet/Centene</td>
<td>December 31, 2020</td>
</tr>
<tr>
<td>Gregg Fishman</td>
<td>Radio Personality</td>
<td>December 31, 2022</td>
</tr>
<tr>
<td>Rosanna Herber</td>
<td>Retired Utility Director</td>
<td>December 31, 2022</td>
</tr>
<tr>
<td>Brandon Rose</td>
<td>Air Pollution Specialist, California Environmental Protection Agency</td>
<td>December 31, 2020</td>
</tr>
<tr>
<td>Heidi Sanborn</td>
<td>Executive Director, National Stewardship Action Council</td>
<td>December 31, 2022</td>
</tr>
<tr>
<td>Dave Tamayo</td>
<td>Environmental Specialist IV, County of Sacramento</td>
<td>December 31, 2022</td>
</tr>
</tbody>
</table>

SMUD’s senior management consists of the following executives:

Chief Executive Officer & General Manager. Arlen Orchard was named chief executive officer and general manager (“CEO & GM”) of SMUD in April 2014. 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. He joined SMUD in 1990 as a staff attorney and became general counsel in 2001. Mr. Orchard serves on the boards of the Large Public Power Council, California Municipal Utilities Association, and American Public Power Association. Before joining SMUD, Mr. Orchard was an attorney with the Sacramento law firm Downey
Brand. He holds a juris doctorate from the University of California, Davis (“UCD”) School of Law, a bachelor’s degree in political science from the University of Nevada, Reno, and attended UCD’s Graduate School of Management. Mr. Orchard has announced his intention to retire in October 2020 and a nationwide search for his replacement is underway.

**Chief Customer Officer.** Nicole Howard reports to the CEO & GM and oversees SMUD’s Customer and Community Services business unit. She is responsible for SMUD’s customer operations, services, revenue operations, product development and sales and programs such as energy efficiency and advanced energy solutions. Her role includes customer strategy, brand, marketing, communications, and economic and community development. Ms. Howard joined SMUD in 2002 as a customer service representative and was a supply-chain supervisor before she became a manager for customer operations in 2011. Her responsibilities included implementing operational changes brought about by SMUD’s smart-grid initiative. She was promoted to senior management in 2014 and to the executive level in 2015. Ms. Howard holds an MBA from California State University, Dominguez Hills and a bachelor’s degree in legal studies from the University of California, Berkeley.

**Chief 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, 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 of California’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.

**Chief Workforce Officer.** Gary King reports to the CEO & GM and, since 2008, has been responsible for human resources, diversity and inclusion, health and safety, organization and workforce development, and general services at SMUD. Before this, Mr. King served as manager of human resource services. He joined SMUD in 1998 as a supervisor for compensation and selection. Before that, 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 Grid Strategy & Operations Officer.** Paul Lau reports to the CEO & GM and is responsible for grid planning and operations, including the reliability of the electric transmission and distribution systems at SMUD. In addition, he oversees energy trading and contracts, energy research and development, resource and new business strategy, and SMUD’s renewable-energy portfolio. Prior to assuming this role, Mr. Lau was assistant general manager for power supply and grid operations. Before that, he was assistant general manager for SMUD’s customer, distribution and technology efforts, overseeing retail operations, customer services, energy delivery, energy efficiency, customer renewable programs, telecom and enterprise business applications. He joined SMUD in 1982. Mr. Lau holds a bachelor’s degree in electrical power engineering from California State University, Sacramento.

**Chief Legal 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 nine 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 and the State Bar of California.

Chief Energy Delivery Officer. Frankie McDermott reports to the CEO & GM and is responsible for SMUD’s power generation and energy-delivery infrastructure, including substations, line assets, telecom and metering. Prior to his current role, Mr. McDermott was 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 Financial Officer. Jennifer Davidson was named chief financial officer (“CFO”) in 2017. Reporting to the CEO & GM, she oversees the accounting, treasury and pricing departments and is also responsible for enterprise and commodity risk management, strategic planning, load research and forecasting, enterprise performance management, and developing SMUD’s budget. 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.

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 the Balancing Authority of Northern California (“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. Sandra Moorman reports to the CFO and is responsible for accounting and financial reporting at SMUD. Prior to her appointment as controller in 2011, Ms. Moorman served as a senior energy-trading specialist and as business unit planning coordinator for customer services. Ms. Moorman also serves as controller for TANC, CVFA, SCA, SFA, SPA, NCGA, NCEA and BANC. Before joining SMUD in 1996 as a senior accountant, Ms. Moorman was the controller for a joint powers authority in Santa Clara County. Ms. Moorman holds a bachelor’s degree in business accounting from San Jose State University. Ms. Moorman has announced her intention to retire in June 2020. After an internal and external
search, SMUD promoted current assistant controller, Lisa Limcaco, to be Ms. Moorman’s successor. Ms. Limcaco is scheduled to begin her role as controller in late May 2020.

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 10,166 million kilowatt-hours (“kWh”) for the year ended December 31, 2019. 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 3,009 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 through creative energy solutions. SMUD’s vision is to be the trusted partner with our customers and community, providing innovative solutions to ensure energy affordability and reliability, improve the environment, reduce our region’s carbon footprint, and enhance the vitality of our community.” 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 peak demand growth consistent with State mandates for renewable energy and reduced carbon emissions;
- 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 2.07 times on a consolidated basis. SMUD also manages its liquidity position by planning for a minimum of 150 days cash on hand. SMUD uses cash on hand to fund capital expenditures, then issues debt to reimburse its cash for qualified capital expenditures. Over the past ten years, the days cash on hand has averaged 193. 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 or minimum days cash on hand.

SMUD typically prepares multi-year forecasts for the purpose of developing annual budgets. The current multi-year forecast projects slow customer growth and higher capital spending, as well as flat or slightly declining electricity sales in the near term resulting from energy efficiency and distributed energy, with increasing sales in the future from electric vehicle adoption and building electrification. Lower revenues could reduce cash balances, at which time SMUD’s management anticipates that SMUD would issue debt and adjust rates accordingly to maintain the fixed charge coverage ratio and days cash on hand targets. These forecasts reflect a potential range of potential load growth, depending upon the rate of adoption.

SMUD’s financial forecasts and budgets do not yet account for any potential effects of the COVID-19 pandemic. SMUD is monitoring the pandemic but is not yet able to predict its effects on SMUD’s financial performance or operations. The effects of the pandemic on SMUD’s financial performance or operations could be material. See “FACTORS AFFECTING THE REGION – Impacts from COVID-19 Pandemic.”

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. During the summers of 2012 and 2013, the SmartPricing Options pilot program tested experimental time differentiated rate plans for residential customers designed to encourage customers to reduce or shift the timing of their energy use. In 2015, the Board declared its intent to move to time-of-day rates (“Time-of-Day Rates”) as the standard rate for residential customers in 2018. On June 15, 2017, the Board approved Time-of-Day 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. All of SMUD’s business customers are also on time-based rates. On June 24, 2019, the Board approved an update to the commercial Time-of-Day Rates to improve consistency and better align commercial rates with current energy market prices. SMUD will start transitioning commercial customers to these new rates in 2021. 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 2019, SMUD received more than 4,229 applications for new solar connections. As of February 2020, approximately 30,000 of SMUD’s residential and commercial customers had installed solar systems, representing approximately 223 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 February 2020, approximately 164 of SMUD’s residential and commercial customers had installed battery storage systems, representing approximately 1.1 MW of battery storage.

As another option for solar, SMUD’s SolarShares® (“SolarShares”) 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 2019 SolarShares generation was approximately 3.19% of retail sales.

Starting in 2020, California 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 Solar Shares, 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.” During the CEC approval process for Neighborhood SolarShares, SMUD responded to multiple program challenges. SMUD made several accommodations to address the challenges and does not expect to make further accommodations before launching the program.

In addition to SolarShares and Neighborhood SolarShares, SMUD maintains a voluntary green energy pricing program called Greenergy® (“Greenergy”). The Greenenergy 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 2019, the program allocated Renewable Energy Credits (“RECs”) equivalent to approximately 8.7% 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 has set a goal of 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 became the first utility in the country to set its efficiency goals to be 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 3 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 net long-term GHG emissions, while assuring reliability of the electrical system; minimizing environmental impacts on land, habitat, water quality and air quality; and maintaining a competitive position relative to other California electricity providers.

A number of bills affecting the electric utility industry have been enacted by the California Legislature. In general, these bills regulate GHG emissions and encourage greater investment in energy efficiency and sustainable generation alternatives, principally through more stringent renewable portfolio...

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 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 provisions and requirements of SBX1-2, SB 350 and SB 100.

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. For 2019, when the RPS target was 31%, SMUD anticipates using a combination of in-year renewable generation and surplus RECs to meet this goal. As of the end of 2019, 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 4.1% of its customer load with renewable energy through its voluntary green pricing programs. SMUD estimates that it has sufficient renewable energy deliveries, power supply commitments, and RPS-eligible surplus carryover to meet its RPS goals through 2025 under the recently approved SB 100. The following table illustrates SMUD’s current RPS goals through 2030 and its existing and committed resources that are expected to be utilized to meet those goals.
In addition to procuring new sources, meeting the RPS goals will require replacement of certain existing renewable contracts which expire in future years. While SMUD anticipates it will meet much of its renewable resource goal 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.”

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 the Balancing Authority of Northern California (“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. Implementation of the approved IRP will require increased spending which has led to rate increases and is expected to result in average annual customer bill increases of 1.75% from 2020 to 2040. As part of the 2019 rate process, spending associated with IRP led to a 0.75% and a 1.00% rate increase in 2020 and 2021, respectively.

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.

SMUD is actively working to meet its sustainable power supply goal, 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 SMUD Board has established a target of 9 MW of energy storage procurement by December 31, 2020. See “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – Energy Storage Systems” for further discussion of AB 2514. SMUD will report progress towards the 9 MW target at the end of 2020 and potentially adopt new targets at that time. 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 is implementing programs and tools, such as advanced metering, energy efficiency options, and moving residential customers to Time-of-Day Rates, 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 Time-of-Day Rates as the standard rate for residential customers, SMUD projected peak load to be reduced by as much as 75 MW in 2019. Preliminary analysis shows statistically significant reductions during the Time-of-Day Peak period (5-8 p.m. local time) resulting in a peak load reduction. SMUD staff will continue to monitor the progress and results of the implementation of Time-of-Day 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 has three transmission system projects expected to be completed by 2020 that will improve system reliability and increase import capability. These system improvements 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.

**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 federal Western Area Power Administration (“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.

**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 minimize 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 supply agreements by entering into financial contracts to fix prices or 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. These contracts are forecasted to have hedged the price exposure on approximately 89%, 79% and 63% of SMUD’s anticipated natural gas requirements for 2020, 2021 and 2022, 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 [____], 2020, SMUD did not have any collateral posting obligations.] [update to a recent date before posting POS] A decrease in natural gas prices would result in a collateral posting by SMUD. As of [April [__], 2020, SMUD estimates that a natural gas price decline of 40% would result in a collateral obligation of approximately $1.1 million.] [update to a recent date before posting of POS] 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 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 Time-of-Day 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 will begin in 2021. See “RATES AND CUSTOMER BASE – Rates and Charges.”

- **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 California. 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 California 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 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.

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, Lost 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 California, 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 is pursuing opportunities to provide similar services to additional CCAs.

**FACTORs AFFECTING THE REGION**

**Precipitation Variability**

As of March 31, 2020, precipitation at Pacific House, California totaled 29.74 inches for the October-September hydropower water supply period. This National Weather Service precipitation station is used to approximate available water supply to SMUD’s Upper American River Project (the “UARP”) hydropower reservoirs. This is below the 30-year average of 44.21 inches. Total reservoir storage in the UARP hydropower reservoirs was about 68% of capacity as of March 31, 2020, approximately 2% below historical average for this date. SMUD manages its reservoirs to maximize water storage going into the summer season and thereby preserving generating capacity during SMUD’s high load months.

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.”

Storm Damage

Due to severe winter storms in January and February of 2017, various SMUD facilities in Sacramento, El Dorado, and Solano counties experienced damage from high winds, landslides and flooding. Repair of damage in Sacramento and Solano counties was completed in the fall of 2018. In El Dorado County, the roads in the UARP experienced the most extensive damage due to landslides. Some of those repairs remain to be completed over the next one to two years. However, all facilities now meet safety standards and are currently in use. SMUD’s insurance claims for recovery of insured costs have been resolved. SMUD has filed claims with FEMA to recover the uninsured expenses as a result of the storm damage. SMUD’s distribution system experienced an additional $7 million of uninsured damage as a result of the 2017 winter storms. Claims for these damages are being filed with the Federal Emergency Management Agency to recover uninsured expenses related to the storms.

Wildfires

Wildfires in California have become increasingly common and destructive. In 2017 and 2018 a number of wildfires broke out in Northern California, including the Tubbs Fire, the Atlas Fire, the Nuns Fire, the Camp Fire and others. While SMUD has never experienced a catastrophic wildfire involving its facilities, frequent drought conditions and unseasonably warm temperatures could increase the possibility of wildfires occurring in areas where SMUD maintains generation, transmission and distribution facilities. Greater numbers of diseased and dead trees could also increase this possibility. As a result, SMUD could face the increased potential for third-party liability for 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. As described below, SMUD’s service territory is located within Sacramento County which is located outside the California Public Utilities Commission (the “CPUC”) high fire threat areas. 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.

California law requires the California Department of Forestry and Fire Protection (“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 Fire Risk and Assessment Program 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.
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”) risk areas; however, SMUD’s UARP facilities are located within both Tier 2 and Tier 3 risk 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 linear miles, which equates to approximately 82 line-miles, of SMUD’s transmission lines are in Tier 2 fire-threat areas and approximately 19.3 linear miles, or 50 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 California 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.

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 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 SMUD’s Board and is available with the independent evaluator’s report on SMUD’s website. SMUD will review and update its wildfire mitigation plan annually.

The recent wildfires in California have not only increased potential liability for utilities, but have also adversely impacted the insurance markets, leading to higher costs for coverage; coverages becoming

<table>
<thead>
<tr>
<th>Fire Hazard Severity Zone</th>
<th>Moderate</th>
<th>High</th>
<th>Very High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acres of SMUD Service Area</td>
<td>231,816</td>
<td>2,337</td>
<td>1,061</td>
</tr>
<tr>
<td>% of Total SMUD Service Area</td>
<td>40.6%</td>
<td>0.4%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Number of Retail Customers</td>
<td>40,114</td>
<td>3,688</td>
<td>136</td>
</tr>
<tr>
<td>% of Total Retail Customers</td>
<td>6.0%</td>
<td>0.6%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>
prohibitively expensive; limited or restricted coverage to certain types of risks; or coverage at insufficient levels. SMUD recently renewed its insurance coverage for wildfire liability. The coverage currently extends through June 15, 2020. The renewal reduced coverage limits to $250 million from $300 million but maintained the same net coverage of $186.5 million. Due to capacity constraints and other changes in the wildfire insurance market, the annual premiums SMUD will pay for wildfire liability coverage increased from $8.2 million to $12.0 million.

In addition, as described in the forepart of this Official Statement, SMUD will utilize a portion of the proceeds of the 2020 Bonds to pay [all/a portion] of its outstanding commercial paper notes. Therefore, 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.

SMUD continues to take responsible action to minimize its exposure to liability from wildfires; however, under current California 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.

**Impacts from COVID-19 Pandemic**

[The outbreak of COVID-19, a respiratory disease caused by a new strain of coronavirus, was first detected in China and has since spread globally, including to the United States, California and SMUD’s service area. On March 12, 2020, the World Health Organization declared the COVID-19 outbreak to be a pandemic. The COVID-19 pandemic has dramatically altered the behavior of businesses and people in a manner that is having negative effects on global and local economies. In addition, stock markets in the United States and globally have seen significant declines attributed to concerns over COVID-19, and capital markets have been significantly disrupted. These adverse impacts are intensifying and continue to evolve daily.

On March 13, 2020, President Trump declared a national state of emergency as a result of the COVID-19 pandemic. On March 19, 2020, Sacramento County issued a stay-at-home directive and Governor Newsom announced a California statewide stay-at-home order. The pandemic, and governmental actions in response to the pandemic, have caused, and are expected to continue to cause, a significant disruption of daily life and business activity globally, nationally and locally, including within SMUD’s service territory. These disruptions include the cancellation and prohibition of public gatherings, the prohibition of non-essential workers working outside of their homes, and the closure of sports arenas, convention centers, some governmental buildings, schools, gyms, religious institutions, bars, dine-in restaurants, and other commercial facilities. Essential services, including electric utility services, are exempted from the Sacramento County directive and the statewide order and continue. [SMUD has activated plans to ensure that staffing is in place to continue delivery of electric service to its customers].

SMUD is monitoring the pandemic but is not yet able to predict the effect that it will have on SMUD’s financial performance or operations. SMUD’s initial electricity sales data from [March 2020] shows little change from the same period in prior years. However, there remains a risk that retail electricity sales could decline, or that load could shift from commercial customers to residential customers, and that there could be a corresponding decline in revenue. In addition, as a result of these events, an increased number of SMUD’s customers could be unable to pay their electric bills and part of the governmental response to the economic consequences of the pandemic may be to require 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 also anticipates an increase in applications for its low-income discount program but the extent of any such increase is currently unknown and cannot be predicted. See “RATES AND CUSTOMER BASE – Low Income Discount.” If a significant number of SMUD’s employees become ill or are required to stay home at the same time, there is also a risk that operations critical to providing electric service could be adversely impacted. The pandemic and related consequences have also disrupted supply chains and could disrupt or delay construction activities which could adversely impact the timing of capital projects, including capital projects designed to further renewable energy and carbon reduction goals and requirements. If the pandemic and its consequences are prolonged, the likelihood of adverse impacts occurring from these risks or others could be increased.

While the 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 by the pandemic and its consequences.\(^2\)

**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 Time-of-Day 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 Time-of-Day 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 California will be adopting time-based rates in 2020.

Additionally, the Board approved a restructuring of the low-income program. Effective January 1, 2019, 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 will occur over a three-year time period, finalizing in 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

---

\(^2\) To be monitored and updated based on current events.
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 will be transitioned to the new rates starting as early as January 1, 2021 and no later than May 31, 2022.

**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 three subaccounts that 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, respectively. [As of April 1, 2020, the combined balance of the three subaccounts in the RSF was $[___] 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, 2020, precipitation at Pacific House, California totaled 43.72 inches which is below the 50-year rolling median of 50.98 inches.

[SMUD transferred approximately $7.7 million out of the HRSF in April 2020 due to below average precipitation, which decreased the balance in the HRSF from $82.4 million to approximately $74.7 million. As of April 1, 2020, the combined balance in the RSF and HRSF was $[___] million.]

**Low Income Discount**

As of February 2020, approximately 75,400 customers received the low-income discount offered by SMUD, which represents approximately 14% of all residential customers. SMUD monitors the program to ensure participants continue to be eligible for the discount. In 2019, the total discount was approximately $30.3 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 anticipates an increase in low-income discount applicants. However, the extent of any such increase is currently unknown and cannot be predicted. 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 2020, SMUD has performed 19,773 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), 180 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.

[Remainder of Page Intentionally Left Blank]
Rate Comparisons

SMUD’s rates remain significantly below those of PG&E and other large utilities throughout California. 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, 2020.

### AVERAGE CLASS RATES

<table>
<thead>
<tr>
<th>Class</th>
<th>SMUD Rates (cents/kWh)</th>
<th>PG&amp;E Rates (cents/kWh)</th>
<th>Percent Below PG&amp;E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential - Standard</td>
<td>16.45¢</td>
<td>25.66¢</td>
<td>35.9%</td>
</tr>
<tr>
<td>Residential – Low Income</td>
<td>11.34¢</td>
<td>15.37¢</td>
<td>26.2%</td>
</tr>
<tr>
<td><strong>All Residential</strong></td>
<td><strong>15.84¢</strong></td>
<td><strong>22.67¢</strong></td>
<td><strong>30.1%</strong></td>
</tr>
<tr>
<td>Small Commercial (Less than 20 kW)</td>
<td>15.67¢</td>
<td>26.21¢</td>
<td>40.2%</td>
</tr>
<tr>
<td>Small Commercial (21 to 299 kW)</td>
<td>14.51¢</td>
<td>24.90¢</td>
<td>41.7%</td>
</tr>
<tr>
<td>Medium Commercial (300 to 499 kW)</td>
<td>13.42¢</td>
<td>23.12¢</td>
<td>42.0%</td>
</tr>
<tr>
<td>Medium Commercial (500 to 999 kW)</td>
<td>12.59¢</td>
<td>20.34¢</td>
<td>38.1%</td>
</tr>
<tr>
<td>Large Commercial (Greater than 1,000 kW)</td>
<td>10.74¢</td>
<td>16.25¢</td>
<td>33.9%</td>
</tr>
<tr>
<td>Lighting – Traffic Signals</td>
<td>12.31¢</td>
<td>24.94¢</td>
<td>50.6%</td>
</tr>
<tr>
<td>Lighting – Street Lighting</td>
<td>14.90¢</td>
<td>26.63¢</td>
<td>44.1%</td>
</tr>
<tr>
<td>Agriculture</td>
<td>13.88¢</td>
<td>22.02¢</td>
<td>37.0%</td>
</tr>
<tr>
<td><strong>System Average</strong></td>
<td><strong>14.29¢</strong></td>
<td><strong>21.56¢</strong></td>
<td><strong>33.7%</strong></td>
</tr>
</tbody>
</table>

(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.

[Remainder of Page Intentionally Left Blank]
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**

<table>
<thead>
<tr>
<th>Monthly Billing Charge 750 kWh (2)</th>
<th>Percent SMUD is (Below)/Above Utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sacramento Municipal Utility District(1)</td>
<td>$118.05</td>
</tr>
<tr>
<td>Pacific Gas &amp; Electric Company</td>
<td>$194.45 (39.2%)</td>
</tr>
<tr>
<td>Roseville Electric Utility</td>
<td>$113.00 4.4%</td>
</tr>
<tr>
<td>Turlock Irrigation District</td>
<td>$116.31 1.4%</td>
</tr>
<tr>
<td>Modesto Irrigation District</td>
<td>$136.03 (13.2%)</td>
</tr>
<tr>
<td>Southern California Edison Company</td>
<td>$156.40 (24.5%)</td>
</tr>
<tr>
<td>Los Angeles Dept. of Water &amp; Power</td>
<td>$160.78 (26.5%)</td>
</tr>
<tr>
<td>San Diego Gas and Electric Company</td>
<td>$219.54 (46.2%)</td>
</tr>
</tbody>
</table>

(1) Includes approved January 1, 2020 rates.
(2) Per individual utility’s published schedules as of January 1, 2020.

[Remainder of Page Intentionally Left Blank]
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.

2020 Revenue Forecast

- Residential: 49.3%
- Large Commercial: 14.4%
- Medium Commercial: 4.8%
- Small Commercial: 30.2%
- Agriculture: 0.7%
- Lighting: 0.5%

[Remainder of Page Intentionally Left Blank]
A stabilizing influence on SMUD’s revenues is that a substantial proportion is derived from residential customers (48.1% in 2019). 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 2019, 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, 2019.

**SMUD’S LARGEST CUSTOMERS**  
(As of December 31, 2019)

<table>
<thead>
<tr>
<th>Customer Type</th>
<th>Annual Revenue ($ millions)</th>
<th>% of Total Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>$34.82</td>
<td>2.50%</td>
</tr>
<tr>
<td>Government</td>
<td>27.78</td>
<td>2.00</td>
</tr>
<tr>
<td>Technology</td>
<td>27.49</td>
<td>1.98</td>
</tr>
<tr>
<td>Government</td>
<td>13.09</td>
<td>0.94</td>
</tr>
<tr>
<td>Technology</td>
<td>10.88</td>
<td>0.78</td>
</tr>
<tr>
<td>Communications</td>
<td>9.07</td>
<td>0.65</td>
</tr>
<tr>
<td>Industrial Gases</td>
<td>8.47</td>
<td>0.61</td>
</tr>
<tr>
<td>Grocery</td>
<td>7.29</td>
<td>0.52</td>
</tr>
<tr>
<td>School</td>
<td>7.11</td>
<td>0.51</td>
</tr>
<tr>
<td>Medical</td>
<td>6.73</td>
<td>0.48</td>
</tr>
<tr>
<td><strong>Top 10 Total</strong></td>
<td><strong>$152.74</strong></td>
<td><strong>10.98%</strong></td>
</tr>
</tbody>
</table>

[Remainder of Page Intentionally Left Blank]
POWER SUPPLY AND TRANSMISSION

Power Supply Resources

The following table sets forth information concerning SMUD’s power supply resources as of February 29, 2020. 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 February 29, 2020)

<table>
<thead>
<tr>
<th>Source:</th>
<th>Capacity Available (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Generating Facilities:</strong></td>
<td></td>
</tr>
<tr>
<td>Upper American River Project – Hydroelectric</td>
<td>676</td>
</tr>
<tr>
<td>Solano 1, 2 &amp; 3 Wind Projects – Wind(^2)</td>
<td>105</td>
</tr>
<tr>
<td><strong>Sub-total:</strong></td>
<td>781</td>
</tr>
<tr>
<td><strong>Local Gas-Fired Plants:</strong></td>
<td></td>
</tr>
<tr>
<td>SFA (Cosumnes)</td>
<td>576</td>
</tr>
<tr>
<td>CVFA (Carson-Ice)</td>
<td>103</td>
</tr>
<tr>
<td>SCA (Procter &amp; Gamble)</td>
<td>182</td>
</tr>
<tr>
<td>SPA (McClellan)</td>
<td>72</td>
</tr>
<tr>
<td>SPA (Campbell Soup)</td>
<td>170</td>
</tr>
<tr>
<td><strong>Sub-total:</strong></td>
<td>1,103</td>
</tr>
<tr>
<td><strong>Purchased Power:</strong></td>
<td></td>
</tr>
<tr>
<td>Western Area Power Administration (WAPA)(^3)(^4)</td>
<td>366</td>
</tr>
<tr>
<td>Feed-in-Tariff Photovoltaic – Solar</td>
<td>83</td>
</tr>
<tr>
<td>Grady – Wind</td>
<td>71</td>
</tr>
<tr>
<td>Recurrent – Solar</td>
<td>55</td>
</tr>
<tr>
<td>Rock Tenn (Simpson) – Biomass</td>
<td>42</td>
</tr>
<tr>
<td>Iberdrola (PPM) – Wind</td>
<td>24</td>
</tr>
<tr>
<td>CalGeo – Geothermal</td>
<td>26</td>
</tr>
<tr>
<td>Patua (Gradient/Vulcan) – Geothermal</td>
<td>12</td>
</tr>
<tr>
<td>Other Long-Term Contracts</td>
<td>39</td>
</tr>
<tr>
<td>Firm Contract Reserves(^4)</td>
<td>18</td>
</tr>
<tr>
<td>Committed Short-Term Purchases(^5)</td>
<td>408</td>
</tr>
<tr>
<td>Uncommitted Short-Term Purchases</td>
<td>187</td>
</tr>
<tr>
<td><strong>Sub-total:</strong></td>
<td>1,330</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3,215</td>
</tr>
</tbody>
</table>

\(^1\) 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 gigawatt hours (“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 December 2020.

*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 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 2020 that will allow for 90.8 MW of capacity at the point of interconnection. SMUD released a draft environmental impact report for the project in July 2019 and expects to complete the environmental review for the project in 2020. The Board is expected to consider proceeding with the Solano 4 project in mid-2020. Travis Air Force Base has raised a concern that the project has the potential to impact its radar system. SMUD is engaging in a process to resolve this concern. The expected operation date for the project has been delayed into 2023 pending resolution of this concern.

**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 – 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.

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.

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 require, 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 89%, 71% and 63% of SMUD’s natural gas requirements for 2020, 2021 and 2022, respectively.

In March 2003, SMUD purchased a 21% ownership interest in natural gas reserves located in the San Juan basin in northern New Mexico from affiliates of El Paso Corp. The property, known as the Rosa Unit, consists of 54,209 acres of producing oil and gas leases totaling over 500 producing gas wells operated by WPX Energy Production, L.L.C. (“WPX Energy”) until July of 2017 when WPX Energy sold their interest in the Rosa Unit to LOGOS Resources, LLC (“LOGOS”). Due to low natural gas prices, new production wells were not drilled within the Rosa Unit. As a result, SMUD experienced reduced value from its ownership interest and, in November 2019, the Board approved the sale of SMUD’s interest in the Rosa Unit to LOGOS. This transaction was completed in December 2019 with an effective date of November 1, 2019.

SMUD has contracted with the Northern California Gas Authority No. 1 (“NCGA”) to purchase an approximate average of 8,700 Dth/day over the remaining life of a contract expiring May 31, 2027. SMUD has also contracted with the California Statewide Communities Development Authority (“CSCDA”) to purchase an approximate average of 17,000 Dth/day through September 2040. Under both contracts, 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 agreement is the AECO hub in Alberta, Canada and the delivery point for the CSCDA agreement is the PG&E Citygate hub in California. SMUD has also contracted with the City of Vernon to purchase an approximate average of 12,000 Dth/day through May 2021. Under this contract, SMUD has agreed to pay a discounted variable price for the fuel and anticipates periodically fixing the effective price under separate hedging contracts. The gas is delivered to the SMUD system via the Topock 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 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 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 California 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 California 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 California Public Utilities Commission, 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 47,329 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 contract expires in June 2021.

**El Paso Firm Transport Agreement.** In 2016, SMUD entered into a two-year contract with El Paso Natural Gas for 10,000 Dth/day for the first year and 9,000 Dth/day for the second year of firm transportation capacity on the El Paso Natural Gas pipeline from the Blanco Hub in New Mexico to the receipt point into the PG&E system at Topock, Arizona. This agreement went into effect in April of 2017 and expired in October of 2019. This agreement had provided capacity from the Blanco hub to the
California-Arizona border. This agreement was used to transport all of SMUD’s long term projected gas supplied from the Rosa Unit. This agreement was terminated on October 31, 2019 due to the sale of SMUD’s interest in the Rosa Unit to LOGOS. See “POWER SUPPLY AND TRANSMISSION – Fuel Supply – Supply” for more information regarding the sale of SMUD’s interest in the Rosa Unit.

**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. Power sold under this contract is generated by the CVP, a series of federal hydroelectric facilities in northern California operated by the United States Bureau of Reclamation. Starting in January 2015, the contract provides SMUD with the right to purchase 25% of total WAPA power sold. This is expected to be approximately 318 MW of capacity and 661 GWh of energy in an average year, but will vary depending on the availability of water to the CVP. 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 is typically available in spring and summer months and less delivered in fall and winter. SMUD also has a contract with WAPA expiring September 30, 2020, by which WAPA delivers 200-300 MW per hour based on certain contractual parameters.

**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 northern California and a 12-year contract for 340 GWh per year of renewable biomass energy that commenced July 1, 2009. The SMUD Board recently approved an extension of the wind contract through June 30, 2025. The biomass contract ends June 30, 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 Cyrr Energy, Inc. (“Cyrr”). In December 2015, Cyrr terminated Phase 2. Upon termination of Phase 2, the contractual right for Cyrr 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. See also “LEGAL PROCEEDINGS – Patua Acquisition Company, LLC.”

**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 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 will escalate to the full 30 MWs within four years.

**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 has a commercial operation date planned for December 31, 2020.

Grady Wind Energy. In October 2015, SMUD entered into a 25-year power purchase agreement with Grady Wind Energy LLC for the purchase of energy from a 200 MW wind project located in New Mexico. The Grady Wind Energy LLC wind project began commercial operations on August 5, 2019. Energy from the Grady project is delivered to the CAISO. SMUD purchases 100% of project output which includes energy, renewable energy credits, and capacity attributes.

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, 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 has stopped producing and selling energy from the biomass plant. SMUD is monitoring the bankruptcy proceeding and will take any steps necessary to ensure its interests are protected.

SMUD and the other POUs have recently finalized negotiations for an additional 5-year power purchase agreement to complete its SB 859 compliance requirements. SMUD expects to execute this new agreement by June 2020.

Sutter Energy Center. SMUD has 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 will now expire November 1, 2020. SMUD has entered into a new contract with Calpine for the same 258 MWs of energy. The new contract becomes 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’s commercial operation date is forecasted to occur on June 30, 2020.
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 $47.5 million for 2020. SMUD’s obligation of the TANC budget is about $18.0 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.

[On February 20, 2015, SMUD and WAPA signed agreements related to a proposed new 500 kV transmission line that would connect the COTP line to WAPA’s CVP transmission system (the “Colusa-Sutter Transmission Project”). While the agreements were signed addressing both the development and subsequent operation of the Colusa-Sutter Transmission Project, SMUD’s Board only approved funding for the study and environmental activities, reserving further approvals for after the results of the NEPA and CEQA processes. However, while substantial environmental review work was progressing, the escalating costs of completing the Colusa-Sutter Transmission Project, along with the development of other less-costly alternatives, significantly diminished the perceived value of the Colusa-Sutter Transmission Project and prompted SMUD management to cancel the Colusa-Sutter Transmission Project. WAPA was so-notified of this decision by SMUD in February of 2019 and is currently in process of winding down the project work activities. WAPA will soon be providing SMUD a final accounting and reimbursement of any funds advance by SMUD to WAPA for project development. Cancelation of the Colusa-Sutter Transmission Project will not impact any of SMUD’s already existing transmission contract rights with WAPA to receive power deliveries from the COTP.]

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 2029. 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 wind, small hydro and biomass. Small hydro is a hydroelectric facility with a capacity of 30 MW or less. Biomass represents 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.

Forecasted load requirements do not account for the impact of the COVID-19 pandemic and its related consequences. See “FACTORS AFFECTING THE REGION – Impacts from COVID-19 Pandemic.”

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.
## PROJECTED REQUIREMENTS AND RESOURCES TO MEET LOAD REQUIREMENTS

### ENERGY REQUIREMENTS AND RESOURCES (GWh)

<table>
<thead>
<tr>
<th>Renewable Resources</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
<th>2029</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>District or Joint Powers Authority Owned:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UARP - Small Hydro</td>
<td>35</td>
<td>65</td>
<td>68</td>
<td>66</td>
<td>66</td>
<td>69</td>
<td>69</td>
<td>69</td>
<td>69</td>
<td>69</td>
</tr>
<tr>
<td>Solano 1, 2 &amp; 3 – Wind</td>
<td>624</td>
<td>618</td>
<td>595</td>
<td>867</td>
<td>916</td>
<td>936</td>
<td>935</td>
<td>934</td>
<td>934</td>
<td>930</td>
</tr>
<tr>
<td>SFA – Shell Landfill Gas and Digester Gas(2)</td>
<td>240</td>
<td>354</td>
<td>354</td>
<td>725</td>
<td>736</td>
<td>848</td>
<td>846</td>
<td>843</td>
<td>842</td>
<td>839</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>899</td>
<td>1,037</td>
<td>1,016</td>
<td>1,659</td>
<td>1,718</td>
<td>1,853</td>
<td>1,846</td>
<td>1,845</td>
<td>1,838</td>
<td></td>
</tr>
<tr>
<td>Purchases</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western (WAPA) – Small Hydro</td>
<td>22</td>
<td>19</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Rock Tenn (Simpson) – Biomass</td>
<td>313</td>
<td>150</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Patau (Gradient/Vulcan) – Geothermal</td>
<td>145</td>
<td>147</td>
<td>147</td>
<td>147</td>
<td>147</td>
<td>147</td>
<td>147</td>
<td>147</td>
<td>147</td>
<td>147</td>
</tr>
<tr>
<td>Cal Energy – Geothermal</td>
<td>199</td>
<td>223</td>
<td>223</td>
<td>223</td>
<td>224</td>
<td>223</td>
<td>223</td>
<td>222</td>
<td>222</td>
<td>222</td>
</tr>
<tr>
<td>Iberdrola (PPM) – Wind</td>
<td>98</td>
<td>98</td>
<td>98</td>
<td>98</td>
<td>98</td>
<td>58</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Grady – Wind</td>
<td>872</td>
<td>895</td>
<td>895</td>
<td>895</td>
<td>900</td>
<td>895</td>
<td>895</td>
<td>890</td>
<td>895</td>
<td>895</td>
</tr>
<tr>
<td>Recurrent Solarshare</td>
<td>173</td>
<td>171</td>
<td>171</td>
<td>170</td>
<td>172</td>
<td>169</td>
<td>169</td>
<td>169</td>
<td>169</td>
<td>169</td>
</tr>
<tr>
<td>Rancho Seco PV2</td>
<td>0</td>
<td>337</td>
<td>335</td>
<td>333</td>
<td>332</td>
<td>334</td>
<td>333</td>
<td>333</td>
<td>331</td>
<td>330</td>
</tr>
<tr>
<td>Feed-in-Tariff Photovoltaic – Solar</td>
<td>215</td>
<td>212</td>
<td>211</td>
<td>210</td>
<td>209</td>
<td>208</td>
<td>207</td>
<td>206</td>
<td>205</td>
<td>204</td>
</tr>
<tr>
<td>Navajo Solar</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Other Long-Term Contracts</td>
<td>194</td>
<td>224</td>
<td>223</td>
<td>222</td>
<td>220</td>
<td>218</td>
<td>104</td>
<td>82</td>
<td>79</td>
<td>83</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,231</td>
<td>2,475</td>
<td>2,626</td>
<td>2,621</td>
<td>2,621</td>
<td>2,569</td>
<td>2,389</td>
<td>2,363</td>
<td>2,363</td>
<td>2,356</td>
</tr>
<tr>
<td><strong>Non-Renewable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>District or Joint Powers Authority Owned:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UARP – Large Hydro(3)</td>
<td>750</td>
<td>1,539</td>
<td>1,603</td>
<td>1,589</td>
<td>1,604</td>
<td>1,580</td>
<td>1,583</td>
<td>1,583</td>
<td>1,581</td>
<td>1,584</td>
</tr>
<tr>
<td>SFA – Cosumnes</td>
<td>3,229</td>
<td>3,295</td>
<td>3,288</td>
<td>2,895</td>
<td>3,134</td>
<td>3,015</td>
<td>3,010</td>
<td>3,005</td>
<td>2,998</td>
<td>2,993</td>
</tr>
<tr>
<td>CVFA – Carson Ice</td>
<td>152</td>
<td>201</td>
<td>182</td>
<td>159</td>
<td>169</td>
<td>150</td>
<td>169</td>
<td>169</td>
<td>169</td>
<td>169</td>
</tr>
<tr>
<td>SCA – P&amp;G</td>
<td>456</td>
<td>449</td>
<td>471</td>
<td>402</td>
<td>406</td>
<td>393</td>
<td>327</td>
<td>300</td>
<td>287</td>
<td>287</td>
</tr>
<tr>
<td>SPA – McClellan</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>SPA – Campbell Soup</td>
<td>282</td>
<td>284</td>
<td>135</td>
<td>53</td>
<td>51</td>
<td>60</td>
<td>78</td>
<td>69</td>
<td>79</td>
<td>91</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4,871</td>
<td>5,771</td>
<td>5,681</td>
<td>5,099</td>
<td>5,367</td>
<td>5,210</td>
<td>5,180</td>
<td>5,144</td>
<td>5,108</td>
<td>5,127</td>
</tr>
<tr>
<td>Purchases</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western (WAPA) – Large Hydro</td>
<td>699</td>
<td>629</td>
<td>641</td>
<td>641</td>
<td>641</td>
<td>641</td>
<td>641</td>
<td>641</td>
<td>641</td>
<td>641</td>
</tr>
<tr>
<td>Western (WAPA) Customers (wheeling)</td>
<td>41</td>
<td>37</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
</tr>
<tr>
<td>Calpine Sutter</td>
<td>541</td>
<td>584</td>
<td>545</td>
<td>553</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Committed Purchases</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,282</td>
<td>1,250</td>
<td>1,225</td>
<td>1,233</td>
<td>679</td>
<td>679</td>
<td>679</td>
<td>679</td>
<td>679</td>
<td>679</td>
</tr>
<tr>
<td><strong>Total Resources</strong></td>
<td>9,283</td>
<td>10,533</td>
<td>10,548</td>
<td>10,612</td>
<td>10,385</td>
<td>10,312</td>
<td>10,098</td>
<td>10,032</td>
<td>9,995</td>
<td>10,001</td>
</tr>
<tr>
<td><strong>Uncommitted Purchases / (Sales)</strong></td>
<td>1,539</td>
<td>10,533</td>
<td>10,385</td>
<td>10,312</td>
<td>10,098</td>
<td>10,032</td>
<td>9,995</td>
<td>10,001</td>
<td>10,001</td>
<td>10,001</td>
</tr>
<tr>
<td><strong>Total Projected Energy Requirements</strong></td>
<td>10,740</td>
<td>10,728</td>
<td>10,730</td>
<td>10,731</td>
<td>10,748</td>
<td>10,901</td>
<td>10,990</td>
<td>11,087</td>
<td>11,261</td>
<td>11,415</td>
</tr>
<tr>
<td>Energy Efficiency (EE) Board Goals</td>
<td>90</td>
<td>164</td>
<td>237</td>
<td>292</td>
<td>348</td>
<td>393</td>
<td>439</td>
<td>485</td>
<td>512</td>
<td>543</td>
</tr>
<tr>
<td>SB1 Photovoltaic Goals</td>
<td>55</td>
<td>102</td>
<td>145</td>
<td>196</td>
<td>249</td>
<td>304</td>
<td>358</td>
<td>413</td>
<td>468</td>
<td>524</td>
</tr>
<tr>
<td>Expected Electric Vehicle (EV) Charging</td>
<td>27</td>
<td>58</td>
<td>95</td>
<td>156</td>
<td>229</td>
<td>303</td>
<td>385</td>
<td>468</td>
<td>550</td>
<td>647</td>
</tr>
<tr>
<td>Electric Building (EB)</td>
<td>7</td>
<td>19</td>
<td>34</td>
<td>52</td>
<td>80</td>
<td>114</td>
<td>156</td>
<td>214</td>
<td>282</td>
<td>367</td>
</tr>
<tr>
<td>Battery Storage</td>
<td>0</td>
<td>(1)</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(5)</td>
<td>(7)</td>
<td>(9)</td>
<td>(12)</td>
<td>(16)</td>
</tr>
<tr>
<td><strong>Total Gross Energy Requirements before EE, SB1 and EV Charging</strong></td>
<td>10,851</td>
<td>10,917</td>
<td>10,981</td>
<td>11,009</td>
<td>11,032</td>
<td>11,176</td>
<td>11,239</td>
<td>11,294</td>
<td>11,396</td>
<td>11,453</td>
</tr>
</tbody>
</table>

(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) 2020 based on current precipitation levels. All other years assume average precipitation.
## CAPACITY REQUIREMENTS AND RESOURCES\(^{(1)}\)
### NET CAPACITY – MEGAWATTS

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
<th>2029</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Managed Peak</td>
<td>2,884</td>
<td>2,911</td>
<td>2,940</td>
<td>2,968</td>
<td>2,996</td>
<td>3,039</td>
<td>3,065</td>
<td>3,091</td>
<td>3,117</td>
<td>3,143</td>
</tr>
<tr>
<td>Energy Efficiency (EE) Board Goals</td>
<td>(17)</td>
<td>(32)</td>
<td>(49)</td>
<td>(64)</td>
<td>(82)</td>
<td>(74)</td>
<td>(82)</td>
<td>(91)</td>
<td>(97)</td>
<td>(105)</td>
</tr>
<tr>
<td>SB1 Photovoltaic Goals</td>
<td>(19)</td>
<td>(34)</td>
<td>(49)</td>
<td>(67)</td>
<td>(84)</td>
<td>(103)</td>
<td>(122)</td>
<td>(140)</td>
<td>(159)</td>
<td>(178)</td>
</tr>
<tr>
<td>Electric Vehicle (EV) Charging</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>9</td>
<td>16</td>
<td>20</td>
<td>26</td>
<td>31</td>
<td>37</td>
</tr>
<tr>
<td>Electric Building (EB)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>10</td>
<td>13</td>
<td>18</td>
<td>24</td>
<td>32</td>
</tr>
<tr>
<td>Battery Storage (BESS)</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(6)</td>
<td>(8)</td>
<td>(12)</td>
<td>(17)</td>
<td>(24)</td>
<td>(32)</td>
<td>(40)</td>
</tr>
<tr>
<td>Planned Peak</td>
<td>2,850</td>
<td>2,847</td>
<td>2,846</td>
<td>2,843</td>
<td>2,836</td>
<td>2,875</td>
<td>2,878</td>
<td>2,880</td>
<td>2,889</td>
<td>2,889</td>
</tr>
<tr>
<td>Transmission Losses</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>Dispatchable Demand Resource</td>
<td>(83)</td>
<td>(83)</td>
<td>(83)</td>
<td>(83)</td>
<td>(83)</td>
<td>(83)</td>
<td>(83)</td>
<td>(83)</td>
<td>(83)</td>
<td>(83)</td>
</tr>
<tr>
<td>Adjusted Peak</td>
<td>2,795</td>
<td>419</td>
<td>2,793</td>
<td>2,791</td>
<td>2,788</td>
<td>2,780</td>
<td>2,783</td>
<td>2,785</td>
<td>2,830</td>
<td>2,834</td>
</tr>
<tr>
<td>15% Reserve Margin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Renewable Resources

**District or Joint Powers Authority Owned:**
- UARP – Small Hydro: 36
- Solano Wind: 105
- SFA – Shell Landfill Gas and Digester Gas\(^{(2)}\): 40
- Total: 181

**Purchases:**
- Western (WAPA) – Small Hydro: 10
- Rock Tenn (Simpson) – Biomass: 42
- Iberdrola (PPM) – Wind: 24
- Grady – Wind: 71
- Patau (Gradient/Vulcan) – Geothermal: 12
- CalGeo – Geothermal: 26
- Recurrent Solarshares: 55
- RanchoSoco PV2 – Solar: -116
- Navajo Solar: -
- Feed-in-Tariff Photovoltaic – Solar: 83
- Other Long-Term Contracts: 40
- Total: 362

### Non-Renewable

**District or Joint Powers Authority Owned:**
- UARP – Large Hydro: 640
- SFA (Cosumnes): 536
- CVFA (Carson-Ice): 103
- SCA (Procter & Gamble): 182
- SPA (McClellan): 72
- SPA (Campbell Soup): 170
- Total: 1,703

**Purchases:**
- Western (WAPA) – Large Hydro: 339
- Western (WAPA) Customers (wheeling): 20
- Sutter Energy Center: 258
- Firm Contract Reserves \(^{(1)}\): 18
- Committed Purchases: 150
- Total: 785

### Total Resources

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
<th>2029</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planned Peak</td>
<td>2,850</td>
<td>2,847</td>
<td>2,846</td>
<td>2,843</td>
<td>2,836</td>
<td>2,875</td>
<td>2,878</td>
<td>2,880</td>
<td>2,889</td>
<td>2,889</td>
</tr>
<tr>
<td>Transmission Losses</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>Dispatchable Demand Resource</td>
<td>(83)</td>
<td>(83)</td>
<td>(83)</td>
<td>(83)</td>
<td>(83)</td>
<td>(83)</td>
<td>(83)</td>
<td>(83)</td>
<td>(83)</td>
<td>(83)</td>
</tr>
<tr>
<td>Adjusted Peak</td>
<td>2,795</td>
<td>419</td>
<td>2,793</td>
<td>2,791</td>
<td>2,788</td>
<td>2,780</td>
<td>2,783</td>
<td>2,785</td>
<td>2,830</td>
<td>2,834</td>
</tr>
<tr>
<td>15% Reserve Margin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Notes:
1. Totals may not sum due to rounding.
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.

**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 are underway and will be complete 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.
SELECTED OPERATING DATA

Selected operating data of SMUD for the four years ended December 31, 2016 through 2019, and for the two months ended February 29, 2020 and February 28, 2019 are presented in the following table.

SMUD SELECTED OPERATING DATA
CUSTOMERS, SALES, SOURCES OF ENERGY AND REVENUES

<table>
<thead>
<tr>
<th>Two Months Ended</th>
<th>Year Ended December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customers at End of Period:</td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>565,853</td>
</tr>
<tr>
<td>Commercial and industrial</td>
<td>68,249</td>
</tr>
<tr>
<td>Other</td>
<td>7,387</td>
</tr>
<tr>
<td>Total</td>
<td>641,489</td>
</tr>
<tr>
<td>MWh Sales:</td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>674,711</td>
</tr>
<tr>
<td>Commercial and industrial</td>
<td>865,235</td>
</tr>
<tr>
<td>Other</td>
<td>9,858</td>
</tr>
<tr>
<td>Total</td>
<td>1,549,804</td>
</tr>
<tr>
<td>Surplus power/out of area sales</td>
<td>284,386</td>
</tr>
<tr>
<td>Total</td>
<td>1,834,190</td>
</tr>
<tr>
<td>Sources of Energy Sold MWh:</td>
<td></td>
</tr>
<tr>
<td>Generated by SMUD</td>
<td>941,733</td>
</tr>
<tr>
<td>Purchased or exchanged</td>
<td>951,145</td>
</tr>
<tr>
<td>Total</td>
<td>1,892,878</td>
</tr>
<tr>
<td>Less System losses and SMUD usage</td>
<td>58,688</td>
</tr>
<tr>
<td>Total</td>
<td>1,834,190</td>
</tr>
<tr>
<td>Gross System peak demand (kW)(1)</td>
<td>1,480,000</td>
</tr>
<tr>
<td>Average kWh sales per residential customer(2)</td>
<td>1,192</td>
</tr>
<tr>
<td>Average Revenue per kWh Sold:</td>
<td></td>
</tr>
<tr>
<td>Residential(2) (cents)</td>
<td>13.07</td>
</tr>
<tr>
<td>Commercial &amp; industrial(2) (cents)</td>
<td>12.51</td>
</tr>
</tbody>
</table>

(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, 2019 and December 31, 2018 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, 2016 through 2019. The selected financial data for the periods ended February 29, 2020 and February 28, 2019 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, 2016 through 2019. The selected financial data for the period ended February 29, 2020 are not necessarily indicative of the financial data to be expected for the entire year ending December 31, 2020.

**SMUD FINANCIAL DATA**

**(thousands of dollars)**

<table>
<thead>
<tr>
<th>Two Months Ended February 29/28,</th>
<th>Year Ended December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summary of Income</strong></td>
<td></td>
</tr>
<tr>
<td>Operating Revenues(2)</td>
<td>$219,976</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>(203,538)</td>
</tr>
<tr>
<td>Operating Income (Loss)</td>
<td>16,438</td>
</tr>
<tr>
<td>Interest and Other Income (Expense).</td>
<td>8,570</td>
</tr>
<tr>
<td>Interest Expense</td>
<td>(12,054)</td>
</tr>
<tr>
<td>Change in Net Position</td>
<td>$12,954</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Selected Statement of Net Position Information</strong></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Plant in Service</td>
<td>$3,168,634</td>
<td>$2,977,484</td>
<td>$3,187,135</td>
<td>$2,995,505</td>
<td>$2,942,005</td>
</tr>
<tr>
<td>Construction Work in Progress</td>
<td>$390,536</td>
<td>435,165</td>
<td>351,584</td>
<td>396,794</td>
<td>278,721</td>
</tr>
<tr>
<td>Unrestricted Cash – Net</td>
<td>$428,957</td>
<td>$340,930</td>
<td>$451,800</td>
<td>$434,103</td>
<td>$608,311</td>
</tr>
<tr>
<td>Rate Stabilization Fund</td>
<td>$140,839</td>
<td>$96,694</td>
<td>$143,669</td>
<td>$96,694</td>
<td>$99,899</td>
</tr>
<tr>
<td>Total Assets</td>
<td>$5,399,823</td>
<td>$5,224,669</td>
<td>$5,429,137</td>
<td>$5,254,839</td>
<td>$5,426,013</td>
</tr>
<tr>
<td>Net Position</td>
<td>$1,790,098</td>
<td>$1,686,426</td>
<td>$1,777,145</td>
<td>$1,723,476</td>
<td>$1,506,905</td>
</tr>
<tr>
<td>Long-Term Debt(3)</td>
<td>$2,161,324</td>
<td>$1,800,204</td>
<td>$2,166,389</td>
<td>$2,001,767</td>
<td>$2,126,395</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Debt Service Coverage Ratios</strong></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Parity Debt Service Coverage Ratio:</td>
<td>N/A</td>
<td>N/A</td>
<td>2.11x</td>
<td>2.37x</td>
<td>2.77x</td>
</tr>
<tr>
<td>Parity and Subordinate Debt Service Coverage Ratio:</td>
<td>N/A</td>
<td>N/A</td>
<td>2.06x</td>
<td>2.37x</td>
<td>2.75x</td>
</tr>
</tbody>
</table>

(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:

2019 $47.0 million  
2018 ($3.2 million)  
2017 $64.7 million  
2016 $4.9 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.

[Remainder of Page Intentionally Left Blank]
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, 2019 AND 2018 (thousands of dollars)**

<table>
<thead>
<tr>
<th></th>
<th>Year Ended December 31, 2019</th>
<th>Year Ended December 31, 2018 (restated)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SMUD</td>
<td>Authorities</td>
</tr>
<tr>
<td><strong>Summary of Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Revenues</td>
<td>$ 1,553,167</td>
<td>$ 294,908</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>(1,412,199)</td>
<td>(239,477)</td>
</tr>
<tr>
<td>Operating Income</td>
<td>140,968</td>
<td>55,431</td>
</tr>
<tr>
<td>Interest and Other Income</td>
<td>(21,113)</td>
<td>(2,432)</td>
</tr>
<tr>
<td>Interest Expense</td>
<td>(66,185)</td>
<td>(31,665)</td>
</tr>
<tr>
<td>Change in Net Position</td>
<td>$ 53,670</td>
<td>$ 26,198</td>
</tr>
<tr>
<td><strong>Selected Statement of Net Position Information</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction Work in Progress</td>
<td>351,584</td>
<td>2,218</td>
</tr>
<tr>
<td>Unrestricted Cash</td>
<td>$ 451,800</td>
<td>$ 43,175</td>
</tr>
<tr>
<td>Rate Stabilization Fund</td>
<td>$ 143,669</td>
<td>--</td>
</tr>
<tr>
<td>Total Assets</td>
<td>$5,429,137</td>
<td>$1,263,973</td>
</tr>
<tr>
<td>Net Position</td>
<td>$1,777,145</td>
<td>$ 309,297</td>
</tr>
<tr>
<td>Long-Term Debt(3)</td>
<td>$2,166,389</td>
<td>$ 895,711</td>
</tr>
</tbody>
</table>

(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 million in 2019 and $10.9 million in 2018.

(2) Operating Revenues reflect net transfers to (from) the Rate Stabilization Fund as follows:
   
   - **2019:** $47.0 million
   - **2018:** ($3.2 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.
Management’s Discussion of SMUD’s Operating Results

Two Months Ended February 29, 2020 (Unaudited). For the two months ended February 29, 2020, SMUD reported an increase in net position of $13.0 million as compared to a decrease of $37.0 million for the two months ended February 28, 2019.

Operating revenues were $33.5 million lower than 2019. This was primarily due to lower sales of surplus gas ($35.4 million), sales of surplus power ($4.5 million) and AB 32 revenue ($0.5 million), partially offset by higher sales to customers ($2.9 million), RSF transfers ($2.8 million) and public good revenue ($0.6 million) and other electric revenues ($0.6 million).

Operating expenses were $75.9 million lower than 2019. This was primarily due to lower purchased power expenses ($42.2 million), production expense ($34.4 million), transmission and distribution operating expenses ($3.2 million), maintenance expenses ($1.7 million) and depletion expense ($1.0 million), partially offset by higher administrative and general expenses ($2.5 million), amortization of regulatory asset ($2.3 million) and public good expenses ($1.2 million).

Non-Operating income was $8.9 million higher than 2019. This was primarily due to lower project write offs ($6.5 million) and higher unrealized holding gains ($1.1 million), miscellaneous non-operating income ($0.6 million) and interest income ($0.3 million).

Interest expense increased $1.2 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). Amounts transferred to the RSF from Operating Revenues were $47.0 million in 2019 and amounts transferred from the RSF to Operating Revenues were $3.2 million in 2018.

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.
Year Ended December 31, 2018. For the year ended December 31, 2018, SMUD reported an increase in net position of $216.6 million as compared to an increase of $167.5 million for 2017.

Operating revenues were $35.2 million higher than 2017. This was primarily due to lower transfers to the RSF ($67.9 million), higher revenue recognition related to SB-1 ($12.9 million), sales of surplus gas ($8.4 million), revenue from low carbon fuel credit sales ($4.8 million) and revenue recognition for public good ($3.5 million), partially offset by lower sales to customers ($63.2 million). Amounts transferred from the RSF from Operating Revenues were $3.2 million in 2018 and amounts transferred to the RSF from Operating Revenues were $64.7 million in 2017.

Operating expenses were $10.4 million higher than 2017. This was primarily due to higher customer service and information expenses ($14.1 million), production expenses ($13.4 million) and amortization of regulatory assets ($10.6 million), partially offset by lower administrative and general expenses ($18.7 million) and maintenance expenses ($8.6 million).

Non-Operating income increased by $18.7 million primarily due to the gain on a wind facility repurchase ($46.7 million) in 2018, higher distributions from the JPAs ($14.3 million), and lower investment expense ($8.0 million), offset by lower net judgment and arbitration awards ($46.3 million) and higher CCA costs net of revenues ($7.4 million).

Interest expense decreased $5.5 million from 2017.

Regulatory Assets. In accordance with Governmental Accounting Standards Board (“GA SB”) 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, 2019, SMUD had a total of $804.4 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 $391.6 million at December 31, 2019. 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 $319.3 million at December 31, 2019. Regulatory assets associated with Rancho Seco decommissioning costs totaled $81.1 million at December 31, 2019. Nuclear fuel storage costs and non-radioactive 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. As of January 31, 2020, the balance of the Decommissioning Trust Fund was $8.81 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 2,295 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 recently 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, 2021. 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 the California Public Employees’ Retirement System (“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, 2018, the last actuarial valuation date for SMUD’s plan within PERS, the market value of the SMUD plan assets was $1.78 billion. The plan is 77.9% funded on a market value of assets basis, an increase of 1.4% compared to the June 30, 2017 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, 2019, SMUD’s required employer contribution rate for normal cost was 8.2% of payroll and the unfunded liability contribution was $29.4 million. During 2019, SMUD contributed $51.5 million to PERS (including SMUD’s contributions to cover required employee contributions), and SMUD employees paid $15.1 million for their share of the PERS contribution.

For the fiscal years ending June 30, 2020 and June 30, 2021, SMUD is required to contribute 8.7% and 9.1% of payroll for normal costs and $31.1 million and $33.5 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 9.1% of payroll to the plan for normal costs and $37.7 million for the unfunded liability contribution for the fiscal year ending June 30, 2022, 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. Forecasted SMUD contributions do not account for the impact of the COVID-19 pandemic and its related consequences. See “FACTORS AFFECTING THE REGION – Impacts from COVID-19 Pandemic.”

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 $28.4 million, and also voluntarily made an additional payment of $20.0 million, for the unfunded accrued liability for the fiscal year ended June 30, 2019. SMUD also made an annual lump sum prepayment of $30.0 million, and voluntarily made an additional payment of $26.1 million for the unfunded accrued liability for the fiscal year ending June 30, 2020.

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. GASB issued statement No. 73 “Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68” (“GASB No. 73”). GASB No. 73 extends the approach to accounting and financial reporting established by GASB No. 68 to all pensions. The net pension liability as of December 31, 2019 is $467.6 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 $5.4 million in 2019 and $4.9 million in 2018. 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 $24.8 million in 2019 and $23.8 million in 2018.

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 2020, SMUD plans to make a contribution for the normal costs to the CERBT in the amount of $9.5 million. In March 2019 and 2018, SMUD made contributions for the normal costs to the CERBT in the amount of $9.4 million and $9.6 million, respectively. SMUD can elect to make additional contributions to the trust. During 2019 and 2018, SMUD made healthcare benefit contributions by paying actual medical costs of $23.7 million and $25.6 million, respectively. During 2019, SMUD received a $20.0 million reimbursement for cash benefit payments from the CERBT. Forecasted CERBT contributions do not account for the impact of the COVID-19 pandemic.
and its related consequences. See “FACTORS AFFECTING THE REGION – Impacts from COVID-19 Pandemic.”

At June 30, 2019 and 2018, SMUD estimated that the actuarially determined accumulated postemployment benefit obligation was approximately $437.5 and $432.0 million, respectively. At June 30, 2019 and 2018, the plan was 88.6% and 87.5% 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 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 liability as of December 31, 2019 and 2018 is $32.2 million and $22.1 million, respectively.

CAPITAL REQUIREMENTS AND OUTSTANDING INDEBTEDNESS

Estimated Capital Requirements

SMUD has a projected capital requirement of approximately $2.120 billion for the period 2020 through 2024 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 $75 million for Solano Phase 4.

ESTIMATED CAPITAL REQUIREMENTS

(Dollars in Thousands)

<table>
<thead>
<tr>
<th></th>
<th>Service Area and Other System Improvements Including Distribution System</th>
<th>Improvements to Existing Generation Plant</th>
<th>General Plant</th>
<th>Special Projects</th>
<th>Total Capital Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>$235,985</td>
<td>$49,071</td>
<td>$151,222</td>
<td>$13,978</td>
<td>$450,256</td>
</tr>
<tr>
<td>2021</td>
<td>161,389</td>
<td>50,933</td>
<td>123,635</td>
<td>78,120</td>
<td>414,077</td>
</tr>
<tr>
<td>2022</td>
<td>200,451</td>
<td>52,923</td>
<td>127,747</td>
<td>22,203</td>
<td>403,323</td>
</tr>
<tr>
<td>2023</td>
<td>210,151</td>
<td>52,923</td>
<td>139,108</td>
<td>22,203</td>
<td>424,384</td>
</tr>
<tr>
<td>2024</td>
<td>215,551</td>
<td>52,923</td>
<td>137,408</td>
<td>22,203</td>
<td>428,084</td>
</tr>
</tbody>
</table>

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 April 1, 2020, SMUD had Senior Bonds in the aggregate principal amount of $1,778,040,000 outstanding. SMUD’s plan of finance described in the forepart of this Official Statement includes the issuance of $[_______]* aggregate principal amount of Senior Bonds and the refunding of $[_______]* aggregate principal amount of Senior Bonds. 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, NCEA and CSCDA 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 April 1, 2020, 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.

As of April 1, 2020, SMUD’s commercial paper notes (the “Notes”) were outstanding in the aggregate principal amount of $50,000,000. 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

* Preliminary, subject to change.
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 intends to pay \$50,000,000\* of the outstanding principal amount of the Notes with the
proceeds of the 2020 Bonds (as defined in the forepart of this Official Statement). See “PLAN OF
FINANCE” in the forepart of this Official Statement.

**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 October 1, 2019, bonds issued by the Authorities to finance the Local Gas-Fired
Plants were outstanding in the aggregate principal amount of \$126,220,000. 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
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 October 1, 2019, related bonds in the
aggregate principal amount of \$198,610,000 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 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 October 1, 2019, related bonds in the aggregate principal amount of \$539,615,000 remain outstanding.

**Interest Rate Swap Agreements.** SMUD has two interest rate swap agreements relating to
previously or currently outstanding Subordinated Bonds and two forward starting interest rate swap
agreements relating to potential refunding bonds to be issued in the future, as shown in the following table.

---

\* Preliminary, subject to change.
For more information, see Note 9 (Derivative Financial Instruments) to SMUD’s consolidated financial statements.

<table>
<thead>
<tr>
<th>Effective Date</th>
<th>Termination Date</th>
<th>SMUD Pays</th>
<th>SMUD Receives</th>
<th>Notional Amount (000’s)</th>
<th>Counterparty</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/2/1997</td>
<td>7/1/2024</td>
<td>Floating</td>
<td>SIFMA</td>
<td>5.154%</td>
<td>$88,470</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>J Aron &amp; Company LLC</td>
</tr>
<tr>
<td>7/15/2003</td>
<td>8/15/2028</td>
<td>Fixed</td>
<td>2.894%</td>
<td>63% of LIBOR</td>
<td>$85,625</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Morgan Stanley Capital Services, Inc.</td>
</tr>
<tr>
<td>07/21/2021</td>
<td>08/15/2028</td>
<td>Fixed</td>
<td>1.099%</td>
<td>67% of LIBOR</td>
<td>$127,030</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>J Aron &amp; Company LLC</td>
</tr>
<tr>
<td>07/20/2022</td>
<td>08/15/2033</td>
<td>Fixed</td>
<td>1.607%</td>
<td>SIFMA</td>
<td>$157,785</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Morgan Stanley Capital Services, Inc.</td>
</tr>
</tbody>
</table>

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 addition, SMUD is contemplating entering into one or more forward starting interest rate hedging instruments in connection with all or a portion of its outstanding bonds. SMUD does not expect that any such interest rate hedging instruments, if entered into, will be secured by a pledge of revenues of SMUD’s Electric System or any other property of SMUD. Any such interest rate hedging instruments, if entered into, may require SMUD to post collateral under certain circumstances.]

**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.

[Remainder of Page Intentionally Left Blank]
### Debt Service Requirements

<table>
<thead>
<tr>
<th>Calendar Year</th>
<th>Senior Bonds Debt Service (2)</th>
<th>Subordinated Bonds Debt Service (3)</th>
<th>Total Debt Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>$177,114,997</td>
<td>-</td>
<td>$177,114,997</td>
</tr>
<tr>
<td>2020</td>
<td>187,370,981</td>
<td>$10,555,556</td>
<td>197,926,537</td>
</tr>
<tr>
<td>2021</td>
<td>187,233,106</td>
<td>10,000,000</td>
<td>197,233,106</td>
</tr>
<tr>
<td>2022</td>
<td>187,512,094</td>
<td>10,861,111</td>
<td>198,373,205</td>
</tr>
<tr>
<td>2023</td>
<td>195,709,169</td>
<td>7,483,333</td>
<td>203,192,492</td>
</tr>
<tr>
<td>2024</td>
<td>163,573,081</td>
<td>8,833,333</td>
<td>172,406,414</td>
</tr>
<tr>
<td>2025</td>
<td>164,901,156</td>
<td>5,500,000</td>
<td>170,401,156</td>
</tr>
<tr>
<td>2026</td>
<td>165,091,431</td>
<td>6,000,000</td>
<td>171,091,431</td>
</tr>
<tr>
<td>2027</td>
<td>165,196,213</td>
<td>6,000,000</td>
<td>171,196,213</td>
</tr>
<tr>
<td>2028</td>
<td>97,721,837</td>
<td>103,721,837</td>
<td>201,443,674</td>
</tr>
<tr>
<td>2029</td>
<td>108,422,341</td>
<td>114,422,341</td>
<td>222,844,682</td>
</tr>
<tr>
<td>2030</td>
<td>114,233,482</td>
<td>120,233,482</td>
<td>234,466,964</td>
</tr>
<tr>
<td>2031</td>
<td>114,230,045</td>
<td>120,230,045</td>
<td>234,460,090</td>
</tr>
<tr>
<td>2032</td>
<td>114,232,552</td>
<td>120,232,552</td>
<td>234,465,104</td>
</tr>
<tr>
<td>2033</td>
<td>114,236,556</td>
<td>120,236,556</td>
<td>234,473,112</td>
</tr>
<tr>
<td>2034</td>
<td>114,231,723</td>
<td>120,231,723</td>
<td>234,463,446</td>
</tr>
<tr>
<td>2035</td>
<td>114,233,201</td>
<td>120,233,201</td>
<td>234,466,402</td>
</tr>
<tr>
<td>2036</td>
<td>54,103,563</td>
<td>60,103,563</td>
<td>114,207,126</td>
</tr>
<tr>
<td>2037</td>
<td>54,103,563</td>
<td>60,103,563</td>
<td>114,207,126</td>
</tr>
<tr>
<td>2038</td>
<td>54,103,563</td>
<td>60,103,563</td>
<td>114,207,126</td>
</tr>
<tr>
<td>2039</td>
<td>54,101,750</td>
<td>60,101,750</td>
<td>114,203,500</td>
</tr>
<tr>
<td>2040</td>
<td>54,105,000</td>
<td>60,105,000</td>
<td>114,210,000</td>
</tr>
<tr>
<td>2041</td>
<td>54,101,250</td>
<td>60,101,250</td>
<td>114,202,500</td>
</tr>
<tr>
<td>2042</td>
<td>-</td>
<td>28,490,000</td>
<td>28,490,000</td>
</tr>
<tr>
<td>2043</td>
<td>-</td>
<td>28,490,300</td>
<td>28,490,300</td>
</tr>
<tr>
<td>2044</td>
<td>-</td>
<td>28,490,350</td>
<td>28,490,350</td>
</tr>
<tr>
<td>2045</td>
<td>-</td>
<td>28,494,550</td>
<td>28,494,550</td>
</tr>
<tr>
<td>2046</td>
<td>-</td>
<td>28,492,150</td>
<td>28,492,150</td>
</tr>
<tr>
<td>2047</td>
<td>-</td>
<td>28,492,700</td>
<td>28,492,700</td>
</tr>
<tr>
<td>2048</td>
<td>-</td>
<td>28,490,450</td>
<td>28,490,450</td>
</tr>
<tr>
<td>2049</td>
<td>-</td>
<td>28,489,800</td>
<td>28,489,800</td>
</tr>
<tr>
<td>Total</td>
<td><strong>$2,920,757,272</strong></td>
<td><strong>$381,163,633</strong></td>
<td><strong>$3,301,920,905</strong></td>
</tr>
</tbody>
</table>

(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 CSCDA or SMUD’s portion of bonds issued by TANC. Payments by SMUD which are used by the Authorities, NCGA, NCEA, CSCDA 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) Includes the issuance of SMUD’s Electric Revenue Bonds, 2019 Series G. 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) Includes the issuance of the 2019 Subordinated Bonds (as defined in the forepart of this Official Statement). 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 $100 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.

Station E Site Remediation

In October 2013, SMUD purchased property for development of a new substation to replace the North City Substation (“Station E”). Initial development of the site in 2016 uncovered solid and hazardous waste in quantities not indicated by pre-purchase due diligence. SMUD thereafter worked with the Sacramento County Environmental Management Division, the local enforcement agency for the California Department of Resources Recycling and Recovery to obtain approval of soil handling and land use plans for development of the site. Most of that work was completed in 2019, with minor elements to be completed with development of the site, including installing a final cover, grading, drainage, maintenance and landfill gas control measures. SMUD recorded a liability for $16.1 million which turned out to be slightly more than the cost of the overall remediation effort. SMUD filed a legal action against Union Pacific Railroad Co., et al., as the responsible parties, to recover those funds. SMUD management believes that any increased costs ultimately borne by SMUD will not have a material adverse impact on SMUD’s financial position, liquidity or results of operations.

Patua Acquisition Company, LLC

On April 16, 2010, SMUD entered into a 23-year power purchase agreement with Patua Project, LLC (the “Patua PPA”). The fifth amendment to the Patua PPA was signed on November 30, 2016, with the new project owner, Patua Acquisition Company, LLC (“Patua”). The Patua PPA requires Patua to provide a warranty for the annual amount of energy and green attributes produced and delivered to SMUD. If Patua fails to meet the warranty for two consecutive years, it triggers SMUD’s right to reduce the Guaranteed Capacity and Transmission Capacity Requirement as defined in the Patua PPA.

On February 16, 2017, SMUD sent Patua a Notice of Failure to Meet Annual Performance Guarantee, Reduction of Phase 1 Guaranteed Capacity Resizing, and Reduction of Transmission Capacity Requirement pursuant to the terms of the Patua PPA. Patua disagreed with the reductions and on June 9, 2017, after meetings with SMUD staff, sent a letter requesting a meeting with a senior officer to work towards a resolution in accordance with the dispute resolution provisions of the Patua PPA. A meeting of the senior officers occurred. Staff continues to work through the issue with Patua. However, SMUD management does not believe that the outcome will 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. BPA’s justification for the significant increase was to align the hourly rate with its long-term rate based on a perceived shift away from long-term firm transmission service for entities wishing to access the California energy market.

On September 25, 2017, FERC approved BPA’s hourly rate increase on an interim basis, and on March 19, 2018, FERC issued its final confirmation order approving BPA’s rates on a permanent basis. 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.

On November 21, 2017, SMUD appealed FERC’s interim approval of BPA’s Southern Intertie rate increase in the United States District Court, Eastern District of California, seeking an immediate injunction against the rate increase. SMUD jointly appealed with TANC and TID, two other entities that are negatively impacted by the hourly transmission rate increase. The appeal challenges FERC’s review of BPA’s rates. After nearly a year with no action from the court, on October 3, 2018, SMUD, TANC and TID voluntarily dismissed its appeal in the United States District Court, electing to defer to the appeal in the United States Court of Appeals for the Ninth Circuit as discussed in the next paragraph.

FERC’s final order of March 19, 2018, triggered SMUD’s right to appeal BPA’s decision in the Ninth Circuit. SMUD, along with TANC and TID, jointly filed an appeal on June 15, 2018 in the Ninth Circuit seeking to overturn BPA’s Southern Intertie hourly rate increase. The court held oral argument on June 7, 2019 and issued a decision on June 17, 2019. In its decision, the court denied the joint appeal and upheld BPA’s Southern Intertie hourly rate increase. SMUD will 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.
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 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
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. Additional workshops have been ordered to review the electric generator local transmission rates and SMUD will continue to participate in this process to ensure that reductions in the local transmission rates don’t result in a shift of costs to the backbone customers. SMUD management believes that the ultimate resolution of this case will not 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, California 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, California 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 California 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.

Federal Policy on 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.

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 California 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 EPAct 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 EPAct 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 that provide for non-jurisdictional transmission providers have the ability to not accept a project’s cost allocation, El Paso Electric Company (“El Paso”), a jurisdictional transmission provider, petitioned to the Court of Appeals for the 5th Circuit on December 18, 2014. 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. On August 8, 2016, the Court of Appeals for the 5th Circuit granted El Paso’s petition, vacating FERC’s orders on compliance and remanding the cost allocation issue to FERC, concluding FERC acted arbitrarily and capriciously in its mandates regarding the role of non-jurisdictional transmission providers in cost allocation. The Court of Appeals for the 5th Circuit directed FERC to provide a more reasoned explanation for why the non-jurisdictional transmission providers will participate in the binding cost allocation process, or why their lack of participation will not result in unjust and unreasonable rates. On November 16, 2017, FERC issued an order on remand upholding its prior WestConnect orders and providing additional explanation to respond and comply with the Court of Appeals for the 5th Circuit mandate. Subsequently, El Paso, along with the other jurisdictional transmission providers of WestConnect, submitted a request for rehearing with FERC, requesting FERC grant rehearing and modify the order on remand for its failure to address the deficiencies identified by the Court of Appeals for the 5th Circuit. FERC issued an order denying rehearing on June 21, 2018. On August 17, 2018, El Paso appealed FERC’s two orders, petitioning the 5th Circuit for review. SMUD and the other non-jurisdictional transmission providers filed an intervention on September 17, 2018 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. On November 15, 2019, the transmission providers reached an agreement in principle on an alternative option that, if approved by FERC, will resolve all issues. The
jurisdictional transmission providers have drafted OATT provisions to reflect the elements of the agreement in principle, and have shared these with the non-jurisdictional transmission providers. Both sides continue to discuss the OATT changes and the court has held the case in abeyance during the discussions. 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 three regional planning entities in the western interconnection (CAISO, Columbia Grid, and Northern Tier Transmission Group), have developed a common approach to jointly evaluate transmission projects that interconnect two or more regions. The process for allocating costs for such projects defers to the respective regional cost allocation methodologies. The jurisdictional members of WestConnect filed their proposed interregional transmission coordination and cost allocation planning process with the FERC on May 10, 2013. On December 18, 2014, FERC approved the compliance filings. 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. EPAct 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. EPAct 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, EPAct 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 of California 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 was immediately challenged in court, and oral arguments have been held in the D.C. Circuit Court of Appeals.

In June 2018, EPA and NHTSA proposed revised standards, known as the “Safer Affordable Fuel-Efficient Vehicle” (“SAFE”) rule that would set far less stringent requirements on automakers. The SAFE rule, if it goes into effect, may diminish the production of electric vehicles, the adoption of which SMUD has invested in heavily. The SAFE rule is currently undergoing interagency review and is expected to be challenged in court once final.

**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 California, 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. At this time, the current administration has made known that it hopes to see the D.C. Circuit rule and the Supreme Court review the decision before the November 2020 election.

SMUD is unable to predict at this time the outcome of the ongoing litigation, whether any new EPA rulemakings will be undertaken, and 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 California 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 California 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 California 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 California. The regulations became effective on January 1, 2012. As adopted, the cap-and-trade program covers sources accounting for 85% of California’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 California’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. Future potential near-term links to the CARB cap-and-trade program include the states of Oregon, Washington and New Mexico.

CARB has certified three independent offset project registries and adopted five different offset project protocols. During the first compliance period in 2013-2014, entities used offsets for about 4% of their compliance obligations.

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 POU’s 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 POUs 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 California to reduce GHG emissions to 40% below 1990 levels by 2030. In 2016, the California Legislature passed Senate Bill 32 (“SB 32”), which codified Governor Brown’s goal of reducing California GHG emissions to 40% below 1990 levels by 2030. In 2017, the California 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 California 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 California, including power plants, that may cause a significant adverse impact on the environment must be analyzed under CEQA. Some California 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 California 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 California 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 California 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 POUs 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 California 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, California 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 POUs 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 California-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.

**Renewables Portfolio Standard.** In September 2002, the California Legislature enacted and the Governor signed into law Senate Bill 1078 (“SB 1078”). SB 1078 required that the IOUs adopt a RPS to meet a minimum of 1% of retail energy sales needs each year from renewable resources and to meet a goal of 20% of their retail energy needs from renewable energy resources by the year 2017. SB 1078 also directed the State’s municipal electric utilities to implement and enforce an RPS that recognizes the intent of the Legislature to encourage renewable resources, taking into consideration the impact of the standard on a utility’s rates, reliability, financial resources, and the goal of environmental improvement. On September 26, 2006, the Governor of the State signed Senate Bill 107 (“SB 107”) into law, which requires IOUs to have 20% of their electricity come from renewable sources by 2010 and still prescribes that the local publicly owned utilities meet the intent of the State Legislature. As discussed under “BUSINESS STRATEGY – Sustainable Power Supply and Transmission – Renewable Energy,” the State has adopted a 33% RPS mandate to be met by all utilities by 2020. The Board adopted a 33% goal for 2020 in December 2008. SMUD met its RPS target of 20% by 2010 and is on track to meet the 2020 goal of 33%.

Since the implementation of SB 1078, the CPUC and the CEC have taken a number of actions that have had an impact on the renewable energy goals set by the legislation. In order to overcome the challenges associated with meeting accelerated RPS goals, the CPUC and the CEC supported the implementation of a renewable energy certificate trading system to meet the accelerated RPS goals. SB 107 allows this flexibility, with the condition that the energy is delivered to an in-state trading hub.

In parallel, pursuant to SB 1078, the CEC, the Western Governors’ Association and the WECC have collaboratively undertaken the development and establishment of the Western Renewable Energy Generation Information System (“WREGIS”), which will be used to ensure the integrity of renewable energy certificates and prevent the double counting of the certificates. The electronic tracking system became operational in June of 2007.

Senate Bill X1-2 (“SBX1-2”), the “California Renewable Energy Resources Act,” was signed into law by Governor Jerry Brown on April 12, 2011. SBX1-2 codifies the RPS target for retail electricity sellers to serve 33% of their loads with eligible renewable energy resources by 2020 as provided in Executive Order S-14-08. As enacted, SBX1-2 makes the requirements of the RPS program applicable to local, publicly-owned electric utilities (rather than just prescribing that local, publicly-owned electric utilities meet the intent of the legislation as under previous statutes). However, the governing boards of local, publicly-owned electric utilities are responsible for implementing the requirements, rather than the CPUC, as is the case for the IOUs. In addition, certain enforcement authority with respect to local, publicly-owned electric utilities is given to the CEC and CARB, including authority to impose penalties. SBX1-2 provides that in order to fulfill unmet long-term generation resource needs, each local, publicly-owned electric utility is required to adopt and implement a renewable energy resources procurement plan that requires the utility to procure a minimum quantity of electricity products from eligible renewable energy resources, including unbundled RECs, as a specified percentage of total kilowatt hours sold to the utility’s retail end-use customers to achieve the following targets: (i) an average of 20% for the period January 1, 2011 to December 31, 2013, inclusive; (ii) 25% by December 31, 2016; and (iii) 33% by December 31, 2020 and for all subsequent years. In addition to the specific requirements in 2016 and 2020, SBX1-2 also
required procurement of quantities of renewable power in the years 2014-2015 and 2017-2019 sufficient to show reasonable progress toward achieving the above goals.

In addition to the overall percentage procurement requirements, SBX1-2 created 4 subcategories of RPS resources. Grandfathered resources, also known as “count in full” and “Category 0” resources, include any facility with a contract signed prior to June 1, 2010 that meets the eligibility requirements defined in the bill. Category 1 resources are those signed after June 1, 2010 that are located in California or directly delivered to California without using substitute power sources. Category 2 resources are those signed after June 1, 2010 that are associated with substitute energy delivered to California (firmed and shaped transactions). Finally, Category 3 resources are those signed after June 1, 2010 that do not meet the requirements for placement in Category 1 or 2, including unbundled RECs. All unbundled RECs, regardless of source, have been placed in Category 3. The percentage of a retail electricity seller’s or publicly owned utility’s non-grandfathered RPS requirements (that is, the procurement from Categories 1-3 above) that must come from Category 1 resources is at least 50% through 2013 and increasing to a level of 75% in 2017 and beyond. Similarly, the percentage of non-grandfathered RPS requirements that may be met with Category 3 resources declines over time, beginning at 25% through 2013 and declining to a level of 10% in 2017 and beyond. SB 350 established increased RPS requirements after 2020, moving the basic requirement to serve 50% of loads from renewable resources by 2030.

Senate Bill 100 was passed by the Legislature and approved by Governor Brown on September 10, 2018. The bill accelerates the 50% RPS target to 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 California Legislature enacted, and the Governor signed into law, Assembly Bill 2514 (“AB 2514”). AB 2514 required the CPUC, by March 1, 2012, to open a proceeding to determine appropriate targets, if any, for each load-serving entity to procure viable and cost-effective energy storage systems and, by October 1, 2013, to adopt an energy storage system procurement target, if determined to be appropriate, to be achieved by each load-serving entity by December 31, 2015, and a second target to be achieved by each load-serving entity by December 31, 2020. On or before March 1, 2012, the governing board of each local publicly owned electric utility 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. As part of this proceeding, the governing board was permitted to consider a variety of possible policies to encourage the cost-effective deployment of energy storage systems, including refinement of existing procurement methods to properly value energy storage systems. The bill requires each load-serving entity and local publicly owned electric utility to report certain information to the CPUC, for a load-serving entity, or to the CEC, for a local publicly owned electric utility. 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%. Both former Governor Brown and current Governor Newsom have urged the SWRCB, other agencies and affected parties to execute voluntary agreements to address species’ needs and outflow requirements and those negotiations are developing vigorously, and the affected State agencies have focused substantial effort on the agreements in the first quarter of 2020, 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 California 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 POUs (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 POUs, 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 California’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 POUs, 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. POUs are not required to adhere to SB 247, but there will likely be market impacts that will affect SMUD as it relates to 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. POUs 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 last year, 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 with which it partners. 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 California 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% reserve margin. 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. Other public power agencies, including Seattle City Light and the Salt River Project, are planning to participate in 2020, TID and the Los Angeles Department of Water and Power are planning to participate in 2021, and Tacoma Power is expected to participate in 2022. Two IOUs, Public Service Company of New Mexico and NorthWestern Energy, recently announced their intent to join the EIM in 2021 and two more IOUs, Tucson Electric Power and Avista, intend to join the EIM in 2022.

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, with a proposed start date of April 1, 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 2022.

Community Choice Aggregation

California 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 California 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, City of Davis, and City of Woodland. 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, Union City, and Alameda County to implement a local CCA program.

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, Lost 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 the 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.

PG&E Bankruptcy

The statements under this caption regarding the financial condition of Pacific Gas & Electric ("PG&E"), PG&E’s potential wildfire liabilities, and actions and developments in connection with PG&E’s voluntary bankruptcy filing have been obtained from public sources that SMUD believes to be reliable, but such statements have not been independently verified by SMUD and SMUD assumes no responsibility for the accuracy or completeness thereof.

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”). On January 29, 2019, PG&E and PG&E Corporation filed for bankruptcy protection under Chapter 11 of the Bankruptcy Code. A Chapter 11 case under the Bankruptcy Code is utilized to accomplish either a restructuring and/or a liquidation of business.

In its bankruptcy filings, PG&E indicated that its voluntary bankruptcy filing was initiated to address extraordinary financial challenges. These are largely attributed to PG&E’s potential liabilities associated with a number of wildfires that occurred in Northern California in 2017 and 2018. In its Form 8-K filing with the Securities and Exchange Commission reporting its intent to file voluntary bankruptcy (the “PG&E SEC filing”) and its subsequent bankruptcy filings, PG&E estimated that if it were found liable for certain or all the costs, expenses and other losses with respect to the 2017 and 2018 Northern California wildfires, the amount of such liability (exclusive of potential punitive damages, fines and penalties or damages related to future claims) could exceed $30 billion. SB 901, which was enacted by California legislature in September 2018, addressed a portion of the liabilities PG&E faced in connection with the 2017 wildfires. That legislation, however, expressly excluded any similar relief for wildfires occurring in 2018. AB 1054, which was enacted by the legislature in July 2019 (described above) addresses certain liabilities for eligible future wildfire costs but will not cover any liabilities arising from previous 2017 and 2018 wildfires. See also “DEVELOPMENTS IN THE ENERGY MARKETS – State Legislation and Regulatory Proceedings – Wildfire Legislation.”

With approval from the bankruptcy court, PG&E has continued to operate both its electric and gas systems. PG&E obtained, and the bankruptcy court approved its access to, approximately $5.5 billion in secured debtor-in-possession financing (“DIP Financing”) from several financial institutions to provide liquidity to fund its operations during the Chapter 11 process.

On September 9, 2019 PG&E filed its Plan of Reorganization with the Bankruptcy Court. The reorganization plan provides for an exit from bankruptcy prior to the June 30, 2020 deadline for PG&E to participate in the Wildfire Fund established by AB 1054. The plan requires approval by a majority of the impaired creditors (i.e., those creditors who would not be receiving the full amount of their claims under the reorganization plan) and the CPUC before it can be confirmed. Settlements have been approved with several different creditor groups, and PG&E has amended its plan to address these settlements. The period for filing objections to the Plan confirmation is pending; and is currently scheduled to conclude on May 15, 2020. On October 4, 2019, the CPUC initiated a proceeding to investigate the ratemaking and other implications for PG&E that will result from the confirmation of a plan of reorganization and other regulatory approvals necessary to resolve PG&E’s bankruptcy case; a decision in this proceeding is expected prior to the June 30 deadline.
PG&E proposes some changes in its amended Plan and, in addition to certain treatment of wildfire related claims, to pay in full, with interest, of all prepetition funded debt obligations, all prepetition trade claims and employee-related claims and to assume all power purchase agreements and community choice aggregation servicing agreements. Subject to Bankruptcy Court approval, Chapter 11 debtors have the power to assume or reject contractual arrangements. Chapter 11 debtors may seek to reject contracts that are uneconomic or otherwise burdensome to the debtor. In the event PG&E were to seek to reject some power purchase agreements, and if the rejection is ordered by the court, there may be further market impacts. The risk of, or actual rejection by, PG&E of existing power supply contracts or contracts relating to the development of future resources or technologies (such as transportation electrification, energy storage and renewable energy sources) may impact the willingness of developers and investors to do business in California and could impair the procurement efforts of other California electric utilities by reducing their access to such resources and technologies and/or increasing their costs. Although PG&E may still seek to reject certain executory contracts, including power purchase and sale agreements, SMUD does not have any long-term agreements with PG&E that if rejected in bankruptcy would result in a material impact to SMUD. SMUD timely submitted its pre-petition claims, the total amount of which is not material.

Due to the number of uncertainties surrounding the PG&E bankruptcy SMUD is unable to predict the full effects of the PG&E bankruptcy on SMUD or the California electric markets at this time. SMUD is closely monitoring the PG&E bankruptcy developments and does not anticipate any material impacts to SMUD.

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) shifts in the availability and relative costs of different fuels (including the cost of natural gas); (m) 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 California; (n) 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; (o) other legislative changes, voter initiatives, referenda and
statewide propositions; (p) effects of changes in the economy; (q) effects of possible manipulation of the electric markets; (r) natural disasters or other physical calamities, including, but not limited to, earthquakes, droughts, severe weather, wildfires and floods; (s) 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; and (t) issues relating to cyber security. 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 2019 Bonds should obtain and review such information.

[Remainder of Page Intentionally Left Blank]
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 2020 Bonds or (b) certificates representing ownership interest in or other confirmation of ownership interest in the 2020 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 2020 Bonds. The 2020 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 2020 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 2020 Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the 2020 Bonds on DTC’s records. The ownership interest of each actual purchaser of each 2020 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 2020 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 2020 Bonds, except in the event that use of the book-entry system for the 2020 Bonds is discontinued.
To facilitate subsequent transfers, all 2020 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 2020 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 2020 Bonds; DTC’s records reflect only the identity of the Direct Participants to whose accounts such 2020 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 2020 Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the 2020 Bonds, such as redemptions, tenders, defaults, and proposed amendments to the Bond documents. For example, Beneficial Owners of the 2020 Bonds may wish to ascertain that the nominee holding the 2020 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 2020 Bonds is being redeemed, DTC’s practice is to determine by lot the amount of the interest of each Direct Participant in the 2020 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 2020 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 2020 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 2020 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 2020 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 2020 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 2020 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 2020 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 2020 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 2020 Bonds, by virtue of their purchase of the 2020 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 2020 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.

D-4

4149-1591-5299.4
The 2020 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 an irrevocable surety bond are available in the Reserve Fund in the amount of the Reserve Fund Requirement.
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 2020 Bonds

If Refunding Bonds are issued for the purpose of refunding 2020 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 2020 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 2020 Bonds then outstanding at or before their maturity date, all liability of SMUD in respect of such 2020 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 2020 Bonds, then said 2020 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.
APPENDIX E

PROPOSED FORM OF LEGAL OPINION FOR 2020 BONDS

[Closing Date]

Sacramento Municipal Utility District
Sacramento, California

Sacramento Municipal Utility District
Electric Revenue Bonds, 2020 Series H and
Electric Revenue Refunding Bonds, 2020 Series I (Federally Taxable)
(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 Bonds, 2020 Series H (the "2020 Series H Bonds") and $_________ aggregate principal amount of Sacramento Municipal Utility District Electric Revenue Refunding Bonds, 2020 Series I (Federally Taxable) (the "2020 Series I Bonds") and, collectively with the 2020 Series H Bonds, the "2020 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. 20-04-___, adopted April 16, 2020 (the "Sixty-Third 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 2020 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 2020 Bonds 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 2020 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 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. 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 2020 Series H 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 2020 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 April __, 2020, or other offering material relating to the 2020 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 2020 Bonds constitute the valid and binding limited obligations of SMUD.

2. The Resolution, including the Sixty-Third 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 2020 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 2020 Series H 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. Interest on the 2020 Series H Bonds is not a specific preference item for purposes of the federal alternative minimum tax. Interest on the 2020 Series I Bonds is exempt from State of California personal income taxes. We observe that interest on the 2020 Series I Bonds is not excluded from gross income for federal income tax purposes under Section 103 of the Code. 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 2020 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 Bonds, 2020 Series H (the “2020 Series H Bonds”) and $________ aggregate principal amount of Sacramento Municipal Utility District Electric Revenue Refunding Bonds, 2020 Series I (Federally Taxable) (the “2020 Series I Bonds” and, collectively with the 2020 Series I Bonds, the “2020 Bonds”). The 2020 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. 20-04-__ , adopted on April 16, 2020 (the “Resolution”). Pursuant to Section 134.12 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 2020 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 2020 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 2020 Bonds required to comply with the Rule in connection with offering of the 2020 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, no 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 2020 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 April __, 2020 and related to the 2020 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 2020 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 2020 Series H Bonds or other material events adversely affecting the tax status of the 2020 Series H 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 2020 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).
(c) 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 2020 Bonds. If such termination occurs prior to the final maturity of the 2020 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 2020 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 2020 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 2020 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 2020 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 2020 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 2020 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 2020 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: May __, 2020.

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 Bonds, 2020 Series H
Electric Revenue Refunding Bonds, 2020 Series I (Federally Taxable)

Name of Borrower: Sacramento Municipal Utility District

Date of Issuance: May __, 2020

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 134.12 of Resolution No. 20-04-__, adopted April 16, 2020, 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
Citibank, N.A. and Sacramento Municipal Utility District have entered and/or anticipate entering into one or more transactions (each a “Transaction”) that are or will be governed by this Master Agreement (the “Master Agreement”), which includes the schedule (the “Schedule”), and the documents and other confirming evidence (each a “Confirmation”) exchanged between the parties confirming those Transactions.

Accordingly, the parties agree as follows:—

1. Interpretation

(a) **Definitions.** The terms defined in Section 12 and in the Schedule will have the meanings therein specified for the purpose of this Master Agreement.

(b) **Inconsistency.** In the event of any inconsistency between the provisions of the Schedule and the other provisions of this Master Agreement, the Schedule will prevail. In the event of any inconsistency between the provisions of any Confirmation and this Master Agreement (including the Schedule), such Confirmation will prevail for the purpose of the relevant Transaction.

(c) **Single Agreement.** All Transactions are entered into in reliance on the fact that this Master Agreement and all Confirmations form a single agreement between the parties (collectively referred to as this “Agreement”), and the parties would not otherwise enter into any Transactions.

2. Obligations

(a) **General Conditions.**

(i) Each party will make each payment or delivery specified in each Confirmation to be made by it, subject to the other provisions of this Agreement.

(ii) Payments under this Agreement will be made on the due date for value on that date in the place of the account specified in the relevant Confirmation or otherwise
pursuant to this Agreement, in freely transferable funds and in the manner customary for payments in the required currency. Where settlement is by delivery (that is, other than by payment), such delivery will be made for receipt on the due date in the manner customary for the relevant obligation unless otherwise specified in the relevant Confirmation or elsewhere in this Agreement.

(iii) Each obligation of each party under Section 2(a)(i) is subject to (1) the condition precedent that no Event of Default or Potential Event of Default with respect to the other party has occurred and is continuing, (2) the condition precedent that no Early Termination Date in respect of the relevant Transaction has occurred or been effectively designated and (3) each other applicable condition precedent specified in this Agreement.

(b) **Change of Account.** Either party may change its account for receiving a payment or delivery by giving notice to the other party at least five Local Business Days prior to the scheduled date for the payment or delivery to which such change applies unless such other party gives timely notice of a reasonable objection to such change.

(c) **Netting.** If on any date amounts would otherwise be payable:

(i) in the same currency; and

(ii) in respect of the same Transaction,

by each party to the other, then, on such date, each party’s obligation to make payment of any such amount will be automatically satisfied and discharged and, if the aggregate amount that would otherwise have been payable by one party exceeds the aggregate amount that would otherwise have been payable by the other party, replaced by an obligation upon the party by whom the larger aggregate amount would have been payable to pay to the other party the excess of the larger aggregate amount over the smaller aggregate amount.

The parties may elect in respect of two or more Transactions that a net amount will be determined in respect of all amounts payable on the same date in the same currency in respect of such Transactions, regardless of whether such amounts are payable in respect of the same Transaction. The election may be made in the Schedule or a Confirmation by specifying that subparagraph (ii) above will not apply to the Transactions identified as being subject to the election, together with the starting date (in which case subparagraph (ii) above will not, or will cease to, apply to such Transactions from such date). This election may be made separately for different groups of Transactions and will apply separately to each pairing of branches or offices through which the parties make and receive payments or deliveries.

(d) **Default Interest; Other Amounts.** Prior to the occurrence or effective designation of an Early Termination Date in respect of the relevant Transaction, a party that defaults in the performance of any payment obligation will, to the extent permitted by law and subject to Section 6(c), be required to pay interest (before as well as after judgment) on the overdue amount to the other party on demand in the same currency as such overdue amount, for the period from (and including) the original due date for payment to (but excluding) the date of actual payment, at the Default Rate. Such interest will be calculated on the basis of daily compounding and the
actual number of days elapsed. If, prior to the occurrence or effective designation of an Early Termination Date in respect of the relevant Transaction, a party defaults in the performance of any obligation required to be settled by delivery, it will compensate the other party on demand if and to the extent provided for in the relevant Confirmation or elsewhere in this Agreement.

3. Representations

Each party represents to the other party (which representations will be deemed to be repeated by each party on each date on which a Transaction is entered into) that:—

(a) **Basic Representations.**

(i) **Status.** It is duly organized and validly existing under the laws of the jurisdiction of its organization or incorporation and, if relevant under such laws, in good standing;

(ii) **Powers.** It has the power to execute this Agreement and any other documentation relating to this Agreement to which it is a party, to deliver this Agreement and any other documentation relating to this Agreement that it is required by this Agreement to deliver and to perform its obligations under this Agreement and any obligations it has under any Credit Support Document to which it is a party and has taken all necessary action to authorize such execution, delivery and performance;

(iii) **No Violation or Conflict.** Such execution, delivery and performance do not violate or conflict with any law applicable to it, any provision of its constitutional documents, any order or judgment of any court or other agency of government applicable to it or any of its assets or any contractual restriction binding on or affecting it or any of its assets;

(iv) **Consents.** All governmental and other consents that are required to have been obtained by it with respect to this Agreement or any Credit Support Document to which it is a party have been obtained and are in full force and effect and all conditions of any such consents have been complied with; and

(v) **Obligations Binding.** Its obligations under this Agreement and any Credit Support Document to which it is a party constitute its legal, valid and binding obligations, enforceable in accordance with their respective terms (subject to applicable bankruptcy, reorganization, insolvency, moratorium or similar laws affecting creditors’ rights generally and subject, as to enforceability, to equitable principles of general application (regardless of whether enforcement is sought in a proceeding in equity or at law)).

(b) **Absence of Certain Events.** No Event of Default or Potential Event of Default or, to its knowledge, Termination Event with respect to it has occurred and is continuing and no such event or circumstance would occur as a result of its entering into or performing its obligations under this Agreement or any Credit Support Document to which it is a party.

(c) **Absence of Litigation.** There is not pending or, to its knowledge, threatened against it or any of its Affiliates any action, suit or proceeding at law or in equity or before any court,
tribunal, governmental body, agency or official or any arbitrator that is likely to affect the legality, validity or enforceability against it of this Agreement or any Credit Support Document to which it is a party or its ability to perform its obligations under this Agreement or such Credit Support Document.

(d) **Accuracy of Specified Information.** All applicable information that is furnished in writing by or on behalf of it to the other party and is identified for the purpose of this Section 3(d) in the Schedule is, as of the date of the information, true, accurate and complete in every material respect.

4. **Agreements**

Each party agrees with the other that, so long as either party has or may have any obligation under this Agreement or under any Credit Support Document to which it is a party:—

(a) **Furnish Specified Information.** It will deliver to the other party any forms, documents or certificates specified in the Schedule or any Confirmation by the date specified in the Schedule or such Confirmation or, if none is specified, as soon as reasonably practicable.

(b) **Maintain Authorizations.** It will use all reasonable efforts to maintain in full force and effect all consents of any governmental or other authority that are required to be obtained by it with respect to this Agreement or any Credit Support Document to which it is a party and will use all reasonable efforts to obtain any that may become necessary in the future.

(c) **Comply with Laws.** It will comply in all material respects with all applicable laws and orders to which it may be subject if failure so to comply would materially impair its ability to perform its obligations under this Agreement or any Credit Support Document to which it is a party.

5. **Events of Default and Termination Events**

(a) **Events of Default.** The occurrence at any time with respect to a party or, if applicable, any Credit Support Provider of such party or any Specified Entity of such party of any of the following events constitutes an event of default (an “Event of Default”) with respect to such party:—

(i) **Failure to Pay or Deliver.** Failure by the party to make, when due, any payment under this Agreement or delivery under Section 2(a)(i) or 2(d) required to be made by it if such failure is not remedied on or before the third Local Business Day after notice of such failure is given to the party;

(ii) **Breach of Agreement.** Failure by the party to comply with or perform any agreement or obligation (other than an obligation to make any payment under this Agreement or delivery under Section 2(a)(i) or 2(d) or to give notice of a Termination Event) to be complied with or performed by the party in accordance with this Agreement if such failure is not remedied on or before the thirtieth day after notice of such failure is given to the party;

Copyright © 1992 by International Swaps and Derivatives Association, Inc.
(iii) **Credit Support Default.**

(1) Failure by the party or any Credit Support Provider of such party to comply with or perform any agreement or obligation to be complied with or performed by it in accordance with any Credit Support Document if such failure is continuing after any applicable grace period has elapsed;

(2) the expiration or termination of such Credit Support Document or the failing or ceasing of such Credit Support Document to be in full force and effect for the purpose of this Agreement (in either case other than in accordance with its terms) prior to the satisfaction of all obligations of such party under each Transaction to which such Credit Support Document relates without the written consent of the other party; or

(3) the party or such Credit Support Provider disaffirms, disclaims, repudiates or rejects, in whole or in part, or challenges the validity of, such Credit Support Document;

(iv) **Misrepresentation.** A representation made or repeated or deemed to have been made or repeated by the party or any Credit Support Provider of such party in this Agreement or any Credit Support Document proves to have been incorrect or misleading in any material respect when made or repeated or deemed to have been made or repeated;

(v) **Default under Specified Transaction.** The party, any Credit Support Provider of such party or any applicable Specified Entity of such party (1) defaults under a Specified Transaction and, after giving effect to any applicable notice requirement or grace period, there occurs a liquidation of, an acceleration of obligations under, or an early termination of, that Specified Transaction, (2) defaults, after giving effect to any applicable notice requirement or grace period, in making any payment or delivery due on the last payment, delivery or exchange date of, or any payment on early termination of, a Specified Transaction (or such default continues for at least three Local Business Days if there is no applicable notice requirement or grace period) or (3) disaffirms, disclaims, repudiates or rejects, in whole or in part, a Specified Transaction (or such action is taken by any person or entity appointed or empowered to operate it or act on its behalf);

(vi) **Cross Default.** If “Cross Default” is specified in the Schedule as applying to the party, the occurrence or existence of (1) a default, event of default or other similar condition or event (however described) in respect of such party, any Credit Support Provider of such party or any applicable Specified Entity of such party under one or more agreements or instruments relating to Specified Indebtedness of any of them (individually or collectively) in an aggregate amount of not less than the applicable Threshold Amount (as specified in the Schedule) which has resulted in such Specified Indebtedness becoming, or becoming capable at such time of being declared, due and payable under such agreements or instruments, before it would otherwise have been due and payable or (2) a default by such party, such Credit Support Provider or such Specified Entity (individually or collectively) in making one or more payments on the due date thereof in an aggregate amount of not less than the applicable Threshold Amount under such
agreements or instruments (after giving effect to any applicable notice requirement or grace period);

(vii) **Bankruptcy.** The party, any Credit Support Provider of such party or any applicable Specified Entity of such party:—

1. is dissolved (other than pursuant to a consolidation, amalgamation or merger); (2) becomes insolvent or is unable to pay its debts or fails or admits in writing its inability generally to pay its debts as they become due; (3) makes a general assignment, arrangement or composition with or for the benefit of its creditors; (4) institutes or has instituted against it a proceeding seeking a judgment of insolvency or bankruptcy or any other relief under any bankruptcy or insolvency law or other similar law affecting creditors’ rights, or a petition is presented for its winding-up or liquidation, and, in the case of any such proceeding or petition instituted or presented against it, such proceeding or petition (A) results in a judgment of insolvency or bankruptcy or the entry of an order for relief or the making of an order for its winding-up or liquidation or (B) is not dismissed, discharged, stayed or restrained in each case within 30 days of the institution or presentation thereof; (5) has a resolution passed for its winding-up, official management or liquidation (other than pursuant to a consolidation, amalgamation or merger); (6) seeks or becomes subject to the appointment of an administrator, provisional liquidator, conservator, receiver, trustee, custodian or other similar official for it or for all or substantially all its assets; (7) has a secured party take possession of all or substantially all its assets or has a distress, execution, attachment, sequestration or other legal process levied, enforced or sued on or against all or substantially all its assets and such secured party maintains possession, or any such process is not dismissed, discharged, stayed or restrained, in each case within 30 days thereafter; (8) causes or is subject to any event with respect to it which, under the applicable laws of any jurisdiction, has an analogous effect to any of the events specified in clauses (1) to (7) (inclusive); or (9) takes any action in furtherance of, or indicating its consent to, approval of, or acquiescence in, any of the foregoing acts; or

(viii) **Merger Without Assumption.** The party or any Credit Support Provider of such party consolidates or amalgamates with, or merges with or into, or transfers all or substantially all its assets to, another entity and, at the time of such consolidation, amalgamation, merger or transfer:—

1. the resulting, surviving or transferee entity fails to assume all the obligations of such party or such Credit Support Provider under this Agreement or any Credit Support Document to which it or its predecessor was a party by operation of law or pursuant to an agreement reasonably satisfactory to the other party to this Agreement; or

2. the benefits of any Credit Support Document fail to extend (without the consent of the other party) to the performance by such resulting, surviving or transferee entity of its obligations under this Agreement.
(b) **Termination Events.** The occurrence at any time with respect to a party or, if applicable, any Credit Support Provider of such party or any Specified Entity of such party of any event specified below constitutes an Illegality if the event is specified in (i) below, and, if specified to be applicable, a Credit Event Upon Merger if the event is specified pursuant to (ii) below or an Additional Termination Event if the event is specified pursuant to (iii) below:—

(i) **Illegality.** Due to the adoption of, or any change in, any applicable law after the date on which a Transaction is entered into, or due to the promulgation of, or any change in, the interpretation by any court, tribunal or regulatory authority with competent jurisdiction of any applicable law after such date, it becomes unlawful (other than as a result of a breach by the party of Section 4(b)) for such party (which will be the Affected Party):—

(1) to perform any absolute or contingent obligation to make a payment or delivery or to receive a payment or delivery in respect of such Transaction or to comply with any other material provision of this Agreement relating to such Transaction; or

(2) to perform, or for any Credit Support Provider of such party to perform, any contingent or other obligation which the party (or such Credit Support Provider) has under any Credit Support Document relating to such Transaction;

(ii) **Credit Event Upon Merger.** If “Credit Event Upon Merger” is specified in the Schedule as applying to the party, such party (“X”), any Credit Support Provider of X or any applicable Specified Entity of X consolidates or amalgamates with, or merges with or into, or transfers all or substantially all its assets to, another entity and such action does not constitute an event described in Section 5(a)(viii) but the creditworthiness of the resulting, surviving or transferee entity is materially weaker than that of X, such Credit Support Provider or such Specified Entity, as the case may be, immediately prior to such action (and, in such event, X or its successor or transferee, as appropriate, will be the Affected Party); or

(iii) **Additional Termination Event.** If any “Additional Termination Event” is specified in the Schedule or any Confirmation as applying, the occurrence of such event (and, in such event, the Affected Party or Affected Parties shall be as specified for such Additional Termination Event in the Schedule or such Confirmation).

(c) **Event of Default and Illegality.** If an event or circumstance which would otherwise constitute or give rise to an Event of Default also constitutes an Illegality, it will be treated as an Illegality and will not constitute an Event of Default.

6. **Early Termination**

(a) **Right to Terminate Following Event of Default.** If at any time an Event of Default with respect to a party (the “Defaulting Party”) has occurred and is then continuing, the other party (the “Non-defaulting Party”) may, by not more than 20 days notice to the Defaulting Party specifying the relevant Event of Default, designate a day not earlier than the day such notice is
effective as an Early Termination Date in respect of all outstanding Transactions. If, however, “Automatic Early Termination” is specified in the Schedule as applying to a party, then an Early Termination Date in respect of all outstanding Transactions will occur immediately upon the occurrence with respect to such party of an Event of Default specified in Section 5(a)(vii)(1), (3), (5), (6) or, to the extent analogous thereto, (8), and as of the time immediately preceding the institution of the relevant proceeding or the presentation of the relevant petition upon the occurrence with respect to such party of an Event of Default specified in Section 5(a)(vii)(4) or, to the extent analogous thereto, (8).

(b) **Right to Terminate Following Termination Event.**

(i) **Notice.** If a Termination Event occurs, an Affected Party will, promptly upon becoming aware of it, notify the other party, specifying the nature of that Termination Event and each Affected Transaction and will also give such other information about that Termination Event as the other party may reasonably require.

(ii) **Two Affected Parties.** If an Illegality under Section 5(b)(i)(1) occurs and there are two Affected Parties, each party will use all reasonable efforts to reach agreement within 30 days after notice thereof is given under Section 6(b)(i) on action to avoid that Termination Event.

(iii) **Right to Terminate.** If:—

1. an agreement under Section 6(b)(ii) has not been effected with respect to all Affected Transactions within 30 days after an Affected Party gives notice under Section 6(b)(i); or

2. an Illegality other than that referred to in Section 6(b)(ii), a Credit Event Upon Merger or an Additional Termination Event occurs,

either party in the case of an Illegality, any Affected Party in the case of an Additional Termination Event if there is more than one Affected Party, or the party which is not the Affected Party in the case of a Credit Event Upon Merger or an Additional Termination Event if there is only one Affected Party may, by not more than 20 days notice to the other party and provided that the relevant Termination Event is then continuing, designate a day not earlier than the day such notice is effective as an Early Termination Date in respect of all Affected Transactions.

(c) **Effect of Designation.**

(i) If notice designating an Early Termination Date is given under Section 6(a) or (b), the Early Termination Date will occur on the date so designated, whether or not the relevant Event of Default or Termination Event is then continuing.

(ii) Upon the occurrence or effective designation of an Early Termination Date, no further payments or deliveries under Section 2(a)(i) or 2(d) in respect of the Terminated Transactions will be required to be made, but without prejudice to the other provisions of
this Agreement. The amount, if any, payable in respect of an Early Termination Date shall be determined pursuant to Section 6(e).

(d) **Calculations.**

(i) **Statement.** On or as soon as reasonably practicable following the occurrence of an Early Termination Date, each party will make the calculations on its part, if any, contemplated by Section 6(e) and will provide to the other party a statement (1) showing, in reasonable detail, such calculations (including all relevant quotations and specifying any amount payable under Section 6(e)) and (2) giving details of the relevant account to which any amount payable to it is to be paid. In the absence of written confirmation from the source of a quotation obtained in determining a Market Quotation, the records of the party obtaining such quotation will be conclusive evidence of the existence and accuracy of such quotation.

(ii) **Payment Date.** An amount calculated as being due in respect of any Early Termination Date under Section 6(e) will be payable on the day that notice of the amount payable is effective (in the case of an Early Termination Date which is designated or occurs as a result of an Event of Default) and on the day which is two Local Business Days after the day on which notice of the amount payable is effective (in the case of an Early Termination Date which is designated as a result of a Termination Event). Such amount will be paid together with (to the extent permitted under applicable law) interest thereon (before as well as after judgment), from (and including) the relevant Early Termination Date to (but excluding) the date such amount is paid, at the Applicable Rate. Such interest will be calculated on the basis of daily compounding and the actual number of days elapsed.

(e) **Payments on Early Termination.** If an Early Termination Date occurs, the following provisions shall apply based on the parties’ election in the Schedule of a payment measure, either “Market Quotation” or “Loss,” and a payment method, either the “First Method” or the “Second Method.” If the parties fail to designate a payment measure or payment method in the Schedule, it will be deemed that “Market Quotation” or the “Second Method,” as the case may be, shall apply. The amount, if any, payable in respect of an Early Termination Date and determined pursuant to this Section will be subject to any Set-off.

(i) **Events of Default.** If the Early Termination Date results from an Event of Default:

(1) **First Method and Market Quotation.** If the First Method and Market Quotation apply, the Defaulting Party will pay to the Non-defaulting Party the excess, if a positive number, of (A) the sum of the Settlement Amount (determined by the Non-defaulting Party) in respect of the Terminated Transactions and the Unpaid Amounts owing to the Non-defaulting Party over (B) the Unpaid Amounts owing to the Defaulting Party.
(2) **First Method and Loss.** If the First Method and Loss apply, the Defaulting Party will pay to the Non-defaulting Party, if a positive number, the Non-defaulting Party’s Loss in respect of this Agreement.

(3) **Second Method and Market Quotation.** If the Second Method and Market Quotation apply, an amount will be payable equal to (A) the sum of the Settlement Amount (determined by the Non-defaulting Party) in respect of the Terminated Transactions and the Unpaid Amounts owing to the Non-defaulting Party less (B) the Unpaid Amounts owing to the Defaulting Party. If that amount is a positive number, the Defaulting Party will pay it to the Non-defaulting Party; if it is a negative number, the Non-defaulting Party will pay the absolute value of that amount to the Defaulting Party.

(4) **Second Method and Loss.** If the Second Method and Loss apply, an amount will be payable equal to the Non-defaulting Party’s Loss in respect of this Agreement. If that amount is a positive number, the Defaulting Party will pay it to the Non-defaulting Party; if it is a negative number, the Non-defaulting Party will pay the absolute value of that amount to the Defaulting Party.

(ii) **Termination Events.** If the Early Termination Date results from a Termination Event:

(1) **One Affected Party.** If there is one Affected Party, the amount payable will be determined in accordance with Section 6(e)(i)(3), if Market Quotation applies, or Section 6(e)(i)(4), if Loss applies, except that, in either case, references to the Defaulting Party and to the Non-defaulting Party will be deemed to be references to the Affected Party and the party which is not the Affected Party, respectively, and, if Loss applies and fewer than all the Transactions are being terminated, Loss shall be calculated in respect of all Terminated Transactions.

(2) **Two Affected Parties.** If there are two Affected Parties:

(A) if Market Quotation applies, each party will determine a Settlement Amount in respect of the Terminated Transactions, and an amount will be payable equal to (I) the sum of (a) one-half of the difference between the Settlement Amount of the party with the higher Settlement Amount (“X”) and the Settlement Amount of the party with the lower Settlement Amount (“Y”) and (b) the Unpaid Amounts owing to X less (II) the Unpaid Amounts owing to Y; and

(B) if Loss applies, each party will determine its Loss in respect of this Agreement (or, if fewer than all the Transactions are being terminated, in respect of all Terminated Transactions) and an amount will be payable equal to one-half of the difference between the Loss of the party with the higher Loss (“X”) and the Loss of the party with the lower Loss (“Y”).
If the amount payable is a positive number, Y will pay it to X; if it is a negative number, X will pay the absolute value of that amount to Y.

(iii) **Adjustment for Bankruptcy.** In circumstances where an Early Termination Date occurs because “Automatic Early Termination” applies in respect of a party, the amount determined under this Section 6(e) will be subject to such adjustments as are appropriate and permitted by law to reflect any payments or deliveries made by one party to the other under this Agreement (and retained by such other party) during the period from the relevant Early Termination Date to the date for payment determined under Section 6(d)(ii).

(iv) **Pre-Estimate.** The parties agree that if Market Quotation applies an amount recoverable under this Section 6(e) is a reasonable pre-estimate of loss and not a penalty. Such amount is payable for the loss of bargain and the loss of protection against future risks and except as otherwise provided in this Agreement neither party will be entitled to recover any additional damages as a consequence of such losses.

7. **Transfer**

Neither this Agreement nor any interest or obligation in or under this Agreement may be transferred (whether by way of security or otherwise) by either party without the prior written consent of the other party, except that:

(a) a party may make such a transfer of this Agreement pursuant to a consolidation or amalgamation with, or merger with or into, or transfer of all or substantially all of its assets to, another entity (but without prejudice to any other right or remedy under this Agreement); and

(b) a party may make such a transfer of all or any part of its interest in any amount payable to it from a Defaulting Party under Section 6(e).

Any purported transfer that is not in compliance with this Section will be void.

8. **Miscellaneous**

(a) **Entire Agreement.** This Agreement constitutes the entire agreement and understanding of the parties with respect to its subject matter and supersedes all oral communication and prior writings with respect thereto.

(b) **Amendments.** No amendment, modification or waiver in respect of this Agreement will be effective unless in writing (including a writing evidenced by a facsimile transmission) and executed by each of the parties or confirmed by an exchange of telexes or electronic messages on an electronic messaging system.

(c) **Survival of Obligations.** Without prejudice to Sections 2(a)(iii) and 6(c)(ii), the obligations of the parties under this Agreement will survive the termination of any Transaction.
(d) **Remedies Cumulative.** Except as provided in this Agreement, the rights, powers, remedies and privileges provided in this Agreement are cumulative and not exclusive of any rights, powers, remedies and privileges provided by law.

(e) **Counterparts and Confirmations.**

(i) This Agreement (and each amendment, modification and waiver in respect of it) may be executed and delivered in counterparts (including by facsimile transmission), each of which will be deemed an original.

(ii) The parties intend that they are legally bound by the terms of each Transaction from the moment they agree to those terms (whether orally or otherwise). A Confirmation shall be entered into as soon as practicable and may be executed and delivered in counterparts (including by facsimile transmission) or be created by an exchange of telexes or by an exchange of electronic messages on an electronic messaging system, which in each case will be sufficient for all purposes to evidence a binding supplement to this Agreement. The parties will specify therein or through another effective means that any such counterpart, telex or electronic message constitutes a Confirmation.

(f) **No Waiver of Rights.** A failure or delay in exercising any right, power or privilege in respect of this Agreement will not be presumed to operate as a waiver, and a single or partial exercise of any right, power or privilege will not be presumed to preclude any subsequent or further exercise, of that right, power or privilege or the exercise of any other right, power or privilege.

(g) **Headings.** The headings used in this Agreement are for convenience of reference only and are not to affect the construction of or to be taken into consideration in interpreting this Agreement.

9. **Expenses**

A Defaulting Party will, on demand, indemnify and hold harmless the other party for and against all reasonable out-of-pocket expenses, including legal fees, incurred by such other party by reason of the enforcement and protection of its rights under this Agreement or any Credit Support Document to which the Defaulting Party is a party or by reason of the early termination of any Transaction, including, but not limited to, costs of collection.

10. **Notices**

(a) **Effectiveness.** Any notice or other communication in respect of this Agreement may be given in any manner set forth below (except that a notice or other communication under Section 5 or 6 may not be given by facsimile transmission or electronic messaging system) to the address or number or in accordance with the electronic messaging system details provided (see the Schedule) and will be deemed effective as indicated:—

(i) if in writing and delivered in person or by courier, on the date it is delivered;
(ii) if sent by telex, on the date the recipient’s answerback is received;

(iii) if sent by facsimile transmission, on the date that transmission is received by a responsible employee of the recipient in legible form (it being agreed that the burden of proving receipt will be on the sender and will not be met by a transmission report generated by the sender’s facsimile machine);

(iv) if sent by certified or registered mail (airmail, if overseas) or the equivalent (return receipt requested), on the date that mail is delivered or its delivery is attempted; or

(v) if sent by electronic messaging system, on the date that electronic message is received,

unless the date of that delivery (or attempted delivery) or that receipt, as applicable, is not a Local Business Day or that communication is delivered (or attempted) or received, as applicable, after the close of business on a Local Business Day, in which case that communication shall be deemed given and effective on the first following day that is a Local Business Day.

(b) **Change of Addresses.** Either party may by notice to the other change the address, telex or facsimile number or electronic messaging system details at which notices or other communications are to be given to it.

11. **Governing Law and Jurisdiction**

(a) **Governing Law.** This Agreement will be governed by and construed in accordance with the law specified in the Schedule.

(b) **Jurisdiction.** With respect to any suit, action or proceedings relating to this Agreement (“Proceedings”), each party irrevocably:—

(i) submits to the jurisdiction of the English courts, if this Agreement is expressed to be governed by English law, or to the non-exclusive jurisdiction of the courts of the State of New York and the United States District Court located in the Borough of Manhattan in New York City, if this Agreement is expressed to be governed by the laws of the State of New York; and

(ii) waives any objection which it may have at any time to the laying of venue of any Proceedings brought in any such court, waives any claim that such Proceedings have been brought in an inconvenient forum and further waives the right to object, with respect to such Proceedings, that such court does not have any jurisdiction over such party.

Nothing in this Agreement precludes either party from bringing Proceedings in any other jurisdiction (outside, if this Agreement is expressed to be governed by English law, the Contracting States, as defined in Section 1(3) of the Civil Jurisdiction and Judgments Act 1982 or any modification, extension or re-enactment thereof for the time being in force) nor will the bringing of Proceedings in any one or more jurisdictions preclude the bringing of Proceedings in any other jurisdiction.
Waiver of Immunities. Each party irrevocably waives, to the fullest extent permitted by applicable law, with respect to itself and its revenues and assets (irrespective of their use or intended use), all immunity on the grounds of sovereignty or other similar grounds from (i) suit, (ii) jurisdiction of any court, (iii) relief by way of injunction, order for specific performance or for recovery of property, (iv) attachment of its assets (whether before or after judgment) and (v) execution or enforcement of any judgment to which it or its revenues or assets might otherwise be entitled in any Proceedings in the courts of any jurisdiction and irrevocably agrees, to the extent permitted by applicable law, that it will not claim any such immunity in any Proceedings.

12. Definitions

As used in this Agreement:—

“Additional Termination Event” has the meaning specified in Section 5(b).

“Affected Party” has the meaning specified in Section 5(b).

“Affected Transactions” means (a) with respect to any Termination Event consisting of an Illegality, all Transactions affected by the occurrence of such Termination Event and (b) with respect to any other Termination Event, all Transactions.

“Affiliate” means, subject to the Schedule, in relation to any person, any entity controlled, directly or indirectly, by the person, any entity that controls, directly or indirectly, the person or any entity directly or indirectly under common control with the person. For this purpose, “control” of any entity or person means ownership of a majority of the voting power of the entity or person.

“Applicable Rate” means:—

(a) in respect of obligations payable or deliverable (or which would have been but for Section 2(a)(iii)) by a Defaulting Party, the Default Rate;

(b) in respect of an obligation to pay an amount under Section 6(e) of either party from and after the date (determined in accordance with Section 6(d)(ii)) on which that amount is payable, the Default Rate;

(c) in respect of all other obligations payable or deliverable (or which would have been but for Section 2(a)(iii)) by a Non-defaulting Party, the Non-default Rate; and

(d) in all other cases, the Termination Rate.

“consent” includes a consent, approval, action, authorization, exemption, notice, filing, registration or exchange control consent.

“Credit Event Upon Merger” has the meaning specified in Section 5(b).

“Credit Support Document” means any agreement or instrument that is specified as such in this Agreement.
“Credit Support Provider” has the meaning specified in the Schedule.

“Default Rate” means a rate per annum equal to the cost (without proof or evidence of any actual cost) to the relevant payee (as certified by it) if it were to fund or of funding the relevant amount plus 1% per annum.

“Defaulting Party” has the meaning specified in Section 6(a).

“Early Termination Date” means the date determined in accordance with Section 6(a) or 6(b)(iii).

“Event of Default” has the meaning specified in Section 5(a) and, if applicable, in the Schedule.

“Illegality” has the meaning specified in Section 5(b).

“law” includes any treaty, law, rule or regulation and “lawful” and “unlawful” will be construed accordingly.

“Local Business Day” means, subject to the Schedule, a day on which commercial banks are open for business (including dealings in foreign exchange and foreign currency deposits) (a) in relation to any obligation under Section 2(a)(i), in the place(s) specified in the relevant Confirmation or, if not so specified, as otherwise agreed by the parties in writing or determined pursuant to provisions contained, or incorporated by reference, in this Agreement, (b) in relation to any other payment, in the place where the relevant account is located, (c) in relation to any notice or other communication, including notice contemplated under Section 5(a)(i), in the city specified in the address for notice provided by the recipient and, in the case of a notice contemplated by Section 2(b), in the place where the relevant new account is to be located and (d) in relation to Section 5(a)(v)(2), in the relevant locations for performance with respect to such Specified Transaction.

“Loss” means, with respect to this Agreement or one or more Terminated Transactions, as the case may be, and a party, an amount that party reasonably determines in good faith to be its total losses and costs (or gain, in which case expressed as a negative number) in connection with this Agreement or that Terminated Transaction or group of Terminated Transactions, as the case may be, including any loss of bargain, cost of funding or, at the election of such party but without duplication, loss or cost incurred as a result of its terminating, liquidating, obtaining or reestablishing any hedge or related trading position (or any gain resulting from any of them). Loss includes losses and costs (or gains) in respect of any payment or delivery required to have been made (assuming satisfaction of each applicable condition precedent) on or before the relevant Early Termination Date and not made, except, so as to avoid duplication, if Section 6(e)(i)(1) or (3) or 6(e)(ii)(2)(A) applies. Loss does not include a party’s legal fees and out-of-pocket expenses referred to under Section 9. A party will determine its Loss as of the relevant Early Termination Date, or, if that is not reasonably practicable, as of the earliest date thereafter as is reasonably practicable. A party may (but need not) determine its Loss by reference to quotations of relevant rates or prices from one or more leading dealers in the relevant markets.
“Market Quotation” means, with respect to one or more Terminated Transactions and a party making the determination, an amount determined on the basis of quotations from Reference Market-makers. Each quotation will be for an amount, if any, that would be paid to such party (expressed as a negative number) or by such party (expressed as a positive number) in consideration of an agreement between such party (taking into account any existing Credit Support Document with respect to the obligations of such party) and the quoting Reference Market-maker to enter into a transaction (the “Replacement Transaction”) that would have the effect of preserving for such party the economic equivalent of any payment or delivery (whether the underlying obligation was absolute or contingent and assuming the satisfaction of each applicable condition precedent) by the parties under Section 2(a)(i) in respect of such Terminated Transaction or group of Terminated Transactions that would, but for the occurrence of the relevant Early Termination Date, have been required after that date. For this purpose, Unpaid Amounts in respect of the Terminated Transaction or group of Terminated Transactions are to be excluded but, without limitation, any payment or delivery that would, but for the relevant Early Termination Date, have been required (assuming satisfaction of each applicable condition precedent) after that Early Termination Date is to be included. The Replacement Transaction would be subject to such documentation as such party and the Reference Market-maker may, in good faith, agree. The party making the determination (or its agent) will request each Reference Market-maker to provide its quotation to the extent reasonably practicable as of the same day and time (without regard to different time zones) on or as soon as reasonably practicable after the relevant Early Termination Date. The day and time as of which those quotations are to be obtained will be selected in good faith by the party obliged to make a determination under Section 6(e), and, if each party is so obliged, after consultation with the other. If more than three quotations are provided, the Market Quotation will be the arithmetic mean of the quotations, without regard to the quotations having the highest and lowest values. If exactly three such quotations are provided, the Market Quotation will be the quotation remaining after disregarding the highest and lowest quotations. For this purpose, if more than one quotation has the same highest value or lowest value, then one of such quotations shall be disregarded. If fewer than three quotations are provided, it will be deemed that the Market Quotation in respect of such Terminated Transaction or group of Terminated Transactions cannot be determined.

“Non-default Rate” means a rate per annum equal to the cost (without proof or evidence of any actual cost) to the Non-defaulting Party (as certified by it) if it were to fund the relevant amount.

“Non-defaulting Party” has the meaning specified in Section 6(a).

“Potential Event of Default” means any event which, with the giving of notice or the lapse of time or both, would constitute an Event of Default.

“Reference Market-makers” means four leading dealers in the relevant market selected by the party determining a Market Quotation in good faith (a) from among dealers of the highest credit standing which satisfy all the criteria that such party applies generally at the time in deciding whether to offer or to make an extension of credit and (b) to the extent practicable, from among such dealers having an office in the same city.

“Scheduled Payment Date” means a date on which a payment or delivery is to be made under Section 2(a)(i) with respect to a Transaction.
“Set-off” means set-off, offset, combination of accounts, right of retention or withholding or similar right or requirement to which the payer of an amount under Section 6 is entitled or subject (whether arising under this Agreement, another contract, applicable law or otherwise) that is exercised by, or imposed on, such payer.

“Settlement Amount” means, with respect to a party and any Early Termination Date, the sum of:

(a) the Market Quotations (whether positive or negative) for each Terminated Transaction or group of Terminated Transactions for which a Market Quotation is determined; and

(b) such party’s Loss (whether positive or negative and without reference to any Unpaid Amounts) for each Terminated Transaction or group of Terminated Transactions for which a Market Quotation cannot be determined or would not (in the reasonable belief of the party making the determination) produce a commercially reasonable result.

“Specified Entity” has the meaning specified in the Schedule.

“Specified Indebtedness” means, subject to the Schedule, any obligation (whether present or future, contingent or otherwise, as principal or surety or otherwise) in respect of borrowed money.

“Specified Transaction” means, subject to the Schedule, (a) any transaction (including an agreement with respect thereto) now existing or hereafter entered into between one party to this Agreement (or any Credit Support Provider of such party or any applicable Specified Entity of such party) and the other party to this Agreement (or any Credit Support Provider of such other party or any applicable Specified Entity of such other party) which is a rate swap transaction, basis swap, forward rate transaction, commodity swap, commodity option, equity or equity index swap, equity or equity index option, bond option, interest rate option, foreign exchange transaction, cap transaction, floor transaction, collar transaction, currency swap transaction, cross-currency rate swap transaction, currency option or any other similar transaction (including any option with respect to any of these transactions), (b) any combination of these transactions and (c) any other transaction identified as a Specified Transaction in this Agreement or the relevant confirmation.

“Terminated Transactions” means with respect to any Early Termination Date (a) if resulting from a Termination Event, all Affected Transactions and (b) if resulting from an Event of Default, all Transactions (in either case) in effect immediately before the effectiveness of the notice designating that Early Termination Date (or, if “Automatic Early Termination” applies, immediately before that Early Termination Date).

“Termination Event” means an Illegality or, if specified to be applicable, a Credit Event Upon Merger or an Additional Termination Event.
“Termination Rate” means a rate per annum equal to the arithmetic mean of the cost (without proof or evidence of any actual cost) to each party (as certified by such party) if it were to fund or of funding such amounts.

“Unpaid Amounts” owing to any party means, with respect to an Early Termination Date, the aggregate of (a) in respect of all Terminated Transactions, the amounts that became payable (or that would have become payable but for Section 2(a)(iii)) to such party under Section 2(a)(i) on or prior to such Early Termination Date and which remain unpaid as at such Early Termination Date and (b) in respect of each Terminated Transaction, for each obligation under Section 2(a)(i) which was (or would have been but for Section 2(a)(iii)) required to be settled by delivery to such party on or prior to such Early Termination Date and which has not been so settled as at such Early Termination Date, an amount equal to the fair market value of that which was (or would have been) required to be delivered as of the originally scheduled date for delivery, in each case together with (to the extent permitted under applicable law) interest, in the currency of such amounts, from (and including) the date such amounts or obligations were or would have been required to have been paid or performed to (but excluding) such Early Termination Date, at the Applicable Rate. Such amounts of interest will be calculated on the basis of daily compounding and the actual number of days elapsed. The fair market value of any obligation referred to in clause (b) above shall be reasonably determined by the party obliged to make the determination under Section 6(e) or, if each party is so obliged, it shall be the average of the fair market values reasonably determined by both parties.
IN WITNESS WHEREOF the parties have executed this document on the respective
dates specified below with effect from the date specified on the first page of this document.

CITIBANK, N.A.  
SACRAMENTO MUNICIPAL UTILITY
DISTRICT

By: ____________________________  By: ____________________________
  Name: ____________________________  Name: ____________________________
  Title: ____________________________  Title: ____________________________
  Date: ____________________________  Date: ____________________________
SCHEDULE

to the

ISDA Master Agreement
dated as of April __, 2020, between

CITIBANK, N.A.,
a national banking association organized and existing
under the laws of the United States of America

(“Party A”)

and

SACRAMENTO MUNICIPAL UTILITY DISTRICT,
a political subdivision organized and existing
under the laws of the State of California

(“Party B”)


In this Agreement:—

(a) "Specified Entity" means in relation to Party A for the purpose of:—

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Entities</th>
</tr>
</thead>
<tbody>
<tr>
<td>5(a)(vi)</td>
<td>(Cross Default)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>5(a)(vii)</td>
<td>(Bankruptcy)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>5(b)(ii)</td>
<td>(Credit Event Upon Merger)</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

and in relation to Party B for the purpose of:—

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>5(a)(v)</td>
<td>(Default under Specified Transaction)</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>
(b) **“Specified Transaction”** will have the meaning specified in Section 12 of this Agreement.

(c) The **“Cross Default”** provisions of Section 5(a)(vi) will apply to Party A and will apply to Party B.

The following provisions apply:—

**“Specified Indebtedness”** will have the meaning specified in Section 12 of this Agreement; provided, however, that Specified Indebtedness shall not include deposits received in the course of Party A’s ordinary banking business. For the purpose of Section 5(a)(vi)(1), any reference to Specified Indebtedness becoming, or becoming capable of being declared, due and payable shall not include indebtedness with respect to which such declaration (or ability to declare) is being contested in good faith by the party (or its Credit Support Provider or relevant Specified Entity) through appropriate action.

**“Threshold Amount”** means, (i) with respect to Party A, the lesser of (x) USD 250,000,000 or (y) three percent (3%) of the Stockholders’ Equity of Party A, and (ii) with respect to Party B, USD 20,000,000. For purposes of (i) above, Stockholder’s Equity shall be determined by reference to the relevant party’s most recent consolidated (quarterly, in the case of a U.S. incorporated party) balance sheet and shall include, in the case of a U.S. incorporated party, legal capital, paid-in capital, retained earnings and cumulative translation adjustments. Such balance sheet shall be prepared in accordance with accounting principles that are generally accepted in such party’s country of organization.

The following proviso will be inserted at the end of Section 5(a)(vi) of this Agreement:

“provided, however, that notwithstanding the foregoing, an Event of Default shall not occur under either (1) or (2) above if (a) in the event or condition referred to in (1) or the failure to pay referred to in (2) is a failure to pay caused by an error or omission of an administrative or operational nature; and (b) funds were available to such party to enable it to make the relevant payment when due; and (c) such relevant payment is made within three Business Days following receipt of written notice from an interested party of such failure to pay.”

(d) The **“Credit Event Upon Merger”** provisions of Section 5(b)(ii) will apply to Party A and will apply to Party B.
The “Automatic Early Termination” provisions of Section 6(a) will not apply to Party A and will not apply to Party B; provided, however, that with respect to a party, where the Event of Default specified in Section 5(a)(vii)(1), (3), (4), (5), (6) or to the extent analogous thereto, (8) is governed by a system of law which does not permit termination to take place after the occurrence of the relevant Event of Default, then the Automatic Early Termination provisions of Section 6(a) will apply to such party.

Payments on Early Termination. For the purpose of Section 6(e) of this Agreement, Market Quotation and the Second Method will apply.

Additional Termination Event will apply. The following shall constitute Additional Termination Events for all purposes:—

(i) (A) The rating of the long-term, unsecured, unenhanced senior debt (not taking into account any third party credit enhancement) of Party A (1) is withdrawn, suspended or falls below Baa3 as determined by Moody’s Investors Service, Inc. (“Moody’s”), or (2) is withdrawn, suspended or falls below BBB- as determined by S&P Global Ratings, a business of Standard & Poor’s Financial Services LLC (“S&P”), or (B) Party A fails to have any long-term, unsecured, unenhanced senior debt (not taking into account any third party credit enhancement) rated by S&P or Moody’s. For the purpose of the foregoing Termination Event, Party A shall be the Affected Party and all Transactions shall be Affected Transactions.

(ii) (A) The rating of the long-term, unsecured, unenhanced senior debt (not taking into account any third party credit enhancement) of Party B (1) is withdrawn, suspended or falls below Baa3 as determined by Moody’s, or (2) is withdrawn, suspended or falls below BBB- as determined by S&P, or (B) Party B fails to have any long-term, unsecured, unenhanced senior debt (not taking into account any third party credit enhancement) rated by S&P or Moody’s. For the purpose of the foregoing Termination Event, Party B shall be the Affected Party and all Transactions shall be Affected Transactions.

(iii) Impossibility. Due to the occurrence of a natural or man-made disaster, armed conflict, act of terrorism, riot, labor disruption or any other circumstance beyond its control after the date on which a Transaction is entered into, it becomes impossible (other than as a result of its own misconduct) for such a party:

(1) to perform any absolute or contingent obligation, to make a payment or delivery or to receive a payment or delivery in respect of such Transaction or to comply with any other material provision of this Agreement relating to such Transaction; or

(2) to perform, or for any Credit Support Provider of such party to perform, any contingent or other obligation which the party (or such Credit Support Provider) has under any Credit Support Document relating to such Transaction.
For the purposes of Section 6, in the event of an Impossibility, both parties shall be Affected Parties.

An Impossibility shall be treated as an Illegality for purposes of Section 5(c) of the Agreement.

(h) **Affected Transactions.** The definition of “Affected Transactions” in Section 12 of the Agreement is hereby amended by inserting “Impossibility,” immediately after “an Illegality.”

(i) **Events of Default.**

(i) **Merger Without Assumption.** Section 5(a)(viii) of this Agreement is hereby amended to read in its entirety as follows:—

“(viii) **Merger Without Assumption.** The party or any Credit Support Provider of such party consolidates or amalgamates with, or merges with or into, or transfers all or substantially all its assets to, or reorganizes, incorporates, reincorporates or reforms into or as, another entity (or, without limiting the foregoing, if such party is a Government Entity, an entity such as an organization, board, commission, authority, agency, or body succeeds to the principal functions of, or powers and duties granted to, such party or any Credit Support Provider of such party) and, at the time of such consolidation, amalgamation, merger, transfer or succession:—

(1) the resulting, surviving, reorganized, reincorporated, reconstituted, transferee, or successor entity fails to assume all the obligations of such party or such Credit Support Provider under this Agreement or any Credit Support Document to which it or its predecessor was a party by operation of law or pursuant to an agreement reasonably satisfactory to the other party to this Agreement; or

(2) the benefits of any Credit Support Document fail to extend (without the consent of the other party) to the performance by such resulting, surviving, reorganized, reincorporated, reconstituted, transferee or successor entity of its obligations under this Agreement.”

(ii) **Bankruptcy.** Clause (6) of Section 5(a)(vii) of this Agreement is hereby amended to read in its entirety as follows:—

“(6)(A) seeks or becomes subject to the appointment of an administrator, provisional liquidator, conservator, receiver, trustee, custodian or other similar official for it or for all or substantially all its assets or (B) in the case of a Government Entity, any Credit Support Provider of such Government Entity or any applicable Specified Entity of such Government Entity, (I) there shall be appointed or designated with respect to it, an entity such as an organization, board, commission, authority, agency or body to monitor, review, oversee,
recommend or declare a financial emergency or similar state of financial distress with respect to it or (II) there shall be declared or introduced or proposed for consideration by it or by any legislative or regulatory body with competent jurisdiction over it, the existence of a state of financial emergency or similar state of financial distress in respect of it;”.

(j) **Termination Events.** Section 5(b)(ii) of this Agreement is hereby amended to read in its entirety as follows:—

“(ii) **Credit Event Upon Merger.** If “Credit Event Upon Merger” is specified in the Schedule as applying to the party, such party (“X”), any Credit Support Provider of X or any applicable Specified Entity of X consolidates or amalgamates with, or merges with or into, or transfers all or substantially all its assets to, or reorganized, incorporates, reincorporates or reforms into or as, another entity (or, without limiting the foregoing, if X is a Government Entity, an entity such as an organization, board, commission, authority, agency or body succeeds to the principal functions of, or powers and duties granted to, X, any Credit Support Provider of X or any Specified Entity of X) and such action does not constitute an event described in Section 5(a)(viii) but the creditworthiness of the resulting, surviving, transferee or successor entity is materially weaker than that of X, such Credit Support Provider or such Specified Entity, as the case may be, immediately prior to such action (and, in such event, X or its successor or transferee, as appropriate, will be the Affected Party); or”.

(l) **Delivery of Collateral.** Each of Party A and Party B shall deliver collateral in order to secure its obligations under this Agreement and each Transaction hereunder in accordance with the terms and provisions of the ISDA Credit Support Annex attached hereto as Exhibit D and incorporated by reference herein.

**Part 2. Agreement to Deliver Documents.**

For the purpose of Section 4(a) of this Agreement, each party agrees to deliver the following documents, as applicable:—

<table>
<thead>
<tr>
<th>Party required to deliver document</th>
<th>Form/Document/Certificate</th>
<th>Date by which to be Delivered</th>
<th>Covered by Section 3(d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Party A</td>
<td>An opinion of counsel to Party A substantially in the form of Exhibit B to this Schedule.</td>
<td>Promptly after the execution of this Agreement and, with respect to each Transaction, prior to the execution of such Transaction.</td>
<td>Yes</td>
</tr>
<tr>
<td>Party B</td>
<td>An opinion of counsel to Party B in the form of Exhibit C to this Schedule.</td>
<td>Prior to the execution of this Agreement and, with respect to each Transaction, prior to the</td>
<td>Yes</td>
</tr>
<tr>
<td>Party required to deliver document</td>
<td>Form/Document/Certificate</td>
<td>Date by which to be Delivered</td>
<td>Covered by Section 3(d)</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>---------------------------</td>
<td>------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Party B</td>
<td>Evidence reasonably satisfactory to Party A of the (i) authority of Party B to enter into the Agreement and any Transactions and (ii) authority and genuine signature of the individual signing the Agreement on behalf of Party B to execute the same.</td>
<td>Prior to the execution of this Agreement and, with respect to each Transaction, prior to the execution of such Transaction.</td>
<td>Yes</td>
</tr>
<tr>
<td>Party B</td>
<td>A certified copy of the resolution or resolutions (or the equivalent thereof) of the governing body of Party B, certified by an appropriate official of Party B, pursuant to which Party B is authorized to enter into this Agreement and each Transaction.</td>
<td>Prior to the execution of this Agreement and, with respect to each Transaction, prior to the execution of such Transaction.</td>
<td>Yes</td>
</tr>
<tr>
<td>Party A and Party B</td>
<td>Such party’s Annual Report containing audited consolidated financial statements certified by independent certified public accountants for each fiscal year.</td>
<td>As soon as available and in any event within 120 days (or as soon as practicable after becoming publicly available) after the end of each of its fiscal years, provided that (i) with respect to Party A, such document shall be deemed to have been delivered by Party A upon becoming available on Party A’s website and (ii) with respect to Party B, such document shall be deemed to have been delivered by Party B upon becoming available on EMMA.</td>
<td>Yes</td>
</tr>
<tr>
<td>Party A and Party B</td>
<td>Such party’s unaudited consolidated financial statements, the consolidated balance sheet</td>
<td>As soon as available and in any event within 60 days (or as soon as practicable after becoming publicly available)</td>
<td>Yes</td>
</tr>
<tr>
<td>Party required to deliver document</td>
<td>Form/Document/Certificate</td>
<td>Date by which to be Delivered</td>
<td>Covered by Section 3(d)</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---------------------------</td>
<td>-------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Party A</td>
<td>and related statements of income for each fiscal quarter.</td>
<td>after the end of each of its fiscal quarters provided that (i) with respect to Party A, such document shall be deemed to have been delivered by Party A upon becoming available on Party A’s website and (ii) with respect to Party B, such document shall be deemed to have been delivered by Party B upon becoming available on EMMA.</td>
<td></td>
</tr>
<tr>
<td>Party B</td>
<td>An executed copy of the Covered Indenture and a draft of any amendment, supplement or modification thereof.</td>
<td>Prior to the execution of this Agreement and, at least ten Local (10) Business Days prior to the adoption of any amendment, supplement or modification thereto.</td>
<td>Yes</td>
</tr>
<tr>
<td>Part B</td>
<td>Swap transaction policy or hedge policy of Party B</td>
<td>Prior to the Trade Date of the initial Transaction hereunder or upon execution and delivery of this Agreement by Party B and thereafter at least ten (10) Local Business Days prior to the adoption of any amendment, supplement or modification to any such policy.</td>
<td>Yes</td>
</tr>
</tbody>
</table>


(a) **Addresses for Notices.** For the purpose of Section 10(a) to this Agreement:—

Address for notices or communications to Party A:—

Address: 390 Greenwich Street, New York, New York 10013

Attention: Director Derivatives Operations (with an additional copy (in the case of notices or communications relating to Section 5, 6, 7, 9 or 11 of this Agreement) addressed to the attention of the Law Department).

Facsimile No.: (212) 615-8276
Address for notices or communications to Party B:—

Address:  [Please provide]
Attention:  [Please provide]
Facsimile No.:  [Please provide]
Telephone No.:  [Please provide]

(b) **Calculation Agent.** The Calculation Agent is Party A, unless otherwise specified in a Confirmation in relation to the relevant Transaction; provided however that if and for so long as an Event of Default has occurred and is continuing with respect to Party A, the Calculation Agent will be a leading dealer in the relevant derivatives market selected by Party B and reasonably acceptable to Party A, provided further however that if Party B notifies Party A of its selection of a leading dealer and Party A does not respond within 3 Local Business Days, the leading dealer will be deemed to be acceptable to Party A.

(c) **Credit Support Document.** Details of any Credit Support Document:—

In the case of Party A, the ISDA Credit Support Annex attached hereto as Exhibit D and incorporated by reference herein.

In the case of Party B, [the Covered Indenture] and the ISDA Credit Support Annex attached hereto as Exhibit D and incorporated by reference herein.

(d) **Credit Support Provider.** Credit Support Provider means in relation to Party A: not applicable. Credit Support Provider means in relation to Party B, not applicable.

(e) **Governing Law.** THIS AGREEMENT WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REFERENCE TO CHOICE OF LAW DOCTRINE; PROVIDED THAT THE POWER, AUTHORITY AND CAPACITY OF PARTY B TO ENTER INTO THE AGREEMENT OR ANY TRANSACTION [AND EACH CREDIT SUPPORT DOCUMENT] SHALL BE GOVERNED BY THE LAWS OF THE STATE OF CALIFORNIA.

(f) **Netting of Payments.** Subparagraph (ii) of Section 2(c) of this Agreement will apply to all Transactions.

(g) “Affiliate” will have the meaning specified in Section 12 of this Agreement, provided, however that with regard to Party A, the term “Affiliate” shall not include any entity that controls or is under common control with Party A.

(h) “Covered Indenture” means the ________________ adopted ____________, as amended and supplemented prior to the date hereof in accordance with the terms thereof and as amended and supplemented following the date hereof in accordance with the terms hereof and thereof. [To be discussed]
(i) “Covered Indenture Incorporation Date” means the date of this Agreement.

(j) “Government Entity” means Party B.


(a) **Obligations.** Section 2(a)(iii) of this Agreement is hereby amended to read in its entirety as follows:—

“(iii) Each obligation of each party under Section 2(a)(i) is subject to (1) the condition precedent that no Event of Default, Potential Event of Default or Incipient Illegality with respect to the other party has occurred and is continuing, (2) the condition precedent that no Early Termination Date in respect of the relevant Transaction has occurred or been effectively designated and (3) each other applicable condition precedent specified in this Agreement.”

(b) **Representations.**

The introductory clause of Section 3 of this Agreement is hereby amended to read in its entirety as follows:—

“Each party represents to the other party (which representations will be deemed to be repeated by each party on each date on which a Transaction is entered into and, in the case of the representations in Section 3(a) and 3(e), at all times until the termination of this Agreement) that:—”.

(ii) Section 3(a)(ii) of this Agreement is hereby amended to read in its entirety as follows:—

“(ii) **Powers.** It has the power to execute this Agreement and any other documentation relating to this Agreement to which it is a party, to deliver this Agreement and any other documentation relating to this Agreement that it is required by this Agreement to deliver and to perform its obligations under this Agreement and any obligations it has under any Credit Support Document to which it is a party and has taken all necessary action and made all necessary determinations and findings to authorize such execution, delivery and performance;”.

(iii) Section 3(b) of this Agreement is hereby amended to read in its entirety as follows:—

“(b) **Absence of Certain Events.** No Event of Default or Potential Event of Default or, to its knowledge, Incipient Illegality (in the case of a Government Entity) or Termination Event with respect to it has occurred and is continuing and no such event or circumstance would occur as a result of its entering into or performing its obligations under this Agreement or any Credit Support Document to which it is a party.”
(iv) Section 3 of this Agreement is hereby amended by adding the following subsection “(e)” thereto, which subsection shall only apply to the Government Entity:—

“(e) **Non-Speculation.** This Agreement has been, and each Transaction hereunder will be (and, if applicable, has been), entered into for purposes of managing its borrowings or investments, hedging its underlying assets or liabilities or in connection with its line of business (including financial intermediation services) or the financing of its business and not for purposes of speculation.”

(v) Section 3 of this Agreement is hereby amended by adding the following subsection “(f)” thereto:—

“(f) **No Immunity.** It is not entitled to claim immunity on the grounds of sovereignty or other similar grounds with respect to itself or its revenues or assets (irrespective of their use or intended use) from (i) suit, (ii) jurisdiction of any court, (iii) relief by way of injunction, order for specific performance or for recovery of property, (iv) attachment of its assets (whether before or after judgment) or (v) execution or enforcement of any judgment to which it or its revenues or assets might otherwise be made subject to in any Proceedings (as defined in Section 11(b)) in the courts of any jurisdiction and no such immunity (whether or not claimed) may be attributed to such party or its revenues or assets.”

(c) **Agreements.**

(i) The introductory clause of Section 4 of this Agreement is hereby amended to read in its entirety as follows:—

“Each party agrees with the other (or, in the case of Section 4(d), (e) and (f), the Government Entity agrees with the other party) that, so long as either party has or may have any obligation under this Agreement or under any Credit Support Document to which it is a party:—”

(ii) Section 4 of this Agreement is hereby amended by adding the following subsections “(d)”, “(e)” and “(f)” thereto:—

“(d) **Compliance with Covered Indenture.** The Government Entity will observe, perform and fulfill each provision in the Covered Indenture applicable to such Government Entity in effect on the Covered Indenture Incorporation Date, as any of those provisions may be amended, supplemented or modified for purposes of this Agreement with the prior written consent of the other party hereto (the “Incorporated Provisions”), with the effect that such other party hereto will have the benefit of each of the Incorporated Provisions (including without limitation, covenants, right to consent to certain actions subject to consent under the Covered Indenture and delivery of financial statements and other notices and information). In the event the Covered Indenture ceases to be in effect prior to the termination of this Agreement, the Incorporated Provisions (other than those provisions requiring payments in respect of bonds, notes, warrants or other similar instruments issued under the Covered Indenture) will remain in full force.
and effect for purposes of this Agreement as though set forth herein until such date on which all of the obligations of the Government Entity under this Agreement and any obligations of the Government Entity or any Credit Support Provider of the Government Entity under a Credit Support Document have been fully satisfied. The Incorporated Provisions are hereby incorporated by reference and made a part of this Agreement to the same extent as if such provisions were set forth herein. For purposes of this Agreement, the Incorporated Provisions shall be construed as though (i) all references therein to any party making loans, extensions of credit or financial accommodations thereunder or commitments therefor (the “Financings”) were to the other party hereto and (ii) to the extent that such Incorporated Provisions are conditioned on or relate to the existence of such Financings or the Government Entity having any obligations in connection therewith, all references to such Financings or obligations were to the obligations of the Government Entity under this Agreement. Any amendment, supplement, modification or waiver of any of the Incorporated Provisions without the prior written consent of the other party hereto shall have no force and effect with respect to this Agreement. Any amendment, supplement or modification for which such consent is obtained shall be part of the Incorporated Provisions for purposes of this Agreement. [To be discussed]

(e) Notice of Incipient Illegality. If an Incipient Illegality occurs, the Government Entity will, promptly upon becoming aware of it, notify the other party, specifying the nature of that Incipient Illegality and will also give such other information about that Incipient Illegality as the other party may reasonably require.

(f) Security and Source of Payment of Party B’s Obligations. [The obligations of Party B to make payments to Party A under this Agreement are subordinate to Party B’s obligations on its Parity Bonds (as defined in Resolution No. 6649 of Party B), its Subordinated Electric Revenue Bonds (as defined in Resolution No. 85-11-1 as amended and restated by Resolution No. 01-06-10), its commercial paper notes and other obligations (issued or incurred under Resolution No. 11-12-05 of Party B, Resolution No. 19-02-02 of Party B, or any other similar resolution of Party B adopted in replacement of or in addition to such resolutions) and any reimbursement obligations of Party B related thereto, whether such Parity Bonds, Subordinated Electric Revenue Bonds, commercial paper notes, other obligations or reimbursement obligations are presently outstanding or incurred after the date hereof (collectively, the “Senior Obligations”), and thus are payable solely from Net Revenues (as defined in Resolution No. 6649 of Party B) after the payment of amounts then due on the Senior Obligations.] [To be discussed]

For purposes of subsection (f) of Section 4, capitalized terms used but not defined in this Agreement shall have the respective meanings ascribed to them in the Covered Indenture.”

(d) Jurisdiction. Section 11(b) of this Agreement is hereby amended to read in its entirety as follows:—

“(b) Jurisdiction. With respect to any suit, action or proceedings relating to this Agreement (“Proceedings”), each party irrevocably:—
(i) submits, to the fullest extent permitted by applicable law, to the non-exclusive jurisdiction of each of the courts of the State of New York, the United States District Court located in the Borough of Manhattan in New York City, the courts of the state in which the Government Entity or other party’s principal executive offices are located and the United States District Court with jurisdiction over the location of the Government Entity or the other party’s principal executive offices; and

(ii) waives, to the fullest extent permitted by applicable law, (1) any objection which it may have at any time to the laying of venue of any Proceedings brought in any such court, (2) any claim that such Proceedings have been brought in an inconvenient forum and (3) the right to object, with respect to such Proceedings, that such court does not have any jurisdiction over such party.

Nothing in this Agreement precludes either party from bringing Proceedings in any other jurisdiction nor will the bringing of Proceedings in any one or more jurisdictions preclude the bringing of Proceedings in any other jurisdiction.”

(e) **Definitions.** Section 12 of this Agreement is hereby amended to add the following definitions in their appropriate alphabetical order:

“‘Covered Indenture’ has the meaning specified in the Schedule.”

“‘Covered Indenture Incorporation Date’ has the meaning specified in the Schedule.”

“‘Government Entity’ has the meaning specified in the Schedule.”

“‘Incipient Illegality’ means (a) the enactment by any legislative body with competent jurisdiction over a Government Entity of legislation which, if adopted as law, would render unlawful (i) the performance by such Government Entity of any absolute or contingent obligation to make a payment or delivery or to receive a payment or delivery in respect of a Transaction or the compliance by such Government Entity with any other material provision of this Agreement relating to such Transaction or (ii) the performance by a Government Entity or a Credit Support Provider of such Government Entity of any contingent or other obligation which the Government Entity (or such Credit Support Provider) has under any Credit Support Document relating to such Transaction, or (b) the occurrence with respect to a Government Entity or any Credit Support Provider of such Government Entity of any event that constitutes an Illegality.”

“‘Senior Lien Electric Revenue Bonds’ means any bonds authorized and issued pursuant to Resolution No. 6649 of Party B, as amended or supplemented, and any revenue bonds having an equal lien and charge upon the Net Revenues (as defined in Resolution No. 6649) and therefore payable on parity with bonds issued pursuant to Resolution No. 6649.”
Miscellaneous:

(f) This Agreement is hereby amended by adding the following Section “13” hereto:—

“13. Relationship Between Parties

Each party will be deemed to represent to the other party on the date on which it enters into a Transaction that (absent a written agreement between the parties that expressly imposes affirmative obligations to the contrary for that Transaction):-

(i) **Non-Reliance.** It is acting for its own account, and it has made its own independent decisions to enter into that Transaction and as to whether that Transaction is appropriate or proper for it based upon its own judgment and upon advice from such advisors as it has deemed necessary. It is not relying on any communication (written or oral) of the other party as investment advice or as a recommendation to enter into that Transaction; it being understood that information and explanations related to the terms and conditions of a Transaction shall not be considered investment advice or a recommendation to enter into that Transaction. It has not received from the other party any assurance or guarantee as to the expected results of that Transaction.

(ii) **Assessment and Understanding.** It is capable of assessing the merits of and understanding (on its own behalf or through independent professional advice), and understands and accepts, the terms, conditions and risks of that Transaction. It is also capable of assuming, and assumes, the risks of that Transaction.

(iii) **Status of Parties.** The other party is not acting as a fiduciary for or as an advisor to it in respect of that Transaction.”

(g) Set-off. Section 6 of the Agreement is amended by adding the following new subsection 6(f):

(f) In addition to any rights of set-off a party may have as a matter of law or otherwise, upon the occurrence of an Event of Default with respect to a party ("X") the other party ("Y") will have the right (but will not be obliged) without prior notice to X or any other person to set-off any obligation of X owing to Y (whether or not arising under this Agreement, whether or not matured, whether or not contingent and regardless of the currency, place of payment or booking office of the obligation) against any obligation of Y owing to X (whether or not arising under this Agreement, whether or not matured, whether or not contingent and regardless of the currency, place of payment or booking office of the obligation).

For the purpose of cross-currency set-off, Y may convert any obligation to another currency at a market rate determined by Y.

If an obligation is unascertained, Y may in good faith estimate that obligation and set-off in respect of the estimate, subject to the relevant party accounting to the other when the obligation is ascertained.
Nothing in this provision will be deemed to create a charge or other security interest.

(h) **Waiver of Right to Trial by Jury.** Each party hereby irrevocably 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 Agreement or any Credit Support Document. Each party (i) certifies that no representative, agent or attorney of the other party or any Credit Support Provider has represented, expressly or otherwise, that such other party would not, in the event of such a suit, action or proceeding, seek to enforce the foregoing waiver and (ii) acknowledges that it and the other party have been induced to enter into this Agreement and provide for any Credit Support Document, as applicable, by, among other things, the mutual waivers and certifications in this section.

(i) **LIMITATION OF LIABILITY.** NO PARTY SHALL BE REQUIRED TO PAY OR BE LIABLE FOR SPECIAL, PUNITIVE, EXEMPLARY, INCIDENTAL, CONSEQUENTIAL, OR INDIRECT DAMAGES (WHETHER OR NOT ARISING FROM ITS NEGLIGENCE) TO ANY OTHER PARTY; PROVIDED, HOWEVER, THAT NOTHING IN THIS PROVISION SHALL AFFECT THE ENFORCEABILITY OF SECTION 6(e) OF THIS AGREEMENT. IF AND TO THE EXTENT ANY PAYMENT REQUIRED TO BE MADE PURSUANT TO THIS AGREEMENT IS DEEMED TO CONSTITUTE LIQUIDATED DAMAGES, THE PARTIES ACKNOWLEDGE AND AGREE THAT SUCH DAMAGES ARE DIFFICULT OR IMPOSSIBLE TO DETERMINE AND THAT SUCH PAYMENT IS INTENDED TO BE A REASONABLE APPROXIMATION OF THE AMOUNT OF SUCH DAMAGES AND NOT A PENALTY.

(j) **Severability.** In the event that any one or more of the provisions contained in this Agreement should be held invalid, illegal, or unenforceable in any jurisdiction, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby; provided, however, that this severability provision will not be applicable if any provision of Section 1(c), 2, 5, or 6 is held to be invalid or unenforceable. The parties shall endeavor, in good faith negotiations, to replace the invalid, illegal or unenforceable provisions with valid provisions, the economic effect of which comes as close as possible to that of the invalid, illegal or unenforceable provisions.

(k) **Additional Representations.** For purposes of Section 3 of this Agreement, the following shall be added, immediately following paragraph (f) thereof:

“(g) **No Agency.** It is entering into this Agreement, any Credit Support Document to which it is a party, each Transaction, and any other documentation relating to this Agreement as principal (and not as agent or in any other capacity, fiduciary or otherwise).

(h) **Due Execution.** The individual(s) executing and delivering this Agreement and any other documentation (including any Credit Support Document and each Confirmation) relating to this Agreement to which it is a party or that it is required to deliver are duly empowered and authorized to do so, and it has duly
executed and delivered this Agreement, each Confirmation and any Credit Support Document to which it is a party.

(i) **Eligible Contract Participant.** It is an “eligible contract participant” within the meaning of Section 1a(18) of the Commodity Exchange Act, as amended. Party B represents that it is: (1) a governmental entity (including the United States, a State, or a foreign government), or political subdivision of a governmental entity, or (2) an instrumentality, agency, or department of an entity described in clause (1), and, in either case (1) or (2), it owns and invests on a discretionary basis $50,000,000 or more in investments, or otherwise satisfies the requirements of Section 1a(18)(A)(vii)(III) of the Commodity Exchange Act, as amended.

(j) Party B represents that its Senior Lien Electric Revenue Bonds constitute long-term, unsecured, unsubordinated debt of Party B.

(k) **Plan Assets.** Party B represents to Party A that it is not using assets of any employee benefit plan in connection with any Transaction.”

(l) **Acknowledgments.** Each party acknowledges that:

(i) the proprietary trading and other activities and transactions of the other party and its Affiliates, including risk management transactions entered into or to be entered into in connection with, or in anticipation of, the establishment, maintenance or termination of a particular Transaction, may affect the level of a market price, rate or index underlying a Transaction, the price and terms on which such other party or other dealers are willing to enter into or unwind or terminate a Transaction and the valuations provided by such other party;

(ii) the “indicative” or “midmarket” valuations of a Transaction provided to it by the other party from time to time may not represent (1) the price at which a new Transaction may be entered into, (2) the price at which the Transaction may be liquidated or unwound, (3) the price at which the Transaction is or would be carried on such other party’s books; (4) the price at which a similar Transaction might be available from another dealer in the market or (5) the calculation or estimate of an amount that would be payable following the designation of an Early Termination Date under Section 6(e) or otherwise of this Agreement;

(iii) (1) absent an express written agreement to the contrary, neither party has undertaken an obligation to unwind or terminate a Transaction prior to its scheduled termination date and (2) the provision by a party of a valuation or indicative unwind price does not constitute an undertaking to unwind or terminate any Transaction at that price unless the party providing such price expressly so indicates in connection with the provision of such price;

(iv) (1) neither party has undertaken an obligation to quote a price or terms for entering into or unwinding or terminating a Transaction prior to its scheduled termination
date, (2) if a party provides such a quote, the price or other terms provided may not be the 
most favorable price or terms available in the market and (3) except as expressly agreed 
writing, the price and terms on which a Transaction is entered into or unwound or 
terminated have been or will be individually negotiated and no representations or 
warties are given with respect to such price or terms;

(v) the parties are dealing at arm’s-length and neither party is acting as a fiduciary or 
financial, investment, trading or other adviser for the other party;

(vi) it assumes sole responsibility for (1) evaluating and understanding all of the 
terms, conditions and risks (economic and otherwise) of this Agreement, any Credit 
Support Document, each Transaction and any other documentation relating to this 
Agreement and (2) determining (x) the suitability or appropriateness thereof in light of its 
circumstances, (y) the extent to which it is necessary or appropriate to consult with its 
own legal, regulatory, tax, business, investment, financial, and accounting advisers or to 
obtain additional information or analyses, and (z) whether the rates, prices or amounts 
and other terms of each Transaction and the indicative quotations (if any) provided by the 
other party are acceptable to it in light of relevant factors, including rates, prices, amounts 
or other terms available in the relevant market; and

(vii) each party is entering into, and determining its responsibilities in connection with, 
this Agreement, any Credit Support Document and each Transaction in reliance upon the 
accuracy of the representations and acknowledgments of the other party contained in this 
Agreement, any Credit Support Document, each Confirmation and any other 
documentation relating to this Agreement.

(m) Section 6(e)(iii). Section 6(e)(iii) of this Agreement shall be amended to include the 
following sentences after the existing sentence:

“In addition to and notwithstanding anything to the contrary in the preceding sentence of 
this Section 6(e)(iii), if an Early Termination Date is deemed to have occurred under 
Section 6(a) as a result of Automatic Early Termination, the Defaulting Party hereby 
agrees to indemnify the Non-Defaulting Party on demand against all loss or damage that 
the Non-Defaulting Party may sustain or incur in respect of each Transaction as a result 
of movement in interest rates, currency exchange rates or market quotations between the 
Early Termination Date and the date (the “Determination Date”) upon which the Non-
Defaulting Party obtains the information confirming the existence of the Event of Default 
leading to the deemed Early Termination Date under Section 6(a) that has been derived 
from reasonably reliable source of information, including publicly available information, 
such as Telerate, Reuters, Financial Times and The Wall Street Journal.

If the Non-Defaulting Party shall determine that it would gain or benefit from the 
movement in interest rates, currency exchange rates or market quotations between the 
Early Termination Date and the Determination Date, the amount of such gain or benefit 
shall be deducted from the amount payable by the Defaulting Party pursuant to Section 
6(e)(i)(4).
The Determination Date shall be a date not later than the date upon which creditors generally of the Defaulting Party are notified of the occurrence of the Event of Default leading to the deemed Early Termination Date.”

(n) **Confirmation Procedures.** For each Transaction that Party A and Party B enter into hereunder, Party A shall promptly send to Party B a Confirmation in the form of Exhibit A hereto setting forth the terms of such Transaction. Party B shall execute and return the Confirmation to Party A or request correction of any error within five Business Days of receipt. Failure of Party B to respond within such period shall not affect the validity or enforceability of such Transaction and shall be deemed to be an affirmation and acceptance of such terms.
The parties executing this Schedule have executed the Master Agreement and have agreed as to the contents of this Schedule.

CITIBANK, N.A.

By: ____________________________

Title: ____________________________

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By: ____________________________

Title: ____________________________
Ladies and Gentlemen:

The purpose of this letter agreement is to set forth the terms and conditions of the Transaction entered into between us on the Trade Date specified below (the “Transaction”). This letter agreement constitutes a “Confirmation” as referred to in the Master Agreement specified below.

The definitions and provisions contained in the 2006 ISDA Definitions (as published by the International Swaps and Derivatives Association, Inc.) (the “Definitions”), are incorporated into this Confirmation. In the event of any inconsistency between those Definitions and this Confirmation, this Confirmation will govern.

1. This Confirmation supplements, forms part of, and is subject to the Master Agreement dated as of ____________, 2020 (the “Agreement”) between you and us. All provisions contained in the Agreement govern this Confirmation except as expressly modified below.

2. The terms of the particular Transaction to which this Confirmation relates are as follows:—

<table>
<thead>
<tr>
<th>Party A:</th>
<th>CITIBANK, N.A.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Party B:</td>
<td>SACRAMENTO MUNICIPAL UTILITY DISTRICT</td>
</tr>
<tr>
<td>[Notional Amount:]</td>
<td></td>
</tr>
<tr>
<td>Trade Date:</td>
<td></td>
</tr>
<tr>
<td>Effective Date:</td>
<td></td>
</tr>
<tr>
<td>Termination Date:</td>
<td></td>
</tr>
<tr>
<td>FIXED AMOUNTS:</td>
<td></td>
</tr>
<tr>
<td>Fixed Rate Payer:</td>
<td></td>
</tr>
</tbody>
</table>

Exhibit A
Page 1
<table>
<thead>
<tr>
<th><strong>[Fixed Rate Payer Currency Amount:]</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Rate Payer Payment Dates [or, Period End Dates, if Delayed Payment or Early Payment applies]:</td>
<td>[ ], subject to adjustment in accordance with the [Following/Modified Payment or [Following/Preceding] Business convention, with respect to a __________ Banking Day and a __________ Banking Day [with No Adjustment of Period End Dates]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>[Fixed Amount:]</strong></th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Fixed Rate:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fixed Rate Day Count Fraction:</strong></td>
<td></td>
</tr>
</tbody>
</table>

**FLOATING AMOUNTS:**

<table>
<thead>
<tr>
<th><strong>Floating Rate Payer:</strong></th>
<th>[Party B/A]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>[Floating Rate Payer Currency Amount:]</strong></td>
<td></td>
</tr>
</tbody>
</table>

| Floating Rate Payer Payment Dates [or, Period End Dates, if Delayed Payment or Early Payment applies]: | [ ], subject to adjustment in accordance with the [Following/Modified Payment or [Following/Preceding] Business convention, with respect to a __________ Banking Day and a __________ Banking Day [with No Adjustment of Period End Dates] |

<table>
<thead>
<tr>
<th><strong>Floating Rate for initial Calculation Period:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Floating Rate Option:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Designated Maturity:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Floating Rate Spread:</strong></td>
<td>[plus/minus] %p.a.</td>
</tr>
<tr>
<td><strong>Floating Rate Day Count Fraction:</strong></td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>Details</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Reset Dates:</td>
<td></td>
</tr>
<tr>
<td>[Rate Cut-off Dates: ]</td>
<td></td>
</tr>
<tr>
<td>[Method of Averaging: ]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unweighted/Weighted Average Rate</td>
</tr>
<tr>
<td>Compounding:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Applicable/Inapplicable</td>
</tr>
<tr>
<td>[Compounding Dates: ]</td>
<td></td>
</tr>
<tr>
<td>[Initial Exchange: ]</td>
<td></td>
</tr>
<tr>
<td>Initial Exchange Date:</td>
<td></td>
</tr>
<tr>
<td>Party A Initial Exchange Amount:</td>
<td></td>
</tr>
<tr>
<td>Party B Initial Exchange Amount:</td>
<td></td>
</tr>
<tr>
<td>Final Exchange:</td>
<td></td>
</tr>
<tr>
<td>Final Exchange Date:</td>
<td></td>
</tr>
<tr>
<td>Party A Initial Exchange Amount:</td>
<td></td>
</tr>
<tr>
<td>Party B Initial Exchange Amount:</td>
<td></td>
</tr>
<tr>
<td>Calculation Agent:</td>
<td></td>
</tr>
<tr>
<td>3. Account Details</td>
<td></td>
</tr>
<tr>
<td>Payments to Party A</td>
<td></td>
</tr>
<tr>
<td>Account for payments in [first currency]:</td>
<td>[ ]</td>
</tr>
<tr>
<td>Account for payments in [first currency]:</td>
<td>[ ]</td>
</tr>
<tr>
<td>Payments to Party B</td>
<td></td>
</tr>
<tr>
<td>Account for payments in [first currency]:</td>
<td>[ ]</td>
</tr>
<tr>
<td>Account for payments in [first currency]:</td>
<td>[ ]</td>
</tr>
<tr>
<td></td>
<td>Offices</td>
</tr>
<tr>
<td>---</td>
<td>---------</td>
</tr>
<tr>
<td></td>
<td>The Office of Party B for the Transaction is [ ]</td>
</tr>
<tr>
<td>5.</td>
<td>[Broker/Arranger: ]</td>
</tr>
</tbody>
</table>
Please confirm that the foregoing correctly sets forth the terms of our agreement by executing the copy of this Confirmation enclosed for that purpose and returning it to us.

Yours sincerely,

CITIBANK, N.A.

By: __________________________

Name: __________________________

Title: __________________________

Confirmed as of the date first written

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By: __________________________

Name: __________________________

Title: __________________________
Sacramento Municipal Utility District
[address]

Dear Sir or Madam:

I have acted as counsel to Citibank, N.A. (“Citibank”) in connection with the execution and delivery by Citibank of the ISDA Master Agreement dated as of ____________, 2020 (the “Agreement”), between Sacramento Municipal Utility District (the “Counterparty”) and Citibank.

In such capacity I, or attorneys under my supervision, have examined a copy of the Agreement. I have also reviewed certain corporate proceedings of Citibank and I have examined originals, or copies certified or otherwise identified to my satisfaction, of such corporate records of Citibank, certificates of public officials and of officers and representatives of Citibank, and such other documents as I have deemed necessary as a basis for the opinions hereinafter expressed. In such examination, I have assumed the authenticity of all documents submitted to me as originals and the conformity with the originals of all documents submitted to me as certified or otherwise satisfactorily identified copies. I have also assumed that the Agreement has been duly executed and delivered by Counterparty pursuant to appropriate corporate authority. The opinions given below are limited to matters concerning the laws of the United States of America and the State of New York.

Based upon the foregoing and having regard for such legal considerations as I deem relevant, I am of the opinion that:

1. Citibank is a national banking association duly existing under the laws of the United States of America.

2. Citibank has full corporate power to execute and deliver the Agreement and to perform its obligations thereunder.

3. Such actions have been duly authorized by all necessary corporate action and do not violate, and are not in conflict with, any provision of law or of the articles of association of Citibank.

4. The Agreement has been duly executed and delivered by Citibank, and constitutes the legal, valid and binding obligation of Citibank, enforceable against Citibank in accordance with its terms (subject to applicable bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium or other laws affecting creditors’ rights generally from time to time in effect). The enforceability of Citibank’s obligations is also subject to general principles of equity (regardless of whether such enforceability is considered in a proceeding in equity or at law).
Very truly yours,
Ladies and Gentlemen:

We have acted as counsel to _____, a __________ of the State of _____ (“Party B”) in connection with the execution and delivery of the Master Agreement (the “Master Agreement”) dated as of ______, 20__ between Citibank, N.A. (“Party A”) and Party B and the Confirmation(s), dated ______, 20__ (the “Confirmation(s)”), each between Party A and Party B. The Master Agreement together with the Confirmation(s) shall constitute one agreement.

In connection with this opinion, we have examined executed copies of the Master Agreement and the Confirmation(s) and such documents and records of Party B, certificates of public officials and officers of Party B and such other documents as we have deemed necessary or appropriate for the purposes of this opinion. In such opinion, we have assumed the genuineness of all the signatures, the authenticity of all documents submitted to us as originals and the conformity to authentic original documents of all documents submitted to us as certified, conformed or photostatic copies.

Based upon the foregoing, we are of the opinion that:

1. Party B is a _______ of the State of _____ duly organized and validly existing under the laws of the State of ____.

2. Party B is authorized to enter into the Master Agreement and the Confirmation(s) and to perform its obligations thereunder.

3. Party B has taken all necessary action required to be taken to ensure that the Master Agreement and the Confirmation(s) comply in all respects with its charter and/or by-laws.

4. The Master Agreement and the Confirmation(s) have been duly executed and delivered by Party B and constitute legally valid and binding obligations of Party B enforceable against Party B in accordance with their respective terms (subject to applicable bankruptcy, reorganization, insolvency, moratorium or similar laws affecting creditors’ rights generally and subject, as to enforceability, to equitable principles of general application (regardless of whether enforcement is sought in a proceeding in equity or at law)).

5. To the best of our knowledge, no consent, authorization, license or approval of, or registration or declaration with, any governmental authority is required in connection with the
execution, delivery and performance of the Master Agreement and the Confirmation(s) by Party B.

6. The execution, delivery and performance of the Master Agreement and the Confirmation(s) by Party B and the provisions thereof do not conflict with, violate, or constitute a breach of or default under, any instrument relating to the creation, authorization, organization, existence, or operation of Party B, any commitment, agreement, or other instrument to which Party B is a party or by which it or its property or assets is bound or affected, or any constitution, law, rule, regulation, government code, resolution, guideline, ordinance, judgment, order, writ, decree, or ruling to which Party B (or any of its officials in their respective capacities as such) or its property is subject.

7. There is no action, suit, claim, proceeding, inquiry, or investigation, at law or in equity or by or before any court, governmental or public board, body, or agency, or regulatory authority, or private arbitration association, pending or, to our knowledge, threatened against or affecting Party B or any entity affiliated with Party B (or any of its officials in their respective capacities as such) or any of its property (nor to our knowledge is there any basis therefor), which in any way questions the right, power, or authority of Party B to enter into or perform its obligations under the Master Agreement or the Confirmation(s), the validity of the proceeding taken by Party B in connection with the authorization, execution, delivery, or performance of the Master Agreement or the Confirmation(s), or wherein any unfavorable decision, ruling, or finding could adversely affect the transactions contemplated by the Master Agreement or the Confirmation(s) or which in any way could adversely affect the Master Agreement or the Confirmation(s) or the legality, validity, binding effect, or enforceability thereof.

8. Party B is subject to suit with respect to its obligations under the Master Agreement and the Confirmation(s) and neither Party B nor any of its properties and assets has any right to immunity from suit or attachment in aid of execution or other legal process on the grounds of sovereignty or otherwise or, to the extent that Party B and any of its properties have any such right to immunity, Party B has effectively waived such right for the purpose of the Master Agreement and the Confirmation and the party executing the Master Agreement and the Confirmation(s) on its behalf has the authority to waive such immunity.

9. [Opinion re: security and source of payment of Party B’s obligations, enforceability of Covered Indenture.]

Very truly yours,
This Annex supplements, forms part of, and is subject to, the above-referenced Agreement, is part of its Schedule and is a Credit Support Document under this Agreement with respect to each party.

Accordingly, the parties agree as follows:

Paragraph 1. Interpretation

(a) **Definitions and Inconsistency.** Capitalized terms not otherwise defined herein or elsewhere in this Agreement have the meanings specified pursuant to Paragraph 12, and all references in this Annex to Paragraphs are to Paragraphs of this Annex. In the event of any inconsistency between this Annex and the other provisions of this Schedule, this Annex will prevail, and in the event of any inconsistency between Paragraph 13 and the other provisions of this Annex, Paragraph 13 will prevail.

(b) **Secured Party and Pledgor.** All references in this Annex to the “Secured Party” will be to either party when acting in that capacity and all corresponding references to the “Pledgor” will be to the other party when acting in that capacity; *provided, however,* that if Other Posted Support is held by a party to this Annex, all references herein to that party as the Secured Party with respect to that Other Posted Support will be to that party as the beneficiary thereof and will not subject that support or that party as the beneficiary thereof to provisions of law generally relating to security interests and secured parties.

Paragraph 2. Security Interest
Each party, as the Pledgor, hereby pledges to the other party, as the Secured Party, as security for its Obligations and grants to the Secured Party a first priority continuing security interest in, lien on and right of Set-off against all Posted Collateral Transferred to or received by the Secured Party hereunder. Upon the Transfer by the Secured Party to the Pledgor of Posted Collateral, the security interest and lien granted hereunder on that Posted Collateral will be released immediately and, to the extent possible, without any further action by either party.

**Paragraph 3. Credit Support Obligations**

(a) **Delivery Amount.** Subject to Paragraphs 4 and 5, upon demand made by the Secured Party on or promptly following a Valuation Date, if the Delivery Amount for that Valuation Date equals or exceeds the Pledgor’s Minimum Transfer Amount, then the Pledgor will Transfer to the Secured Party Eligible Credit Support having a Value as of the date of Transfer at least equal to the applicable Delivery Amount (rounded pursuant to Paragraph 13). Unless otherwise specified in Paragraph 13, the “Delivery Amount” applicable to the Pledgor for any Valuation Date will equal the amount by which:

(i) the Credit Support Amount

exceeds

(ii) the Value as of that Valuation Date of all Posted Credit Support held by the Secured Party.

(b) **Return Amount.** Subject to Paragraphs 4 and 5, upon a demand made by the Pledgor on or promptly following a Valuation Date, if the Return Amount for that Valuation Date equals or exceeds the Secured Party’s Minimum Transfer Amount, then the Secured Party will Transfer to the Pledgor Posted Credit Support specified by the Pledgor in that demand having a Value as of the date of Transfer as close as practicable to the applicable Return Amount (rounded pursuant to Paragraph 13). Unless otherwise specified in Paragraph 13, the “Return Amount” applicable to the Secured Party for any Valuation Date will equal the amount by which:

(i) the Value as of that Valuation Date of all Posted Credit Support held by the Secured Party

exceeds

(ii) the Credit Support Amount.

“Credit Support Amount” means, unless otherwise specified in Paragraph 13, for any Valuation Date (i) the Secured Party’s Exposure for that Valuation Date plus (ii) the aggregate of all Independent Amounts applicable to the Pledgor, if any, minus (iii) all Independent Amounts applicable to the Secured Party, if any, minus (iv) the Pledgor’s Threshold; provided, however, that the Credit Support Amount will be deemed to be zero whenever the calculation of Credit Support Amount yields a number less than zero.

**Paragraph 4. Conditions Precedent, Transfer Timing, Calculations and Substitutions**

(a) **Conditions Precedent.** Each Transfer obligation of the Pledgor under Paragraphs 3 and 5 and of the Secured Party under Paragraphs 3, 4(d)(ii), 5 and 6(d) is subject to the conditions precedent that:

(i) no Event of Default, Potential Event of Default or Specified Condition has occurred and is continuing with respect to the other party; and
(ii) no Early Termination Date for which any unsatisfied payment obligations exist has occurred or been designated as the result of an Event of Default or Specified Condition with respect to the other party.

(b) **Transfer Timing.** Subject to Paragraphs 4(a) and 5 and unless otherwise specified, if a demand for the Transfer of Eligible Credit Support or Posted Credit Support is made by the Notification Time, then the relevant Transfer will be made not later than the close of business on the next Local Business Day; if a demand is made after the Notification Time, then the relevant Transfer will be made not later than the close of business on the second Local Business Day thereafter.

(c) **Calculations.** All calculations of Value and Exposure for purposes of Paragraphs 3 and 6(d) will be made by the Valuation Agent as of the Valuation Time. The Valuation Agent will notify each party (or the other party, if the Valuation Agent is a party) of its calculations not later than the Notification Time on the Local Business Day following the applicable Valuation Date (or in the case of Paragraph 6(d), following the date of calculation).

(d) **Substitutions.**

(i) Unless otherwise specified in Paragraph 13, upon notice to the Secured Party specifying the items of Posted Credit Support to be exchanged, the Pledgor may, on any Local Business Day, Transfer to the Secured Party substitute Eligible Credit Support (the “Substitute Credit Support”); and

(ii) subject to Paragraph 4(a), the Secured Party will Transfer to the Pledgor the items of Posted Credit Support specified by the Pledgor in its notice not later than the Local Business Day following the date on which the Secured Party receives the Substitute Credit Support, unless otherwise specified in Paragraph 13 (the “Substitution Date”); provided that the Secured Party will only be obligated to Transfer Posted Credit Support with a Value as of the date of Transfer of that Posted Credit Support equal to the Value as of that date of the Substitute Credit Support.

**Paragraph 5. Dispute Resolution**

If a party (a “Disputing Party”) disputes (I) the Valuation Agent’s calculation of a Delivery Amount or a Return Amount or (II) the Value of any Transfer of Eligible Credit Support or Posted Credit Support, then (1) the Disputing Party will notify the other party and the Valuation Agent (if the Valuation Agent is not the other party) not later than the close of business on the Local Business Day following (X) the date that the demand is made under Paragraph 3 in case of (I) above or (Y) the date of Transfer in the case of (II) above, (2) subject to Paragraph 4(a), the appropriate party will Transfer the undisputed amount to the other party not later than the close of business on the Local Business Day following (X) the date that the demand is made under Paragraph 3 in the case of (I) above or (Y) the date of Transfer in the case of (II) above, (3) the parties will consult with each other in an attempt to resolve the dispute and (4) if they fail to resolve the dispute by the Resolution Time, then:

(i) In the case of a dispute involving a Delivery Amount or Return Amount, unless otherwise specified in Paragraph 13, the Valuation Agent will recalculate the Exposure and the Value as of the Recalculation Date by:

(A) utilizing any calculations of Exposure for the Transactions (or Swap Transactions) that the parties have agreed are not in dispute;
calculating the Exposure for the Transactions (or Swap Transactions) in dispute by seeking four actual quotations at mid-market from Reference Market-makers for purposes of calculating Market Quotation, and taking the arithmetic average of those obtained; provided that if four quotations are not available for a particular Transaction (or Swap Transaction), then fewer than four quotations may be used for that Transaction (or Swap Transaction); and if no quotations are available for a particular Transaction (or Swap Transaction), then the Valuation Agent’s original calculations will be used for that Transaction (or Swap Transaction);

utilizing the procedures specified in Paragraph 13 for calculating the Value, if disputed, of Posted Credit Support.

(ii) In the case of a dispute involving the Value of any Transfer of Eligible Credit Support or Posted Credit Support, the Valuation Agent will recalculate the Value as of the date of Transfer pursuant to Paragraph 13.

Following a recalculation pursuant to this Paragraph, the Valuation Agent will notify each party (or the other party, if the Valuation Agent is a party) not later than the Notification Time on the Local Business Day following the Resolution Time. The appropriate party will, upon demand following that notice by the Valuation Agent or a resolution pursuant to (3) above and subject to Paragraphs 4(a) and 4(b), make the appropriate Transfer.

Paragraph 6. Holding and Using Posted Collateral

(a) Care of Posted Collateral. Without limiting the Secured Party’s rights under Paragraph 6(c), the Secured Party will exercise reasonable care to assure the safe custody of all Posted Collateral to the extent required by applicable law, and in any event the Secured Party will be deemed to have exercised reasonable care if it exercises at least the same degree of care as it would exercise with respect to its own property. Except as specified in the preceding sentence, the Secured Party will have no duty with respect to Posted Collateral, including, without limitation, any duty to collect any Distributions, or enforce or preserve any rights pertaining thereto.

(b) Eligibility to Hold Posted Collateral; Custodians.

(i) General. Subject to the satisfaction of any conditions specified in Paragraph 13 for holding Posted Collateral, the Secured Party will be entitled to hold Posted Collateral or to appoint an agent (a “Custodian”) to hold Posted Collateral for the Secured Party. Upon notice by the Secured Party to the Pledgor of the appointment of a Custodian, the Pledgor’s obligations to make any Transfer will be discharged by making the Transfer to that Custodian. The holding of Posted Collateral by a Custodian will be deemed to be the holding of that Posted Collateral by the Secured Party for which the Custodian is acting.

(ii) Failure to Satisfy Conditions. If the Secured Party or its Custodian fails to satisfy any conditions for holding Posted Collateral, then upon a demand made by the Pledgor, the Secured Party will, not later than five Local Business Days after the demand, Transfer or cause its Custodian to Transfer all Posted Collateral held by it to a Custodian that satisfies those conditions or to the Secured Party if it satisfies those conditions.
(iii) **Liability.** The Secured Party will be liable for the acts or omissions of its Custodian to the same extent that the Secured Party would be liable hereunder for its own acts or omissions.

(c) **Use of Posted Collateral.** Unless otherwise specified in Paragraph 13 and without limiting the rights and obligations of the parties under Paragraphs 3, 4(d)(ii), 5, 6(d) and 8, if the Secured Party is not a Defaulting Party or an Affected Party with respect to a Specified Condition and no Early Termination Date has occurred or been designated as the result of an Event of Default or Specified Condition with respect to the Secured Party, then the Secured Party will, notwithstanding Section 9-207 of the New York Uniform Commercial Code, have the right to:

(i) sell, pledge, rehypothecate, assign, invest, use, commingle or otherwise dispose of, or otherwise use in its business any Posted Collateral it holds, free from any claim or right of any nature whatsoever of the Pledgor, including any equity or right of redemption by the Pledgor; and

(ii) register any Posted Collateral in the name of the Secured Party, its Custodian or a nominee for either.

For purposes of the obligation to Transfer Eligible Credit Support or Posted Credit Support pursuant to Paragraphs 3 and 5 and any rights or remedies authorized under this Agreement, the Secured Party will be deemed to continue to hold all Posted Collateral and to receive Distributions made thereon, regardless of whether the Secured Party has exercised any rights with respect to any Posted Collateral pursuant to (i) or (ii) above.

(d) **Distributions and Interest Amount.**

(i) **Distributions.** Subject to Paragraph 4(a), if the Secured Party receives or is deemed to receive Distributions on a Local Business Day, it will Transfer to the Pledgor not later than the following Local Business Day any Distributions it receives or is deemed to receive to the extent that a Delivery Amount would not be created or increased by that Transfer, as calculated by the Valuation Agent (and the date of calculation will be deemed to be a Valuation Date for this purpose).

(ii) **Interest Amount.** Unless otherwise specified in Paragraph 13 and subject to Paragraph 4(a), in lieu of any interest, dividends or other amounts paid or deemed to have been paid with respect to Posted Collateral in the form of Cash (all of which may be retained by the Secured Party), the Secured Party will Transfer to the Pledgor at the times specified in Paragraph 13 the Interest Amount to the extent that a Delivery Amount would not be created or increased by that Transfer, as calculated by the Valuation Agent (and the date of calculation will be deemed to be a Valuation Date for this purpose). The Interest Amount or portion thereof not Transferred pursuant to this Paragraph will constitute Posted Collateral in the form of Cash and will be subject to the security interest granted under Paragraph 2.

**Paragraph 7. Events of Default**

For purposes of Section 5(a)(iii)(1) of this Agreement, an Event of Default will exist with respect to a party if:
Paragraph 8. Certain Rights and Remedies

(a) Secured Party’s Rights and Remedies. If at any time (1) an Event of Default or Specified Condition with respect to the Pledgor has occurred and is continuing or (2) an Early Termination Date has occurred or been designated as the result of an Event of Default or Specified Condition with respect to the Pledgor, then, unless the Pledgor has paid in full all of its Obligations that are then due, the Secured Party may exercise one or more of the following rights and remedies:

(i) all rights and remedies available to a secured party under applicable law with respect to Posted Collateral held by the Secured Party;

(ii) any other rights and remedies available to the Secured Party under the terms of Other Posted Support, if any;

(iii) the right to Set-off any amounts payable by the Pledgor with respect to any Obligations against any Posted Collateral or the Cash equivalent of any Posted Collateral held by the Secured Party (or any obligation of the Secured Party to Transfer that Posted Collateral);

and

(iv) the right to liquidate any Posted Collateral held by the Secured Party through one or more public or private sales or other dispositions with such notice, if any, as may be required under applicable law, free from any claim or right of any nature whatsoever of the Pledgor, including any equity or right of redemption by the Pledgor (with the Secured Party having the right to purchase any or all of the Posted Collateral to be sold) and to apply the proceeds (or the Cash equivalent thereof) from the liquidation of the Posted Collateral to any amounts payable by the Pledgor with respect to any Obligations in that order as the Secured Party may elect.

Each party acknowledges and agrees that Posted Collateral in the form of securities may decline speedily in value and is of a type customarily sold on a recognized market, and, accordingly, the Pledgor is not entitled to prior notice of any sale of that Posted Collateral by the Secured Party, except any notice that is required under applicable law and cannot be waived.

(b) Pledgor’s Rights and Remedies. If at any time an Early Termination Date has occurred or been designated as the result of an Event of Default or Specified Condition with respect to the Secured Party, then (except in the case of an Early Termination Date relating to less than all Transactions (or Swap
Transactions) where the Secured Party has paid in full all of its obligations that are then due under Section 6(e) of this Agreement:

(i) the Pledgor may exercise all rights and remedies available to a Pledgor under applicable law with respect to Posted Collateral held by the Secured Party;

(ii) the Pledgor may exercise any other rights and remedies available to the Pledgor under the terms of Other Posted Support, if any;

(iii) the Secured Party will be obligated immediately to Transfer all Posted Collateral and the Interest Amount to the Pledgor; and

(iv) to the extent that Posted Collateral or the Interest Amount is not so Transferred pursuant to (iii) above, the Pledgor may:

(A) Set-off any amounts payable by the Pledgor with respect to any Obligations against any Posted Collateral or the Cash equivalent of any Posted Collateral held by the Secured Party (or any obligation of the Secured Party to Transfer that Posted Collateral); and

(B) to the extent that the Pledgor does not Set-off under (iv)(A) above, withhold payment of any remaining amounts payable by the Pledgor with respect to any Obligations, up to the Value of any remaining Posted Collateral held by the Secured Party, until that Posted Collateral is Transferred to the Pledgor.

(c) **Deficiencies and Excess Proceeds.** The Secured Party will Transfer to the Pledgor any proceeds and Posted Credit Support remaining after liquidation, Set-off and/or application under Paragraphs 8(a) and 8(b) after satisfaction in full of all amounts payable by the Pledger with respect to any Obligations; the Pledgor in all events will remain liable for any amounts remaining unpaid after any liquidation, Set-off and/or application under Paragraphs 8(a) and 8(b).

(d) **Final Returns.** When no amounts are or thereafter may become payable by the Pledgor with respect to any Obligations (except for any potential liability under Section 2(d) of this Agreement), the Secured Party will Transfer to the Pledgor all Posted Credit Support and the Interest Amount, if any.

**Paragraph 9. Representations**

Each party represents to the other party (which representation will be deemed to be repeated as of each date on which it, as the Pledgor, Transfers Eligible Collateral) that:

(i) it has the power to grant a security interest in and lien on any Eligible Collateral it Transfers as the Pledgor and has taken all necessary actions to authorize the granting of that security interest and lien;

(ii) it is the sole owner of or otherwise has the right to Transfer all Eligible Collateral it Transfers to the Secured Party hereunder, free and clear of any security interest, lien, encumbrance or other restrictions other than the security interest and lien granted under Paragraph 2;
upon the Transfer of any Eligible Collateral to the Secured Party under the terms of this Annex, the Secured Party will have a valid and perfected first priority security interest therein (assuming that any central clearing corporation or any third-party financial intermediary or other entity not within the control of the Pledgor involved in the Transfer of that Eligible Collateral gives the notices and takes the action required of it under applicable law for perfection of that interest); and

the performance by it of its obligations under this Annex will not result in the creation of any security interest, lien or other encumbrance on any Posted Collateral other than the security interest and lien granted under Paragraph 2.

Paragraph 10. Expenses

(a) **General.** Except as otherwise provided in Paragraphs 10(b) and 10(c), each party will pay its own costs and expenses in connection with performing its obligations under this Annex and neither party will be liable for any costs and expenses incurred by the other party in connection herewith.

(b) **Posted Credit Support.** The Pledgor will promptly pay when due all taxes, assessments or charges of any nature that are imposed with respect to Posted Credit support held by the Secured Party upon becoming aware of the same, regardless of whether any portion of that Posted Credit Support is subsequently disposed of under Paragraph 6(c), except for those taxes, assessments and charges that result from the exercise of the Secured Party’s rights under Paragraph 6(c).

(c) **Liquidation/Application of Posted Credit Support.** All reasonable costs and expenses incurred by or on behalf of the Secured Party or the Pledgor in connection with the liquidation and/or application of any Posted Credit Support under Paragraph 8 will be payable, on demand and pursuant to the Expenses Section of this Agreement, by the Defaulting Party or, if there is no Defaulting Party, equally by the parties.

Paragraph 11. Miscellaneous

(a) **Default Interest.** A Secured Party that fails to make, when due, any Transfer of Posted Collateral or the Interest Amount will be obliged to pay the Pledgor (to the extent permitted under applicable law) an amount equal to interest at the Default Rate multiplied by the Value of the items of property that were required to be Transferred, from (and including) the date that Posted Collateral or Interest Amount was required to be Transferred to (but excluding) the date of Transfer of that Posted Collateral or Interest Amount. This interest will be calculated on the basis of daily compounding and the actual number of days elapsed.

(b) **Further Assurances.** Promptly following a demand made by a party, the other party will execute, deliver, file and record any financing statement, specific assignment or other document and take any other action that may be necessary or desirable and reasonably requested by that party to create, preserve, perfect or validate any security interest or lien granted under Paragraph 2, to enable that party to exercise or enforce its rights under this Annex with respect to Posted Credit Support or an Interest Amount or to effect or document a release of a security interest on Posted Collateral or an Interest Amount.

(c) **Further Protection.** The Pledgor will promptly give notice to the Secured Party of, and defend against, any suit, action, proceeding or lien that involves Posted Credit Support Transferred by the Pledgor or that could adversely affect the security interest and lien granted by it under Paragraph 2, unless that suit, action, proceeding or lien results from the exercise of the Secured Party’s rights under Paragraph 6(c).
(d) **Good Faith and Commercially Reasonable Manner.** Performance of all obligations under this Annex, including, but not limited to, all calculations, valuations and determinations made by either party, will be made in good faith and in a commercially reasonable manner.

(e) **Demands and Notices.** All demands and notices given by a party under this Annex will be made as specified in the Notices Section of this Agreement, except as otherwise provided in Paragraph 13.

(f) **Specifications of Certain Matters.** Anything referred to in this Annex as being specified in Paragraph 13 also may be specified in one or more Confirmations or other documents and this Annex will be construed accordingly.

**Paragraph 12. Definitions**

As used in this Annex:—

“**Cash**” means the lawful currency of the United States of America.

“**Credit Support Amount**” has the meaning specified in Paragraph 3.

“**Custodian**” has the meaning specified in Paragraphs 6(b)(i) and 13.

“**Delivery Amount**” has the meaning specified in Paragraph 3(a).

“**Disputing Party**” has the meaning specified in Paragraph 5.

“**Distributions**” means, with respect to Posted Collateral other than Cash, all principal, interest and other payments and distributions of cash or other property with respect thereto, regardless of whether the Secured Party has disposed of that Posted Collateral under Paragraph 6(c). Distributions will not include any item of property acquired by the Secured Party upon any disposition or liquidation of Posted Collateral or, with respect to any Posted Collateral in the form of Cash, any distributions on that collateral, unless otherwise specified herein.

“**Eligible Collateral**” means, with respect to a party, the items, if any, specified as such for that party in Paragraph 13.

“**Eligible Credit Support**” means Eligible Collateral and Other Eligible Support.

“**Exposure**” means for any Valuation Date or other date for which Exposure is calculated and subject to Paragraph 5 in the case of a dispute, the amount, if any, that would be payable to a party that is the Secured Party by the other party (expressed as a positive number) or by a party that is the Secured Party to the other party (expressed as a negative number) pursuant to Section 6(e)(ii)(2)(A) of this Agreement as if all Transactions (or Swap Transactions) were being terminated as of the relevant Valuation Time; *provided* that Market Quotation will be determined by the Valuation Agent using its estimates at mid-market of the amounts that would be paid for Replacement Transactions (as that term is defined in the definition of “Market Quotation”).

“**Independent Amount**” means, with respect to a party, the amount specified as such for that party in Paragraph 13; if no amount is specified, zero.
“Interest Amount” means, with respect to an Interest Period, the aggregate sum of the amounts of interest calculated for each day in that Interest Period on the principal amount of Posted Collateral in the form of Cash held by the Secured Party on that day, determined by the Secured Party for each such day as follows:

\[ (x) \times (y) \div (z) \]

where:
- \( (x) \) is the amount of Cash on that day;
- \( (y) \) is the Interest Rate in effect for that day;
- \( (z) \) is 360.

“Interest Period” means the period from (and including) the last Local Business Day on which an Interest Amount was Transferred (or, if no Interest Amount has yet been Transferred, the Local Business Day on which Posted Collateral in the form of Cash was Transferred to or received by the Secured Party) to (but excluding) the Local Business Day on which the current Interest Amount is to be Transferred.

“Interest Rate” means the rate specified in Paragraph 13.

“Local Business Day,” unless otherwise specified in Paragraph 13, has the meaning specified in the Definitions Section of this Agreement, except that references to a payment in clause (b) thereof will be deemed to include a Transfer under this Annex.

“Minimum Transfer Amount” means, with respect to a party, the amount specified as such for that party in Paragraph 13; if no amount is specified, zero.

“Notification Time” has the meaning specified in Paragraph 13.

“Obligations” means, with respect to a party, all present and future obligations of that party under this Agreement and any additional obligations specified for that party in Paragraph 13.

“Other Eligible Support” means, with respect to a party, the items, if any, specified as such for that party in Paragraph 13.

“Other Posted Support” means all Other Eligible Support Transferred to the Secured Party that remains in effect for the benefit of that Secured Party.

“Pledgor” means either party, when that party (i) receives a demand for or is required to Transfer Eligible Credit Support under Paragraph 3(a) or (ii) has Transferred Eligible Credit Support under Paragraph 3(a).

“Posted Collateral” means all Eligible Collateral, other property, Distributions, and all proceeds thereof that have been Transferred to or received by the Secured Party under this Annex and not Transferred to the Pledgor pursuant to Paragraph 3(b), 4(d)(ii) or 6(d)(i) or released by the Secured Party under Paragraph 8. Any Interest Amount or portion thereof not Transferred pursuant to Paragraph 6(d)(ii) will constitute Posted Collateral in the form of Cash.

“Posted Credit Support” means Posted Collateral and Other Posted Support.

“Recalculation Date” means the Valuation Date that gives rise to the dispute under Paragraph 5; provided, however, that if a subsequent Valuation Date occurs under Paragraph 3 prior to the resolution of the dispute, then the “Recalculation Date” means the most recent Valuation Date under Paragraph 3.
“Resolution Time” has the meaning specified in Paragraph 13.

“Return Amount” has the meaning specified in Paragraph 3(b).

“Secured Party” means either party, when that party (i) makes a demand for or is entitled to receive Eligible Credit Support under Paragraph 3(a) or (ii) holds or is deemed to hold Posted Credit Support.

“Specified Condition” means, with respect to a party, any event specified as such for that party in Paragraph 13.

“Substitute Credit Support” has the meaning specified in Paragraph 4(d)(i).

“Substitution Date” has the meaning specified in Paragraph 4(d)(ii).

“Threshold” means, with respect to a party, the amount specified as such for that party in Paragraph 13; if no amount is specified, zero.

“Transfer” means, with respect to any Eligible Credit Support, Posted Credit Support or Interest Amount, and in accordance with the instructions of the Secured Party, Pledgor or Custodian, as applicable:

(i) in the case of Cash, payment or delivery by wire transfer into one or more bank accounts specified by the recipient;

(ii) in the case of certificated securities that cannot be paid or delivered by book-entry, payment or delivery in appropriate physical form to the recipient or its account accompanied by any duly executed instruments of transfer, assignments in blank, transfer tax stamps and any other documents necessary to constitute a legally valid transfer to the recipient;

(iii) in the case of securities that can be paid or delivered in book-entry, the giving of written instruments to the relevant depository institution or other entity specified by the recipient, together with a written copy thereof to the recipient, sufficient if complied with to result in a legally effective transfer of the relevant interest to the recipient; and

(iv) in the case of Other Eligible Support or Other Posted Support, as specified in Paragraph 13.

“Valuation Agent” has the meaning specified in Paragraph 13.

“Valuation Date” means each date specified in or otherwise determined pursuant to Paragraph 13.

“Valuation Percentage” means, for any item of Eligible Collateral, the percentage specified in Paragraph 13.

“Valuation Time” has the meaning specified in Paragraph 13.

“Value” means for any Valuation Date or other date for which Value is calculated, and subject to Paragraph 5 in the case of a dispute, with respect to:

(i) Eligible Collateral or Posted Collateral that is:

(A) Cash, the amount thereof; and
(B) a security, the bid price obtained by the Valuation Agent multiplied by the applicable Valuation Percentage, if any;

(ii) Posted Collateral that consists of items that are not specified as Eligible Collateral, zero;

and

(iii) Other Eligible Support and Other Posted Support, as specified in Paragraph 13.
Paragraph 13. Elections and Variables

(a) **Security Interest for “Obligations”**. The term “Obligations” as used in this Annex means, with respect to a party, all present and future obligations under this Agreement.

(b) **Credit Support Obligations.**

(i) **Delivery Amount, Return Amount and Credit Support Amount; Addition to Paragraph 3.**

(A) “Delivery Amount” has the meaning set forth in Paragraph 3(a).

(B) “Return Amount” means, for any Valuation Date, an amount equal to the amount by which (i) the Value as of that Valuation Date of all Posted Credit Support held by the Secured Party exceeds (ii) the Credit Support Amount; provided, however, that following such return, the Value of all Posted Credit Support held by the Secured Party must at least equal the Credit Support Amount.

(C) “Credit Support Amount” means for any Valuation Date (i) the Secured Party’s Exposure for that Valuation Date plus (ii) the aggregate of all Independent Amounts applicable to the Pledgor, if any, minus (iii) the Pledgor’s Threshold, if any; provided, however, that (x) in the case where the sum of the Independent Amounts applicable to the Pledgor exceeds zero, the Credit Support Amount will not be less than the sum of all Independent Amounts applicable to the Pledgor and (y) in all other cases, the Credit Support Amount will be deemed to be zero whenever the calculation of the Credit Support Amount yields an amount less than zero.

(D) **Addition to Paragraph 3.** The following subparagraph (c) is hereby added to Paragraph 3 of this Annex:

(c) **No offset.** On any Valuation Date, if either (i) each party is required to make a Transfer under Paragraph 3(a) or (ii) each party is required to make a Transfer under Paragraph 3(b), then the amounts of those obligations will not offset each other.

(ii) **Eligible Collateral.** The items set forth on Schedule I hereto will qualify as “Eligible Collateral” for the party specified.

(iii) **Other Eligible Support.** There shall be no “Other Eligible Support” for either party for purposes of this Annex.

(iv) **Thresholds.**

(A) “Independent Amount” shall mean, with respect to Party A and Party B, zero (USD 0.00).

(B) “Threshold” as of any date shall be the amount set forth in Schedule II hereto under the caption “Threshold” and shall be, with respect to Party A, the amount set forth opposite the rating classification assigned to any long-term unsecured, unsubordinated, debt securities of Party A and, with respect to Party B, shall be the amount set forth opposite the ratings classification assigned to the [long-term unsecured, unsubordinated, debt] of Party B (without giving effect to any credit enhancement), in either case by any Relevant Rating Agency. If at any time (i) any such rating shall be suspended or withdrawn or (ii) all outstanding long-term, unsecured, unsubordinated debt of Party A or Party B shall not
be rated by either of the Relevant Rating Agencies, the Threshold for such party shall be zero (USD 0.00). In the event of a split rating classification by the Relevant Rating Agencies the Threshold shall be the amount opposite the lower of the ratings on Schedule II hereto. “Relevant Rating Agency” for the purposes hereof means S&P and Moody’s.

(C) “Minimum Transfer Amount” $______.

(D) Rounding. The Delivery Amount and the Return Amount will not be rounded.

(c) Valuation and Timing.

(i) “Valuation Agent” means, for purposes of Paragraphs 3 and 5, the party making the demand under Paragraph 3, and, for purposes of Paragraphs 4(d)(ii) and 6(d), the Secured Party receiving or deemed to receive the Substitute Credit Support or the Distributions of the Interest Amount, as applicable, provided, however, that for purposes of calculating the Value of Eligible Credit Support or Posted Credit Support, Party A shall be the Valuation Agent.

(ii) “Valuation Date” means, with respect to the determination of Exposure, the first Local Business Day of each week or any other Local Business Day upon the reasonable request of either party, and with respect to the determination of Value of Eligible Credit Support or Posted Credit Support, the first Local Business Day of each week or any other Local Business Day upon the reasonable request of either party.

(iii) “Valuation Time” means, with respect to the determination of Exposure, Value of Eligible Credit Support and Posted Credit Support, the close of business on the Local Business Day immediately before the Valuation Date or date of calculation, as applicable.

(iv) “Notification Time” means 10:00 a.m., New York time on a Valuation Date; provided, however, that, notwithstanding Paragraph 4(b), (x) with regard to Transfers of Eligible Credit Support or Posted Credit Support in the form of Cash, if a request for Transfer is made by the Notification Time, then the relevant Transfer shall be made not later than the close of business on the day on which such request is received, or, if such day is not a Local Business Day or, if such request is received after the Notification Time, not later than the close of business on the next Local Business Day, and (y) with regard to Transfers of other forms of Eligible Credit Support or Posted Credit Support, the relevant Transfer shall be made in accordance with Paragraph 4(b). Notwithstanding anything herein to the contrary, with regard to Transfers of Independent Amounts, the relevant Transfer shall be made by the close of business on the second Local Business Day following the Trade Date of the applicable Transaction.

(d) Conditions Precedent and Secured Party’s Rights and Remedies. There shall be no “Specified Condition” with respect to Party A or Party B.

(e) Substitution.

(i) “Substitution Date” has the meaning specified in Paragraph 4(d)(ii).

(ii) The following provision shall be inserted at the end of Paragraph 4(d) (ii): “; provided, further however, that any request to substitute must seek the substitution of Eligible Credit Support or Posted Credit Support in an amount in excess of the Pledgor’s Minimum Transfer Amount”.

(f) Dispute Resolution.
“Resolution Time” means 1:00 p.m., New York time, on the Local Business Day following the date on which notice is given that gives rise to a dispute under Paragraph 5.

(ii) **Value.** For the purpose of Paragraphs 5(i)(C) and 5(ii), Party A will determine the Value of Eligible Credit Support or Posted Credit Support consisting of securities based upon the bid quotations of any generally recognized dealer (which may include an affiliate of Party A), and adding thereto any interest accrued but not paid to any person with respect to such securities through the day on which the determination is made and multiplying the sum by the applicable Valuation Percentage, if any.

(iii) **Alternative.** The provisions of Paragraph 5 will apply, provided, however, that in the event of a dispute regarding the Value of securities which constitute Eligible Credit Support or Posted Credit Support, Party B may submit bid quotations from two other recognized dealers in which case the Value of such securities shall be the mean of the two quotations submitted by Party B.

(g) **Holding and Using Posted Collateral.**

(i) **Eligibility to Hold Posted Collateral; Custodians.** A party or its Custodian will be entitled to hold Posted Collateral pursuant to Paragraph 6(b) provided that such party is not a Defaulting Party. Initially Party A shall not be using a Custodian and initially the Custodian for Party B shall be as set forth in a written notice delivered to Party A to the address and in the manner as set forth in Paragraph (k).

(ii) **Use of Posted Collateral.** The provisions of Section 6(c) will apply to both parties.

(h) **Distributions and Interest Amount.**

(i) **Interest Rate.** The “Interest Rate” with respect to U.S. Dollars will be the “Federal Funds Rate”, set forth in H.15 (519) for that day opposite the caption “Federal Funds (Effective).” If on any day such rate is not yet published in H.15 (519), the rate for such day will be the rate set forth in Bloomberg Screen page FEDL01<INDEX><HP><GO> for that day under the caption “FED FUNDS EFFECTIVE”, or such other rate as may be agreed by the parties. For this purpose “H.15 (519)” shall have the meaning specified in the Annex of the 2000 Definitions as published by the International Swaps and Derivatives Association, Inc.

(ii) **Transfer of Interest Amount.** Transfers of the Interest Amount will be made in arrears on the last Local Business Day of each calendar month.

(iii) **Alternative to Interest Amount.** The provisions of Paragraph 6(d)(ii) will apply, provided, however, that the Interest Amount will compound daily.

(i) **Additional Representations.**

Party A and Party B each represent to the other (which representation will be deemed to be repeated as of each date on which it, as the Pledgor, Transfers Eligible Collateral) that:

(i) no consent, approval or other authorization of any governmental authority is required in connection with the Transfer of Eligible Collateral hereunder.

(ii) its assets exceed its liabilities.

(j) **Other Eligible Support and Other Posted Support.**
(i) “Value” with respect to Other Eligible Support and Other Posted Support shall not be applicable.

(ii) “Transfer” with respect to Other Eligible Support and Other Posted Support shall not be applicable.

(k) Demands and Notices.

All demands, specifications and notices under this Annex will be made pursuant to the Notices Section of this Annex, provided, that the address for Party A for such purposes shall be:

Citibank, N.A.
Collateral Management Group
333 West 34th Street, 2nd FL
New York, NY 10001
Telephone no. (212) 615-8589
Facsimile no. (212) 615-8595;

and the address for Party B for such purposes shall be:

Sacramento Municipal Utility District
[address]
Attention: __________
Facsimile No.: __________
Telephone No.: __________

(l) Other Provisions.

(i) Form of Collateral. All non-Cash Eligible Credit Support or Posted Credit Support Transferred to either party shall be recorded in book entry form by a Federal Reserve Bank, as fiscal agent, and Pledgor shall (i) deliver to Secured Party a listing of such credit support by title (or series), unpaid principal amount and maturity date and (ii) cause a Federal Reserve bank to hold such credit support for the account of the Secured Party or the Custodian (in a custody account), as applicable, in the name of the Secured Party or Custodian, as applicable.

(ii) Care of Posted Collateral. Supplementing the provisions of Paragraph 6(a), the Secured Party shall also be deemed to have exercised reasonable care if it takes such action for that purpose as the Pledgor shall reasonably request in writing (but no omission to comply with any such request shall of itself be deemed a failure to exercise reasonable care).

(iii) Use of Posted Credit Support. Supplementing the provisions of Paragraph 6(c), the Secured Party may notify the obligors on any Posted Collateral to make payment to the Secured Party or its nominee or transferee of any amounts due thereon and to take control or grant its nominee the right to take control of any proceeds of any Posted Collateral.

(iv) Collateral Account; Place of Transfers. Transfers of Eligible Credit Support by the Pledgor to the Secured Party shall be made for credit to an account of the Secured Party at such commercial bank in New York City as shall be designated by the Secured Party. The Pledgor agrees that the Secured Party shall have absolute control over the Pledgor’s Collateral Account and that the
Pledgor shall have no right to make any withdrawal from the Pledgor’s Collateral Account. Upon request of the Secured Party, the Pledgor shall use its best efforts to cause such bank to deliver a letter to the Secured Party, in form and substance reasonably satisfactory to the Secured Party, in which such bank agrees to waive or acknowledges its waiver, with respect to such account, of any general lien and any right of setoff against the Pledgor.

(v) **U.S. Bankruptcy Code Provisions.** (x) All Transfers of Posted Collateral hereunder (including the grant of a security interest in Posted Collateral hereunder) are “transfers” “under” the Agreement within the meaning of Section 546(g) of the United States Bankruptcy Code; and (y) to the extent any Transaction constitutes a “forward contract” within the meaning of the United States Bankruptcy Code, transfers of Posted Collateral under the Annex are intended to be “margin payments” within the meaning of Section 101(38) of the United States Bankruptcy Code.

(vi) **Notices.** Notwithstanding Section 12 of the Agreement, any communication by a party (“X”) to the other party (“Y”) requesting the delivery or return of Eligible Credit Support or Posted Credit Support pursuant to Section 3 of this Annex may be given orally (including telephonically to the telephone number of Y set forth in subparagraph (k) above, or any other telephone number Y may notify X of in writing) during normal business hours in the city in which Y is located on any Local Business Day to any officer, employee or agent of Y which identifies himself or herself as being permitted to receive oral communications on behalf of Y with respect to this Annex. Any such oral communication will be deemed received and effective when actually received by any such officer, employee or agent of Y. X shall deliver to Y, within one Local Business Day following receipt of an oral or written request by Y, a written confirmation of any such oral communication.

(vii) **Secured Party’s Rights and Remedies.**

(a) Supplementing the provisions of Paragraph 8(a), the Pledgor irrevocably appoints the Secured Party its attorney-in-fact, with full authority in its place and stead and in its name or otherwise, from time to time in the Secured Party’s discretion, to take any action and to execute any instrument which the Secured Party may deem necessary or advisable to accomplish the purposes of this Annex, including without limitation:

(i) to ask, demand, collect, sue for, recover, compromise, receive and give acquittance and receipts for moneys due and to become due under or in respect of any Posted Collateral and to perform all other acts as fully as though the Secured Party were the absolute owner of the Posted Collateral for all purposes,

(ii) to receive, endorse, and collect any drafts or other instruments, documents and chattel paper, in connection with clause (i) above, and

(iii) to file any claims or take any action or institute any proceedings which the Secured Party may deem necessary or desirable for the collection of any of the Posted Collateral or otherwise to enforce the rights of the Secured Party with respect to any Posted Collateral.

(b) Further supplementing the provisions of Paragraph 8(a) and 13(a), the Secured Party may apply Eligible Credit Support or Posted Credit Support to pay any amounts due by Pledgor to Secured Party pursuant to this Agreement, including any Transaction, and any other amounts then due by Pledgor to Secured Party or its Affiliates under any other contractual arrangements between them.
(viii) **Actions Hereunder.** Either party may take any actions hereunder, including liquidation rights, through its Custodian, and, in the case of Party A, through Citigroup Global Markets Inc. or any successor to either, as agent for Party A.

(ix) **Severability.** Any provision of this Annex which is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof, and any such prohibition or unenforceability in any jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction.

(x) **Successors.** This Annex and all obligations of the Pledgor hereunder shall be binding upon the successors and assigns of the Pledgor and shall, together with the rights and remedies of the Secured Party hereunder, inure to the benefit of the Secured Party and its respective successors and assigns.

(xi) **No Third Party Rights.** This Annex has been and is made solely for the benefit of Party A and Party B and their respective assigns, and no other person, partnership, association, corporation or other entity shall acquire or have any right under or by virtue of this Annex.

(xii) **Incorporation of ISDA 2014 Collateral Agreement Negative Interest Protocol.** The parties to this Annex agree that the amendments set out in the Attachment to the ISDA 2014 Collateral Agreement Negative Interest Protocol published by the ISDA on May 12, 2014 and available on the ISDA website (www.isda.org) (the “Protocol”) shall apply to this Annex and are hereby incorporated by reference. The parties further agree that this Annex will be deemed to be a Protocol Covered Collateral Agreement and that the Implementation Date will be the effective date of this Annex notwithstanding the definitions of such terms in the Protocol.
IN WITNESS WHEREOF, the parties hereto have executed this Annex as of the date first above written.

CITIBANK, N.A.  

By: ____________________________  
Name: ____________________________  
Title: ____________________________  
Date: ____________________________

SACRAMENTO MUNICIPAL UTILITY DISTRICT  

By: ____________________________  
Name: ____________________________  
Title: ____________________________  
Date: ____________________________
Schedule I

<table>
<thead>
<tr>
<th>(A) Cash</th>
<th>Party A</th>
<th>Party B</th>
<th>Valuation Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[X]</td>
<td>[X]</td>
<td>100%</td>
</tr>
</tbody>
</table>

(B) (x) Negotiable debt obligations issued by the U.S. Treasury Department or the Government National Mortgage Association ("Ginnie Mae"), or (y) mortgage backed securities issued by Ginnie Mae (but with respect to either (x) or (y) excluding interest only or principal only stripped securities, securities representing residual interests in mortgage pools, or securities that are not listed on a national securities exchange or regularly quoted in a national quotation service) and in each case having a remaining maturity of:

(i) less than one year | [X] | [X] | 100%
(ii) one year or greater but less than 10 years | [X] | [X] | 98%
(iii) 10 years or greater | [X] | [X] | 95%

(C) (x) Negotiable debt obligations issued by the Federal Home Loan Mortgage Association ("Freddie Mac") or the Federal National Mortgage Association ("Fannie Mae") or (y) mortgage-backed securities issued by Freddie Mac or Fannie Mae but excluding interest only or principal only stripped securities, securities representing residual interests in mortgage pools, or securities that are not listed on a national securities exchange or regularly quoted in a national quotation service.

(D) Any other collateral acceptable to the Secured Party in its sole discretion | [X] | [X] | *

* The Valuation Percentage shall be determined by the Valuation Agent from time to time and in its sole discretion.
<table>
<thead>
<tr>
<th>Moody's</th>
<th>S&amp;P</th>
<th>Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aaa3 or above</td>
<td>AA- or above</td>
<td></td>
</tr>
<tr>
<td>A1, A2</td>
<td>A+/A</td>
<td></td>
</tr>
<tr>
<td>A3</td>
<td>A-</td>
<td></td>
</tr>
<tr>
<td>Baa1</td>
<td>BBB+</td>
<td></td>
</tr>
<tr>
<td>Baa2</td>
<td>BBB</td>
<td></td>
</tr>
<tr>
<td>Baa3 or below</td>
<td>BBB- or below</td>
<td></td>
</tr>
</tbody>
</table>
President Kerth then called for 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. Public comment was received from the following member of the public, copies of which are attached to these minutes:

- David Wright

Director Rose thanked staff for their work during this COVID-19 crisis. He then reported on his attendance at a webinar on how to use software to comply with the new solar homes mandate. He also reported on a conversation he had with Green Tech Education & Employment, a local company running a net zero mobility hub, about funding sources and barriers faced in moving forward and how SMUD can partner with them.

Vice President Bui-Thompson reported that the search for SMUD’s Chief Executive Officer was moving forward but was understandably impacted by the COVID crisis. She reported on her attendance at webinars on how various communities are dealing with the crisis, and she thanked the Board members and staff for their work during this time.

Director Fishman reported on his volunteer work at Sacramento Food Bank and Family Services and noted that many of its usual volunteers fell into the at-risk group for COVID-19. He asked all to consider volunteering and noted that opportunities in the region are available at https://www.handsonsacto.org. He thanked staff for their work during the crisis.

Director Herber praised the Rotary Club in Elk Grove and the Cosumnes Community Services District for a diaper drive organized with Chicks in Crisis that provided 10,000 diapers and 150,000 boxes of baby wipes. She stated that the Big Day of Giving was coming up in May and encouraged all to give. She thanked staff for their hard work during the crisis.

Director Tamayo thanked staff for their work in keeping the lights on and preparing for some of the changes that would occur in response to the crisis.
Director Sanborn reported on her attendance along with Director Herber at a meeting with Mow Better of the Environmental Council of Sacramento, where it was decided that the buy back of gas powered lawnmowers would be delayed. She reported on her attendance at a webinar with stakeholders around solar issues as well as her meeting with Alex Kaffka of Verdera. She thanked the community for caring about issues and working in a constructive manner.

President Kerth stated he would close with a message from Captain Tom Moore, a World War II veteran from Great Britain who celebrated his 100th birthday by walking laps in his garden to raise a thousand pounds (currently at 16 million pounds) to help with the COVID-19 pandemic, “You’ve all got to remember that we will get through it in the end, it will all be right. For all those people finding it difficult at the moment, the sun will shine on you again and the clouds will go away.” President Kerth adjourned the meeting in honor of Captain Tom at 8:41 p.m.

Approved:

President    Secretary
Directors, what is missing from your list of goals? Can you tell what is missing?

This is from the Board information packet for the April 16, 2020 Board meeting, page 15, Board Monitoring Report 2019

SD-2, Competitive Rates

1. Background

Strategic Direction 2, Competitive Rates states that:

Maintaining competitive rates is a core value of SMUD.

Therefore:

a) The Board establishes a rate target of 18 percent below Pacific Gas & Electric Company’s published rates on a system average basis. . . .

b) SMUD’s rate of change for both rates and bills shall be competitive with other local utilities on a system average basis.

c) In addition, SMUD’s rates shall be designed to balance and achieve the following goals:

i) Reflect the cost of energy when it is used;

ii) Reduce use on peak;
iii) Encourage energy efficiency and conservation;
iv) Minimize “sticker” shock in the transition from one rate design to another;
v) Offer flexibility and options;
vi) Be simple and easy to understand;
vii) Meet the needs of people with fixed low incomes and severe medical conditions; and
viii) Equitably allocate costs across and within customer classes.

The Board should amend SD2, competitive rates, to state that one of the goals is to comply with Article XIII C of the California Constitution, which says:

“(d) No local government may impose, extend, or increase any special tax unless and until that tax is submitted to the electorate and approved by a two-thirds vote.” (section 2(d))
Exhibit to Agenda Item #5

Provide the Board with the financial results from the two-month period ended February 29, 2020, and update on year-to-date precipitation totals with associated impacts on commodity budget and Rate Stabilization Funds.

Board of Directors Meeting
Thursday, April 16, 2020, scheduled to begin at 5:30 p.m.
February 2020 YTD - Financial Highlights

• Change in net position - $22M over budget
• Sales to customers – on target
• Transfer from rate stabilization fund - $3M for low carbon and electric vehicle programs
• Total operating expenses – 5% under budget
• Sources of energy
  • Hydro – 81% under budget
  • JPA – 31% under budget
  • Net purchased power – 185% over budget
February 2020 YTD – Change in Net Position  
(thousands of dollars)

<table>
<thead>
<tr>
<th></th>
<th>Actual</th>
<th>Budget</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total customer sales</td>
<td>$ 197,090</td>
<td>$ 194,414</td>
<td>$ 2,676</td>
</tr>
<tr>
<td>Other operating revenues</td>
<td>$ 6,864</td>
<td>$ 6,212</td>
<td>$ 652</td>
</tr>
<tr>
<td>Transfer from rate stabilization fund</td>
<td>$ 2,830</td>
<td>$ -</td>
<td>$ 2,830</td>
</tr>
<tr>
<td><strong>Total operating revenues</strong></td>
<td>$ 206,784</td>
<td>$ 200,626</td>
<td>$ 6,158</td>
</tr>
<tr>
<td>Purchased power</td>
<td>$ 33,942</td>
<td>$ 22,787</td>
<td>$ 11,155</td>
</tr>
<tr>
<td>Production</td>
<td>$ 37,478</td>
<td>$ 51,731</td>
<td>$(14,253)</td>
</tr>
<tr>
<td>Transmission and distribution</td>
<td>$ 26,515</td>
<td>$ 24,905</td>
<td>$ 1,610</td>
</tr>
<tr>
<td>Other operating costs</td>
<td>$ 89,491</td>
<td>$ 98,849</td>
<td>$(9,358)</td>
</tr>
<tr>
<td><strong>Total operating expenses</strong></td>
<td>$ 187,426</td>
<td>$ 198,272</td>
<td>$(10,846)</td>
</tr>
<tr>
<td><strong>Net operating income</strong></td>
<td>$ 19,358</td>
<td>$ 2,354</td>
<td>$ 17,004</td>
</tr>
<tr>
<td>Total non-operating revenues</td>
<td>$ 8,899</td>
<td>$ 4,801</td>
<td>$ 4,098</td>
</tr>
<tr>
<td>Total non-operating expenses</td>
<td>$ 16,898</td>
<td>$ 17,554</td>
<td>$(656)</td>
</tr>
<tr>
<td><strong>Change in Net Position</strong></td>
<td>$ 11,359</td>
<td>$(10,399)</td>
<td>$ 21,758</td>
</tr>
</tbody>
</table>
# Precipitation – Pacific House

## Water Year 2020

### Precipitation - Pacific House

<table>
<thead>
<tr>
<th>Month</th>
<th>Plan</th>
<th>Actual</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct-19</td>
<td>1.90&quot;</td>
<td>0.05&quot;</td>
<td>-1.85&quot;</td>
</tr>
<tr>
<td>Nov-19</td>
<td>7.47&quot;</td>
<td>2.82&quot;</td>
<td>-4.65&quot;</td>
</tr>
<tr>
<td>Dec-19</td>
<td>7.75&quot;</td>
<td>10.52&quot;</td>
<td>2.77&quot;</td>
</tr>
<tr>
<td>Jan-20</td>
<td>9.35&quot;</td>
<td>4.12&quot;</td>
<td>-5.23&quot;</td>
</tr>
<tr>
<td>Feb-20</td>
<td>8.69&quot;</td>
<td>0.02&quot;</td>
<td>-8.67&quot;</td>
</tr>
<tr>
<td>Mar-20</td>
<td>6.75&quot;</td>
<td>12.35&quot;</td>
<td>5.60&quot;</td>
</tr>
</tbody>
</table>

*Plan vs. Actual*
SMUD has in place financial mitigation tools that hedge against hydroelectric uncertainty

Fund Balances:
- HRSF Balance - $82.4M
- RSF WAPA Balance - $43.3M

2020 Fund Transfers:
- Projected transfer out of HRSF $7.7M
- Projected transfer into WAPA RSF $2.3M

<table>
<thead>
<tr>
<th>2020 Commodity Costs Forecast vs. Budget (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forecast</td>
</tr>
<tr>
<td>$</td>
</tr>
<tr>
<td>$</td>
</tr>
</tbody>
</table>

Hydro Performance as of February 29, 2020

<table>
<thead>
<tr>
<th></th>
<th>Forecasted (GWh)</th>
<th>2020 Budget (GWh)</th>
<th>Variance (GWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UARP</td>
<td>999</td>
<td>1,523</td>
<td>-524</td>
</tr>
<tr>
<td>WAPA</td>
<td>724</td>
<td>661</td>
<td>63</td>
</tr>
<tr>
<td>UARP + WAPA</td>
<td>1,724</td>
<td>2,184</td>
<td>-460</td>
</tr>
</tbody>
</table>
Good evening President Kerth, Directors and staff:

Your meeting today shows the Board information packet reporting "SMUD’s year-to-date net position increased $11.4 million compared to a $10.4 million decrease projected in the budget. We attribute the favorable variance ($21.8 million) to higher operating revenues, lower operating expenses, higher non-operating revenue and lower interest expense." WOW!

Does the staff expect these trends to continue?

Do you, Directors, or does the staff expect these trends to continue for all of 2020?

Directors and the general public should be most interested in knowing the staff’s forecast for these trends. As our SMUD Board, please direct staff to answer these questions today or, at minimum, to report to the Board at the next meeting.

The Board approved four rate increases last June in Resolution 19-06-13, two in 2020 and two in 2021. But the Board also has the power to cancel the rate increases and to actually lower rates. The next rate increase is scheduled to go into effect on October 1, 5 ½ months from now. By late Summer you will have several more months of financial data and a clearer financial picture for 2020. I recommend that you consider canceling the remaining rate increases and reducing rates.

Thank you.

Melissa Andrews O’Kane
Sacramento resident/SMUD customer
Good evening Board President Kerth, Directors and staff.

My name is Noah Davidson and I live in Sacramento.

According to the SOURCES AND USES OF ENERGY - COMPARED TO BUDGET For the Period Ended February 29, 2020 on page 154 in the Board information packet SMUD had total net Purchases of Power less transmission losses of 951 GWh.

According to the STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION For the Two Months Ended February 29, 2020 on page 153 of the Board information packet purchased power cost $36.9 million.

If SMUD purchased 951 GWh of power for $36.9 million then the cost per kWh was approximately $0.0388 per kWh. Do you agree?

The decrease in power generation was 498 GWh. The increase in total net purchases of power was 433 GWh. The decrease in generation was almost entirely offset by the increase in purchased power.

Presumably SMUD purchased all this power because it was cheaper to purchase it than to generate it. The question is how much would it have cost SMUD to generate that extra 433 GWh of power in dollars or cents per kilowatt hour?

As long as this item is on the agenda the Board has the power to direct staff to answer these questions. Directors you would probably be interested in knowing the staff’s answers to these questions. Please direct staff to answer this question today or, at minimum, to report to the Board at the next meeting. Thank you.

Noah Davidson
916-838-9266
April 16, 2020

Good evening Board President Kerth, Directors and staff.  
My name is Jeff Durbin and I live in Rancho Cordova.  
I'm sorry we can't meet in person for a while.

Page 151 of the Board information packet says, "Operating Expenses - Purchased power expense, net of surplus power sales, was $33.9 million, which was $11.2 million (49.0 percent) higher than planned. Purchased power expense is the result of higher quantities purchased of $42.2 million, offset by lower prices of $31.0 million." Page 154 shows that you have purchased 433 GWh more than in the budget.

It also says, "SMUD's generation was lower by 498 GWh (34.6 percent)." It appears that because SMUD was able to purchase power from WSPP and other more cheaply than it could have generated the power, SMUD chose to purchase more power and generate less. Is that true?

If it is so cheap for SMUD to buy power, cheaper than it is to generate power, then SMUD could possibly purchase power in advance for the rest of 2020 and continue to buy more and produce less than it projected in the budget for 2020. Has SMUD done this? If not, will you consider doing this? If not, why wouldn't you do this?

As long as this item is on the agenda, the Board has the power to direct staff to answer these questions. Directors you would probably be interested in knowing the staff's answers to these questions. Please direct staff to answer this question today or, at minimum, to report to the Board at the next meeting.
Thank you.
Good evening Board President Kerth, Directors and Staff;

My name is Richard Lee, and I am a resident of Sacramento.

The Board information packet graph on page 150 labeled “Change in net position year to date,” (see attached) shows a projected net decrease in the budget of about $40 million through May, a net increase of almost $90 million through September, and a final increase for 2020 of $50 million.

However, the office memorandum and the executive summary both show that SMUD is $21.8 million ahead of its budget projections. Obviously some of SMUD’s assumptions and projections that were built into the budget have not actualized. If the financial statements for the remaining ten months of the year go as SMUD projects, then the change in net position for the year would be over $70 million.

Considering the above, I have two questions:

1. What assumptions is SMUD presently using for its financial performance for the rest of the year, and

2. Is there a revised projected change in net position for 2020?
As long as this item is on the agenda, the Board has the responsibility to direct staff to answer these questions. Certainly, as Directors you should be interested in knowing the basis of staff’s forecast for these trends.

Please direct staff to answer these questions today, or at least report to the Board at the next meeting.

Thank you for your attention to this matter.

Best wishes,
Richard Lee
Good evening Board President Kerth, Directors and staff.

My name is Julie Ostoich and I live in Sacramento.

The office memorandum and executive summary say the same thing, almost word for word.

SMUD’s year-to-date net position increased $11.4 million compared to a $10.4 million decrease projected in the budget. We attribute the favorable variance ($21.8 million) to higher operating revenues, lower operating expenses, higher non-operating revenue, and lower interest expense.

You are twenty million dollars ahead of your projected figures in two months. That is an average of ten million dollars per month. If the trends that caused this favorable change in net position continue for the rest of the year SMUD could be $120 million ahead of its budget by the end of 2020. The budget was for a net increase in net position of about $50 million. Adding $120 million to that would make it an increase in net position of $170 million for 2020.

Do you consider this to be a reasonable forecast and projection of the change in net position for 2020? Why or why not? What is your forecast and projection of the change in net position?

As long as this item is on the agenda the Board has the power to direct staff to answer these questions. Directors you would probably be interested in knowing the staff’s answers to these questions. Please direct staff to answer this question today or, at minimum, to report to the
Board at the next meeting.

Thank you.

Julile Ostoich
Good evening Board President Kerth, Directors and staff.

My name is Kim Glazzard and I live in Sacramento.

SMUD is twenty million dollars ahead of its projected change in net position. According to SMUD’s Financial Statements, SMUD had a change in net position of $209 million on operating revenues of $1.6 billion in 2018. That is a margin of 13.1%. Net position for an electric utility district is analogous to net income for an investor-owned utility.

Similarly, SMUD had a change in net position of $178 million on operating revenues of $1.56 billion in 2017. That is a margin of 11.4%.

SMUD continues to set rates and charges that lead to significant increases in net position year after year. This Board approved a total of four rate increases last June totaling about 11%.

We are all affected by the COVID-19 virus. Many Sacramento area residents have lost their jobs. What do you say to SMUD customer-owners suffering from financial impacts of the virus who see SMUD running significant surpluses year after year and continuing to increase rates? Is this ethical?

What can SMUD do to ease the financial burden on, and build trust among, customer-owners during this unprecedented emergency? Has SMUD considered refunding at least the March and/or April charges to customer-owners - or another debt forgiveness program - as many insurance companies are doing? Or has SMUD considered providing a substantial refund check or something similar to each customer-owner?
Good evening Board President Kerth, Directors and staff.

My name is Ginny Linn and I live in Sacramento.

The EXECUTIVE SUMMARY for the Two Months Ended February 29, 2020 on page 151 of the Board information packet says, "Operating Expenses - Purchased power expense, net of surplus power sales, was $33.9 million, which was $11.2 million (49.0 percent) higher than planned. Purchased power expense is the result of higher quantities purchased of $42.2 million, offset by lower prices of $31.0 million."

Page 153 of the Board information packet, the table of "STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION For the Two Months Ended February 29, 2020", shows that purchased power was 7.9% over the budget, or $36.9 million. How can it be 7.9% over the budget and 49.0% over the budget? This is an apples to apples comparison of purchased power expense For the Two Months Ended February 29, 2020. It appears you have made an error. Please address this. What is the correct percentage and number?

As long as this item is on the agenda the Board has the power to direct staff to answer these questions. Directors you would probably be interested in knowing the staff’s answers to these questions. Please direct staff to answer this question today or, at minimum, to report to the Board at the next meeting. Thank you.
Exhibit to Agenda Item # 7

Provide the Board with a briefing on COVID-19 operational and financial impacts to customers, employees, and operations, and an update on actions taken.

Board of Directors Meeting
Thursday, April 16, 2020, scheduled to begin at 5:30 p.m.
Agenda

1. Early monitoring and preparation for COVID-19
2. Overview of COVID-19 impacts
3. Three pillars of response effort
   - Employees
   - Operations
   - Customers
4. Financial impacts
   - Assumptions & modeling
   - Decisions to date
5. Next steps
Early monitoring and preparation for COVID-19: SMUD

SMUD, like other utilities, is well prepared for unplanned events that impact our operations. Specifically for COVID-19:

- Safety is always SMUD’s priority. Rigorous risk mitigation measures in place for employees in all aspects of our operations.
- Ongoing integrated and robust planning for wide range of major events
  - Business Continuity
  - Emergency Management
  - Disaster Recovery
  - Crisis Communications
- Regular scenario exercises: internally and with external jurisdictions and partners
- Strong financial management
- Cross-department COVID-19 team began meeting in January for monitoring and response preparedness
- Engaged senior leadership team early to ensure plans in place to support operations, employees and our customers
- Social distancing plans developed and implemented early
We’ve all seen the headlines

**Coronavirus pandemic alters life as we know it**
By Amy Woodyatt, Julia Hollingsworth, Ben Westcott, Adam Renton, Meg Wagner and Mike Hayes, CNN
Updated 10:13 a.m. ET, March 30, 2020

Macy’s will furlough the majority of its 125,000 employees

‘A silent explosion’: Coronavirus deaths in U.S. climb past 16,000
COVID-19 deaths in the U.S. surpass 16,000. In New York, new hospitalizations slow, affirming signs that stay-at-home orders are slowing coronavirus spread.

‘We Have Lost It All’: The Shock Felt by Millions of Unemployed Americans

While U.S. Extends Coronavirus Shutdowns
Confirmed cases of Covid-19 rise to more than 735,000 globally, and deaths top 34,000

China Gets Back to Work While U.S. Extends Coronavirus Shutdowns
Students aren’t back to school in China’s Jiangsu province on Monday after a long delay due to the coronavirus pandemic.

By Chong Koh Ping and Ann.

April 16, 2020
COVID-19 impacts

**BUSINESS INSIDER**

Electricity use in the US has plummeted more over the past 3 weeks than it did during the entire 2008 recession — and economists say that's a more timely picture of this downturn's true impact.

**Reported impacts**

- Across Europe, electricity sales down 4-16%
- New York reporting electricity sales decrease
- LPPC CEOs using 5-15% drop in load as “most likely” case
- **SMUD** – current forecast reflects experience equal to low-to-mid range of both Europe and other large public power – though very limited data
- **SMUD** – anticipating 3% system load reduction on weekends and 7% reduction on weekdays.

---

**The New York Times**

*Another Way to See the Recession: Power Usage Is Way Down*

By QuocTrung Bui and Justin Wolfers April 8, 2020

When the economy is moving too fast for the usual indicators, the electricity grid offers a valuable clue.
COVID-19 impacts are profound

COVID-19 is hurting our customers

• Commercial customers are shutting down and we don’t know for how long.
• Small and medium business customers are disproportionately impacted.
• Customers’ ability to pay their SMUD bills will be impacted.

Weekly unemployment claims

• US: 6.6m week ending April 4. 16.8m in three weeks
• CA: 1.06m week ending April 8. 2.17m in three weeks

University of the Pacific unemployment study estimates

• CA unemployment: 18.8% by May
• Sacramento unemployment: 18.5% by May
COVID-19 Impacts vs. a Typical Recession

• COVID-19 is different from previous recessions
• Sharp immediate decline with no warning signals
• Initial forecast was for a quick recovery; now less certain and many varied outlooks. Latest forecasts show economic conditions worsening and impact into 2022.

• **Sacramento Unemployment**: Great Recession 12.9%; **May 2020 Forecast 18.5%**
• **California Unemployment**: **Forecast 8.5% in early 2022.**

• There is uncertainty about how long and how large additional impacts may be:
  - Length of shelter-in-place orders
  - Ability for businesses to recover once shelter order rescinded
  - Overall economy: recession anticipated for 2020-2021 and into 2022
# Economic outlook

## Headwinds

<table>
<thead>
<tr>
<th>Federal</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Up to 20% unemployment (37m jobs vulnerable)</td>
</tr>
<tr>
<td>• Up to 50% drop in GDP – St. Louis Fed</td>
</tr>
<tr>
<td>• 0.4% GDP drop, recovery mid-2022 – UCLA</td>
</tr>
<tr>
<td>• Additional states and cities to exceed hospital capacity in next few weeks.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Statewide “Shelter in Place”</td>
</tr>
<tr>
<td>• Schools closed through August/September</td>
</tr>
<tr>
<td>• Continued daily new case identification and death counts</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Closure of key accounts (Huhtamaki and Kikkoman so far)</td>
</tr>
<tr>
<td>• Closure of arenas and theatres</td>
</tr>
<tr>
<td>• Closure of many small businesses</td>
</tr>
</tbody>
</table>

## Tailwinds

<table>
<thead>
<tr>
<th>Federal</th>
</tr>
</thead>
<tbody>
<tr>
<td>• $8b emergency health care supplement</td>
</tr>
<tr>
<td>• $100b paid sick leave and unemployment</td>
</tr>
<tr>
<td>• Fed action to support functioning markets with liquidity and stability</td>
</tr>
<tr>
<td>• $2.2t in stimulus support, unemployment benefits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Federal disaster declaration creates opportunity for potential FEMA reimbursement – significant lag time</td>
</tr>
<tr>
<td>• EDD unemployment benefits increased (additional $600 per week to July 31, 2020 and waiting period waived)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Availability of small business loans.</td>
</tr>
<tr>
<td>• Sacramento COVID-19 response fund (Donate4Sacramento) surpassed $1m to support local families, nonprofits and small businesses</td>
</tr>
</tbody>
</table>
Early Proactive Response: Operations

<table>
<thead>
<tr>
<th>Date</th>
<th>Action Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEB 26</td>
<td>Emergency Operations Center (EOC) activated February 26: Level 1 (partial activation, remote only, minimal staff)</td>
</tr>
<tr>
<td>MAR 13</td>
<td>EOC elevated to Level 2 on March 13 (partial activation, remote, higher staffing level)</td>
</tr>
<tr>
<td>MAR 17</td>
<td>EOC elevated to Level 3 on March 17 (full activation, physically staffing EOC, Monday to Friday, with remote option)</td>
</tr>
<tr>
<td>DAILY</td>
<td>Executive team meeting daily to assess situation and evolving information, make decisions and pivot as necessary</td>
</tr>
<tr>
<td>DAILY</td>
<td>Executives meeting with their leadership teams daily</td>
</tr>
<tr>
<td>DAILY</td>
<td>Temperature screening before entering SMUD buildings or jobsite</td>
</tr>
</tbody>
</table>

Early and aggressive social distancing strategy

- Suspended travel
- Meeting restrictions
- Suspended participation in community events
- Split crews
- Staggered start times
- Split 24/7 onsite staff between multiple locations
- Support for maximizing social distancing and minimizing risks for field staff
- Temporary campus closure
- Remote work where possible
- Sequestration in place for some work groups starting April 16
Proactive response: Supporting employees

<table>
<thead>
<tr>
<th>COVID-19 Paid Leave program</th>
</tr>
</thead>
<tbody>
<tr>
<td>COVID-19 resource and update website for employees</td>
</tr>
<tr>
<td>Daily email updates with program information and user-generated content to keep employees connected</td>
</tr>
<tr>
<td>Tailored communications for field employees</td>
</tr>
<tr>
<td>Shared resource program</td>
</tr>
<tr>
<td>Leave donation program (in development)</td>
</tr>
<tr>
<td>Care and Connect program for sequestered employees</td>
</tr>
</tbody>
</table>
Supporting customers

Suspended disconnection of power due to non-payment for residential and commercial customers

Easier to apply for Energy Assistance Program Rate (EAPR), including changes to income qualification

Paused the recertification process for EAPR and MEDRate customers

Dedicated webpage with updates and resources for residential and business customers. smud.org/coronavirus

Energy Specialists working remotely, engaging with customers and using energy usage and bill data to provide customized education and prioritize for weatherization, energy efficiency and electrification work once we’re able to return to the field

Working with nonprofit partners to determine how to support them in their time of need
Supporting customers: Communications

Outreach to customers in multiple channels with information and tools to support them during the pandemic.


Supporting messaging in email, social media and print.

Emails to residential and commercial customers. Strong open rate of 43%, compared to SMUD average of 23%.

Strong engagement in other digital channels. smud.org web traffic is up 6% since February 28, with 9% of traffic coming from new visitors.

smud.org/coronavirus page has received 11,000+ views since published March 13.

Three videos for social media featuring SMUD field employees to remind the public to practice social distancing around our crews.
What our customers are telling us

7% of customers say they’re very unlikely to be able to pay next month’s utility bill.

70% of SMUD commercial customer respondents feel their financial situation will be slightly to much worse in the next two months.

56% of SMUD residential customers say they are using more electricity.

60% of SMUD commercial customers expect to use somewhat less to a lot less electricity.

68% of SMUD residential customers feel SMUD is prepared to continue providing reliable power during the current situation.

76% of SMUD residential customers state they are aware of seeing communications from SMUD on not shutting of power for non-payment.

J.D. Power shared SMUD’s COVID-19 webpage and customer communications as one of a small handful of examples of utilities that are responding well to the COVID-19 issue in a webinar to share results of its COVID-19 pulse survey in late March.
SMUD’s financial reality before COVID-19

• At SMUD, cash is king

• Cash outflow is ~$3m/day

• Cash inflows come from two main sources:
  1. Customer payments
  2. Financing

• Before COVID-19
  - Found $28m of operational efficiencies. This is in our plan.
  - We were working on finding offsets to $30m of unplanned, mandated wildfire costs (vegetation management)

• Post-COVID-19, revenue impacts will require us to increase borrowing in the short term
SMUD’s new financial reality: What we’re monitoring

Load and electricity sales
- Temporary closure of many businesses
- Changes in commercial and residential load patterns
- System-wide we’re seeing a 3% reduction on weekends and a 7% reduction on weekdays, based on early data
- We are continuing to monitor and refine load forecast based on latest data

Customer impacts and revenue
- Net decrease in revenue due to decrease in load (only partially offset by commodity reduction)
- Customers’ abilities to pay their SMUD bills will be impacted by economic downturn and high unemployment, likely increasing write-offs and slowing the pace at which we collect revenue from our customers
- Delinquencies, collections, payment agreements, write-offs: Increase expected, but too early to know extent
- Longer term commercial customer impacts
- Bill payment cadence uncertain
- 2008 increases in delinquencies were very limited, but this was without suspended shutoffs, therefore no certainty about customer payment response
- Delayed payments can cause significant impact to days cash; anticipate initial one-time larger impact then ongoing drag on cash flow
SMUD’s new financial reality: What we’re monitoring

**Increased costs**
- Hard costs and indirect costs of transitioning to large remote workforce (1,400 working remotely, compared to 100 typically working from home on any given day)
- Additional safety measures, leave costs
- Sequestration costs: Salaries, stipends, accommodation (RV rental)

**EAPR applications**
- Number of applications holding steady, expect spike
- Higher unemployment, mostly (95%) lowest-paid workers, will drive continued increases
- Expecting rapid increase in number of EAPR customers, due to anticipated Sacramento rapid unemployment peak, unlike more gradual historical recessions

**Supply Chain**
- Some vendors have invoked contractual arrangements to put SMUD on notice for potential interruptions to operations/service
- Continuing to monitor for supply chain disruptions
- Some commodity market counterparties are distressed and we’re minimizing credit risk
Impact of sudden load drop

- Lower electricity sales (kWh) means lower revenue
  - Gross revenue loss for 2020: $47m - $68m
  - Gross revenue loss for 2021: $67m - $128m

- SMUD’s commodity costs will decrease

- However, many of SMUD’s business costs are fixed: poles and wires, wildfire vegetation management and insurance, accounting, billing, treasury, grid operations, cyber security, customer contact center, etc. – these costs all remain so we can keep the lights on

- If revenue doesn’t cover these necessary fixed costs, we need to take action to keep SMUD financially healthy

- While SMUD is not-for-profit, we must still meet minimum financial metrics
## Consolidated financial impact

### Reduction ranges required

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>O&amp;M</td>
<td>$30m-$40m</td>
<td>$25m-$75m</td>
</tr>
<tr>
<td>Capital/Cash Balances</td>
<td>$30m-$45m</td>
<td>$50m-$100m</td>
</tr>
</tbody>
</table>

### Expected Case

- High degree of uncertainty for both years, greater uncertainty in 2021 and 2022
- 3-7% load drop for 2020 during shelter in place; recessionary load drop in 2020/2021/2022
- Relaxing Fixed Charge and Days Cash for single year, then resume to current targets
- EAPR subsidy increases & additional write-offs
- COVID-19 response is also increasing costs
- Assumes borrowing available with low interest rates
- Additional cost reductions required if shelter-in-place is extended
Strong financial management is helping

• Proactive financial management means we’re better positioned in times of crisis.

• Previous actions and financial stewardship have increased our financial strength:
  - Increased fixed charge from 1.50 to 1.70
  - Increased days cash from 100 to 130 to 150 days
  - Paid off debt of 2 thermal plants early

• Strong focus on Operational Excellence
  - $28m in permanent annual savings reduced 2019 Rate Action by 2%

• While past decisions and focus give us more financial flexibility and help insulate us from some of the likely longer-term financial impacts from COVID-19, the situation is dynamic and there will be more difficult decisions needed

• SMUD’s forward thinking on rate restructuring has helped: Fixed charge, Time-of-Day rates, EAPR restructure and the recently approved commercial rate restructure
## Cost reduction decisions we’ve already made

**O & M - 2020**
- 3-month hiring freeze, longer if needed ($1-2m)
- Reduce 2020 travel/training budget by ($2m)
- Delay roll out of conference room technology to remaining rooms ($300,000)
- Not seeking additional Community Choice Aggregation clients ($3m upfront investment before revenue received)
- Shifted implementation of some energy efficiency efforts to further years ($10m)
- Reduced R&D pilots and implementation ($3m)
- **TOTAL Estimated $20m**

**Capital / Cash Balances - 2020**
- Delayed the supplemental $9.5m payment to OPEB.
- Settle nuclear litigation
- Sell energy efficiency loan portfolio
- Delay infrastructure spending associated with economic expansion ($15m)
- **TOTAL Estimated at least $25m**

**Other**
- Monitoring commodity trading partners – some are distressed – and defensively changing business relationship (buy-only, reducing unsecured credit)
- Monitoring interest rate markets for access to short-term commercial paper funding to bolster liquidity. Preparing to go to long-term debt market in late April as markets normalize.
- Relaxing key financial metrics to increase liquidity (reduces savings requirements $50m capital).
## 2020 gaps

<table>
<thead>
<tr>
<th></th>
<th>O&amp;M</th>
<th>Capital/Cash Reduction</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduction range required</td>
<td>$30m-$40m</td>
<td>$30m-$45m</td>
<td></td>
</tr>
<tr>
<td>Savings identified</td>
<td>$20m</td>
<td>$25m</td>
<td></td>
</tr>
<tr>
<td>Gap</td>
<td>$10m-$20m</td>
<td>$5m-$20m</td>
<td></td>
</tr>
</tbody>
</table>
Will need to make more decisions

We’re continuing to monitor SMUD data and other jurisdictions for changes and new information

- Refine modeling, scenarios and finalize additional cost reductions based on data
  - Commodity markets, commodity counter parties and impacts to our commodity budget
  - Understand impacts to Sacramento businesses
  - Understand impacts to Commercial Development and our required capital investments to serve
  - Interest rates and short and long-term financing environment
  - Legislative and regulatory decisions – national, state and local

- Stress test scenarios to prepare us if conditions worsen

Additional action

- Majority of 2020 reductions are in place based on current forecast. Now focused on 2021 while continuing to look at 2020

- Review procurements for further prioritization and potential deferrals of non-critical spending

- Revise management’s metrics to reflect critical operations, prioritization, financial health and meeting customer and community needs
May Board meeting

Update the Board on COVID-19 financial and operational impacts

Progress on identifying cost reductions for 2020 and 2021

Identify impacts to any of the Board’s Strategic Directions

Possible discussion of need to relax specific Strategic Direction metrics such as:
- SD-5 Customer Relations
- SD-9 Resource Planning
- SD-14 System Enhancement

April 16, 2020 Board of Directors Meeting
COVID-19 In Summary

Foundational strengths

- Prepared operationally for COVID-19
- Financially strong
- Data analytics providing real time data to support timely quality decisions

Clarity of information and taking action

- Steps already taken
- Cash focused

Planning for continued uncertainty

- Conservative approach with scenario planning and stress testing
- Controlling what we can control; mitigating what we can’t control
- Staff and the Board will need to make tough decisions to navigate the crisis

April 16, 2020 24 Board of Directors Meeting
Questions
Exhibit to Agenda Item #8

a. Authorize the issuance of the 2020 Series H Revenue Bonds, the distribution of the Preliminary Official Statement, and the Chief Executive Officer and General Manager’s execution of all necessary documents, including the Bond Purchase Agreement.

b. Authorize the issuance of 2020 Series I Taxable Refunding Bonds, the distribution of the Preliminary Official Statement, and the Chief Executive Officer and General Manager’s execution of all necessary documents, including the Bond Purchase Agreement, and as an alternative to issuing 2020 Series I Taxable Refunding Bonds, authorize the Chief Executive Officer and General Manager to enter into interest rate swaps or similar agreements to provide for refunding savings or hedge interest rate risk relating to a future refunding of the 2013 Series A & B Revenue Bonds.

Board of Directors Meeting
Thursday, April 16, 2020, scheduled to begin at 5:30 p.m.
Overall Economic Impact

A recession larger and faster than 2008 is expected and reflected in market instability.

There is uncertainty about how long and how large additional impacts may be:

- Long-term lock-downs
- Financial market instability
- Political environment

Federal Reserve has acted more aggressively and quickly than in 2008. Underlying economic foundations are strong, which may aid in recovery when pandemic is controlled.
FED Uncertainty - Caused Municipal Rates to Spike

- FED acted more swiftly than in the past 2008 Financial crisis
- Initial $2 Trillion stimulus was silent on Municipal Market support
- Taxable rates such as US Treasuries and LIBOR responded to the stimulus by declining
- Muni Rates, including SIFMA spiked, markets froze and took longer to normalize
FED Actions - Helping to Calm Markets

- Expanding the Money Market Mutual Fund Liquidity Facility (MMLF) to include municipal variable rate notes (VRDNs)
- Expanding the Commercial Paper Funding Facility (CPFF) to include high-quality, tax-exempt commercial paper as eligible securities
- Second $2.3 Trillion package announced April 9th, included $500 billion for Municipals
- After FED action focused on Muni market, rates began to normalize
Market Summary

Debt Markets: SMUD accesses funding for capital projects
  • Short-term municipal market (Commercial Paper borrowing)
  • Long-term municipal market activity (Revenue Bond borrowing)

1. Market access initially impaired, currently recovering
2. Interest rates have reduced back to normal levels
3. Questions remain on investor demand

Commodity markets:
  • Crude Oil and Natural Gas prices very low; Power markets stable
  • Counterparties being monitored for solvency issues
Borrowing Strategy

1. Issue $400 million of new money bonds at low interest rates
   • Provide $350 million of funding ($300 million in budget resolution)
   • Refund all outstanding Commercial Paper -$50 million
   • Monitor cash flows for changes in revenue stream
   • Utilize commercial paper for additional liquidity needs, if necessary

2. Refund or enter into agreement to lower debt cost for $203 million outstanding 2013 A&B bonds

3. Plan has us borrowing $200 million in 2021
   • Issue Commercial Paper and refund with Long-term Bonds
   • Target 2\textsuperscript{nd} half of 2021 to refund the Commercial Paper
Debt Outstanding Is Declining

SMUD has lowered debt outstanding by approximately $1 billion since the Great Recession
Strategically Positioned Debt Service Profile

Provides future flexibility to address SMUDs evolving strategy

Future Flexibility

April 16, 2020 8 Board of Directors Meeting
SMUD Plans to issue up to $400 million of new money bonds to:

1. Provide $350 million new capital funding for projects in 2019, 2020 and 2021

2. Refund $50 million outstanding Commercial Paper issued in 2019

3. Issue Green Bonds for qualified green capital project expenditures ($38 million portion of the $350 million)
2020 Series H - Portion will be sold as Green Bonds ($38 million)

Green/ESG certified investments sought by certain investors
  • Growing but young market with developing compliance
  • SMUD continuing to show leadership and enhance market growth

Projects Financed:

  HQ - designed to achieve LEED Gold Certification
  Rancho Seco 2 – Solar Project
  Small Hydro Generation Improvements – Jones Fork and South Fork
2020 Series H Transaction Benefits

• Provides liquidity for the uncertain period ahead
  • Full $400 million Commercial Paper capacity available for future capital spending and liquidity, increasing financing flexibility
  • Provides certainty of capital funding for 2020 and part of 2021
  • Interest rates recovering and are still at historically low levels provides attractive borrowing costs

• Issue SMUD’s 2\textsuperscript{nd} “GREEN BONDS”
  • Continue to develop investor base for issuing to fund additional capital spending that will help meet SMUD decarbonization targets
2020 Series I - Refunding or Interest Rate Swap to provide savings for 2013 Series A&B

Pre-COVID — Savings on Refunding significant and SMUD favored for immediate cash flow savings

2-3 weeks ago — Savings non-existent but are now improving with market normalizing

Criteria for selection between two options (Refunding or Swap):
• Typically use largest NPV, but not only criteria
• Timing of savings: Refunding has savings starting in 2020 while Swap delays savings until after 2023

Staff seeking approval for both transactions similar to 2016 and 2017, to allow staff to make a decision on pricing date
Option 1 - Taxable Refunding

• $203 million 2013 A&B Bonds are not callable until 2023
  - Tax laws changed in 2017 and took away ability to advance refund using tax-exempt bonds

• SMUD can refund now using taxable bonds
  - Savings would be realized starting in 2020

• SMUD has not used taxable bonds with exception of BABs in 2009 and 2010

• SMUD typically targets minimum +5% NPV savings for Refundings
  - Recently forecast to provide 8-10% NPV savings ($15-20 million)
Option 2 - Interest Rate Swap (Hedge)

- $203 million 2013 A&B Bonds are not callable until 2023
- SMUD can lock in future refunding savings by entering into an interest rate swap
  - SMUD can refund using tax-exempt bonds in 2023
  - Savings would be realized after a 2023 refunding
- SMUD has utilized this strategy successfully in the past in 2016 and 2019
- Recently forecast to provide as much as 30% NPV savings ($60 million)
Good Faith Estimate Disclosure Requirement

Government Code Section 5852.1 requires: a Good Faith Estimate of Costs provided by an Underwriter or Financial Advisor

Current Estimated Cost Summary:

<table>
<thead>
<tr>
<th></th>
<th>Series 2020 H</th>
<th>Series 2020 I</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New Money</td>
<td>Refunding</td>
</tr>
<tr>
<td>True Interest Cost (TIC)</td>
<td>3.54%</td>
<td>2.75%</td>
</tr>
<tr>
<td>Cost of Issuance</td>
<td>$ 938,230</td>
<td>$ 561,085</td>
</tr>
<tr>
<td>Bond Proceeds</td>
<td>$ 486,666,785</td>
<td>$ 239,210,000</td>
</tr>
<tr>
<td>Total Payment Amount</td>
<td>$ 834,093,805</td>
<td>$ 340,527,042</td>
</tr>
</tbody>
</table>
Planned Bond Sale

Pricing is planned for April 28th but is market dependent

- Marketing efforts will begin with sending out Official Statement on or around 4/21
- SMUD will have a retail order period- investors can access through various platforms
- SMUD will notify interested parties and customers through a ListServ
Requested Action

1. Authorize the issuance of the **2020 Series H Revenue Bonds**, the distribution of the Preliminary Official Statement, and the Chief Executive Officer and General Manager’s execution of all necessary documents, including the **Bond Purchase Agreement**.

2. Authorize the issuance of **2020 Series I Taxable Refunding Bonds**, the distribution of the Preliminary Official Statement, and the Chief Executive Officer and General Manager’s execution of all necessary documents, including the **Bond Purchase Agreement**, and as an alternative to issuing 2020 Series I Taxable Refunding Bonds, authorize the Chief Executive Officer and General Manager to enter into interest rate swaps or similar agreements to provide for refunding savings or hedge interest rate risk relating to a future refunding of the **2013 Series A & B Revenue Bonds**.
Good evening Board President Kerth, Directors and staff.

My name is Whitney Leeman and I live in Sacramento.

Appendix A to the draft preliminary official statement, page A-5, which is page 249 of the Board information packet, says:

“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 2.07 times on a consolidated basis. SMUD also manages its liquidity position by planning for a minimum of 150 days cash on hand of.”(sic)

“Over the past ten years, the days cash on hand has averaged 193. The resolutions securing SMUD’s Senior Bonds and Subordinated Bonds ... do not require SMUD to maintain a minimum fixed charge coverage ratio or minimum days cash on hand.”

For ten years you have been averaging an actual fixed charge coverage ratio of 2.07 times although Board policy only requires 1.50 times.

These are arbitrary Board minimums and not required by the bonds. These two metrics show that you have continued to overcharge your customers. The way you have achieved this is through excessively high rates. Please address this.
Good evening Board President Kerth, Directors and staff.

My name is Mark Graham and I live in Elk Grove.

Page 250 of the Board information packet, which is page A-6 of Appendix A to the Draft Preliminary Official Statement, says:

“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.”

This is corporate greenwashing. Customers don’t care about most of this and neither should you. Customers do not want or need better, more timely information. They already know when there is an outage.

Your primary commitment and responsibility is to customers, and that means reliably delivering electricity at a low cost. Speaking of transparency please answer two questions:

#1 How much MONEY have the smart meters saved SMUD customers?

#2 How much ELECTRICITY have the smart meters saved SMUD customers?

Your failure to answer these questions suggests that the savings to CUSTOMERS have been negligible.
I support authorizing issuance of bonds to support SMUD finances, including pandemic-induced losses, as long as historically low costs can be taken advantage of.

I would encourage authority to issue bonds adequate to support electrification, efficiency, and GHG reductions while this opportunity exists.

This is my own opinion, not a Sac350 policy.

David Wright

Sent with ProtonMail Secure Email.
I'm not sure I support issuance of Green Bonds, given that the presentation at an earlier date to the Board indicated that there was no financial benefit to SMUD of bonds in this format, and that they carried monitoring and reporting requirements that might be onerous and thus costly.

David Wright

Sent with ProtonMail Secure Email.
In this extraordinary time I request a measure allowing the public opportunity to view the meeting in full and commenting on it. Since the feed was unstable / internet providers are maxed out, it would be reasonable to give constituents opportunity to view the meeting after it is archived online and then to comment for the record.

David Wright

Sent with ProtonMail Secure Email.
To the Board,

The COVID-19 crisis unfolding in slow motion before us has interesting parallels to and differences from the long-unfolding climate crisis.

It is heartening to see everyday heroes, including many SMUD staff, rise in the midst of the pandemic to help their fellows, and encouraging to see reason and science and foresight being applied in advance to avoid the overwhelming of societal capacity to deal with the calamity.

The climate crisis is just as real and just as relentless, but rather than merely slow-moving it is glacial in speed. Nevertheless we can predict the future outcomes we will all experience. Like the current pandemic we know what to do to mitigate the worst impacts. What we need is a greater sense of the urgency, the immediacy, and the scale of response needed, and a sense of the duty to do it, and do it now.

Some good first steps would be:

1. SMUD re-open the IRP and adopt the 350Kt GHG-by-2040 goal that was analyzed as practical by consultant E3 with approximately 0.2% increase in cost, and supported by 350 Sacramento in its September 2018 comment letter.
2. SMUD commit to actively involving 350 Sacramento, Tell SMUD Clean Power for the People, Solar Rights Alliance, and other community organizations in the vetting process and discussions regarding selection of the next CEO/General Manager.
3. SMUD implement VNEM for rooftop solar on multi-customer structures.

Regards, stay safe and well,

David Wright

Sent with ProtonMail Secure Email.
TO

1. Jennifer Davidson
2.
3.
4. 
5.

TO

6. 
7. 
8. 
9. Legal
10. CEO & General Manager

<table>
<thead>
<tr>
<th>Consent Calendar</th>
<th>Yes</th>
<th>No If no, schedule a dry run presentation.</th>
<th>Budgeted</th>
<th>x</th>
<th>Yes</th>
<th>No (If no, explain in Cost/Budgeted section)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FROM (IPR)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sandra Moorman</td>
<td></td>
<td>Accounting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEPARTMENT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAIL STOP</td>
<td></td>
<td>B352</td>
<td>6957</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXT.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DATE SENT</td>
<td></td>
<td>12/23/19</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NARRATIVE:

Requested Action: Provide the Board with SMUD’s financial results for the year-to-date period for 2020.

Summary: Staff will present the Board with SMUD’s financial results for the year-to-date period for 2020.

Board Policy: GP-3, Board Job Description

Benefits: Provide the Board Members with current information on SMUD’s financial condition.

Cost/Budgeted: N/A

Alternatives: Choose to receive briefing via written report.

Affected Parties: Accounting, Planning, Pricing & Enterprise Performance

Coordination: Accounting, Planning, Pricing & Enterprise Performance

Presenter: Lisa Limcaco, Assistant Controller

Additional Links:

SUBJECT

Review of SMUD’s Year-to-Date Financial Results

ITEM NO. (FOR LEGAL USE ONLY)

4

ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.
TO: Distribution

FROM: Kathy Ketchum / Sandra Moorman

SUBJECT: MARCH 2020 FINANCIAL RESULTS AND OPERATIONS DATA

We are attaching the financial and operating reports for the three months of 2020. They include sales and generation statistics and other selected data.

SMUD’s year-to-date net position increased $7.9 million compared to a $22.8 million decrease projected in the budget. We attribute the favorable variance ($30.6 million) to higher operating revenues, lower operating expenses, higher non-operating revenue, and lower interest expense.

We prepared these statements on the accrual basis of accounting, and they conform to generally accepted accounting principles. The basis for the budget amounts are:

1) budgeted electric revenues are based on the Forecast of Revenues by the Rates Department, adjusted for unbilled revenues; and

2) budgeted operating expenses reflect the 2020 Budget approved by the Board of Directors on November 21, 2019.
SACRAMENTO MUNICIPAL UTILITY DISTRICT
EXECUTIVE SUMMARY
For the Three Months Ended March 31, 2020

Net Position
- SMUD’s net position increased $7.9 million compared to a $22.8 million decrease projected in the budget. We attribute the favorable variance ($30.6 million) to higher operating revenues, lower operating expenses, higher non-operating revenue and lower interest expense.

Revenues
- Revenues from sales to customers were $293.9 million, which was $3.0 million (1.0 percent) higher than planned.
  - The variance was due to higher average customer rates per kilowatt-hour and lower uncollectible provision, offset by lower customer usage.
- Other electric revenues were $7.9 million, which was $2.1 million (20.7 percent) lower than planned.
  - The variance was due to Low Carbon Fuel Standard revenue of $2.4 million that was budgeted; however, actuals were deferred to the rate stabilization fund until SMUD has qualified program expenses to recognize revenue.
- Non-cash revenues transferred from the Rate Stabilization fund for AB32 and LCFS program expenses were $4.0 million (primarily related to EAPR).

Operating Expenses
- Purchased power expense of $56.1 million, less surplus power sales of $6.1 million, was $50.0 million, which was $25.6 million, offset by lower prices of $15.8 million.
  - Purchased power expense was the result of higher quantities purchased of $25.6 million, offset by lower prices of $15.8 million.
- SMUD’s generation was lower by 464 GWh (24.5 percent).
  - JPAs generation was lower by 248 GWh (16.0 percent).
  - Hydro generation was lower by 217 GWh (82.8 percent).
- Production operations cost of $70.9 million, less gas sales of $18.3 million, was $52.6 million, which was $16.4 million (23.7 percent) lower than planned.
  - Fuel costs, net of gas sales, were $15.5 million lower due to lower fuel prices of $9.5 million and fuel usage of $5.9 million.
- The “power margin”, or revenues less cost of purchased power, production operations cost and gas hedges included in investment expense was $204.3 million, which was $11.7 million (6.1 percent) higher than planned.
- All other operating expenses were $183.6 million, which was $12.6 million (6.4 percent) lower than planned.
  - Administrative and general expenses were $9.5 million lower which included non-cash adjustment to actuals for 2019 PMP and SMUD awards of $2.7 million, GASB 75 OPEB amortization of $2.6 million, general liability claims reserve reduction of $2.1 million and reduction of workers compensation reserve of $1.0 million, offset by higher GASB 68 pension amortization of $3.6 million.
  - Non-cash depreciation expense was $1.7 million higher, primarily a result of projects capitalized earlier than anticipated.
  - Non-cash depletion expense was $1.0 million lower, due to the sale of Rosa after the preparation of the 2020 budget.

Non-Operating Revenues and Expenses
- Other revenue, net was $12.7 million, which was $5.6 million (77.9 percent) higher than planned.
  - The variance was primarily due to higher unrealized holding gains of $2.5 million, other income of $1.3 million, interest income of $1.0 million and CIAC revenue of $0.9 million.
- Interest expense was $25.6 million which was $0.7 million (2.7 percent) lower than planned.
SACRAMENTO MUNICIPAL UTILITY DISTRICT
STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
For the Month Ended March 31, 2020
(thousands of dollars)

<table>
<thead>
<tr>
<th></th>
<th>Actual</th>
<th>Budget</th>
<th>Over/Under</th>
<th>Percent of Increase/Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATING REVENUES</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales to customers</td>
<td>$96,784</td>
<td>$96,433</td>
<td>$351</td>
<td>0.4%</td>
</tr>
<tr>
<td>Sales of surplus power</td>
<td>3,120</td>
<td>4,997</td>
<td>(1,877)</td>
<td>(37.6)</td>
</tr>
<tr>
<td>Sales of surplus gas</td>
<td>7,181</td>
<td>-</td>
<td>7,181</td>
<td>*</td>
</tr>
<tr>
<td>Public good revenue</td>
<td>136</td>
<td>333</td>
<td>(197)</td>
<td>(59.2)</td>
</tr>
<tr>
<td>SB-1 revenue (deferral)/recognition, net</td>
<td>86</td>
<td>342</td>
<td>(256)</td>
<td>(74.9)</td>
</tr>
<tr>
<td>Other electric revenue</td>
<td>2,127</td>
<td>5,085</td>
<td>(2,958)</td>
<td>(58.2)</td>
</tr>
<tr>
<td>Rate stabilization fund transfers</td>
<td>1,130</td>
<td>-</td>
<td>1,130</td>
<td>*</td>
</tr>
<tr>
<td><strong>Total operating revenues</strong></td>
<td><strong>110,564</strong></td>
<td><strong>107,190</strong></td>
<td><strong>3,374</strong></td>
<td><strong>3.1%</strong></td>
</tr>
</tbody>
</table>

| OPERATING EXPENSES                   |            |           |            |                              |
| Operations                           |            |           |            |                              |
| Purchased power                      | 19,201     | 22,426    | (3,225)    | (14.4)                       |
| Production                           | 25,670     | 20,524    | 5,146      | 25.1                         |
| Transmission and distribution        | 6,436      | 7,386     | (950)      | (12.9)                       |
| Customer accounts                    | 4,539      | 4,851     | (312)      | (6.4)                        |
| Customer service and information     | 4,597      | 5,886     | (1,289)    | (21.9)                       |
| Administrative and general           | 11,890     | 15,615    | (3,725)    | (23.9)                       |
| Public good                          | 5,014      | 5,857     | (843)      | (14.4)                       |
| **Total operations**                 | **77,347** | **82,545**| **(5,198)**| **(6.3)**                    |

| Maintenance                          |            |           |            |                              |
| Production                           | 5,431      | 4,155     | 1,276      | 30.7                         |
| Transmission and distribution        | 6,778      | 6,630     | 148        | 2.2                          |
| **Total maintenance**                | **12,209** | **10,785**| **1,424**  | **13.2**                     |

| Depreciation                         |            |           |            |                              |
| Production                           | 17,062     | 16,525    | 537        | 3.2                          |
| Transmission and distribution        | 6,778      | 6,630     | 148        | 2.2                          |
| **Depreciation**                     | **23,840** | **23,155**| **685**    | **2.9%**                     |

| Amortization of regulatory asset     |            |           |            |                              |
| Production                           | 2,504      | 2,928     | (424)      | (14.5)                       |
| **Amortization of regulatory asset** | **2,504**  | **2,928** | **(424)**  | **(14.5)**                   |
| **Total operating expenses**         | **109,122**| **113,106**| **(3,984)**| **(3.5)**                    |

| OPERATING INCOME (LOSS)              | 1,442      | (5,916)   | 7,358      | 124.4                        |

| NON-OPERATING REVENUES AND EXPENSES   |            |           |            |                              |
| Other revenues/(expenses)            |            |           |            |                              |
| Interest income                      | 1,330      | 1,033     | 297        | 28.8                         |
| Investment revenue (expense)         | (362)      | (132)     | (230)      | (174.2)                      |
| Other income (expense) - net         | 866        | 286       | 580        | 202.8                        |
| Unrealized holding gains (losses)    | 525        | -         | 525        | *                            |
| Revenue - CIAC                       | 1,432      | 1,146     | 286        | 25.0                         |
| **Total other revenues**             | **3,791**  | **2,333** | **1,458**  | **62.5**                     |

| Interest charges                     |            |           |            |                              |
| Interest on long-term debt           | 8,549      | 8,505     | 44         | 0.5                          |
| Interest on commercial paper         | 186        | 273       | (87)       | (31.9)                       |
| **Total interest charges**           | **8,735**  | **8,778** | **(43)**   | **(0.5)**                    |

| CHANGE IN NET POSITION               | $ (3,502)  | $(12,361) | $ 8,859    | 71.7%                        |

* Equals 1000% or greater.
<table>
<thead>
<tr>
<th></th>
<th>Actual</th>
<th>Budget</th>
<th>Over/Under</th>
<th>Percent of Increase/Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OPERATING REVENUES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales to customers</td>
<td>$293,874</td>
<td>$290,847</td>
<td>$3,027</td>
<td>1.0%</td>
</tr>
<tr>
<td>Sales of surplus power</td>
<td>6,084</td>
<td>16,424</td>
<td>(10,340)</td>
<td>(63.0)</td>
</tr>
<tr>
<td>Sales of surplus gas</td>
<td>18,327</td>
<td>-</td>
<td>18,327</td>
<td>*</td>
</tr>
<tr>
<td>Public good revenue</td>
<td>1,115</td>
<td>1,000</td>
<td>115</td>
<td>11.5</td>
</tr>
<tr>
<td>SB-1 revenue (deferral)/recognition, net</td>
<td>213</td>
<td>1,025</td>
<td>(812)</td>
<td>(79.2)</td>
</tr>
<tr>
<td>Other electric revenue</td>
<td>7,886</td>
<td>9,947</td>
<td>(2,061)</td>
<td>(20.7)</td>
</tr>
<tr>
<td>Rate stabilization fund transfers</td>
<td>3,959</td>
<td>-</td>
<td>3,959</td>
<td>*</td>
</tr>
<tr>
<td><strong>Total operating revenues</strong></td>
<td><strong>331,458</strong></td>
<td><strong>319,243</strong></td>
<td><strong>12,215</strong></td>
<td><strong>3.8</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>OPERATING EXPENSES</strong></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchased power</td>
<td>56,108</td>
<td>56,641</td>
<td>(533)</td>
<td>(0.9)</td>
</tr>
<tr>
<td>Production</td>
<td>70,966</td>
<td>69,010</td>
<td>1,956</td>
<td>2.8</td>
</tr>
<tr>
<td>Transmission and distribution</td>
<td>19,348</td>
<td>20,866</td>
<td>(1,518)</td>
<td>(7.3)</td>
</tr>
<tr>
<td>Customer accounts</td>
<td>14,017</td>
<td>14,907</td>
<td>(890)</td>
<td>(6.0)</td>
</tr>
<tr>
<td>Customer service and information</td>
<td>13,976</td>
<td>17,851</td>
<td>(3,875)</td>
<td>(21.7)</td>
</tr>
<tr>
<td>Administrative and general</td>
<td>33,934</td>
<td>43,452</td>
<td>(9,518)</td>
<td>(21.9)</td>
</tr>
<tr>
<td>Public good</td>
<td>13,547</td>
<td>15,438</td>
<td>(1,891)</td>
<td>(12.2)</td>
</tr>
<tr>
<td><strong>Total operations</strong></td>
<td>221,896</td>
<td>238,165</td>
<td>(16,269)</td>
<td>(6.8)</td>
</tr>
<tr>
<td>Maintenance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production</td>
<td>8,760</td>
<td>7,400</td>
<td>1,360</td>
<td>18.4</td>
</tr>
<tr>
<td>Transmission and distribution</td>
<td>20,381</td>
<td>18,055</td>
<td>2,326</td>
<td>12.9</td>
</tr>
<tr>
<td><strong>Total maintenance</strong></td>
<td>29,141</td>
<td>25,455</td>
<td>3,686</td>
<td>14.5</td>
</tr>
<tr>
<td>Depreciation</td>
<td>51,101</td>
<td>49,431</td>
<td>1,670</td>
<td>3.4</td>
</tr>
<tr>
<td>Depletion</td>
<td>-</td>
<td>970</td>
<td>(970)</td>
<td>(100.0)</td>
</tr>
<tr>
<td>Amortization of regulatory asset</td>
<td>8,521</td>
<td>8,784</td>
<td>(263)</td>
<td>(3.0)</td>
</tr>
<tr>
<td><strong>Total operating expenses</strong></td>
<td><strong>310,659</strong></td>
<td><strong>322,805</strong></td>
<td><strong>(12,146)</strong></td>
<td><strong>(3.8)</strong></td>
</tr>
</tbody>
</table>

| **OPERATING INCOME (LOSS)** | 20,799 | (3,562) | 24,361 | 683.9 |

| **NON-OPERATING REVENUES AND EXPENSES** |         |        |            |                             |
| Other revenues/(expenses) |         |        |            |                             |
| Interest income           | 4,065   | 3,076  | 989        | 32.2                        |
| Investment revenue (expense) | (468) | (396) | (72)      | (18.2)                      |
| Other income (expense) - net | 2,334  | 1,019  | 1,315     | 129.0                       |
| Unrealized holding gains (losses) | 2,472 | - | 2,472 * |                              |
| Revenue - CIAC            | 4,288   | 3,435  | 853       | 24.8                        |
| **Total other revenues**  | 12,691  | 7,134  | 5,557     | 77.9                        |

| Interest charges |         |        |            |                             |
| Interest on long-term debt | 25,415  | 25,514 | (99) | (0.4) |
| Interest on commercial paper | 218     | 818    | (600) | (73.3) |
| **Total interest charges** | **25,633** | **26,332** | **(699)** | **(2.7)** |

| **CHANGE IN NET POSITION** | 7,857 | (22,760) | 30,617 | 134.5 % |

* Equals 1000% or greater.
SACRAMENTO MUNICIPAL UTILITY DISTRICT
SOURCES AND USES OF ENERGY - COMPARED TO BUDGET
For the Period Ended March 31, 2020

<table>
<thead>
<tr>
<th>Sources of Energy (GWh)</th>
<th>Month</th>
<th>Increase (Decrease)</th>
<th>Year-to-Date</th>
<th>Increase (Decrease)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actual</td>
<td>Budget</td>
<td>Percentage</td>
<td>Actual</td>
</tr>
<tr>
<td>Net Generated</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydro</td>
<td>17</td>
<td>113</td>
<td>(85.0) %</td>
<td>45</td>
</tr>
<tr>
<td>Carson Ice (CVFA)</td>
<td>21</td>
<td>2</td>
<td>950.0 %</td>
<td>47</td>
</tr>
<tr>
<td>Procter &amp; Gamble (SCA)</td>
<td>65</td>
<td>26</td>
<td>150.0 %</td>
<td>171</td>
</tr>
<tr>
<td>Campbell Soup Project (SPA)</td>
<td>46</td>
<td>32</td>
<td>43.8 %</td>
<td>135</td>
</tr>
<tr>
<td>SMUD Financing Authority (SFA)</td>
<td>309</td>
<td>245</td>
<td>26.1 %</td>
<td>952</td>
</tr>
<tr>
<td>Other</td>
<td>30</td>
<td>35</td>
<td>(14.1) %</td>
<td>80</td>
</tr>
<tr>
<td>Total net generation</td>
<td>488</td>
<td>453</td>
<td>7.7</td>
<td>1,430</td>
</tr>
<tr>
<td>Purchased Power less transmission losses:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avangrid</td>
<td>2</td>
<td>7</td>
<td>(71.4) %</td>
<td>10</td>
</tr>
<tr>
<td>Calpine Sutter</td>
<td>31</td>
<td>-</td>
<td>*</td>
<td>31</td>
</tr>
<tr>
<td>Feed in Tariff</td>
<td>15</td>
<td>18</td>
<td>(16.7) %</td>
<td>37</td>
</tr>
<tr>
<td>Grady Wind</td>
<td>87</td>
<td>87</td>
<td>0.0</td>
<td>229</td>
</tr>
<tr>
<td>Great Valley Solar</td>
<td>12</td>
<td>15</td>
<td>(20.0) %</td>
<td>31</td>
</tr>
<tr>
<td>Kiefer - Greenergy</td>
<td>10</td>
<td>10</td>
<td>0.0</td>
<td>29</td>
</tr>
<tr>
<td>Patua</td>
<td>9</td>
<td>14</td>
<td>(35.7) %</td>
<td>34</td>
</tr>
<tr>
<td>Simpson</td>
<td>28</td>
<td>18</td>
<td>55.6 %</td>
<td>71</td>
</tr>
<tr>
<td>WAPA</td>
<td>47</td>
<td>36</td>
<td>30.6 %</td>
<td>83</td>
</tr>
<tr>
<td>WSPP and other</td>
<td>206</td>
<td>284</td>
<td>(27.5) %</td>
<td>809</td>
</tr>
<tr>
<td>Other long term power</td>
<td>17</td>
<td>23</td>
<td>(25.3) %</td>
<td>51</td>
</tr>
<tr>
<td>Total net purchases</td>
<td>464</td>
<td>512</td>
<td>(9.3) %</td>
<td>1,415</td>
</tr>
<tr>
<td>Total sources of energy</td>
<td>952</td>
<td>965</td>
<td>(1.3) %</td>
<td>2,845</td>
</tr>
</tbody>
</table>

Uses of energy:
- SMUD electric sales and usage 749 764 (1.9) % 2,302 2,322 (0.9)
- Surplus power sales 177 163 8.6 461 447 3.1
- System losses 26 38 (31.6) % 82 155 (47.1)

Total uses of energy 952 965 (1.3) % 2,845 2,924 (2.7) %

* Change equals 1000% or more.

Net generation is lower than budget for the three-month period.
- Hydro generation is lower than planned (82.8 percent).
- JPA generation is lower than planned (16.0 percent).

Purchased power, less surplus power sales, is higher than plan (63.7 percent).
**SACRAMENTO MUNICIPAL UTILITY DISTRICT**  
**STATEMENTS OF NET POSITION**  
March 31, 2020 and 2019  
(thousands of dollars)

### ASSETS

<table>
<thead>
<tr>
<th></th>
<th>SMUD</th>
<th>CVFA</th>
<th>SCA</th>
<th>SFA</th>
<th>SPA</th>
<th>NCEA</th>
<th>NCGA #1</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ELECTRIC UTILITY PLANT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant in service, original cost</td>
<td>$5,268,998</td>
<td>$153,440</td>
<td>$197,578</td>
<td>$388,182</td>
<td>$208,220</td>
<td>-</td>
<td>-</td>
<td>$6,216,418</td>
<td>$6,027,439</td>
</tr>
<tr>
<td>Less accumulated depreciation</td>
<td>2,406,186</td>
<td>117,813</td>
<td>143,234</td>
<td>173,597</td>
<td>155,013</td>
<td>-</td>
<td>-</td>
<td>2,998,533</td>
<td>2,981,049</td>
</tr>
<tr>
<td><strong>Plant in service - net</strong></td>
<td>2,862,812</td>
<td>35,627</td>
<td>54,344</td>
<td>214,595</td>
<td>53,207</td>
<td>-</td>
<td>-</td>
<td>3,220,858</td>
<td>3,046,390</td>
</tr>
<tr>
<td>Construction work in progress</td>
<td>416,812</td>
<td>-</td>
<td>-</td>
<td>2,715</td>
<td>103</td>
<td>-</td>
<td>-</td>
<td>419,630</td>
<td>474,389</td>
</tr>
<tr>
<td>Investment in Joint Power Agencies</td>
<td>298,034</td>
<td>-</td>
<td>-</td>
<td>15,799</td>
<td>12,280</td>
<td>-</td>
<td>-</td>
<td>310,823</td>
<td>12,280</td>
</tr>
<tr>
<td><strong>Total electric utility plant - net</strong></td>
<td>3,577,658</td>
<td>35,627</td>
<td>54,344</td>
<td>217,310</td>
<td>53,310</td>
<td>-</td>
<td>-</td>
<td>3,658,014</td>
<td>3,533,059</td>
</tr>
<tr>
<td><strong>RESTRICTED ASSETS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenue bond reserves</td>
<td>4,747</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4,747</td>
<td>5,617</td>
</tr>
<tr>
<td>Less accumulated payment of debt service</td>
<td>76,615</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>76,615</td>
<td>71,819</td>
</tr>
<tr>
<td><strong>Restricted assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nuclear decommissioning trust fund</td>
<td>8,836</td>
<td>-</td>
<td>-</td>
<td>8,042</td>
<td>17,889</td>
<td>14,854</td>
<td>-</td>
<td>8,836</td>
<td>8,591</td>
</tr>
<tr>
<td>Rate stabilization fund</td>
<td>141,770</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>141,770</td>
<td>96,894</td>
</tr>
<tr>
<td>Plant in service - net</td>
<td>2,862,812</td>
<td>35,627</td>
<td>54,344</td>
<td>35,627</td>
<td>54,344</td>
<td>214,595</td>
<td>-</td>
<td>474,389</td>
<td>-</td>
</tr>
<tr>
<td>Construction work in progress</td>
<td>416,812</td>
<td>-</td>
<td>-</td>
<td>2,715</td>
<td>103</td>
<td>-</td>
<td>-</td>
<td>419,630</td>
<td>474,389</td>
</tr>
<tr>
<td>Investment in Joint Power Agencies</td>
<td>298,034</td>
<td>-</td>
<td>-</td>
<td>15,799</td>
<td>12,280</td>
<td>-</td>
<td>-</td>
<td>310,823</td>
<td>12,280</td>
</tr>
<tr>
<td><strong>Total restricted assets</strong></td>
<td>168,431</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>171,272</td>
<td>122,113</td>
</tr>
<tr>
<td><strong>CURRENT ASSETS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash, cash equivalents and investments</td>
<td>388,426</td>
<td>5,659</td>
<td>17,654</td>
<td>15,485</td>
<td>10,201</td>
<td>-</td>
<td>-</td>
<td>437,425</td>
<td>363,038</td>
</tr>
<tr>
<td>Unrestricted</td>
<td>110</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>110</td>
<td>110</td>
</tr>
<tr>
<td>Unrestricted - collateral obligation</td>
<td>87,343</td>
<td>-</td>
<td>-</td>
<td>8,042</td>
<td>18,128</td>
<td>19,048</td>
<td>-</td>
<td>3,128</td>
<td>2,151</td>
</tr>
<tr>
<td><strong>Restricted assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nuclear decommissioning trust fund</td>
<td>3,021</td>
<td>-</td>
<td>-</td>
<td>66</td>
<td>155</td>
<td>38,204</td>
<td>-</td>
<td>225,279</td>
<td>25,822</td>
</tr>
<tr>
<td>Rate stabilization fund</td>
<td>535,187</td>
<td>174,797</td>
<td>709,984</td>
<td>71,942</td>
<td>75,875</td>
<td>-</td>
<td>-</td>
<td>744</td>
<td>744</td>
</tr>
<tr>
<td>Prepaid gas to be delivered within one year</td>
<td>3,128</td>
<td>-</td>
<td>-</td>
<td>18,057</td>
<td>23,305</td>
<td>-</td>
<td>-</td>
<td>21,185</td>
<td>23,305</td>
</tr>
<tr>
<td>Prepayments and other</td>
<td>15,654</td>
<td>1,041</td>
<td>1,001</td>
<td>1,173</td>
<td>2,884</td>
<td>-</td>
<td>-</td>
<td>21,795</td>
<td>28,693</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td>580,304</td>
<td>11,644</td>
<td>20,591</td>
<td>50,914</td>
<td>20,722</td>
<td>21,935</td>
<td>39,667</td>
<td>215,089</td>
<td>177,113</td>
</tr>
<tr>
<td><strong>NONCURRENT ASSETS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulatory costs for future recovery</td>
<td>74,192</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>82,989</td>
<td>82,989</td>
</tr>
<tr>
<td>Pension</td>
<td>370,342</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>370,342</td>
<td>370,342</td>
</tr>
<tr>
<td>OPEB</td>
<td>303,363</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>319,329</td>
<td>319,329</td>
</tr>
<tr>
<td>Bond Issues</td>
<td>9,959</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>9,959</td>
<td>9,959</td>
</tr>
<tr>
<td><strong>Deferred Charges</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total current assets</td>
<td>801,904</td>
<td>11,644</td>
<td>20,591</td>
<td>50,914</td>
<td>20,722</td>
<td>21,935</td>
<td>39,667</td>
<td>215,089</td>
<td>177,113</td>
</tr>
<tr>
<td><strong>DEFERRED OUTFLOWS OF RESOURCES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accumulated decrease in fair value of hedging derivatives</td>
<td>90,478</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>90,478</td>
<td>74,238</td>
</tr>
<tr>
<td>Deferred pension obligations</td>
<td>89,457</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>89,457</td>
<td>81,961</td>
</tr>
<tr>
<td>Deferred OPEB</td>
<td>25,543</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>25,543</td>
<td>15,181</td>
</tr>
<tr>
<td>Deferred ARO obligations</td>
<td>15,787</td>
<td>1,874</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>21,154</td>
<td>21,154</td>
</tr>
<tr>
<td>Unamortized bond losses</td>
<td>154,192</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>154,192</td>
<td>154,192</td>
</tr>
<tr>
<td><strong>Total deferred outflows of resources</strong></td>
<td>221,305</td>
<td>1,874</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>225,797</td>
<td>195,439</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>$5,381,813</td>
<td>$47,273</td>
<td>$83,937</td>
<td>$278,193</td>
<td>$74,033</td>
<td>$559,962</td>
<td>$215,218</td>
<td>$6,288,530</td>
<td>$6,130,797</td>
</tr>
</tbody>
</table>

*Numbers may not add across due to elimination entries not shown on this sheet.*
# SACRAMENTO MUNICIPAL UTILITY DISTRICT
## STATEMENTS OF NET POSITION
### March 31, 2020 and 2019
(Thousands of dollars)

### Liabilities and Net Assets

<table>
<thead>
<tr>
<th></th>
<th>SMUD</th>
<th>CVFA</th>
<th>SCA</th>
<th>SFA</th>
<th>SPA</th>
<th>NCEA</th>
<th>NCGB #1</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LONG-TERM DEBT - NET</strong></td>
<td>2,065,879</td>
<td>-</td>
<td>-</td>
<td>125,916</td>
<td>-</td>
<td>560,559</td>
<td>181,935</td>
<td>2,934,289</td>
<td>2,631,211</td>
</tr>
<tr>
<td><strong>CURRENT LIABILITIES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial paper notes</td>
<td>50,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>50,000</td>
<td>286,750</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>70,189</td>
<td>953</td>
<td>689</td>
<td>3,319</td>
<td>1,763</td>
<td>-</td>
<td>1,150</td>
<td>87,063</td>
<td>77,577</td>
</tr>
<tr>
<td>Purchased power payable</td>
<td>60,888</td>
<td>1,774</td>
<td>4,784</td>
<td>20,519</td>
<td>2,791</td>
<td>-</td>
<td>-</td>
<td>21,093</td>
<td>19,779</td>
</tr>
<tr>
<td>Credit support collateral obligation</td>
<td>110</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4,193</td>
<td>4,303</td>
</tr>
<tr>
<td>Long-term debt due within one year</td>
<td>92,920</td>
<td>-</td>
<td>-</td>
<td>8,710</td>
<td>-</td>
<td>-</td>
<td>16,675</td>
<td>118,305</td>
<td>144,885</td>
</tr>
<tr>
<td>Accrued decommissioning</td>
<td>5,649</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5,649</td>
<td>5,562</td>
</tr>
<tr>
<td>Interest payable</td>
<td>21,402</td>
<td>-</td>
<td>1,510</td>
<td>-</td>
<td>5,438</td>
<td>987</td>
<td>29,337</td>
<td>28,999</td>
<td></td>
</tr>
<tr>
<td>Accrued salaries and compensated absences</td>
<td>40,799</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>40,799</td>
<td>35,359</td>
<td></td>
</tr>
<tr>
<td>Customer deposits</td>
<td>44,156</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>44,156</td>
<td>28,930</td>
</tr>
<tr>
<td>Other</td>
<td>22,402</td>
<td>41</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>22,443</td>
<td>16,852</td>
</tr>
<tr>
<td><strong>Total current liabilities</strong></td>
<td>441,260</td>
<td>2,768</td>
<td>5,473</td>
<td>34,058</td>
<td>4,554</td>
<td>5,438</td>
<td>23,005</td>
<td>446,893</td>
<td>676,082</td>
</tr>
<tr>
<td><strong>NONCURRENT LIABILITIES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accrued decommissioning - net</td>
<td>76,544</td>
<td>8,529</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>85,073</td>
<td>91,616</td>
</tr>
<tr>
<td>Derivative financial instruments</td>
<td>57,214</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>57,214</td>
<td>64,201</td>
</tr>
<tr>
<td>Pension liability</td>
<td>467,648</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>467,648</td>
<td>454,044</td>
</tr>
<tr>
<td>Net OPEB liability</td>
<td>32,211</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>32,211</td>
<td>22,086</td>
</tr>
<tr>
<td>Other</td>
<td>86,383</td>
<td>-</td>
<td>-</td>
<td>76</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>86,459</td>
<td>87,724</td>
</tr>
<tr>
<td><strong>Total noncurrent liabilities</strong></td>
<td>722,000</td>
<td>8,529</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>76</td>
<td>730,605</td>
<td>719,651</td>
</tr>
<tr>
<td><strong>TOTAL LIABILITIES</strong></td>
<td>3,229,139</td>
<td>11,297</td>
<td>5,473</td>
<td>159,974</td>
<td>4,554</td>
<td>566,073</td>
<td>204,940</td>
<td>4,111,787</td>
<td>4,026,944</td>
</tr>
<tr>
<td><strong>DEFERRED INFLOWS OF RESOURCES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accumulated increase in fair value of hedging derivatives</td>
<td>13,604</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>13,604</td>
<td>14,015</td>
</tr>
<tr>
<td>Deferred pension inflows</td>
<td>40,585</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>40,585</td>
<td>56,476</td>
</tr>
<tr>
<td>Deferred OPEB inflows</td>
<td>39,200</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>39,200</td>
<td>51,656</td>
</tr>
<tr>
<td>Regulatory credits</td>
<td>485,636</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>485,636</td>
<td>448,257</td>
</tr>
<tr>
<td>Unamortized bond gains - other</td>
<td>7,253</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>7,253</td>
<td>8,353</td>
</tr>
<tr>
<td>Unearned revenue</td>
<td>3,610</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3,610</td>
<td>2,379</td>
</tr>
<tr>
<td><strong>TOTAL DEFERRED INFLOWS OF RESOURCES</strong></td>
<td>589,888</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>589,888</td>
<td>581,135</td>
</tr>
<tr>
<td><strong>NET POSITION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Balance at beginning of year</td>
<td>1,777,144</td>
<td>38,724</td>
<td>78,298</td>
<td>118,948</td>
<td>70,061</td>
<td>(6,846)</td>
<td>10,114</td>
<td>1,804,277</td>
<td>1,725,362</td>
</tr>
<tr>
<td>Member contributions (distributions) - net</td>
<td>6,947</td>
<td>(874)</td>
<td>166</td>
<td>1,371</td>
<td>(882)</td>
<td>697</td>
<td>133</td>
<td>7,857</td>
<td>(7,205)</td>
</tr>
<tr>
<td><strong>TOTAL NET POSITION</strong></td>
<td>1,784,091</td>
<td>37,850</td>
<td>78,464</td>
<td>120,319</td>
<td>69,479</td>
<td>(6,111)</td>
<td>10,278</td>
<td>1,812,134</td>
<td>1,718,157</td>
</tr>
<tr>
<td><strong>TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION</strong></td>
<td>$ 5,603,118</td>
<td>$ 49,147</td>
<td>$ 83,937</td>
<td>$ 280,293</td>
<td>$ 74,033</td>
<td>$ 559,962</td>
<td>$ 215,218</td>
<td>$ 6,513,809</td>
<td>$ 6,326,236</td>
</tr>
</tbody>
</table>

*Numbers may not add across due to elimination entries not shown on this sheet.*
NARRATIVE:

Requested Action:  Informational agenda item to provide Board Members with the opportunity to ask questions and/or discuss recent reports issued by Audit and Quality Services.

Summary:  Reports Issued by Audit and Quality Services:

<table>
<thead>
<tr>
<th>Title</th>
<th>Report Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>HQ Construction Audit Report</td>
<td>28006648</td>
</tr>
</tbody>
</table>

Board Policy:  Board-Staff Linkage, Board-Internal Auditor Relationship (BL-3)

Benefits:  Provides the Board an opportunity to discuss and ask clarifying questions.

Cost/Budgeted:  There is no budgetary impact for this presentation.

Alternatives:  Choose not to have the briefing.

Affected Parties:  Board, Internal Auditor

Coordination:  Board Office, Audit and Quality Services, and applicable SMUD Departments

Presenter:  Claire Rogers, Director of Audit Services

Additional Links

SUBJECT

Reports Issued by Audit and Quality Services

ITEM NO. (FOR LEGAL USE ONLY) 5

ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.
Headquarters Rehabilitation: Construction
Executive Summary

Audit and Quality Services (AQS) completed an audit of the construction phase of the Headquarters (HQ) Rehabilitation project. This audit was included in AQS’ 2018 and 2019 audit plans.

The HQ has served as SMUD’s center of operations since it was occupied in 1960 and was placed on the National Register of Historic Places in 2010. The HQ is a necessary facility to meet current and future business needs and is also considered to be significant to SMUD’s brand and image. However, because the HQ remained largely the same since opening, it contained hazardous materials used during original construction. As a result, the decision was made to abate and rehabilitate the HQ to retain its historical status and make needed upgrades to support continued use.

The purpose of the audit was to review the controls in place to manage the construction work; including scope, budget, and compliance with certain contract terms and conditions. We determined that change order requests showed evidence of review, re-calculation, and authorization, and that key stakeholders are obtaining the financial information needed to make informed decisions. We also determined that project costs and funds are being tracked and allocated in accordance with established processes, except for allowances which were not tracked consistently during construction.

We did however identify an error in the HQ financial reports that was due to a work breakdown structure (WBS) change that impacted prior year costs. To address this risk, we recommend that the Budget Office and Accounting collaborate to establish procedures and controls over WBS changes, and corresponding changes to settlement receiver information, and periodically reconcile prior year costs in Business Planning and Consolidation (BPC) to SAP. The Budget Office and Accounting implemented corrective actions for these recommendations prior to the issuance of this audit report. Additionally, we identified items that should be considered going forward to improve processes and controls related to contract language and guidance for change orders.

During the audit, the items identified in this report were communicated to the HQ Rehabilitation project team (project team) through status updates and meetings. In addition, we attended recurring HQ Rehabilitation meetings; which included the Owner Architect Contractor (OAC) HQ Rehabilitation weekly update and HQ Rehabilitation weekly update meetings, to stay current on the status of the project and to talk with the project team as needed.
Audit & Quality Services

Headquarters Rehabilitation: Construction

Audit Report #28006648
Headquarters Rehabilitation: Construction
Audit & Quality Services Report

Background:
Audit and Quality Services (AQS) completed an audit of the construction phase of the Headquarters (HQ) Rehabilitation project. This audit was included in AQS' 2018 and 2019 audit plans.

The HQ has served as SMUD’s center of operations since it was occupied in 1960 and was placed on the National Register of Historic Places in 2010. The HQ is a necessary facility to meet current and future business needs and is also considered to be significant to SMUD’s brand and image. However, because the HQ remained largely the same since opening, it contained hazardous materials used during original construction. As a result, the decision was made to abate and rehabilitate the HQ to retain its historical status and make needed upgrades to support continued use.

The SMUD HQ Rehabilitation project team (project team) devoted much of 2014 to finalizing designs for temporary work locations, planning the move out of the HQ, preparing documentation for environmental and planning approvals, and overseeing the preliminary design concepts for the renovation. By the end of 2014, the initial forecasted project cost was $100.5 million, based on a construction estimate of $68 million, and the anticipated project completion date was June 2017. The HQ Rehabilitation was later approved by the Board of Directors on April 16, 2015.

In April 2016, two construction bids were received in the amount of $97 and $99 million respectively, which exceeded the original construction estimate by approximately $30 million and increased the forecasted project cost to $152 million. The project team responded by reexamining the scope, schedule, and procurement strategies to identify ways to lower the cost of the project. This reexamination led to a phased approach to separate the demolition and abatement (D&A) from the construction work and a revised completion date of September 2018. The HQ D&A phase focused on the remediation of hazardous materials, such as polychlorinated biphenyls (PCBs), asbestos, and lead based paint in the HQ. AQS previously performed an audit of the D&A phase and issued the report on September 6, 2018. The HQ construction phase focused on updating the HQ to be compliant with current code requirements; maintain historical integrity; improve safety and security; modernize technology and systems; and showcase SMUD’s energy efficiency, environmental, and community leadership.

On November 17, 2016 the Board of Directors awarded Bayview Environmental the D&A contract in the amount of $7,782,000. Then on June 2, 2017 Roebbelien Contracting, Inc. (Roebbelien) was awarded the HQ Rehabilitation pre-construction services contract in the amount of $465,000. The purpose of the pre-construction services contract was for Roebbelien to assist SMUD with redesigning the project—prior to commencing construction—to identify ways to lower costs while still achieving project objectives. This approach resulted in redesigns to the HQ mechanical, electrical, and HVAC systems; additionally, the project scope was changed to reduce the amount of
site work around the HQ (such as electric vehicle charging stations and outside conference rooms) and remove ceiling architecture upgrades. On December 21, 2017, after pre-construction services were complete, the Board approved the revised project scope and the $71,361,101 Roebbelen guaranteed maximum price (GMP) construction contract. This resulted in a new forecasted project cost of $130 million and completion date of March 2019. However, during 2018, delay in approval of required permits, additional hazardous material abatement, and two contract change orders increased the GMP to $75,308,113 and the forecasted project cost to $134 million. In 2019, four additional contract change orders increased the GMP to $76,650,901 and the forecasted project cost to $137 million, and extended the completion date to August 2019. As of December 3, 2019, the total contracted amount—including change orders—for D&A, pre-construction, and construction totaled $89,438,958, which was approximately $7 million less than the lowest construction bid received in April 2016.

During the HQ Rehabilitation, Workforce Enterprise Services – Planning & Performance (Planning & Performance) prepared HQ financial reports to communicate project costs. Further, Planning & Performance prepared a HQ financial report on October 16, 2019, and at this time actual project costs totaled $135,723,327 (through September 2019) and the remaining forecasted project cost was approximately $1.7 million. Included in the forecast were costs for the final GMP change order, the remaining furniture and fixtures, moving employees back into the HQ, and remaining project management.

Below is a timeline showing actual project cost (Construction; D & A; and Support, PM and Other) and forecasted project cost, obtained from the HQ financial reports, during the HQ Rehabilitation. Although AQS evaluated a selection of project costs during objective 2 testing, we did not verify the overall project cost.


Scope:
The scope of the audit covered the duration of the GMP construction contract, including any extensions; further, it specifically included the following:

- GMP Change Directives (CDs), change orders, contingency disbursements, allowance draws, and the change order log.
- HQ financial reports, earned value calculations, monthly payment applications, executive updates, corporate communication, and other HQ Construction financial related communication.

As with the D&A audit, AQS conducted this audit while the HQ Rehabilitation took place—January 10, 2018 through the final executed change order date of December 3, 2019. This approach allowed AQS to communicate observations, recommendations, and additional items as they were identified, which provided the project team the opportunity to address any items discovered prior to project completion.

Objectives:
The objectives of this audit were to:

1. Examine change order requests for evidence of review, re-calculation, and authorization.
2. Determine how costs are being tracked and allocated; including the use of contingency, allowances, and additional SMUD funds.
3. Determine if key stakeholders are obtaining the financial information needed to make informed decisions.

Summary:
The HQ Rehabilitation was led by a project team that consisted of contractors and employees from across SMUD. See the table below for a summary of responsible parties AQS worked with during the construction phase.

<table>
<thead>
<tr>
<th>Role</th>
<th>Responsible Party</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Sponsor</td>
<td>SMUD Director, Facilities &amp; Security Operations</td>
<td>Authority to issue change directives. Communicate on behalf of the project to executive management and across work areas.</td>
</tr>
<tr>
<td>Project Director (Engineer)</td>
<td>SMUD Supervisor, Facilities &amp; Maintenance</td>
<td>Oversee, monitor, and manage the project. Authority to approve contingency disbursements. Communicate on behalf of the project to contractor, executive management, and across work areas.</td>
</tr>
<tr>
<td>Contracting Officer</td>
<td>SMUD Director, Procurement, Warehouse &amp; Fleet</td>
<td>Authority to approve contingency disbursements and issue change orders.</td>
</tr>
<tr>
<td>Construction Manager</td>
<td>Kitchell CEM, Inc.</td>
<td>Coordinate and oversee the day to day work of the project from beginning to end.</td>
</tr>
<tr>
<td>Construction Contractor</td>
<td>Roebbelen Contracting, Inc.</td>
<td>Contracted to perform pre-construction services and construction work.</td>
</tr>
</tbody>
</table>
Objective 1

Change Directives and Change Orders

The contract states that the Construction Contractor can request changes where the physical conditions differ materially from those indicated in the contract documents or when there are unknown physical conditions of an unusual nature. SMUD can also order changes to correct errors or omissions in contract documents, change the scope of work after contract execution, and to address unforeseen conditions. The contract provides requirements for initiating and approving change directives and change orders.

In addition, the contract specifies timeframes for when the Construction Contractor must submit change order requests and when SMUD must approve those requests. The contract also states that upon SMUD approval of change order requests, SMUD will issue a change order; however, there is no SMUD guidance that specifies when change directives and change orders should be approved. We reviewed 82 change directives and determined that the process took between 32 and 142 days from the date of the change order request to the execution date of the change order. Further, the contract states that the Construction Contractor shall bill SMUD for work that has been completed, including amounts for change orders and change directives that have been issued during the period. However, we reviewed 14 signed change directives and determined that for 10 of them, SMUD was billed before the change order was executed and the contract was officially amended.

The Director of Procurement, Warehouse and Fleet is responsible for directing the contracting efforts of SMUD through AP 01.01.03, Delegations of Authority. Procurement has established Change Order Routing Guidelines that provide a high-level overview for changes in contracts such as time extensions, value increases, and scope changes and illustrates requirements for reviewing and approving these changes through a Staff Summary Sheet (SSS). The Procurement Manual provides requirements and guidelines for developing, reviewing, approving, and monitoring SMUD contracts. However, during the audit, the Procurement Manual did not have documented guidance for the following:

- Expectations of contract managers on reviewing and monitoring change directives and change orders.
- Type of supporting documentation required for submission to Procurement.
- Expectations on when Procurement should receive change directives from the contract manager.
- Processing of change orders, including who prepares the SSS and the type of information to include in the SSS.

We reviewed the GMP contract and current SMUD guidance related to change orders; interviewed various individuals involved with the HQ Rehabilitation to understand their roles, responsibilities, and expectations in relation to the change order process; and reviewed a sample of eight change directives to determine the process for initiating, reviewing, and approving the change directives. We determined that the eight change directives were processed in accordance with the contract and contained evidence of review, re-calculation, and authorization. We also identified additional steps taken by
the Construction Manager and Engineer to review and track change directives and change orders that were not required by the contract or SMUD guidance. We found evidence that the Construction Manager reviewed, negotiated, and re-calculated the costs using construction industry standards. In addition, Procurement performed a high-level review of the proposed scope and cost of work.

**Contingency Disbursements**
The contract outlines the allowable costs that constitute a contingency disbursement, including costs that are unanticipated or unforeseen. However, it also states that certain costs arising from unforeseen conditions could also be applied to change orders.

The contract provides detailed requirements for contingency disbursements and specifies that the Construction Contractor is not entitled to an overhead and profit markup for reimbursable contingency costs. The contract further states that the Construction Contractor is required to submit a written request that provides detailed information on the costs, including the reason the costs were not originally included in the GMP and why the costs are not recoverable from another source. Lastly, the contract requires the Engineer and Contracting Officer to review and approve contingency disbursements.

We reviewed a sample of four contingency disbursements to determine whether they were processed in accordance with the contract and contained evidence of review, re-calculation, and authorization. We identified that disbursements were processed in accordance with the contract and contained evidence of review and re-calculation; however, initial disbursements were only signed by the Engineer. In February of 2019, we communicated the issue to the project team, and they addressed the issue by having the Contracting Officer sign all subsequent contingency disbursements.

**Allowance Draws**
The contract does not define allowances. However, we reviewed a sample of three allowance draws and determined that there was evidence of review, re-calculation, and authorization by the Engineer.

**Objective 2**
We examined the project team’s procedure for tracking and reporting project costs and identified that Planning & Performance developed a process to obtain financial data from *Business Planning and Consolidation* (BPC)\(^1\) to generate monthly HQ financial reports, which were used to track and communicate project costs.

We validated HQ Rehabilitation costs, which were charged to plant maintenance (PM) orders\(^2\) and categorized by work breakdown structure (WBS)\(^3\), in the HQ financial report for two months (December 2018 and July 2019) by performing the following:

- Agreeing the totals of a sample of costs in the HQ financial reports to what was documented in SAP.

---

\(^1\) BPC is updated monthly with source data from SAP (for the current year only)

\(^2\) PM Orders are Accounting cost-collection objects used for direct and indirect work

\(^3\) WBS separately identifies business units and segments
• Reviewing SAP for costs related to the HQ Rehabilitation that were not included in the HQ financial reports.
• Reviewing a sample of SMUD staff and contractors working on the project to confirm that their costs were properly included in the HQ financial reports.

We identified that costs related to the HQ Rehabilitation were being tracked and allocated in accordance with the established process; however, we did identify an error in the HQ financial reports. Although there was no impact on the total HQ Rehabilitation cost, the HQ Project Management WBS was overstated by $205,959 and the HQ Renovation Other Construction WBS was understated by $205,959 when compared to costs in SAP. The error occurred because of a WBS change made through the IW32 (Change PM Order) SAP transaction which changed the WBSs attached to two PM orders containing prior year HQ Rehabilitation costs. Because prior year costs in BPC are not updated periodically to match SAP, an inconsistency was created. Additionally, the IW32 transaction not only allows users to change the WBS but also the settlement receiver, which is used to classify costs in the SMUD financial statements. The effect is that project costs and financial statements could be misstated, and prior year costs in BPC may be inaccurate.

We also identified that HQ Rehabilitation costs prior to 2014, amounting to $660,617, were not included in the HQ financial reports. This was due to the project team determining that January 1, 2014 would be the official start date for the project, and the point at which costs would be tracked and reported. However, we did not identify any SMUD guidance related to how initial project costs should be reported.

In addition to the HQ financial reports, Planning & Performance also measured project performance and progress through the updating and tracking of four earned value management (EVM) calculations; which include actual and forecast, earned value, planned value, and earned value forecast. We reviewed each EVM calculation and determined that formulas were reasonable, and the data used was properly supported by costs in SAP, monthly payment applications, and established planned project milestones.

We also reviewed the use of different funding sources for changes in construction scope and work; which included additional SMUD funds, contingency funds, and allowance funds.

• **Additional SMUD funds** - Used for scope and work changes. Additional SMUD funds increase the overall GMP amount and require an executed change order.
• **Contingency funds** – Allocated for Construction Contractor-related contingencies and unforeseen conditions. The use of these funds does not increase the overall GMP.
• **Allowance funds** – Allocated for specific tasks within the scope of the contract that had not received final cost determinations as of the GMP contract authorization date. The use of these funds does not increase the overall GMP.

Using the eight change directives we reviewed for Objective 1, we determined that additional SMUD funds were monitored and tracked by the Construction Manager in a change order log. We also found that similar to change directives, the Construction
Manager monitored and tracked contingency disbursements and the total contingency funds available. We determined that allowances were tracked initially but this was not done consistently during construction.

**Objective 3**
We obtained HQ financial reports and investigated significant financial variances from prior periods—within each project category—for three separate months during HQ construction (December 2018, February 2019, and May 2019). We then met with the Chief Workforce Officer and Chief Financial Officer to discuss the identified variances and determine if they had been informed and understood the reasoning behind each variance. Additionally, we reviewed Board of Director minutes, corporate communication, HQ Project Steering Team meeting presentations, and the Headquarters Project SharePoint site to evaluate what HQ financial information was being communicated outside the project team and whether it was consistent with the monthly HQ financial reports.

We determined that significant project financial changes—along with the needed information to make informed decisions—were being communicated to the Chief Workforce Officer and Chief Financial Officer.

**Conclusion:**
We determined that change order requests showed evidence of review, re-calculation, and authorization. We identified that initial contingency disbursements were only signed by the Engineer; however, this was addressed by the project team after being communicated to them and the Contracting Officer signed all subsequent contingency disbursements. We determined that key stakeholders obtained the financial information needed to make informed decisions.

We determined that project costs and funds were tracked and allocated in accordance with established processes, except for allowances which were not tracked consistently during the entire HQ construction. This creates a risk of duplicated costs being submitted for payment; further, it creates challenges in reconciling total costs at the end of a project. We also identified an error in the HQ financial reports that was due to a WBS change that impacted prior year costs. To address the risk related to WBS changes, we recommend that the Budget Office and Accounting collaborate and perform the following (see Observation 1 – WBS Changes for AQS observation):

- Reduce the number of users who can make WBS changes to only those who should have the ability to make these types of changes.
- Establish procedures over WBS changes, and corresponding changes to settlement receiver information.
- Implement a process to regularly monitor WBS changes and corresponding changes to settlement receiver information.
- Implement a process to periodically reconcile prior year costs in BPC to SAP.

The Budget Office and Accounting implemented corrective actions for each of the recommendations above prior to the issuance of this audit report.
**Additional items for consideration going forward to improve process and controls**

To minimize misunderstanding and to improve the clarity of contract terms in future construction contracts, we recommend that SMUD review the contract language to ensure SMUD cannot be billed for work until after the change order has been executed and the contract is officially amended.

To ensure a more efficient and organized change order process, Procurement should incorporate the following guidance into the Procurement Manual:

- Expectations of contract managers to monitor, review, and approve change directives and change orders, including what type of supporting documentation is needed to be submitted to Procurement. Procurement incorporated these items into the Procurement Manual prior to the issuance of this audit report.
- Expectations on when Procurement should receive change directives from contract managers.
- Processing of change orders, including who prepares the SSS and the type of information to include.

During the audit, the items identified in this report were communicated to the project team through status updates and meetings. In addition, we attended recurring HQ Rehabilitation meetings; which included the Owner Architect Contractor (OAC) HQ Rehabilitation weekly update and HQ Rehabilitation weekly update meetings, to stay current on the status of the project and to talk with the project team as needed.

We would like to thank Facilities, Planning & Performance, Budget Office, Accounting, and Procurement for their assistance during the audit and making the effort to address our requests promptly.
Headquarters Rehabilitation
Observation

Observation 1 – WBS Changes

<table>
<thead>
<tr>
<th>Risk Ranking</th>
<th>Category</th>
<th>Departments Responsible</th>
<th>Planned Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>Process Improvement</td>
<td>Budget Office &amp; Accounting</td>
<td>February 28, 2020</td>
</tr>
</tbody>
</table>

Criteria:
- AP 3.02.02 Business & Finance – Payment for Goods and Services: “The Chief Financial Officer or designee shall establish necessary procedures and controls to ensure…that financial reports accurately depict SMUD’s business dealings in accordance with generally accepted accounting principles…”
- MP 03.02.04.100 Business & Finance - Accounting - Activity Labor Hours: “SMUD needs to record costs appropriately, both for billing and accounting purposes.”

Condition:
The HQ financial reports were created using financial data from BPC and categorized by WBS, which separately identified the business units and segments within the HQ Rehabilitation; however, in the HQ financial reports, the HQ Project Management WBS (I/FA/C/FP/HQ/1) was overstated by $205,959 and the HQ Renovation Other Construction WBS (I/FA/C/FP/HQ/15) was understated by $205,959 when compared to costs in SAP. Although these two categories were misstated, the total HQ Rehabilitation cost in the HQ financial reports was not impacted.

Causes:
- There was no procedure in place stating how and when WBS changes made through the IW32 transaction should be performed, or who should be authorized to make such changes; additionally, there was no process in place to monitor WBS changes.
- The prior year costs in BPC are not updated periodically to match the prior year costs in SAP.

Effects:
- Project costs could be misstated if WBSs can be changed without authorization or monitoring. From January 1, 2015 to April 23, 2019 there were 8,097 WBS changes made across SMUD through the IW32 transaction, and of those, 1,029 changes took place 30 or more days after the order was initially created and involved a change between Capital and Operations & Maintenance. Further, 116 of the 1,029 WBS changes involved orders that contained costs from prior years (totaling $711,748).
- SMUD financial statements could be misstated if settlement receiver information is not being updated properly each time a WBS change is made.
- Prior year costs in BPC, which were being relied upon for tracking and internal reporting purposes by the project team, may not include subsequent changes resulting in decisions being made based on inaccurate data.

### Recommendations:

#### WBS Changes (Owner: Budget Office)
1. Reduce/restrict the ability of the ~655 end users (across 18 user roles) to make WBS changes within the IW32 Transaction, so that only those that should have the ability to make changes can make changes.
2. For those who will still have the ability to make WBS changes within the IW32 transaction, after the reduction/restriction at #1, collaborate with Accounting and establish procedures for how and when they should perform WBS changes.
3. Once procedures are established, collaborate with Accounting to communicate the new procedures to those who will continue to have the ability to make WBS changes, providing training as needed, so they can make WBS changes properly and in accordance with the established policy/procedure.
4. Implement and document an ongoing process to regularly monitor WBS changes to ensure they are appropriate and in compliance with the procedures established.
5. Implement a process to periodically reconcile prior year costs in BPC to SAP.

#### Settlement Receiver Changes (Owner: Accounting)
1. For those who will still have the ability to make WBS changes within the IW32 transaction, after the reduction/restriction at WBS Changes #1, collaborate with the Budget Office and establish procedures for how and when the settlement receiver should be updated when there is a WBS change.
2. Once procedures are established, collaborate with the Budget Office to communicate the new procedures to those who will continue to have the ability to make WBS changes, providing training as needed, so they can make settlement receiver changes properly and in accordance with the established policy/procedure when there is a WBS change.
3. Implement and document an ongoing process to regularly monitor WBS changes and corresponding changes to settlement receiver information to ensure settlement changes are appropriate and in compliance with established procedures.

### Management Responses:
Budget Office and Accounting agree with AQS’ recommendation. The Budget Office and Accounting have collaborated and implemented each of the following corrective actions by or before February 28, 2020:

#### Budget Office:
1. Budget Office worked with IT security to (via enhancement request) limit the ability to make a WBS change to an order (within the IW32 transaction), if there are transactions posted to an order. Budget Office also worked to limit the SAP Roles that can make a WBS assignment change (3 Roles for PM orders; 3 Role for internal orders), thus reducing the total number of users to 78 for PM orders and 62 for internal orders. This recommendation was completed by the Budget Office on October 9, 2019.
2. Budget Office worked with Accounting and created guidelines and procedures for how and when to make WBS assignment changes and these have been provided to BUPCs and BPAs. This recommendation was completed by the Budget Office on February 5, 2020.

3. The Budget Office—after working with Accounting and IT—sent an email to BUPCs and BPAs explaining the controls that were implemented and the new process to be followed related to WBS assignment changes. This recommendation was completed by the Budget Office on February 5, 2020.

4. Budget Office has included an item in the month end close process in SAP’s Schedule Manager (SM01CL-NEW) to check WBS assignment changes. Currently the Budget Office is performing this monthly but will move to quarterly after the end of June 2020. This is to continue a period of active enforcement with the intent to keep this at the forefront of people’s minds and to change behaviors as needed. This recommendation was completed by the Budget Office on February 28, 2020.

5. Budget Office worked with IT to implement a process to have prior year actuals loaded to BPC twice annually to allow for capture of any hierarchical data changes so that SAP and BPC will stay in sync. IT reloaded prior year actuals to BPC on January 3, 2020 and then the Budget Office and IT agreed to a process on January 29, 2020 for how future requests for BPC reloads would be made. This recommendation was completed by the Budget Office on January 29, 2020.

**Accounting:**

1. Accounting worked with the Budget Office to create guidelines and procedures for how and when settlement receiver information should be updated when there is a WBS assignment change. This recommendation was completed by Accounting on February 5, 2020.

2. The Budget office sent an email—on behalf of the Budget Office and Accounting—to BUPCs and BPAs explaining the controls that were implemented and the new process to be followed related to WBS assignment changes and corresponding changes to settlement receiver information. This recommendation was completed by Accounting on February 5, 2020.

3. Accounting has added a step to the month end close process that requires running a report to monitor WBS assignment changes, corresponding changes to settlement receiver information, and compliance with the guidelines. This recommendation was completed by Accounting on February 28, 2020.
Appendix A - Observation Definitions

Observation: Audit observations are risk ranked using the guidance below and focused on policy, compliance and operational improvement opportunities of the audited area.

Risk Rankings:

**Extremely High**
- Material loss of assets or financial impact; or
- Severe legal, regulatory or compliance sanctions; or
- Cessation of business services for the foreseeable future; or
- Critical impact in achieving SMUD’s goals and objectives; or
- Major deterioration in customer metrics and surveys. Irreparable negative media coverage and damage to SMUD’s reputation; or
- Widespread loss of confidence from employees. Unable to fill critical positions for a long period of time

**High**
- Significant loss of assets or financial impact; or
- Significant legal, regulatory or compliance sanctions; or
- Widespread disruption of service levels and interruption of business functions; or
- Significant delays or modification of operational goals and objectives; or
- Significant deterioration in customer metrics and surveys; Significant negative media and erosion of trust; or
- Significant loss of confidence from employees. Significant increase in unanticipated employee separations. Slight impact to fill critical positions

**Medium**
- Moderate loss of assets or financial impact; or
- Moderate legal, regulatory or compliance sanctions; or
- Moderate operational impact to service levels or business disruption; or
- Moderate delays or modification to goals and objectives; or
- Moderate decline in customer metrics and surveys. Modest negative media; or
- Moderate loss of confidence from employees. Moderate increase in unanticipated employee separations. Little to no impact to critical positions

**Low**
- Minor loss of assets or financial impact; or
- Minor legal, regulatory or compliance sanctions; or
- Minor operational impact to service levels and business activity; or
- Minor delays or modifications to goals and objectives; or
- Slight decline in customer metrics and surveys. Limited public criticism; or
- Minor loss of confidence from employees. Slight increase in unanticipated employee separations. No impact to critical positions

Components:
- **Criteria** – The standards, measures, or expectations used in making an evaluation and/or verification (the correct state)
- **Conditions** – The situation that you found, supported by evidence and characterized by facts, measurements, examples, etc. (the current state)
- **Causes** – The reasons for the difference between expected and actual conditions
- **Effects** – The actual or potential risks or exposure the organization faces if the causes and the conditions continue.
TO

1. Jennifer Davidson
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. Legal
10. CEO & General Manager

Consent Calendar  |  Yes  | No | If no, schedule a dry run presentation. | Budgeted  | Yes  | No | (If no, explain in Cost/Budgeted section.)
FROM (IPR)       | Laura Lewis |
                | Office of the General Counsel |
MAIL STOP       | B308 |
                | 6123 |
EXT. DATE SENT  | 04/07/20 |

NARRATIVE:

Requested Action: Provide the Board with a briefing on COVID-19 Operations Impact and an update on actions taken.

Summary: Executive staff will provide a summary of impacts on operations caused by COVID-19 (coronavirus) restrictions as well as actions undertaken in response to evolving federal, state, and local directives.

Board Policy: All Strategic Direction (SD) Policies

Benefits: Provides the Board Members with current information and opportunity to discuss and ask clarifying questions.

Cost/Budgeted: N/A

Alternatives: Choose to receive briefing via written report.

Affected Parties: All SMUD Departments

Coordination: All SMUD Departments

Presenter: Arlen Orchard, Chief Executive Officer and General Manager

Additional Links:
### BOARD AGENDA ITEM

**STAFFING SUMMARY SHEET**

**Committee Meeting & Date**

**Board Meeting Date**
May 21, 2020

<table>
<thead>
<tr>
<th>TO</th>
<th>TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Jennifer Davidson</td>
</tr>
<tr>
<td>2.</td>
<td>_</td>
</tr>
<tr>
<td>3.</td>
<td>_</td>
</tr>
<tr>
<td>4.</td>
<td>_</td>
</tr>
<tr>
<td>5.</td>
<td>_</td>
</tr>
<tr>
<td>6.</td>
<td>_</td>
</tr>
<tr>
<td>7.</td>
<td>_</td>
</tr>
<tr>
<td>8.</td>
<td>_</td>
</tr>
<tr>
<td>9.</td>
<td>Legal</td>
</tr>
<tr>
<td>10.</td>
<td>CEO &amp; General Manager</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Consent Calendar</th>
<th>x</th>
<th>Yes</th>
<th>No</th>
<th>If no, schedule a dry run presentation.</th>
<th>Budgeted</th>
<th>x</th>
<th>Yes</th>
<th>No</th>
<th>If no, explain in Cost/Budgeted section.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FROM (IPR)</td>
<td>_</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jennifer Restivo</td>
<td>Planning, Pricing &amp; Enterprise Performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MAIL STOP</strong></td>
<td>B356</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EXT.</strong></td>
<td>6343</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DATE SENT</strong></td>
<td>12/23/19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NARRATIVE:**

**Requested Action:** Provide the Board with SMUD’s Power Supply Costs.

**Summary:** Staff will present the Board with SMUD’s Power Supply Costs for the year-to-date period for 2020.

**Board Policy:**

*GP-3*

*Number & Title*

**Benefits:** Provides the Board Members with current information on power supply costs for SMUD.

**Cost/Budgeted:** n/a

**Alternatives:** None

**Affected Parties:** Planning, Pricing & Enterprise Performance

**Coordination:** Planning, Pricing & Enterprise Performance

**Presenter:** Jennifer Davidson

**Additional Links:**

**SUBJECT**
Review of SMUD’s Current Power Supply Costs

ITEM NO. (FOR LEGAL USE ONLY) **7**

ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.
TO

1. 6. 
2. 7. 
3. 8. 
4. 9. 
5. 10. 

CONSENT CALENDAR

Yes No

If no, schedule a dry run presentation.

Budgeted X Yes No

If no, explain in Cost/Budgeted section.

FROM (IPR) DEPARTMENT

Laura Lewis Chief Legal Officer & General Counsel

MAIL STOP EXT. DATE SENT

A311 6123 04/27/20

NARRATIVE:

Requested Action: Adopt resolution calling election for Directors for Wards 1, 2, and 5 and request Sacramento County and Placer County to consolidate that election with the November 3, 2020, general election.

Summary: The members of SMUD’s Board of Directors are elected to staggered four-year terms from the Wards they represent. The terms of the Directors for Ward 1 (Brandon D. Rose), Ward 2 (Nancy Bui-Thompson), and Ward 5 (Rob Kerth) will expire on December 31, 2020. Section 11829 of the Municipal Utility District (MUD) Act, in the Public Utilities Code, provides that the resolution calling the election shall also provide for the consolidation of the election with the general election to be held at the same time, in the counties in which SMUD is located and to authorize the counties to canvass the returns and certify the results of the election to the Board. In addition, the resolution shall state the date and purpose of the election, request the counties to reestablish the boundaries of election precincts to coincide with the ward boundaries, specify the length of a candidate statement of qualifications, manner of payment by the candidate, determine the method for breaking a tie vote, and designate the boundaries of the subject SMUD Wards. As part of the resolution, staff is recommending that the Board adopt the following:

a) In the event of a tie vote, determine the election by lot; and
b) Require candidates to pay at the at the Sacramento County Voter Registration and Elections and/or the Placer County Elections Office for costs associated with the statement of qualifications; and

Sacramento and Placer Counties Registrar of Voters’ Offices have informed SMUD that the resolution calling and consolidating the election must be received by their offices no later than June 3, 2020. The attached resolution sets forth all of the information necessary to call the election for Wards 1, 2, and 5 and consolidates the election with the general election to be held on November 3, 2020.

Board Policy: Board Job Description GP-3(j) – Take such other actions as may be required by law.

Benefits: Provides for election of Directors in compliance with law.

Cost/Budgeted: Sacramento and Placer Counties will bill SMUD for the actual cost of conducting the election when completed. $375,000 was budgeted based on the cost of previous elections.

Alternatives: None. This action is legally required.

Affected Parties: Board Members, Board Office, Office of the General Counsel

Coordination: Office of the General Counsel, Board Office, County Elections

Presenter: Laura Lewis

Additional Links:

SUBJECT: Calling Election of Directors for Wards 1, 2, and 5

ITEM NO. (FOR LEGAL USE ONLY): 8

ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.
RESOLUTION NO. ________________

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

Section 1. That an election is called to be held on the 3rd day of November, 2020, for the purpose of electing three (3) directors of the Sacramento Municipal Utility District ("SMUD"), one of whom shall be a resident and voter of each of Wards 1, 2, and 5. The boundaries of said wards are hereby fixed and established as shown on the sheets appended hereto. Each director shall be elected for a full four-year term from the ward in which he or she resides and the election shall be held and conducted in all respects as required by law.

<table>
<thead>
<tr>
<th>Ward</th>
<th>Incumbent</th>
<th>Expiration of Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brandon D. Rose</td>
<td>2020</td>
</tr>
<tr>
<td>2</td>
<td>Nancy Bui-Thompson</td>
<td>2020</td>
</tr>
<tr>
<td>5</td>
<td>Rob Kerth</td>
<td>2020</td>
</tr>
</tbody>
</table>

Section 2. That the Boards of Supervisors of the Counties of Sacramento and Placer are requested to consolidate said election of directors of SMUD with the general election to be held on the 3rd day of November, 2020.

Section 3. That the Boards of Supervisors of the Counties of Sacramento and Placer are requested to reestablish the boundaries of such election precincts as are divided by the boundaries of Wards 1, 2, and 5 of SMUD to provide that the boundaries of the election precincts coincide with the boundaries of said wards.
Section 4. That the Boards of Supervisors of the Counties of Sacramento and Placer are authorized to canvass the returns of the election of directors and to certify the election results to this Board.

Section 5. That in the event of a tie vote between candidates, the election shall be determined by lot.

Section 6. That any candidate for the Board of Directors of SMUD who files a statement of qualifications for printing and distributing pursuant to Section 13307 of the Elections Code shall pay at the Sacramento County Voter Registration and Elections and/or the Placer County Elections Office, in advance, for the publication of the candidate’s statement, pursuant to Elections Code Section 13307, in the amount estimated by the Sacramento County Registrar of Voters, and that any such statement shall contain two hundred words or less.

Section 7. That SMUD agrees to reimburse the Registrar of Voters for actual costs incurred, such costs to be calculated by the method set forth in the County’s current Election Costs Allocation Procedures, pursuant to Elections Code section 10520.

Section 8. That the Secretary of SMUD is directed to transmit certified copies of this resolution to the Clerk of the Boards of Supervisors of the Counties of Sacramento and Placer, to the County Clerks of the Counties of Sacramento and Placer, and to the Registrars of Voters of the Counties of Sacramento and Placer.
SACRAMENTO MUNICIPAL UTILITY DISTRICT
WARD BOUNDARY DESCRIPTIONS
FROM Sept 1, 2011 TO CURRENT DATE
WARD 1

Beginning at a point of intersection of the Northerly Boundary Line of Sacramento County and the intersection of the centerline of Folsom Dam Road (now no longer in service); thence Southeasterly along the centerline of the Folsom Dam Road (now no longer in service) to the centerline of the American River as it exits Folsom Dam; thence Southwesterly along the centerline of the American River to the Northerly prolongation of Fargo Way; thence Southeasterly along the prolongation of Fargo Way to the centerline of Natoma Street; thence Southwesterly along the centerline of Natoma Street to the centerline of Coloma Street; thence Southeasterly along the centerline of Coloma Street to merge with the centerline of Bidwell Street; thence Southwesterly along the centerline of Bidwell Street to the centerline of Riley Street; thence Southeasterly along the centerline of Riley Street to the centerline of Blue Ravine Road; thence Southerly along the centerline of Blue Ravine Road to the Northeasterly prolongation of the Southerly Parcel line of Parcel 7 as described in the Quitclaim Deed recorded in the office of the Sacramento County Recorder in Book 19960906 at Page 1665; thence Southwesterly along the Northeasterly prolongation of said parcel and along the Southerly Parcel Line of said Parcel to the centerline of Siblely Street; thence Southerly along the centerline of Siblely Street to merge with the centerline of Prairie City Road; thence Southerly and Southwesterly along the centerline of Prairie City Road to the City of Folsom Boundary Line; thence Westerly and Southwesterly along the City of Folsom Boundary Line to the centerline of Aerojet Road; thence Northwesterly along the City of Folsom Boundary Line and the centerline of Aerojet Road to the centerline of US Highway 50 (the El Dorado Freeway); thence Southwesterly along the centerline of US Highway 50 (the El Dorado Freeway) to the centerline of Hazel Avenue; thence Northwesterly along the centerline of Hazel Avenue to the centerline of the American River; thence Southwesterly, along the centerline of the American River to the southerly prolongation of the centerline of San Juan Avenue; thence Northerly, along the southerly prolongation of the centerline of San Juan Avenue and the centerline of San Juan Avenue to the centerline of Winding Way; thence Westerly, along the centerline of Winding Way to the centerline of Garfield Avenue; thence Northerly, along the centerline of Garfield Avenue to the centerline of Greenback Lane; thence Northwesterly, along the centerline of Greenback Lane to the centerline of Interstate Highway 80; thence Northeasterly along the centerline of Interstate Highway 80 to the City of Citrus Heights Boundary Line; thence Northerly along the City of Citrus Heights Boundary Line to the Southerly prolongation of the Eastern boundary line of the Plat of “Larchmont Foothills Unit No. 9” as recorded in the office of the Sacramento County Recorder in Book 110 at Page 21; thence Northerly along the Southerly prolongation of said Plat and along the Eastern boundary line of said plat to the Eastern boundary of the Plat of “Larchmont Foothills Unit No. 8” as recorded in the office of the Sacramento County Recorder in Book 113 at Page
2; thence Northerly along the boundary line of said Plat to the Eastern boundary of the Plat of "Larchmont Foothills Unit No. 11" as recorded in the office of the Sacramento County Recorder in Book 129 at Page 19 to the centerline of Daly Avenue; thence Northerly along the centerline of Daly Avenue to the Centerline of Roseville Road; thence Northwesterly along the centerline of Roseville Road to the Southeasterly prolongation of the centerline of Poker Lane; thence Northwesterly along the prolongation of the centerline of Poker Lane and the centerline of Poker Lane to the centerline of Antelope North Road; thence Northeasternly along the centerline of Antelope North Road to the Northern Boundary Line of Sacramento County; thence Westerly along the northerly boundary line of Sacramento County to the west line of Section 11, Township 10 North, Range 5 East, M.D.B. &M.; thence Northerly, along the westerly line of Section 11, one-half mile, more or less, to a road running east and west through the center of Section 11; thence Easterly, along east-west road to the west line of Section 12, Township 10 North, Range 5 East, M.D.B. &M.; thence Northerly, along the west line of Section 12, one-half mile, more or less, to the northwest corner of Section 12; thence Easterly, along the north line of Section 12 to the Range line between Township 10 North, Range 5 East, M.D.B. &M. and Township 10 North, Range 6 East, M.D.B. &M.; thence continuing Easterly, along the north lines of Sections 7, 8, 9 and 10 Township 10 North, Range 6 East, M.D.B. &M. to the northeast corner of Lot 28 as shown on the plat of "Hicken Tract", recorded in the office of the Recorder of Placer County in Book A of Maps, Page 31; thence South 00°03'55" West 20 feet; thence South 00°19'40" East 2635.13 feet, thence South 00°28'00" West 20.22 feet to the southerly line of Booth Road; thence Westerly, along the southerly line of Booth Road the following three (3) courses: 1) South 82°05'00" West 513.96 feet; 2) South 89°18'00" West 292.20 feet; and 3) North 85°19'00" West 237.29 feet; thence leaving the southerly line of Booth Road, and along the Roseville City Limits line South 00°02'00" East 794.50 feet; thence South 89°56'00" East 1038.21 feet to the north-south centerline of Section 10, Township 10 North, Range 6 East, M.D.B. &M.; thence along north-south centerline South 00°28'00" West 367.40 feet to a point in the westerly line of Atkinson Street; thence along the westerly line of Atkinson Street South 33°56'00" East 1221.02 feet; thence along a curve to the right, having a radius of 870 feet, the chord of which bears South 61°12'07" West 810.35 feet, to a point in the northerly line of P.F.E. Road; thence Westerly, along the northerly line of P.F.E. Road, 148 foot to the easterly line of Parcel D as shown on "Parcel Map No. 71906", recorded in the office of the Recorder of Placer County in Book 10 of Parcel Maps at Page 133; thence Northerly, along the easterly line of Parcel D, 1564.15 feet, more or less, to the northeast corner of Parcel D; thence Westerly, along the northerly line of Parcel D and the northerly line of Parcels B and C of the Parcel Map, 1629 feet, more or less, to the northwest corner of Parcel B; thence Southerly, along the westerly line of Parcel B and its southerly prolongation, 1631.43 feet, more or less, to the southerly line of P.F.E. Road; thence, along the southerly line of P.F.E. Road, North 89°07'01" East 636.84 feet; thence South 00°02'00" East 450 feet; thence South 89°59'00" West 96.80 feet to the westerly line of Section 15,
Township 10 North, Range 6 East, M.D.B. & M.; thence along the westerly line of Section 15, South 00°02'00" East 1412.00 feet to the northerly boundary line of Sacramento County; thence Easterly along the northerly line of Sacramento County to the centerline of Interstate 80; thence Northeast, along the centerline of Interstate 80 to its intersection with the east-west centerline of Section 14, Township 10 North, Range 6 East, M.D.B. & M.; thence Easterly, along the east-west centerline of Section 14 to the southerly prolongation of the east line of Lots 5 and 6 as shown on the plat of "Livoti Tract", recorded in the office of the Recorder of Placer County in Book E of Maps at Page 5; thence Northerly, along the east line of Lots 5 and 6 and its southerly and northerly prolongation 660 feet, more or less, to the northerly right of way line of Livoti Avenue; thence Easterly, along the northerly line of Livoti Avenue 210.13 feet, to the easterly line of Lot 26 of "Livoti Tract"; thence Northerly, along the easterly line of Lot 26, 227 feet, more or less, to a point 3.00 feet northerly of the northerly line of Lot 25 of "Livoti Tract"; thence Easterly, along a line parallel with and 3.00 feet northerly of the northerly line of Lot 25, 138.75 feet; thence Northerly, along a line parallel with and 138.75 feet easterly of the easterly line of Lot 26, 445.23 feet to the northerly line of "Livoti Tract"; thence along the northerly line of "Livoti Tract", North 89°22'20" East 1712.24 feet to the northeast corner of "Livoti Tract"; thence Southerly, along the easterly line of "Livoti Tract", also being the westerly line of Section 13, Township 10 North, Range 6 East, M.D.B. & M., 1332.60 feet to the southwest corner of the Northwest one-quarter of Section 13; thence Easterly, along the southerly line of the Northwest one-quarter of Section 13, 2640 feet, more or less, to the westerly line of Sunrise Boulevard; thence Southerly, along the westerly line of Sunrise Boulevard 112 feet, more or less, to its intersection with the westerly prolongation of the north line of the parcel of land conveyed to Charles R. and Marjory A. Knoche and recorded in Volume 1138 of Official Records of Placer County at Page 138; thence East, along the westerly prolongation of the north line of the Knoche parcel to the east line of Sunrise Boulevard; thence continuing East, along the north line of the Knoche parcel, 344.67 feet to the northeast corner of the Knoche parcel, said northwest corner of the Knoche parcel being a point on the east line of Lot 166, as shown on the plat of "Citrus Heights Addition No. 8" recorded in the Placer County Recorder's Office in Book C of Maps, Page 53; thence South 00°01'00" East 635.60 feet along the east line of Lot 166 to a point on the northerly line of Sacramento County; thence South 84°18'41" East 994.92 feet, along the Sacramento County Line to a point on the east line of Lot 169, as shown on "Citrus Heights Addition No. 8"; thence North 00°01'00" West 845.91 feet, along the east line of Lot 169 to the northeast corner of Lot 169, also being a point on the south line of the North one-half of Section 13, Township 10 North, Range 6 East; thence Easterly 652 feet, more or less, along the south line of the North one-half of Section 13 to the northwest corner of Lot 172, as shown on "Citrus Heights Addition No. 8"; thence Southerly, along the west line of Lot 172, 906.6 feet, more or less, to the Sacramento County line; thence along the Sacramento County line, South 85°18'30" East 6391 feet, more or less, to the easterly right of way line of Old Auburn Road; thence along the easterly right of way line of Old.
Auburn Road the following five (5) courses: 1) North 50°33'00" East 120 feet; 2) along a curve to the left, having a radius of 90.3 feet, the chord of which bears North 21°15'00" East 89.3 feet; 3) North 08°41'50" West 413.2 feet; 4) along a curve to the right, having a radius of 330 feet, the chord of which bears North 14°16'50" West 257.6 feet; and 5) North 37°14'50" East 815 feet; thence North 30 feet to the centerline of Old Auburn Road; thence Easterly, along the centerline of Old Auburn Road 4100 feet, more or less, to the centerline of Sierra College Boulevard; thence Southerly, along the centerline of Sierra College Boulevard to the Sacramento County line; thence Easterly along the Sacramento County Line to a point on the boundary line of the 75-foot wide canal described that certain Deed to San Juan Suburban Water District recorded in the office of the Recorder of Placer County in Book 664 of Official Records at Page 618; thence Northerly and Easterly along the canal described in said deed to the Northerly line of Section 23; thence Easterly along the Northerly line of Section 23 to the Westerly line of Folsom Auburn Road; thence Southerly along the Westerly line of Folsom Auburn Road to the northerly boundary line of Sacramento County to said point of beginning.

Ward 2

Beginning at a point of intersection of the Northerly Boundary Line of Sacramento County and the centerline of Folsom Dam Road (now no longer in service); thence Southeasterly along the centerline of the Folsom Dam Road (now no longer in service) to the centerline of the American River as it exits Folsom Dam; thence Southwesterly along the centerline of the American River to the Northwesterly prolongation of Fargo Way; thence Southeasterly along the prolongation of Fargo Way to the centerline of Natoma Street; thence Southwesterly along the centerline of Natoma Street to centerline of Coloma Street; thence Southeasterly along the centerline of Coloma Street to merge with the centerline of Bidwell Street; thence Southwesterly along the centerline of Bidwell Street to the centerline of Riley Street; thence Southeasterly along the centerline of Riley Street to the centerline of Blue Ravine Road; thence Southerly along the centerline of Blue Ravine Road to the Northeasterly prolongation of the Southerly Parcel line of Parcel 7 as described in the Quitclaim Deed recorded in the office of the Sacramento County Recorder in Book 19960906 at Page 1665; thence Southwesterly along the Northeasterly prolongation of said parcel and along the Southerly Parcel Line of said parcel to the centerline of Sibley Street; thence Southerly along the centerline of Sibley Street to merge with the centerline of Prairie City Road; thence Southerly and Southwesterly along the centerline of Prairie City Road to the City of Folsom Boundary Line; thence Westerly and Southwesterly along the City of Folsom Boundary Line to the centerline of Aerojet Road; thence Northwesterly along the City of Folsom Boundary Line and the centerline of Aerojet Road to the
centerline of US Highway 50 (the El Dorado Freeway); thence Southwesterly along the
centerline of US Highway 50 (the El Dorado Freeway) to the centerline of Hazel Avenue;
thence Northwesterly along the centerline of Hazel Avenue to the centerline of the
American River; thence Southwesterly, along the centerline of the American River to a
point on the northerly prolongation of the west line of the plat of "Larchmont Riviera East
Unit No. 2", recorded in the office of the Recorder of Sacramento County on July 7, 1970,
in Book 85 of Maps, Map No. 16; thence Southerly, along the northerly prolongation of the
west line of "Larchmont Riviera East Unit No. 2" and the west line of "Larchmont Riviera
East Unit No. 2" to the northwest corner of the plat of "Larchmont Riviera East Unit No. 1",
recorded in the office of the Recorder of Sacramento County on September 10, 1969, in
Book 84 of Maps, Map No. 15; thence South 105.00 feet, along the west line of
"Larchmont Riviera East Unit No. 1", to the southwest corner of Lot 73 as shown on
"Larchmont Riviera East Unit No. 1"; thence Southeasterly to the centerline of Hyannis
Way; thence Southerly, along the centerline of Hyannis Way to the centerline of Bradshaw
Road; thence Southerly along the centerline of Bradshaw Road to the centerline of
Jackson Highway (CA State Route 16); thence Southeasterly along the centerline of
Jackson Highway (CA State Route 16) to the centerline of Sunrise Boulevard; thence
Southerly along the centerline of Sunrise Boulevard to the centerline of Grantline Road;
thence Southwesterly along the centerline of Grantline Road to the centerline of Calvine
Road; thence Westerly along the centerline of Calvine Road to the centerline of Elk Grove
Florin Road; thence Southerly along the centerline of Elk Grove Florin Road to the
centerline of Elk Grove Boulevard; thence Easterly along the centerline of Elk Grove
Boulevard to the centerline of Waterman Road; thence Southerly along the centerline of
Waterman Road to the centerline of Grantline Road; thence Southwesterly along the
centerline of Grantline Road to the centerline of the Southern Pacific Transportation
Company's Sacramento-Stockton Main Line right of way (now owned by Union Pacific
railroad); thence Southeasterly along the centerline of the Southern Pacific Transportation
Company's Sacramento-Stockton Main Line right of way (now owned by Union Pacific
railroad) to the centerline of the Cosumnes River; thence Southwesterly along the
centerline of the Cosumnes River to the Easterly prolongation of the Northern Parcel line
of the Parcel as described in the Grant Deed recorded by the Sacramento County
Recorder's Office in Book 20080606 at Page 1041; then Westerly along the Easterly
prolongation of and along the Northern Parcel Line of said parcel to the Sacramento
County Boundary Line; thence Southeasterly and Easterly along the Sacramento County
Boundary Line to the Southeastern most point of the Sacramento County Boundary Line;
thence Northerly and Northwesterly along the Sacramento County Boundary Line to the
Northeastern most point of the Sacramento County Boundary Line; thence Southwesterly
and Westerly from the Northeastern most point of the Sacramento County Boundary Line
along the Northerly Sacramento County Boundary Line to said point of beginning.
WARD 3

Beginning at a point which is the intersection of the centerline of Howe Avenue with the centerline of Marconi Avenue; thence from said point of beginning Southerly, along the centerline of Howe Avenue to the centerline of Arden Way; thence Westerly, along the centerline of Arden Way to the centerline of Exposition Boulevard; thence Westerly, along the centerline of Exposition Boulevard to the centerline of the Capitol City Freeway (Business 80); thence Southwesterly, along the centerline of the Capitol City Freeway (Business 80) to the centerline of the Southern Pacific Transportation Company’s Sacramento-Salt Lake City Right of Way (now owned by Union Pacific Railroad); thence Southwesterly, along the centerline of the Southern Pacific Transportation Company’s Sacramento-Salt Lake City Right of Way (now owned by Union Pacific Railroad) to the northerly prolongation of the centerline of Alhambra Boulevard; thence Southerly, along the northerly prolongation of the centerline of Alhambra Boulevard and the centerline of Alhambra Boulevard to the centerline of what was previously known as R Street as shown in Parcel Map recorded at Book 42 at Page 40 in the Sacramento County Recorder’s Office; thence Southeasterly along the centerline of said R Street to the centerline of Stockton Boulevard; thence Southeasterly along the centerline of Stockton Boulevard to the centerline of Broadway; thence Easterly, along the centerline of Broadway to the centerline of 57th Street; thence Northerly along the centerline of 57th Street to the centerline of T Street; thence Southeasterly along the centerline of T Street to the centerline of 59th Street; thence Northerly along the centerline of 59th Street to the centerline of Eastbound US Highway 50, thence Easterly along the centerline of Eastbound US Highway 50 to the Eastbound 65th Street Off-Ramp of US Highway 50; thence Easterly along the centerline of Eastbound US Highway 50 to the centerline of the Southern Pacific Transportation Company’s Sacramento-Stockton Main Line right of way (now owned by Union Pacific railroad); thence Southeasterly along the centerline of the Southern Pacific Transportation Company’s Sacramento-Stockton Main Line right of way (now owned by Union Pacific railroad) to the centerline of Power Inn Road; thence Southerly, along the centerline of Power Inn Road to the centerline of Elsie Avenue; thence Westerly along the centerline of Elsie Avenue to the centerline of Stockton Boulevard; thence Southeasterly along the centerline of Stockton Boulevard and its southerly prolongation to the centerline of California State Highway 99; thence Southerly along the centerline of California State Highway 99 to the Westerly prolongation of the centerline of Geneva Pointe (formerly Old Calvine Road); thence Easterly along the prolongation of the centerline of Geneva Pointe (formerly Old Calvine Road) and the centerline of Geneva Pointe to the centerline of
Calvine Road; then Easterly along the centerline of Calvine Road to the centerline of Grantline Road; thence Northeasterly along the centerline of Grantline Road to the centerline of Sunrise Boulevard; then Northerly along the centerline of Sunrise Boulevard to the centerline of Jackson Highway (CA State Route 16); thence Northwesterly along the centerline of Jackson Highway (CA State Route 16) to the centerline of Bradshaw Road; thence Northerly, along the centerline of Bradshaw Road to the centerline of Hyannis Way; thence Northerly, along the centerline of Hyannis Way and its northerly prolongation to the southwest corner of Lot 73, as shown on the plat of "Larchmont Riviera East Unit No. 1", recorded in the office of the Recorder of Sacramento County on September 10, 1969, in Book 84 or Maps, Map No. 15; thence North 105.00 feet, along the west line of "Larchmont Riviera East Unit No. 1", to the northwest corner of "Larchmont Riviera East Unit No. 1"; thence Northerly, along the west line of "Larchmont Riviera East Unit No. 2" recorded in the office of the Recorder of Sacramento County on July 7, 1970 in Book 85 of Maps, Map No. 16, and the northerly prolongation of the west line of "Larchmont Riviera East Unit No. 2" to the centerline of the American River; thence Northeasterly, along the centerline of the American River to the southeasterly prolongation of the centerline of Arden Way; thence Northwesterly, along the prolongation of the centerline of Arden Way and the centerline of Arden Way to the centerline of Watt Avenue; thence North along the centerline of Watt Avenue to the centerline of Auburn Boulevard and the City of Sacramento Boundary; thence Easterly, Northerly, and Westerly along the City of Sacramento boundary to the centerline of the Roseville Road; thence Southwesterly along the centerline of the Roseville Road to the centerline of Marconi Avenue; thence along the centerline of Marconi Avenue to a point on the centerline of Howe Avenue, said point being said point of beginning.

Ward 4

Beginning at the intersection of the centerline of the Sacramento River and the Sacramento County Boundary with the westerly prolongation of Broadway; thence from said point of beginning Southeasterly, along the westerly prolongation of Broadway and the centerline of Broadway to the centerline of Franklin Boulevard; thence Southerly along the centerline of Franklin Boulevard to the centerline of Sutterville Road; thence Southwesterly along the centerline of Sutterville Road to the centerline of Freeport Boulevard; thence Southerly, along the centerline of Freeport Boulevard to the centerline of Fruitridge Road; thence Westerly along the centerline of Fruitridge Road to the easterly line of the Record of Survey entitled "A Portion of the East 1/2 of Section 2 and the NE 1/4 of Section 11, Township 7 North, Range 4 East, Mount Diablo Meridian and a Portion of Sections 14, 23, 26, and 35, Township 8 North, Range 4 East, Mount Diablo Meridian",
recorded in the office of the Recorder of Sacramento County on November 25, 1991, in Book 49 of Surveys at Page 29; thence Southerly, Easterly, Southerly, and Westerly along the easterly line of said Record of Survey recorded in Book 49 of Surveys at Page 29 to the centerline of Park Village Street; thence Southerly along the centerline of Park Village Street and the southerly prolongation of Park Village Street to the centerline of Freeport Boulevard; thence Southerly along the centerline of Freeport Boulevard and the southerly prolongation of Freeport Boulevard to the centerline of Interstate 5; thence Southeasterly, along the centerline of Interstate 5 to the centerline of Morrison Creek; thence Northeasterly, along the centerline of Morrison Creek to the centerline of Union House Creek (otherwise known as Beacon Creek); thence Easterly, along the centerline of Union House Creek (otherwise known as Beacon Creek) to the centerline of Franklin Boulevard; thence Southerly, along the centerline of Franklin Boulevard to the centerline of Calvine Road; thence Easterly along the centerline of Calvine Road to the centerline of Bruceville Road; thence Northerly along the centerline of Bruceville Road to the centerline of Shasta Avenue; thence Easterly along the centerline of Shasta Avenue to the centerline of California State Highway 99; thence Northwesterly along the centerline of California State Highway 99 to the Westerly prolongation of the centerline of Geneva Pointe (formerly Old Calvine Road); thence Easterly along the Westerly prolongation of the centerline of Geneva Pointe (formerly Old Calvine Road) and the centerline of Geneva Pointe to the centerline of Calvine Road; then Easterly along the centerline of Calvine Road to the centerline of Elk Grove Florin Road; thence Southerly along the centerline of Elk Grove Florin Road to the centerline of Elk Grove Boulevard; thence Easterly along the centerline of Elk Grove Boulevard to the centerline of Waterman Road; thence Southerly along the centerline of Waterman Road to the centerline of Grantline Road; thence Southwesterly along the centerline of Grantline Road to the centerline of the Southern Pacific Transportation Company's Sacramento-Stockton Main Line right of way (now owned by Union Pacific railroad); thence Southeasterly along the centerline of the Southern Pacific Transportation Company's Sacramento-Stockton Main Line right of way (now owned by Union Pacific railroad) to the centerline of the Cosumnes River; thence Southwesterly along the centerline of the Cosumnes River to the Easterly prolongation of the Northern Parcel line of the Parcel as described in the Grant Deed recorded by the Sacramento County Recorder's Office in Book 20080606 at Page 1041; thence Westerly along the Easterly prolongation of and along the Northern Parcel Line of said parcel to the Sacramento County Boundary Line and the centerline of the Mokelumne River; thence Southwesterly, along the centerline of the Mokelumne River to a point located South 85°45'00" East 1534.5 feet and South 76°45'00" East 1181.4 feet from the most southerly corner of Tract 2 as shown on the "Amended Plat of Survey of Property of Green, Harley, Marsh, and Sansforth", recorded in the office of the Recorder of Sacramento County in Book 3 of Surveys at Page 61; thence North 76°45'00" West 1181.4 feet; thence North 85°45'00" West 1534.5 feet to the most southerly corner of Tract 2; thence North 57°32'00" West 1458.64 feet, along the south line of Tract 2 to the easterly right of way line of the
Southern Pacific Railroad (now abandoned); thence Southerly, along the easterly right of way line of the Southern Pacific Railroad (now abandoned); to the south line of that certain Record of Survey recorded in the office of the Recorder of Sacramento County in Book 3 of Surveys at Page 100; thence Westerly, along the south line of the Record of Survey recorded in Book 3 of Surveys at Page 100, to the westerly right of way line of the Southern Pacific Railroad (now abandoned); thence Northerly, along the westerly right of way line of the Southern Pacific Railroad (now abandoned); to the westerly line of Race Track Road; thence Northerly, along the westerly line of Race Track Road to the most southerly corner of Parcel B as shown on the Parcel Map entitled "Swamp Land Survey No 336 Located on Tyler Island", recorded in the office of the Recorder of Sacramento County on September 30, 1985, in Book 89 of Parcel Maps at Page 12; thence North 64°12'51" West along the southwesterly line of the Parcel Map recorded in Book 89 of Parcel Maps at Page 12, and along it's northwesterly prolongation to the centerline of Georgiana Slough; thence Northeasterly, along the centerline of Georgiana Slough to the centerline of the Sacramento River; thence Northerly, along the centerline of the Sacramento River and the Sacramento County Boundary line to a point on westerly prolongation of the centerline of Broadway, said point being the point of beginning.

Ward 5

Beginning at the intersection of the Northerly boundary line of Sacramento County and the centerline of 16th Street; thence from said point of beginning Southerly along the centerline of 16th Street to the centerline of Q Street; thence Easterly along the centerline of Q Street to the centerline of 18th Street; thence Southerly along the centerline of 18th Street to the centerline of Elkhorn Boulevard; thence Southwesterly along the centerline of Elkhorn Boulevard to the centerline of 16th Street; thence Southerly along the centerline of 16th Street to the centerline of Ascot Avenue; thence Easterly along the centerline of Ascot Avenue to the City of Sacramento City Limit Line as shown on the Record of Survey entitled “McClellan Park” recorded in the office of the Recorder of Sacramento County on December 31, 2001 in Book 61 of Records of Survey at Page 25; thence following said City of Sacramento City Limit Line in the Southerly direction to the centerline of North Avenue; thence Easterly along the centerline of North Avenue and the Easterly prolongation of North Avenue to the centerline of Roseville Road; thence Southwesterly along the centerline of Roseville Road to the centerline of Marconi Avenue; thence along the centerline of Marconi Avenue to the centerline of Howe Avenue; thence Southerly along the centerline of Howe Avenue to the centerline of Arden Way; thence Westerly, along the centerline of Arden Way to the centerline of Exposition Boulevard; thence Westerly, along the centerline of Exposition Boulevard of the centerline of the Capital City Freeway; thence Southwesterly, along the centerline of the Capitol City Freeway 80
(Business 80) to the centerline of the Southern Pacific Transportation Company's Sacramento-Salt Lake City Right of Way (now owned by Union Pacific Railroad); thence Southwesterly, along the centerline of the Southern Pacific Transportation Company's Sacramento-Salt Lake City Right of Way (now owned by Union Pacific Railroad) to the northerly prolongation of the centerline of Alhambra Boulevard; thence Southerly, along the northerly prolongation of the centerline of Alhambra Boulevard and the centerline of Alhambra Boulevard to the centerline of Broadway; thence Westerly, along the centerline of Broadway and its westerly prolongation to the centerline of the Sacramento River; thence Northerly, along the centerline of the Sacramento River to its intersection with the northerly boundary line of Sacramento County and the southerly boundary line of Sutter County; thence Easterly, along the northerly boundary line of Sacramento County to a point on the centerline of 16th Street, said point being the point of beginning.

Ward 6

Beginning at the intersection of the centerline of Alhambra Boulevard and the centerline of what was previously known as R Street as shown in Parcel Map recorded at Book 42 at Page 40 in the Sacramento County Recorder's Office; thence Southeasterly along the centerline of said R Street to the centerline of Stockton Boulevard; thence Southeasterly along the centerline of Stockton Boulevard to the centerline of Broadway; thence Easterly, along the centerline of Broadway to the centerline of 57th Street; thence Northerly along the centerline of 57th Street to the centerline of T Street; thence Southeasterly along the centerline of T Street to the centerline of 59th Street; thence Northerly along the centerline of 59th Street to the to the centerline of Eastbound US Highway 50, thence Easterly along the centerline of Eastbound US Highway 50 to the centerline of the Eastbound 65th Street Off-Ramp of US Highway 50; thence Easterly along the centerline of the Eastbound 65th Street Off-Ramp of US Highway 50 to the centerline of 65th Street; thence Northerly along the centerline of 65th Street to the centerline of Eastbound US Highway 50; thence Easterly along the centerline of Eastbound US Highway 50 to the centerline of the Southern Pacific Transportation Company's Sacramento-Stockton Main Line right of way (now owned by Union Pacific railroad); thence Southeasterly, along the centerline of the Southern Pacific Transportation Company's Sacramento-Stockton Main Line right of way (now owned by Union Pacific railroad) to the centerline of Power Inn Road; thence Southerly, along the centerline of Power Inn Road to the centerline of Elsie Avenue; thence Westerly along the centerline of Elsie Avenue to the centerline of Stockton Boulevard; thence Southeasterly along the centerline of Stockton Boulevard and its southerly prolongation to the centerline of California State Highway 99; thence Southerly along the centerline of California State Highway 99 to the Easterly prolongation of the centerline of Shasta Avenue; thence Westerly along the Easterly prolongation of the centerline of Shasta Avenue and the
centerline of Shasta Avenue to the centerline of Bruceville Road; thence Southerly along the centerline of Bruceville Road to the centerline of Calvine Road; thence Westerly along the centerline of Calvine Road to the centerline of Franklin Boulevard; thence Northerly along the centerline of Franklin Boulevard to the centerline of Union House Creek (otherwise known as Beacon Creek); thence Westerly, along the centerline of Union House Creek (otherwise known as Beacon Creek) to the centerline of Morrison Creek; thence Southwesterly, along the centerline of Morrison Creek to the centerline of Interstate 5; thence Northwesterly, along the centerline of Interstate 5 to the southerly prolongation of the centerline of Freeport Boulevard; thence Northerly along the southerly prolongation of Freeport Boulevard and Northerly along the centerline of Freeport Boulevard to the southerly prolongation of Park Village Street; thence Northerly along the southerly prolongation of Park Village Street and Northerly along the centerline of Park Village Street to the easterly line of the Record of Survey entitled "A Portion of the East 1/2 of Section 2 and the NE 1/4 of Section 11, Township 7 North, Range 4 East, Mount Diablo Meridian and a Portion of Sections 14, 23, 26, and 35, Township 8 North, Range 4 East, Mount Diablo Meridian", recorded in the office of the Recorder of Sacramento County on November 25, 1991, in Book 49 of Surveys at Page 29; thence Easterly, Northerly, Westerly, and Northerly along the easterly line of said Record of Survey recorded in Book 49 of Surveys at Page 29 to the centerline of Fruitridge Road; thence Easterly, along the centerline of Fruitridge Road to the centerline of Freeport Boulevard; thence Northeasterly along the centerline of Freeport Boulevard to the centerline of Sutterville Road; thence Northeasterly along the centerline of Sutterville Road to the centerline of Franklin Boulevard; thence Northerly along the centerline of Franklin Boulevard to the centerline of Broadway; thence Southeasterly along the centerline of Broadway to the centerline of Alhambra Boulevard; thence Northerly along the centerline of Alhambra Boulevard at to the point of beginning.

Ward 7

Beginning at the point of intersection of the northerly boundary line of Sacramento County and the centerline of Watt Avenue; thence from said point of beginning Westerly along the northerly boundary line of Sacramento County to the centerline of 16th Street; thence Southerly along the centerline of 16th Street to the centerline of Q Street; thence Easterly along the centerline of Q Street to the centerline of 18th Street; thence Southerly along the centerline of 18th Street to the centerline of Elkhorn Boulevard; thence Southwesterly along the centerline of Elkhorn Boulevard to the centerline of 16th Street; thence Southerly along the centerline of 16th Street to the centerline of Ascot Avenue; thence Easterly along the centerline of Ascot Avenue to the City of Sacramento City Limit Line as shown in the
Record of Survey “McClellan Park” recorded in the office of the Sacramento County Recorder on December 31, 2001 at Book 61 and Page 25; thence following said City of Sacramento City Limit Line in the Southerly direction to the centerline of North Avenue; thence easterly along the centerline of North Avenue and the Easterly prolongation of North Avenue to the Centerline of Roseville Road; thence Northeasterly along the centerline of Roseville Road to the Westerly prolongation of the City of Sacramento Boundary Line; thence Easterly, Southerly, and Westerly along the City of Sacramento Boundary Line to the centerline of Watt Avenue; then Southerly along the centerline of Watt Avenue to the centerline of Arden Way; thence Easterly along the centerline of Arden Way to the Southeasterly prolongation of Arden Way; thence along the Southeasterly prolongation of Arden Way to the centerline of the American River, thence Northeasterly along the centerline of the American River to the Southerly prolongation of San Juan Avenue; thence North along the Southerly prolongation of San Juan Avenue and the centerline of San Juan Avenue to the centerline of Winding Way; thence Westerly along the centerline of Winding Way to the centerline of Garfield Avenue; thence Northerly along the centerline of Garfield Avenue to the centerline of Greenback Lane; thence Northwesterly along the centerline of Greenback Lane to the centerline of Interstate Highway 80; thence Northerly along the centerline of Interstate Highway 80 to the Southerly prolongation of the Eastern boundary line of the Plat of “Larchmont Foothills Unit No. 9” as recorded in the office of the Sacramento County Recorder in Book 110 at Page 21; thence Northerly along the Southerly prolongation of said Plat and along the Eastern boundary line of said plat to the Eastern boundary of the Plat of “Larchmont Foothills Unit No. 8” as recorded in the office of the Sacramento County Recorder in Book 113 at Page 2; thence Northerly along the boundary line of said Plat to the Eastern boundary of the Plat of “Larchmont Foothills Unit No. 11” as recorded in the office of the Sacramento County Recorder in Book 129 at Page 19 to the centerline of Daly Avenue; thence Northerly along the centerline of Daly Avenue to the Centerline of Roseville Road; thence Northwesterly along the centerline of Roseville Road to the Southeasterly prolongation of the centerline of Poker Lane; thence Northwesterly along the prolongation of the centerline of Poker Lane and the centerline of Poker Lane to the centerline of Antelope North Road; thence Northeasterly along the centerline of Antelope North Road to the Northern Boundary Line of Sacramento County; thence Northwesterly along the Northerly Boundary Line of Sacramento County to a point on the centerline of Watt Avenue, said point of beginning.
Request for Proposal (RFP) No. 190226.JM was issued in January 2020 to solicit qualified firms to perform right-of-way vegetation maintenance work on SMUD’s transmission right-of-way (ROW) in El Dorado County, Sacramento County, and Placer County on a task order basis for a three-year period. A pre-proposal conference was held on January 30, 2020 of which six vendors attended. On March 13, 2020, two responsive proposals were received and evaluated in accordance with the advertised criteria. SMUD negotiated with the highest evaluated proposer resulting in a total cost savings of $1,250,600, an additional one-year option to extend, and insurance requirements of $15M in general liability insurance that includes coverage for wildfire liability. The unit prices for high voltage line clearance work include the provisions of Senate Bill No. 247 and have been determined to be fair and reasonable.

Requested Action: Authorize the Chief Executive Officer and General Manager to award a contract to Mountain F. Enterprises, Inc. for Transmission Corridor Vegetation Management Services during the period of May 25, 2020 to December 31, 2023, with one optional one-year extension for a total not-to-exceed amount of $28,681,814.

Board Policy: BL-8; Delegation to the GM with respect to Procurement; Procurement; This award supports SD-4 – Reliability.

Recommendation: Award to the Highest Evaluated Responsive Proposer

Award to:

MOUNTAIN F. ENTERPRISES, INC.  
1180 IRON POINT ROAD, SUITE 350  
FOLSOM, CA 95630

Proposers Notified by Procurement: 26
Proposers Downloaded: 27
Pre-Proposal Conference Attendance: 6
Proposals Received: 2
<table>
<thead>
<tr>
<th>Responsive Proposals Received</th>
<th>Pass/Fail</th>
<th>SEED Points</th>
<th>Technical Points</th>
<th>Price Points</th>
<th>Total Score</th>
<th>Rank</th>
<th>Proposal Amount</th>
<th>Evaluated Proposal Amount</th>
<th>Proposed Award Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOUNTAIN F. ENTERPRISES, INC.</td>
<td>Passed</td>
<td>-</td>
<td>48.00</td>
<td>40.00</td>
<td>88.00</td>
<td>1</td>
<td>$28,681,814</td>
<td>$28,681,814</td>
<td>$28,681,814</td>
</tr>
<tr>
<td>THE ORIGINAL MOWBRAY’S TREE SERVICE, INC.</td>
<td>Passed</td>
<td>-</td>
<td>32.00</td>
<td>23.96</td>
<td>55.96</td>
<td>2</td>
<td>$47,880,735</td>
<td>$47,880,735</td>
<td>$47,880,735</td>
</tr>
</tbody>
</table>

**Benefits:** This contract will provide SMUD with a qualified firm to provide vegetation management work on SMUD’s transmission right-of-way (ROW) in Sacramento County, El Dorado County, and Placer County to assist SMUD in maintaining its reliability to its customers.

**Cost/Budgeted:** $28,681,814; Budgeted for 2020-2024 by Grid Assets.

**Alternatives:** Only award the high voltage line clearance work and solicit the non-line clearance work separately. This alternative would likely return lower rates for the non-line clearance work; however, the costs of managing another contractor would likely dissolve the cost savings.

**Affected Parties:** Grid Assets, Supply Chain Services, and Contractor.

**Coordination:** Grid Assets – Eric Brown, and Supply Chain Services.

**Presenter:** Attila Miszti, Director, Line Assets

**Additional Links:**

SUBJECT: Approve contract award to Mountain F. Enterprises, Inc. for Transmission Corridor Vegetation Management Services

ITEM NO. (FOR LEGAL USE ONLY)

ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.
RESOLUTION NO. ______________

WHEREAS, in January 2020, SMUD issued Request for Proposal No. 190226.JM (RFP) to solicit qualified firms to perform right-of-way vegetation maintenance work on SMUD’s transmission right-of-way in El Dorado County, Sacramento County, and Placer County on a task order basis for a three-year period; and

WHEREAS, two 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, Mountain F. Enterprises, Inc. is hereby determined and declared to be the highest evaluated responsive proposer to provide transmission corridor vegetation management services.

Section 2. The Chief Executive Officer and General Manager, or his designee, is authorized, on behalf of SMUD, to award a contract to Mountain F. Enterprises, Inc. to provide transmission corridor vegetation management services during the period May 25, 2020, to December 31, 2023, with one optional one-year extension, for a total not-to-exceed amount of $28,681,814.

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.
**NARRATIVE:**

**Requested Action:** Authorize the Chief Executive Officer and General Manager to award contracts to Aspen Environmental Group, Ascent Environmental, Inc., Area West Environmental, Inc., and AECOM Technical Services, Inc. to provide Environmental and California Environmental Quality Act (CEQA) support services from June 1, 2020, to May 31, 2023, with one optional two-year extension for a total not-to-exceed aggregate amount of $6,000,000.

**Summary:** Request for Proposal (RFP) 190177.PD was issued in October 2019 to solicit qualified firms to provide environmental and California Environmental Quality Act (CEQA) support services for SMUD’s Environmental department. Services include performing environmental review for projects in accordance with the CEQA and the National Environmental Protection Act (NEPA), environmental permitting, biological field surveys, construction monitoring, cultural resource studies and AB52 consultation support, avian protection plan support, avian mortality monitoring at wind projects and long range campus and facility planning. Procurement held a pre-proposal conference on November 13, 2019, which was attended by 58 attendees and received 17 proposals. Based on the evaluation the request is to award a three-year agreement with one optional two-year extension to the top four highest evaluated responsive proposers for an aggregate amount of $6,000,000.

Procurement requested best and final offers which resulted in reduced rates of $40,000 in total. SMUD will capture these savings at the task level when work is issued. SMUD will also realize an operational expense reduction with these new agreements as the rates proposed are about 3% lower than the previous contract rates plus a CPI adjustment. In total, these reductions are expected to create savings of 3% through the life of these contracts.

**Board Policy:** BL-8; Delegation to the GM with respect to Procurement; Procurement.

**Recommendation:** Award to the Four Highest Evaluated Responsive Proposers

**Award to:**

Aspen Environmental Group  
8801 Folsom Blvd. Suite 275  
Sacramento, CA 95826
Pre-Proposal Conference Attendance: 58  
Proposals Received: 17

<table>
<thead>
<tr>
<th>Responsive Proposals Received</th>
<th>P/F</th>
<th>10 Points SEED</th>
<th>60 Points Technical</th>
<th>30 Points Pricing</th>
<th>Total Score</th>
<th>Overall Rank</th>
<th>Proposal Amount</th>
<th>SEED Credit</th>
<th>Evaluated Proposal Amount</th>
<th>Proposed Award Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspen P 10</td>
<td>55.13</td>
<td>29.07</td>
<td>94.20</td>
<td>1</td>
<td>$2,679,625.00</td>
<td>$130,043.50</td>
<td>$2,549,581.50</td>
<td>$6,000,000, Aggregate of all Task Authorizations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ascent P 10</td>
<td>58.19</td>
<td>25.88</td>
<td>94.07</td>
<td>2</td>
<td>$2,994,125.00</td>
<td>$130,043.50</td>
<td>$2,864,081.50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area West Environmental P 10</td>
<td>53.25</td>
<td>30.00</td>
<td>93.25</td>
<td>3</td>
<td>$2,600,870.00</td>
<td>$130,043.50</td>
<td>$2,470,826.50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AECOM P 9.75</td>
<td>58.13</td>
<td>24.64</td>
<td>92.52</td>
<td>4</td>
<td>$3,037,635.00</td>
<td>$29,616.94</td>
<td>$3,008,018.06</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEI Consultants P 10</td>
<td>55.88</td>
<td>24.10</td>
<td>89.97</td>
<td>5</td>
<td>$3,206,295.00</td>
<td>$130,043.50</td>
<td>$3,076,251.50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Science Associates P 10</td>
<td>54.38</td>
<td>23.39</td>
<td>87.76</td>
<td>6</td>
<td>$3,299,475.00</td>
<td>$130,043.50</td>
<td>$3,169,431.50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panorama Environmental P 10</td>
<td>53.00</td>
<td>23.39</td>
<td>86.39</td>
<td>7</td>
<td>$3,299,245.00</td>
<td>$130,043.50</td>
<td>$3,169,201.50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HDR, Inc. P 10</td>
<td>45.38</td>
<td>22.82</td>
<td>78.19</td>
<td>8</td>
<td>$3,378,535.00</td>
<td>$130,043.50</td>
<td>$3,248,491.50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SWCA Environmental Consultants P 10</td>
<td>47.88</td>
<td>23.31</td>
<td>76.18</td>
<td>9</td>
<td>$3,196,275.00</td>
<td>$15,981.38</td>
<td>$3,180,293.63</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardno P 10</td>
<td>47.19</td>
<td>23.01</td>
<td>73.20</td>
<td>10</td>
<td>$3,230,940.00</td>
<td>$9,692.82</td>
<td>$3,221,247.18</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-Responsive Proposals Received</th>
<th>Proposal Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mountain Enterprises, Inc.</td>
<td>$2,873,275</td>
</tr>
<tr>
<td>Arcadis</td>
<td>$2,930,080</td>
</tr>
<tr>
<td>Dokken Engineering</td>
<td>$2,966,575</td>
</tr>
<tr>
<td>Montrose Environmental Solutions</td>
<td>$4,314,150</td>
</tr>
<tr>
<td>NV 5</td>
<td>$3,474,540</td>
</tr>
<tr>
<td>Jacobs Engineering Group</td>
<td>$3,302,050</td>
</tr>
<tr>
<td>ECORP Consulting</td>
<td>$3,540,075</td>
</tr>
</tbody>
</table>

Supplier Diversity Program:

All 4 of the highest ranked proposers and awardees have committed to SEED participation on their agreement at or close to 20%.

**Benefits:** To provide Environmental and CEQA support services.

**Cost/Budgeted:** $6,000,000; Budgeted for 2020-2025 by Environmental & Real Estate Services

**Alternatives:** Not award this solicitation and request Board action to increase the existing agreement.

**Affected Parties:** Environmental & Real Estate Services, Supply Chain Services, and Contractor.
**Coordination:**  Environmental & Real Estate Services and Contract Manager, and Supply Chain Services.

**Presenter:**  Ammon Rice

**Additional Links:**

<table>
<thead>
<tr>
<th>SUBJECT</th>
<th>Award CEQA and Environmental Services Contract</th>
<th>ITEM NO. (FOR LEGAL USE ONLY)</th>
</tr>
</thead>
</table>

ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.
RESOLUTION NO. _______________

WHEREAS, in October 2019, SMUD issued Request for Proposal No. 190177.PD (RFP) to solicit qualified firms to provide environmental and California Environmental Quality Act (CEQA) support services, including performing environmental review for projects in accordance with CEQA and the National Environmental Protection Act (NEPA), environmental permitting, biological field surveys, construction monitoring, cultural resource studies and AB52 consultation support, avian protection plan support, avian mortality monitoring at wind projects and long range campus and facility planning; and

WHEREAS, 17 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, Aspen Environmental Group, Ascent Environmental, Inc., Area West Environmental, Inc., and AECOM Technical Services, Inc. are hereby determined and declared to be the four highest evaluated responsive proposers to provide environmental and California Environmental Quality Act (CEQA) support services.

Section 2. The Chief Executive Officer and General Manager, or his designee, is authorized, on behalf of SMUD, to award contracts to Aspen Environmental Group, Ascent Environmental, Inc., Area West Environmental, Inc., and AECOM Technical Services, Inc. to provide
environmental and CEQA support services from June 1, 2020, to May 31, 2023, with one optional two-year extension for a total not-to-exceed aggregate amount of $6,000,000.

**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 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.
**Requested Action:** Discuss Board meeting schedule and potential amendments to the Emergency Board Meeting Procedures.

**Summary:** Given the uncertainty of removal or reduction of restrictions related to COVID-19 (coronavirus) and associated federal, state, and local directives related to social distancing, the Board will discuss the Board meeting schedule in the coming months. The Board will also discuss possible modifications to the Emergency Board Meeting Procedures related to associated Board meeting logistics.

**Board Policy:** Board Job Description GP-3(j) – Take such other actions as may be required by law.

**Benefits:** Provides Board Members with the opportunity to make adjustments to continue to operate efficiently and ensure Board objectives are met.

**Cost/Budgeted:** N/A

**Alternatives:** Choose not to make any changes at this time.

**Affected Parties:** Members of the Public, Board Members, and All SMUD Departments

**Coordination:** Board Office, Executive Office and Office of the General Counsel

**Presenter:** President Kerth

---

**ITEM NO.** FOR LEGAL USE ONLY.

ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.
RESOLUTION TO BE DRAFTED BASED ON DISCUSSION