Exhibit to Agenda Item #9


Board of Directors Meeting
Thursday, June 17, 2021, scheduled to begin at 5:30 p.m.
Virtual Meeting (online)
2021 Rate Process

Board meeting on June 17, 2021

- Staff will release the Chief Executive Officer & General Manager’s Report and Recommendations on Rates and Services and Open Access Transmission Tariff
- Board resolution vote to approve public hearing date

Rate Process Timeline

<table>
<thead>
<tr>
<th>Date</th>
<th>Milestone</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 15</td>
<td>Request a public hearing date at the Finance &amp; Audit Committee meeting</td>
</tr>
<tr>
<td>June 17</td>
<td>Set public hearing date and release GM Report*</td>
</tr>
<tr>
<td>July 8</td>
<td>Public Outreach Rate Workshop #1 at 5:30 p.m. (ZoomGov/Granicus)</td>
</tr>
<tr>
<td>July 27</td>
<td>Public Outreach Rate Workshop #2 at 10 a.m. (ZoomGov/Granicus)</td>
</tr>
<tr>
<td>August 31</td>
<td>Public hearing and rates resolution drafted at 5:30 p.m. (ZoomGov/Granicus)</td>
</tr>
<tr>
<td>September 16</td>
<td>Board resolution vote</td>
</tr>
</tbody>
</table>

Public Outreach Period
75 Days

Three public notices are schedule to be published on June 22, June 25 and June 30
If needed, staff will host a third public workshop on August 5 at 5:30 p.m. (virtual)
Executive Summary

• Overview of Rate Design Approach

• Recommendations:
  • 2022 and 2023 Rate Increases
  • Solar and Storage Rate
  • Optional Critical Peak Pricing (CPP) Rate
  • Miscellaneous Rates Changes

• Informational (Programs and Fees):
  • Interconnection Fee
  • Storage Incentive Program
  • Virtual Net Energy Metering Program
Transformational Leadership

• Builds on SMUD’s long-term support for solar industry
• Balanced approach to support all technologies and customer investments needed to achieve zero carbon
• Enables wide-ranging customer choice
• 2030 Zero Carbon Plan: Transformational and Industry-Leading
• Rates and Programs: Industry-Leading to achieve the Transformation
2022 and 2023 Rate Recommendations
Rates Proposal

The proposed increase is well below the forecasted rate of inflation; SMUD is committed to keeping rate increases within inflation.

Major drivers for rate proposal:
- Wildfire prevention and mitigation
- Infrastructure improvements to maintain high reliability
- Clean energy compliance requirements
- Increased operating costs, including materials and labor costs
- Continued internal focus on cost savings and efficiencies to minimize rate increases

For more details, please see the Rate Increase Drivers section in the GM Report.

<table>
<thead>
<tr>
<th>Rate Proposal</th>
<th>Rates &amp; Effective Date</th>
<th>Customer Groups Impacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022 – 2023 Rate Increases</td>
<td>1.5% effective on 3/1/2022</td>
<td>All Customers</td>
</tr>
<tr>
<td></td>
<td>2.0% effective on 1/1/2023</td>
<td></td>
</tr>
</tbody>
</table>
2020 Average System Rate Comparison ($/kWh)

Source: EIA 861M 2020 and self-reported annual data from the 2020 EIA 861 annual survey
## Bill Impacts with Proposed Rates

### Sample Monthly Bill Impacts

<table>
<thead>
<tr>
<th>Size</th>
<th>Average Monthly Bill</th>
<th>1.5% Rate Impact in 2022</th>
<th>2.0% Rate Impact in 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Commercial (20 – 299 kW)</td>
<td>$2,921</td>
<td>$44</td>
<td>$59</td>
</tr>
<tr>
<td>Medium Commercial (500 – 999 kW)</td>
<td>$25,906</td>
<td>$389</td>
<td>$526</td>
</tr>
<tr>
<td>Large Commercial (&gt;1,000 kW)</td>
<td>$91,623</td>
<td>$1,374</td>
<td>$1,860</td>
</tr>
<tr>
<td>Agriculture (Ag &amp; Pumping)</td>
<td>$351</td>
<td>$5</td>
<td>$7</td>
</tr>
<tr>
<td>Average residential at 750 kWh usage</td>
<td>$126.44</td>
<td>$1.91</td>
<td>$2.57</td>
</tr>
</tbody>
</table>

Customers on our low-income Energy Assistance Program Rate (EAPR) & Medical Equipment Discount (MED) rate will see slightly different bill impacts than standard rate customers.  
Amounts may reflect minor rounding differences.
Solar & Storage Rate and Recommendations
Net Energy Metering (NEM) 1.0 was successful in reducing rooftop solar costs.

### Rooftop solar prices (per watt)

<table>
<thead>
<tr>
<th>Year</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>~$12 per Direct Current Watt (Wdc)*</td>
</tr>
<tr>
<td>2021</td>
<td>~$4 (national average)</td>
</tr>
</tbody>
</table>

Note: Rate proposal recommends continued NEM 1.0 rate for existing customers through 2030.

* (NREL US DOE SunShot Initiative) reflects a 1998 price of about $12.00/Wdc for <=10kW

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$32,000 decrease in rooftop solar costs from 1998 to 2021
Two-Year Collaborative Rate Design Journey

October 2019
- Technical Working Group (40+ Hours) (4 months)

July 2020
- E3’s Independent Value of Solar Study ($0.074/kWh) (6 months)
- Board Revisions in Rate Design Strategic Direction 2 – (4 months)

September 2020
- 2030 Zero Carbon Plan (6 months)
- Board Direction to Collaborate with Solar & Storage Industry (6 months)

October 2020
- Solar & Storage Rate Design

2 Years of SMUD Staff working with Customers, Stakeholders, and the Solar & Storage Industry to develop the Solar & Storage Rate.
Solar and Storage Rate – NEW Solar Customers

- Rate is designed to accelerate storage adoption and transform the market from solar only to solar and storage.
- Proposal will benefit all our customers and help SMUD achieve the 2030 Zero Carbon Plan.
- Excess power can be sold back to SMUD for $0.074/kWh no matter the time-of-day or season.
- SMUD will reevaluate this value every 4 years (2026 & 2030) and the value will not be revised more than +/- 30%.
- **Staff is recommending to the Board that all NEM 1.0 customers continue on the NEM 1.0 legacy rate through 2030.**

For more details, please see the Changes to Net Energy Metering section in the GM Report.
Excess Power Sold Back to SMUD $0.074/kWh

What makes up the $0.074/kWh?

• SMUD is recognizing rooftop customer’s excess energy avoids generating this power from a powerplant

• By avoiding powerplant generation SMUD can avoid the following related costs:
  - Carbon / Greenhouse Gases
  - Natural Gas
  - Capacity (Transmission, Distribution, & Generation)

SMUD is recognizing rooftop customer’s excess energy provides a unique indirect benefit of avoiding disturbing land for a utility size solar plant.

For more details, please see the Changes to Net Energy Metering section in the GM Report.
Solar and Storage Rate encourages self-consumption

Key Takeaway:
85% of the generation retains retail value

- Exported Energy - Compensated at $0.074/kWh
- Solar Only - Self Consumption at Full Retail Compensation

*Projected values after solar and storage adoption. Each customer’s energy usage will directly impact their respective percentage of self-consumption and exported energy.
Export Rate Comparison among other utilities ($/kWh)

- SMUD Solar & Storage Rate: $0.074
- Roseville: $0.060
- Lodi: $0.078
- Modesto: $0.076
- Turlock*: $0.037
- Redding: $0.061
- Palo Alto: $0.075
- Alameda: $0.070
- Imperial: $0.070
- Central Coast Community Energy**: $0.025

* Represents the average of on-peak and off-peak prices
** Central Coast Community Energy is a proposed rate is not a Publicly Owned Utility

All figures are being rounded for graphical purposes.
How does the new Solar and Storage Compare to Other Local SMUD’s Solar Resources?

Solar Export Compared to other local solar resources ($/kWh)

- **Rooftop Residential Solar NEM1.0**: $0.133
- **Average Residential w/Proposed Solar & Storage Rate**: $0.103
- **Proposed Solar & Storage Rate**: $0.074
- **Wildflower Solar I**: $0.044
- **Sacramento Valley Energy Center Solar**: $0.033
- **Rancho Seco II Solar**: $0.029

*Effective rate, based on assumed portion of solar generation is consumed on site by the customer and remainder sold back to SMUD at Solar & Storage Rate*
Customer bill impacts before and after the Solar & Storage Rate

Key Takeaway:
Investing Solar and Storage and becoming a Virtual Power Plant (VPP) partner adds the most value for the customer and the greatest impact in helping SMUD achieve the 2030 Zero Carbon Plan

* Bill Impacts include System Infrastructure Fixed Charge. Illustrative example, this is not reflective for all customers.
Optional Critical Peak Pricing Rate Recommendation
## Optional Critical Peak (CPP) Pricing Rate

<table>
<thead>
<tr>
<th>Rate Proposal</th>
<th>Effective Date</th>
<th>Customer Groups Impacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Peak Pricing Rate (CPP)</td>
<td>6/1/2022</td>
<td>Optional Rate for Residential Customers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Up to 30,000 customers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Customers with a SMART Thermostat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Solar and Storage Customers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Storage Only Customers</td>
</tr>
</tbody>
</table>

- Much like a Time of Day (TOD) rate, customers will pay a bit less during non-peak hours, but pay a premium during a CPP event
- Encourages storage customers to use their batteries to maximize their return on investment
- Encourages all customers to reduce energy use during CPP event
- CPP events will only be called during Summer months (Jun – Sep)

For more details, please see the Residential Critical Peak Pricing Rate section in the GM Report.
Solar & Storage Rate
Supporting Programs and Fees
Staff Will Implement Interconnection Fees on 1/1/2022 for New Solar Customers

Start date: January 1, 2022

<table>
<thead>
<tr>
<th>Residential ( Majority )</th>
<th>Residential</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \leq 10\text{kW} ) - $475</td>
<td>( &gt;10\text{kW} - 20\text{kW} ) - $900</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Commercial</th>
<th>Commercial ( Majority )</th>
<th>Commercial ( Cost based )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \leq 100\text{kW} ) - $2,500</td>
<td>( &gt;100\text{kW} - \leq 500\text{kW} ) - $3,300</td>
<td>( &gt;500\text{kW} ) - $5,000</td>
</tr>
</tbody>
</table>

**Note:** This is a direct cost recovery fee for SMUD to cover expenses related to technical document review, validation of system sizes, onsite inspections, integration into SMUD’s distribution system, and processing of application.
## Supporting Programs

### Promote solar and storage adoption

<table>
<thead>
<tr>
<th>Solar and Storage Rate Supporting Programs &amp; Incentives</th>
<th>Description</th>
<th>Incentive Level</th>
<th>Customer Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Storage Incentive Program</strong></td>
<td>Battery incentive</td>
<td>Up to $500</td>
<td>Customers with solar and/or storage</td>
</tr>
<tr>
<td></td>
<td>Battery incentive with Critical Peak Pricing (CPP)</td>
<td>Up to $1,500</td>
<td>Residential Customers with solar and/or storage</td>
</tr>
<tr>
<td></td>
<td>Battery incentive with Virtual Power Plant (VPP)*</td>
<td>Up to $2,500</td>
<td>Customers with solar and/or storage</td>
</tr>
<tr>
<td><strong>Virtual Net Energy Metering (VNEM)</strong></td>
<td>Virtual solar for multifamily residences</td>
<td>N/A</td>
<td>Under-resourced Communities</td>
</tr>
<tr>
<td></td>
<td>SMUD is committed to bringing the benefits of solar to under-resourced multi-family dwelling communities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Virtual Power Plant customers will see on-going “grid benefit” payments that align with grid service costs
SMUD’s Leadership – Transforming the Solar Market to Solar & Storage

NEM 1.0
22 years = 300 storage customers or <1% adoption rate

300

35,000*

$25M in storage / battery incentives

* As of Mar 2021

Solar & Storage Rate
9 years = 30,000 storage customers

30,000

70,000

As of Mar 2021
Customer’s carbon footprint before and after the Solar & Storage Rate

Decrease of 1 Metric Ton (CO2e)* per household for 30,000 customers would be equivalent to removing 7,500 gasoline cars off the road!

* CO2e – Carbon Dioxide Equivalent term for describing different greenhouse gases in a common unit
https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle
Open Access Transmission Tariff (OATT) Update

• The last update to the Open Access Transmission Tariff was approved in 2017
• The proposal includes Ancillary Services price increases to the following schedules:
  • **Schedule 1**: includes, scheduling, system control and dispatch service
    • Proposed rate change from $267.21/MW to $361.72/MW of reserved capacity per month
  • **Schedule 2**: includes reactive supply and voltage control from generation or other sources service
    • Proposed rate change from $76.94/MW to $80.38/MW of reserved capacity per month

For more details, please see OATT Volume 1 of the GM Report.
Outreach objectives & priorities

Outreach Objectives

Outreach Priorities

- Efficiency
- Clarity
- Transparency
- Customization
- Diversity
- Awareness
- Relationship Management
- Reputation

June 17, 2021
Board of Directors Meeting
Identified target audiences

Community & Business Leaders
Chambers, CBOs, Pbids

Neighborhood & Faith Based
HOAs, Rotary, Kiwanis, Large Churches, etc.

Elected Officials
City and County elected officials

Industry & Environmental Groups
Energy industry, environmental, etc.

Customized for each audience
Outreach strategy & approach

Reach out to 750+ groups to provide menu of options to share an overview of the Rate Action proposal. Efforts will include email communication and personalized phone outreach to groups as needed.

Opportunities will be provided including choices of newsletter articles, slide decks/collateral, videos or an opportunity to host SMUD for a virtual meeting.

For groups requesting a meeting, we will tailor presentations based on audience type and time allotted and identify most appropriate presenter.

Emphasis on balanced outreach across SMUD territory to reach customers. Will prioritize some solar-dense communities and groups who have expressed interest in the past to make sure they are receiving information.
Integrated communications campaign

Complementary Channels

Community Engagement
- Virtual outreach
- Relationship mgmt.
- Speaker training
- Partner publications

Web, Digital & Social
- smud.org
- Social media posts
- E-mail newsletters

Marketing
- Videos
- Brochures
- Fact Sheets
- FAQs

Internal Communications
- Daily updates
- ENNs
- Employee engagement

Public Relations
- News release
- Op-ed (TBD)

Complementary Channels
Rate Process Timeline

MAY 18
Finance & Audit Committee Meeting – Introduction to Solar and Storage Rate Concepts

JUN 17
Release the GM Report with Detailed Rate Recommendations

JUL 8
Public Comment Process – Workshop #1

JUL 27
Public Comment Process – Workshop #2

AUG 31
Public Hearing (special Board meeting)

SEP 16
Board votes on Rate Proposal

Extensive public education and outreach
Requested Action

Questions?