Exhibit to
Agenda Item #1

Board Strategic Development Committee and Special SMUD Board of Directors Meeting
Tuesday, August 10, 2020, scheduled to begin at 5:30 p.m.
Virtual Meeting (online)

Public comment may be submitted via e-mail to PublicComment@smud.org.
Long History of Load Flexibility at SMUD

- 1970's: Began Peak Corps Air Conditioning Load Management (ACLM)
- 1990's: Energy Conservation Power Plant
- 2009: Smart Sacramento (Department of Energy Smart Grid Grant Project)
- 2012: Smart Pricing Options Pilot
- 2017: Board Adopted 9 MW Energy Storage Procurement Target (Met in 2020)
- 2017: Time of Day Rates for all Customers

Support for the 2030 Zero Carbon Plan

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Strategic Approach

Load Shaping

- Programs, technology and customer education that improve everyday energy use.
- Targeted load reduction to support the grid on high demand days such as during a heat wave.
- Highly responsive solutions that support the integration of additional intermittent renewable energy supplies such as wind and solar.

Plan for Seasonal Variation

Respond to Real Time Conditions
Load Flexibility Spectrum

Behavioral Rates and DR | Automated DR and Price Signals | Virtual Power Plants (VPP) | Community Solar and Storage

Accessibility | Control and Precision

Presented June 16th

Resource Stack

Load Modification

Supply Dispatch

August 10, 2021 Board Strategic Development Committee and Special SMUD Board of Directors Meeting

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The Zero Carbon Plan Relies on Load Flexibility

Figure 3. Capacity and energy of resources in the SMUD portfolio (current data)


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Recap of Time-Of-Day Impact

With TOD, Customers moved the system peak from 5-6pm to 4-5pm, plus also reduced the peak

98% of Customers Are on Time-of-Day Rates

130 MW of Residential Peak Load Reduction

5 to 8 p.m.
## Load Flexibility Offerings and Initiatives

<table>
<thead>
<tr>
<th>Name</th>
<th>Primary Technology</th>
<th>Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral Demand Response</td>
<td>Customer Notification</td>
<td>2</td>
</tr>
<tr>
<td>Time of Day Rates</td>
<td>Residential Loads</td>
<td>130</td>
</tr>
<tr>
<td>PowerMinder</td>
<td>Water Heater</td>
<td>0.50</td>
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<tr>
<td>Smart Energy Optimizer</td>
<td>Energy Storage</td>
<td>0.75</td>
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<tr>
<td>Curtailment Agreement</td>
<td>Industrial Plant</td>
<td>6.5</td>
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<tr>
<td>PowerDirect</td>
<td>Commercial Lighting, HVAC</td>
<td>12.8</td>
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<tr>
<td>Temperature Dependent Rate</td>
<td>Industrial Plant</td>
<td>15.5</td>
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<tr>
<td>Storage Virtual Power Plant</td>
<td>Battery</td>
<td>25</td>
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<tr>
<td>Multi-DER</td>
<td>Thermostat, Battery, EV</td>
<td>30+</td>
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<tr>
<td>Peak Corps</td>
<td>Air Conditioner</td>
<td>59</td>
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</tbody>
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Customers Can Provide Reliable, Scalable, Load Flexibility
Questions?