AGENDA
BOARD POLICY COMMITTEE MEETING
AND SPECIAL SMUD BOARD OF DIRECTORS MEETING

Wednesday, April 3, 2019
SMUD Customer Service Center, Rubicon Room
6301 S Street, Sacramento, California
Scheduled to begin at 5:30 p.m.

This Committee meeting is noticed as a joint meeting with the Board of Directors for the purpose of compliance with the Brown Act. In order to preserve the function of the Committee as advisory to the Board, members of the Board may attend and participate in the discussions, but no Board action will be taken. The Policy Committee will review, discuss and provide the Committee’s recommendation on the following:

**DISCUSSION ITEMS**

1. Bryan Swann
   Adopt an update to SMUD’s Renewable Energy Resources Procurement Plan (RPS Procurement Plan) as required by Public Utilities Code (PUC) § 399.30(a), and by the Enforcement Procedures for the Renewables Portfolio Standard for Local Publicly Owned Utilities (CEC RPS Regulations), Section 3205(a).
   Presentation: 10 minutes
   Discussion: 5 minutes

2. Heidi Sanborn
   Board monitoring: GP-2, Governance Focus; GP-4, Agenda Planning; GP-13, Core and Key Values.
   Presentation: 5 minutes
   Discussion: 5 minutes

**INFORMATIONAL ITEMS**

3. Joy Mastache
   Provide briefing on the process for preparation of SMUD’s Wildfire Mitigation Plan, including a Public Comment Period.
   Presentation: 5 minutes
   Discussion: 10 minutes

4. Dave Tamayo
   Board Work Plan.
   Discussion: 5 minutes

5. Public Comment.

6. Heidi Sanborn
   Summary of Committee Direction.
   Discussion: 1 minute
ANNOUNCEMENT OF CLOSED SESSION AGENDA

Threat to Public Services or Facilities

Pursuant to section 54957(a) of the Government Code:

Consultation with: Laura Lewis, Chief Legal Officer

Members of the public wishing to address the Committee should complete a sign-up form available at the table outside of the meeting room. Members of the public shall have up to three (3) minutes to provide public comment. The total time allotted to any individual speaker shall not exceed nine (9) minutes for the entire Committee meeting time.

Members of the public wishing to inspect public documents related to agenda items may call 916-732-7143 to arrange for inspection of the documents at the SMUD Customer Service Center, 6301 S Street, Sacramento, California.

NOTE: Accommodations are available for the disabled public. If you need a hearing assistance device or other aid, please call 916-732-6154 in advance of this Committee Meeting.
SMUD Renewable Energy Resources Procurement Plan
(RPS Procurement Plan)
April 2019
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Section 1: Introduction

The Sacramento Municipal Utility District (SMUD) is committed to the development and procurement of renewable energy for our customers. In order to grow renewable energy supplies for its customers, SMUD voluntarily created three separate programs: a green pricing program called “Greenergy,” a shared solar program called “SolarShares,” and a Renewables Portfolio Standard (RPS) Program (prior to legislation mandating the program).

In 1997, SMUD began Greenergy, which allows participating residential customers to select a 100% renewable product to serve 100% or 50% of their monthly electricity demand, respectively, in addition to their regular electricity bill. Commercial Greenenergy customers pay an additional amount per kWh of electricity usage to serve 100% or 50% of their monthly electricity demand using renewables, on top of their regular rates. Commercial Greenergy customers can also purchase 1 MWh blocks of a 100% renewable product. SMUD has significantly expanded Greenergy in the last few years and is planning to revise the program structure in the near future.

In 2008, SMUD launched a pilot program called SolarShares, which allowed customers to receive a portion of their electricity usage from an off-site solar system. Participants saw a SolarShares charge, and a credit associated with the solar generation. The initial 1 MW pilot was fully subscribed quickly. Since then the program has grown and now includes options for large commercial customers as well. In 2016, SMUD significantly expanded the SolarShares program by extending the pilot SolarShares program to large commercial customers, signing agreements to deliver 150 MW. SMUD plans to roll out a residential SolarShares expansion and a new SolarShares option for new residential construction in the future.

These two voluntary programs result in SMUD customers engaging in renewable procurement beyond the RPS mandates in place. State law (SB 350) recognizes this additional procurement by allowing electricity sales to these customers that are supported by specific renewable resources to be excluded from overall retail sales prior to calculating SMUD’s RPS obligation.

In 2001, SMUD established its initial RPS goals, and by 2008 had established goals of procuring 20% of its retail electricity sales from eligible renewable energy resources by 2010 and 33% by 2020 (SMUD’s RPS goals). In 2002 (and in later statutes modifying the initial law), the State of California established an RPS for retail sellers of 20% of retail sales served with electricity from eligible renewable energy resources by December 31, 2010. The RPS statutes at that time did not specifically obligate local publicly owned electric utilities (POUs) such as SMUD with percentage goals and deadlines, nor did the state law require POUs to satisfy state eligibility rules for renewable energy resources to count toward their RPS goals. Nevertheless, POUs were required to consider and implement an RPS that met the “intent of the Legislature”.

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Senate Bill 2 in 2011 (SBX1-2) established an RPS goal of 33% by 2020 for local publicly-owned electric utilities (POUs) as well as retail sellers. SMUD achieved the 20% RPS in 2010, with resources meeting the state eligibility rules, and is on target to achieve the required 33% RPS by 2020. Senate Bill 350 (SB 350, 2015) modified provision of the RPS and set a 2030 RPS target of 50%, which was further modified by Senate Bill 100 (SB 100, 2018) to establish a 60% RPS target by 2030 and a planning goal of serving 100% of retail sales with zero carbon resources by 2045.

SMUD's RPS policy is stated in SMUD Board Strategic Direction (SD) 9. SD9 includes the RPS goals of 20% by 2010, 33% by 2020, and 60% by 2030\(^1\), and also sets policies for energy efficiency goals, clean distributed generation, and greenhouse gas reduction. Staff strives to reach the policy goals in SD9 in the most effective and efficient way practicable. SMUD balances the multiple policies in SD9 with other Board policies including those established for high levels of reliability (SD4), competitive rates (SD2), access to capital markets (SD3), and the local environment (SD7). SMUD also undertakes research, development and demonstration (RD&D) activities (SD10) that contribute to the RPS and other SD9 goals. Balancing the achievement of SMUD's RPS and other policies involves an integrated resource planning (IRP) process.

As required by Public Utilities Code (PUC) § 399.30 (a), and by the Enforcement Procedures for the Renewable Portfolio Standard for Local Publicly Owned Utilities (CEC RPS Regulations), Section 3205(a), SMUD adopted a Renewable Energy Resources Procurement Plan (Procurement Plan) in 2013. Given the legislative changes to RPS requirements from SB 350 and SB 100, as well as the passage of time since the initial plan adoption, SMUD is adopting a revised Procurement Plan – this document – describing how it will achieve its RPS procurement requirements for each compliance period established by law through 2030.

In December 2011, SMUD's Board approved SMUD's RPS Enforcement and Compliance (Enforcement) Plan, pursuant to SBX1-2. In November 2013, SMUD's Board adopted a revised Enforcement Plan to ensure compliance with the CEC RPS Regulations. The Enforcement Plan confirms SMUD's commitment to comply with the CEC RPS Regulations.

**Section 2: Renewable Procurement and RPS Compliance**

SMUD has met its RPS compliance obligations for the first (2011 – 2013) and second (2014 – 2016) compliance periods and is well under way to meeting the established targets for the third (2017 – 2020) compliance period, per CEC RPS Regulations, Section

\(^1\) SMUD's SD-9 goal was most recently revised on October 18, 2018 to reflect the latest 60% requirement enacted in SB 100. This revision also established "Net-zero" goals for SMUD in 2040 and 2050, whereby investments to reduce transportation and building GHG emissions locally "zero-out" remaining GHG emissions from SMUD's power plants.
Table 1 illustrates the RPS compliance targets for 2017 through 2030, as provided in PUC § 399.30 (c)(2). The targets in Table 1 for years not specifically identified (interim targets) in PUC § 399.30 (c)(2) are based on a straight-line interpolation between the targets for the years specified (2020, 2024, 2027, & 2030). The CEC has not yet incorporated updated targets to reflect a 60% RPS by 2030, and therefore the interim targets are SMUD's current best estimates.

Table 1: RPS Compliance Targets

<table>
<thead>
<tr>
<th>RPS Target (% of Retail Sales)</th>
<th>2017</th>
<th>2018</th>
<th>2019</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>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPS Target (%)</td>
<td>27%</td>
<td>28%</td>
<td>31%</td>
<td>33%</td>
<td>35.8%</td>
<td>38.6%</td>
<td>41.3%</td>
<td>44%</td>
<td>46.7%</td>
<td>49.3%</td>
<td>62%</td>
<td>64.7%</td>
<td>57.3%</td>
<td>60%</td>
</tr>
</tbody>
</table>

Table 2 shows the expected procurement from contracted and planned eligible renewable contracts as well as owned resources that can be allocated and retired for SMUD’s RPS compliance. This estimate is based on SMUD’s December 2018 load forecast. Note that this renewable energy procurement shows our estimated availability of resources but does not indicate that the associated Renewable Energy Certificates (RECs) will all be retired for the RPS. Most of these contracts reflect projects that are on-line and generating electricity, or contracts that have been executed with an expected commercial online date. The table excludes generation from resources that are allocated to meet SMUD’s Greenenergy and SolarShares retail sales. For resources that may be used to serve multiple programs, any generation not used to meet RPS requirements is excluded from Table 2. The values in Table 2 incorporate a geothermal project that includes capacity buildout through 2020, a new wind project scheduled online in 2019, and 2 new solar projects expected online in 2021 and 2022.

SMUD expects to retire RECs from existing and planned resources to fully achieve compliance in the compliance periods through 2024. SMUD plans to extend contracts and/or contract for new resources to achieve compliance in subsequent compliance periods (see RPS Deficit – Additional Resources Needed). Table 2 shows adequate eligible renewable procurement to enable compliance with the addition of new resources after 2024.

SMUD’s currently procured renewable energy resources are predominately Portfolio Content Category (PCC) 0 and PCC 1 RECs. SMUD has procured some PCC 3 RECs from our customers’ distributed generation systems under SB 1. SMUD is developing a strategy to optimize our renewables portfolio and is actively pursuing contracts for PCC 2 RECs and considering additional PCC 3 RECs and alternative uses of biomethane to maximize value and meet compliance period requirements subject to CEC RPS

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2 For historical compliance in the first and second compliance periods, see CEC reports on POU RPS compliance.

3 SMUD notes that the CEC has not yet changed the CEC RPS Regulations to implement provisions of SB 350 and SB 100, but believes that any changes established will have minimal impact, if any, on compliance in the third compliance period.

4 Note that this load forecast is more recent than and updated from the forecast that underlaid the modeling in SMUD’s overall Integrated Resource Plan. This is in keeping with the general concept that IRPs are not “set in stone” but will be revised to reflect updated information.
Regulations, Section 3204 (c). As this strategy is considered and potentially implemented, the PCC procurement shown in Table 2 will change, but SMUD will remain in compliance with the portfolio balance requirements.

Table 2: SMUD's Renewable Resources and Compliance Requirements

<table>
<thead>
<tr>
<th>RPS Compliance Period Target (GWh)</th>
<th>Compliance Period 3 2017 - 2020</th>
<th>Compliance Period 4 2021 - 2024</th>
<th>Compliance Period 5 2025 - 2027</th>
<th>Compliance Period 6 2028 - 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1 Minimum</td>
<td>12,298 GWh</td>
<td>15,910 GWh</td>
<td>14,610 GWh</td>
<td>16,973 GWh</td>
</tr>
<tr>
<td>Category 3 Maximum</td>
<td>75%</td>
<td>75%</td>
<td>75%</td>
<td>75%</td>
</tr>
<tr>
<td>Procurement by Technology (GWh)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biomass/Biogas /Biomethane</td>
<td>4,171 GWh</td>
<td>5,126 GWh</td>
<td>3,657 GWh</td>
<td>3,628 GWh</td>
</tr>
<tr>
<td>Geothermal</td>
<td>1,004 GWh</td>
<td>1,471 GWh</td>
<td>1,085 GWh</td>
<td>1,071 GWh</td>
</tr>
<tr>
<td>Solar</td>
<td>543 GWh</td>
<td>2,227 GWh</td>
<td>1,530 GWh</td>
<td>1,214 GWh</td>
</tr>
<tr>
<td>Wind</td>
<td>3,963 GWh</td>
<td>7,679 GWh</td>
<td>5,439 GWh</td>
<td>5,381 GWh</td>
</tr>
<tr>
<td>Eligible Hydro &lt; 30MW</td>
<td>520 GWh</td>
<td>450 GWh</td>
<td>337 GWh</td>
<td>337 GWh</td>
</tr>
<tr>
<td>Total Generation</td>
<td>10,202 GWh</td>
<td>16,953 GWh</td>
<td>12,048 GWh</td>
<td>11,631 GWh</td>
</tr>
<tr>
<td>Surplus Applied</td>
<td>2,097 GWh</td>
<td>0 GWh</td>
<td>2,500 GWh</td>
<td>0 GWh</td>
</tr>
<tr>
<td>Total Applied to RPS Target</td>
<td>12,298 GWh</td>
<td>15,910 GWh</td>
<td>14,610 GWh</td>
<td>16,973 GWh</td>
</tr>
<tr>
<td>RPS Deficit - Additional Resources Needed</td>
<td>0 GWh</td>
<td>0 GWh</td>
<td>61 GWh</td>
<td>5,341 GWh</td>
</tr>
<tr>
<td>Surplus Banked</td>
<td>0 GWh</td>
<td>1,043 GWh</td>
<td>0 GWh</td>
<td>0 GWh</td>
</tr>
<tr>
<td>Procurement by Portfolio Content Category (GWh)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Category 0 RECs</td>
<td>4,134 GWh</td>
<td>4,486 GWh</td>
<td>1,997 GWh</td>
<td>1,970 GWh</td>
</tr>
<tr>
<td>Category 1 RECs</td>
<td>5,781 GWh</td>
<td>12,048 GWh</td>
<td>9,738 GWh</td>
<td>9,348 GWh</td>
</tr>
<tr>
<td>Category 2 RECs</td>
<td>0 G Wh</td>
<td>0 GWh</td>
<td>0 GWh</td>
<td>0 GWh</td>
</tr>
<tr>
<td>Category 3 RECs</td>
<td>245 GWh</td>
<td>377 GWh</td>
<td>283 GWh</td>
<td>283 GWh</td>
</tr>
<tr>
<td>Pre-June 1, 2010 Category 3 RECs</td>
<td>41 GWh</td>
<td>41 GWh</td>
<td>31 GWh</td>
<td>31 GWh</td>
</tr>
<tr>
<td>Total</td>
<td>10,202 GWh</td>
<td>16,953 GWh</td>
<td>12,048 GWh</td>
<td>11,631 GWh</td>
</tr>
<tr>
<td>Percentage of Long-Term RECs</td>
<td>&gt;99%</td>
<td>&gt;99%</td>
<td>&gt;99%</td>
<td>&gt;99%</td>
</tr>
</tbody>
</table>

Note: Values in this table are subject to change.

Table 2 shows the PCC 0, PCC 1 and PCC 3 RECs, that SMUD expects from currently committed eligible renewable resources. The majority of procurement from contracts/agreements signed after June 1, 2010 are PCC 1, sufficient to exceed the portfolio balance requirements specified in PUC § 399.16 (c) and in the CEC RPS Regulations, Section 3203 (c)-(e) with regards to procured electricity products for compliance with RPS requirements. SMUD intends to retire RECs within 36 months of generation to fully meet the portfolio balance requirements. Figure 1 illustrates SMUD's compliance through 2030 utilizing compliance period generation and banked resources, along with any surplus and additional resource needs.

SBX1-2 permitted POUs to accumulate excess procurement in one compliance period for use in a subsequent compliance period. Under these original excess procurement rules, only RECs from long-term contracts and owned resources could count in the excess procurement calculation. This meant that any RECs from short-term contracts were subtracted out before a POU could determine if it had any excess procurement. These original excess procurement rules will remain in place until the end of Compliance Period 3. SMUD has banked excess procurement from Compliance Periods 1 and 2 for
SB 350 significantly amended the excess procurement rules, allowing a POU to calculate its excess procurement without first subtracting out RECs from short-term contracts. Under these new excess procurement rules, only PCC 1 and PCC 0 RECs may be carried forward as excess procurement. This means that if a POU has excess PCC 2 or PCC 3 RECs, those RECs will not be able to be banked and carried forward. While these new excess procurement rules will become mandatory starting in Compliance Period 4, a POU may use these new excess procurement rules in Compliance Period 3 if the POU meets the 65% long-term procurement requirement specified in PUC § 399.13 (b). SMUD notes that the CEC has not yet updated the CEC RPS Regulations to incorporate the revised treatment of excess procurement enacted in SB 350. However, SMUD's procurement practices and Procurement Plan apply these new excess procurement rules, based on the updated provisions in PUC § 399.13 (a)(4)(B). Pursuant to the additional provisions in SB 350, SMUD elects to apply the new excess procurement provisions starting in

5 See section entitled "Excess Procurement" at the end of this plan for more detail. If the CEC's eventual implementation differs from what SMUD is expecting herein, procurement will be adjusted to reflect the final regulations.
Compliance Period 3. SMUD’s banked excess procurement as of the end of Compliance Period 2 was 3,551,599 RECs. SMUD also had historic carryover that was completely retired and used to meet our Compliance Period 2 obligations. SMUD’s total historic carryover balance, as approved by the CEC, was 2,666,104 RECs.6

SMUD’s 2018 IRP reflects a need for additional renewable procurement starting in Compliance Period 5 (2025 – 2027), which under the IRP is met with additional solar and wind resources. SMUD intends to procure these resources earlier than the need shown in the modelling, to ensure compliance under the increased RPS requirements from SB 100. The IRP analysis and modelling were completed prior to the passage of SB 100, and therefore was based on a 50% RPS by 2030. However, SMUD’s SD 9 goal and this Procurement Plan have been updated to reflect meeting the mandated 60% RPS by 2030. The RPS compliance period targets in Table 2 reflect SMUD’s latest load forecast, as of December 2018. Meeting the State’s current 60% RPS will require SMUD to procure additional resources starting in Compliance Period 5 (2025 – 2027).

SMUD is continuing to pursue additional renewable resource options not included in Table 2 and will continue to evaluate new options to ensure compliance through 2030 and in preparation for compliance beyond 2030. SMUD’s continued efforts to optimize our renewables portfolios and procurement value to our customers, will likely alter the timing of additional resource procurements. SMUD will closely monitor resource availability relative to compliance obligations and will strategically assess when to pursue new resources through solicitations, direct contract with developers and marketers, and building our own. Figure 2 provides an estimate of SMUD’s RPS resource mix through 2030.

Note that all tables and figures are based in part on expected generation through 2030. Actual generation and resource mixes may change as SMUD procures additional resources or resources generate differently than expected. SMUD’s projected compliance may also be affected by the difference between the current forecast retail sales and actual sales through 2030. The market response to SMUD’s investments in electrification, along with the uncertain technological changes in that market may lead to increases or decreases in actual sales from those forecast. In addition, changes in customer demand for our Greenergy and SolarShares programs, and in the resources used to supply those programs, can impact the “net” sales used to calculate SMUD’s RPS obligations.

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6 Historic carryover balance was verified by the CEC as part of the Compliance Period 1 verification and compliance determination process. The verification report was adopted by the CEC in January 2017, and the compliance determination was issued by the CEC’s executive director in June 2017.
Section 3: Procurement Process

The SMUD Board of Directors (Board) establishes all RPS goals and SDs and considers them in short and long-term renewable resource investment decisions. As mentioned above, the SDs include policies for environmental performance, power reliability, carbon emissions reductions, financial objectives, and renewables RD&D and procurement. SMUD’s IRP process helps ensure SMUD achieves its long-term goals and SDs, at a reasonable cost. The IRP process helps develop balanced recommendations that support renewable procurement and development actions and other SMUD SDs.
SMUD owns and operates eligible renewable energy resources, with the resulting electricity products used for RPS compliance. SMUD owns several small hydro, wind, and solar PV facilities, which are listed in Appendix A.

SMUD also procures eligible renewable electricity resources by contract through formal solicitation processes and unsolicited offers. These proposals and offers are evaluated based on benefits, costs and overall value to SMUD’s customer/owners.

Section 4: Historic Carryover

Since the Board approved an RPS goal in 2001, SMUD has actively procured renewable energy. In order to ensure meeting its annual RPS goals and, specifically, the 2010 target, SMUD procured renewable energy exceeding the annual targets established in the CEC RPS Regulations. Per the CEC RPS Regulations, “Historic carryover” means a POU’s procurement that satisfies the following criteria:

1. The procurement is for electricity and the associated renewable energy credit generated in 2004-2010 by any eligible renewable energy resource that met the Commission’s RPS eligibility requirements in effect when the original procurement contract or ownership agreement was executed by the POU.
2. The original contract or ownership agreement was executed by the POU prior to June 1, 2010.
3. The procurement is in excess of the sum of the 2004-2010 annual procurement targets defined in section 3206 (a)(5)(D) and was not applied to the RPS of another state or to a voluntary claim.

Through the CEC’s verification process, SMUD received 2,666,104 RECs of historic carryover from renewable energy consistent with these criteria. SMUD applied all its historic carryover towards the requirements for Compliance Periods 2.

Section 5: Portfolio Content Category 0 Resources

SMUD has some of its current renewable supply procured pursuant to contracts or ownership agreement executed before June 1, 2010 from resources that met the CEC’s eligibility requirements when the resources were procured. Pursuant to PUC § 399.16 (e) as implemented in CEC RPS Regulations, Section 3202 (2), the electricity product from these “grandfathered resources” are counted in full toward the RPS requirements. The CEC reporting forms refer to these resources as PPC “0” resources.

SMUD has modified or extended some of these contracts and as a result has changed the status of the resources from the date of modification from PCC 0 to PCC 1. See Appendix A for a listing of SMUD’s resources.
Section 6: Additional Committed Category Resources

SMUD continued to develop and procure renewable supply after June 1, 2010. SMUD’s Feed-In Tariff (FIT) solicitation in 2009 resulted in nearly 100 MW of solar PV systems that have since been constructed under the FIT. SMUD expanded its Solano Wind Facility in the Rio Vista area in 2012, by completing construction of Solano Phase III, which added 128 MW of capacity. In 2013, SMUD supported the construction of several local dairy digester projects in SMUD’s service territory. Some of SMUD’s dairy digester resources have experienced operational issues and are currently offline.

SMUD also has 3 “grandfathered” common carrier biomethane contracts that are certified to provide renewable biomethane to the Cosumnes Power Plant (CPP), along with a biogas cleanup facility near the Sacramento Regional County Sanitation District’s (SRCSD) wastewater treatment plant that began injecting the cleaned biogas into SMUD’s dedicated pipeline for combustion at CPP in 2011. This SRCSD biogas was previously combusted at SMUD’s Carson power plant, and may still be combusted there when combustion at CPP is infeasible (due to planned or unplanned outages). SMUD is considering maximizing the value of these resources and may use them for purposes other than the RPS (in which case other RPS resources will be procured for compliance as needed).

SMUD has also added, or extended, the following contracts since the Procurement Plan was last updated:

- Patua 1 – 29 MW geothermal & solar PV facility began deliveries at the end of 2013.
- Rancho Seco PV – 10.9 MW solar PV facility started delivery at the end of 2015.
- Kiefer I – SMUD signed a new 8.3 MW contract that allowed SMUD to continue receiving biogas generation from this facility in 2016.
- Kiefer 2 – SMUD signed a new 5.7 MW contract that allowed SMUD to continue receiving biogas generation from this facility in 2016.
- CalEnergy – 30 MW geothermal facility started deliveries of the first 10 MW in 2017, with the remaining 20 MW to be phased in through 2020.
- Great Valley Solar (Recurrent) – 60 MW solar PV facility began delivering to SMUD at the end of 2017.

SMUD currently has some PCC 3 resources through the implementation of the SB-1 solar roof-top incentive program. The amount of PCC 3 generation represented is a fraction of the PCC 3 maximum in the CEC regulations. SMUD has not used PCC 2 resources for RPS compliance in the past, but as mentioned earlier, is actively pursuing strategic procurement of PCC 2 as part of optimizing our overall renewables portfolio and anticipates adding PCC 2 resources in the near future. See Appendix A for a listing of SMUD’s resources.
Section 7: Future Procurement

Since meeting its RPS goal for 2016, SMUD continues to conduct activities to procure renewable energy to meet future obligations. Activities include the following:

- SMUD staff will continue to seek additional renewables resources to address the current RPS resource shortfall forecast in Compliance Period 5 and beyond. As part of SMUD's ongoing efforts to optimize its overall renewables portfolio, including the addition of PCC 2 and PCC 3 resources, when SMUD will need additional resources is expected to shift. SMUD plans to closely monitor any changes to when additional resources are needed and ensure that requests for proposals for new projects are available well in advance of expected shortfalls, or that other means of identifying, negotiating, and contracting for new resources take place. SMUD will consider both in-state and out-of-state resources and will continue to pursue new renewable resources within SMUD's service territory.

- SMUD continually reviews existing renewable contracts set to expire within the next few years to examine the possibility of extending and/or modifying these contracts.

- SMUD is developing a new small hydro facility near the current Slab Creek project that is scheduled to be online by the middle of 2019.


- An agreement to purchase generation from new 13 MW solar PV facility located in SMUD’s service territory, which is expected to begin operations starting in 2020. RECs from this facility are expected to be used for SMUD’s voluntary renewable programs, with any surplus available to meet RPS requirements.

- SMUD is working on developing a new 160 MW solar PV facility located at SMUD’s Rancho Seco site which is expected to be online in 2021. RECs from this facility are expected to be used primarily for SMUD’s voluntary renewable programs, with any surplus available to meet RPS requirements.

- A contract for a new 100 MW solar PV facility located in Southern California that is scheduled to be online in 2022. RECs from this facility may be used for SMUD’s voluntary renewable programs, with any surplus available to meet RPS requirements.

- SMUD is looking into repowering the early phases of our existing Solano Wind facility, in addition to adding a phase 4 to SMUD’s Solano project (potential net addition of up to 77 MW). SMUD’s Board has not made any decisions yet whether to proceed with this project.

- SMUD staff has supported development of new local dairy digester projects and continues to look for opportunities to economically expand this resource in SMUD’s service territory.

- As SMUD’s SolarShares and Greenergy Programs are expected to expand, staff continues to look for solar and renewable projects to supply these programs.
Some of the resources used to serve SMUD’s voluntary renewable programs are listed here since any excess generation not used to serve load from those programs will be used to meet RPS obligations. However, this plan and any requirements or provisions herein, apply to procurement to serve SMUD’s RPS obligations, notwithstanding the provisions of Section 8 of this plan.

These planned activities and other future procurement may also contribute to meeting SMUD’s RPS compliance requirements, along with existing resources and committed projects. In addition, they will add to SMUD’s renewable fuel diversity and contribute toward SMUD’s longer term carbon reduction goals.

Section 8: PUC § 399.30 (c)(4) – Retail Sales Exclusion for Voluntary Green Pricing and Shared Renewable Programs

Starting in Compliance Period 2, and pursuant to PUC § 399.30 (c)(4), the SMUD Board adopts rules permitting SMUD to exclude from its retail sales the kWh generated by an eligible renewable energy resource that is credited to a participating customer pursuant to a voluntary green pricing program, subject to the following additional requirements:

- Any exclusion shall be limited to electricity products that do not meet the portfolio content criteria set forth in PUC § 399.16 (b)(2) or (3).
- Any RECs associated with electricity credited to a participating customer shall not be used for compliance with the RPS procurement requirements and shall be retired on behalf of the participating customer, and shall not be further sold, transferred, or otherwise monetized for any purpose.
- To the extent possible for generation that is excluded from retail sales under this provision, SMUD shall seek to procure those eligible renewable energy resources that are located in reasonable proximity to program participants.

The CEC has not yet implemented PUC § 399.30 (c)(4) in the currently effective CEC RPS Regulations. However, pursuant to PUC § 399.30 (c)(4) SMUD has excluded certain green pricing and shared renewable load served by eligible renewable energy resources (qualifying as PCC 1 or PCC 0) from its total retail sales for purposes of determining RPS compliance obligation in Compliance Period 2. SMUD will continue to apply the exclusions allowed by this provision in future compliance periods for eligible renewable energy resources that are located within a reasonable proximity of program participants, to the extent possible as specified by this section.

Section 9: PUC § 399.13 (b) as referenced by PUC § 399.30 (d)(1) – Long-Term Procurement

Pursuant to PUC § 399.30 (d)(1), the SMUD Board adopts procurement requirements consistent with PUC § 399.13 (b), as follows:
Beginning January 1, 2021, at least 65% of the procurement SMUD counts toward the renewables portfolio standard requirement of each compliance period shall be from its contracts of 10 years or more in duration or in its ownership or ownership agreements for eligible renewable energy resources.

SMUD’s procurement strategy shall ensure that SMUD continues to comply with the provisions of PUC § 399.13 (b), as referenced in PUC § 399.30 (d)(1). SMUD currently procures (or owns) greater than 99% of our RPS resources through long-term contracts (greater than or equal to 10 years), and intends to continue procuring all PCC 1 resources to meet RPS compliance from long-term contracts (with limited exceptions, and ensuring the 65% requirement is met). SMUD may procure PCC 2 and PCC 3 resources through short-term contracts, but will ensure that at least 65% of all RECs applied to meet any compliance period obligation are from long-term contracts.

Furthermore, as provide by PUC § 399.13 (a)(4)(B)(iii), as referenced in PUC § 399.30 (d)(1), SMUD hereby provides notice of its intent to comply with the provision of PUC § 399.13 (b) for the compliance period beginning in January 1, 2017 (Compliance Period 3), and thereby applying the provisions of PUC § 399.13 (a)(4)(B)(i) and (ii) to Compliance Period 3.

Section 10: PUC § 399.13 (a)(4)(B) as referenced in PUC § 399.30 (d)(1) – Excess Procurement

As described in Section 1 above, SB 350 made modifications to the excess procurement requirements in PUC § 399.13 (a)(4)(B), and no longer requires subtraction of short-term contracts in calculating excess procurement. The CEC has not yet implemented these new excess procurement rules into the CEC RPS Regulations. However, SMUD incorporates these new rules into this plan and will use the updated provisions of this section in calculating excess procurement.

As stated in Section 9, SMUD has elected to comply with the long-term procurement requirements of PUC § 399.13 (b) early, and as permitted by PUC § 399.13 (a)(4)(B)(iii), the new excess procurement rules will apply to SMUD starting in Compliance Period 3 (2017 – 2020).

Pursuant to PUC § 399.30 (d)(1), and consistent with SMUD’s election to meet the long-term procurement requirements of PUC § 399.13 (b) early, the SMUD Board adopts procurement requirements consistent with PUC 399.13 (a)(4)(B), as follows:

For Compliance Period 1 and 2, the following rules shall apply:

- SMUD may apply excess procurement in one compliance period to a subsequent compliance period, subject to the following limitations:
• Electricity products that exceed the maximum limit for PCC 3, as specified in PUC § 399.16 (c), must be subtracted from the calculation of excess procurement.

• Electricity products procured under contracts of less than 10 years in duration shall be subtracted from the calculation of excess procurement, unless the electricity product meets the grandfathering requirements of PUC § 399.16 (d).

• SMUD may begin accruing excess procurement as of January 1, 2011.

• Excess procurement meeting these requirements may be applied to any future compliance period and shall not expire.

For Compliance Period 3 and all subsequent compliance periods, the following rules shall apply:

• SMUD may apply excess procurement in one compliance period to a subsequent compliance period, subject to the following limitations:
  • Electricity products that are classified as PCC 2 or PCC 3 may not be counted as excess procurement.
  • Electricity products that exceed the maximum limit for PCC 3, as specified in PUC § 399.16(c), must be subtracted from the calculation of excess procurement.

• Excess procurement meeting these requirements may be applied to any future compliance period and shall not expire.
# Appendix A - SMUD RPS Resources

## Existing Resources

<table>
<thead>
<tr>
<th>Resource</th>
<th>Technology</th>
<th>PCC</th>
<th>Short/Long</th>
<th>Capacity</th>
<th>Termination</th>
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<tr>
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## Future Resources - Contracted/Under Development

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<tr>
<th>Resource</th>
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<th>Capacity</th>
<th>Online</th>
<th>Termination</th>
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## Future Resources - Planned/Under Consideration

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<td>77</td>
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<td>Post 2030</td>
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</tbody>
</table>

# These facilities are currently offline.
* These resources will be used primarily to serve load from SMUD's SolarShares programs and not available for RPS compliance needs. However, any excess generation not needed to serve SolarShares loads may be applied to SMUD's RPS compliance needs.
** Generation from the FIT resources will be used to serve SMUD's voluntary programs on occasion as needed (i.e. unexpected fluctuations in loads, delay in solar/renewable resource development, etc.)
*** The NTUA agreement specifically identifies the use of generation from this resource may be used to meet RPS requirements or to serve load from our voluntary renewable programs (SolarShares, Greenergy).

All RECs from these facilities are tracked in WREGIS and retired into the appropriate retirement accounts (compliance or voluntary program) to ensure no double counting between programs occurs.