Exhibit to Agenda Item #1b
Energy Operations 2021 Proposed Budget

Board Finance & Audit Committee and Special SMUD Board of Directors Meeting
2021 Proposed Budget
November 11, 2020, scheduled to begin at 5:30 p.m.
Virtual Meeting (online)
Energy Operations
2021 Proposed Budget & Initiatives

Lora Anguay
Interim Chief Grid Strategy & Operations Officer
## Business Segments & Functions

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<thead>
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<tbody>
<tr>
<td>Distribution System Planning</td>
<td>Energy Management System</td>
<td>Energy Trading</td>
<td>Climate Change</td>
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<td>System Protection and Control</td>
<td>Power Operations Engineering</td>
<td>Power / Gas Contracts &amp; Reserves</td>
<td>Renewable &amp; Distributed Generation</td>
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<td>Optimize Energy Operations Assets</td>
<td>Transportation Electrification</td>
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November 11, 2020

Board Finance & Audit Committee and Special SMUD Board of Directors Meeting – 2021 Proposed Budget
2021 Proposed Budget by Theme

Keeping the Lights On
Optimization & Operational Excellence
Risk Mitigation
Embracing the Future
Allocated Costs

$144.5
$54.9
$31.6
$5.1
$3.0
$-

$50.0
$40
$60
$80
$100
$120
$140

$140
$120
$100
$80
$60
$40
$20
$-

November 11, 2020
Board Finance & Audit Committee and Special SMUD Board of Directors Meeting – 2021 Proposed Budget
Keeping the Lights On

- Reliability and Compliance
  - Load serving capability
    - Complete upgrade of Hurley – Procter transmission line
  - Additional distribution capacity
    - Finalize site selection for future substation to serve the Railyards and surrounding area development
  - Addition of remote monitoring & control at distribution substations by leveraging infrastructure replacement programs
  - Regulatory compliance with all applicable standards
Market Optimization

- Balancing Authority of Northern California’s (BANC) implementation of California Independent System Operator’s (CAISO) Energy Imbalance Market (EIM) – Phase II
- Extended Day Ahead Market (EDAM) Stakeholder Process
- Renewable Portfolio Standard (RPS) Optimization
Risk Mitigation

- Implementation of wildfire mitigation measures
  SD-4, 17

- Evaluate risks associated with the 2030 Zero Carbon Plan
  SD-2, 4
Embracing the Future

▪ Foundational technology for the future
  ▪ Advanced Distribution Management System (ADMS)
  ▪ Distributed Energy Resource Management System (DERMS)

▪ Pursue new net revenue opportunities
  ▪ Leverage existing partnerships and new opportunities
    ▪ Open Systems International (OSI) ADMS/DERMS
  ▪ Operationalize the California Mobility Center (CMC)
    ▪ Launch first pilots with Zeus and Amply
Embracing the Future

- Implementation of Board adopted 2040 Energy Plan and development of new 2030 Zero Carbon Plan
  - Implement new and expanded programs to increase building and transportation electrification
  - Implementation of the integrated Distribution Resource Plan (iDRP)
  - Continue process to add new local solar and batteries
  - Adopt the new 2030 Zero Carbon Plan in March 2021
Embracing the Future

- **Energy Storage**
  - Build 4MW battery storage system at Hedge
  - Investigate additional distributed battery storage opportunities

- **Building Electrification**
  - Expand Residential/Commercial Building Electrification offerings
  - Research load flexibility & technologies to mitigate grid and customer panel impacts from electrification

SD-2, 4, 5, 7, 9, 10
Embracing the Future

- Transportation Electrification
  - Support Medium & Heavy Duty Electrification
  - Low-Income/Disadvantaged Communities (DAC) Sustainability Projects
  - Electric Vehicle (EV) Education & Workforce Development
  - Managed EV Charging Research

- Begin additional research projects and pilots identified in 2030 Zero Carbon Plan
  - Seek grant opportunities for funding

SD-2, 4, 5, 7, 9, 10
2021 Proposed Budget

Costs:
- Keeping the Lights On
- Optimization/Operational Excellence
- Risk Mitigation
- Embracing the Future
- Allocated Costs

2020 Forecast
- O&M: $83.3
- Public Good: $21.8
- Capital: $4.9

2020 Budget
- O&M: $109.2
- Public Good: $24.3
- Capital: $9.1

2021 Proposed
- O&M: $96.7
- Public Good: $39.5
- Capital: $8.4

Resources:
- November 11, 2020
- Board Finance & Audit Committee and Special SMUD Board of Directors Meeting – 2021 Proposed Budget
Transmission Agency of Northern California (TANC)

- Created in 1984 as joint powers agency.
- Project Manager and majority owner (87%) of California Oregon Transmission Project (COTP – 500KV transmission line from Captain Jack to Tracy).
- Membership consists of 15 Northern California Public Agencies.
  - SMUD is 38.5% participant in TANC, its share increasing due to the layoff with Santa Clara and Northern California Power Agency (NCPA) member agencies that was effective July 1, 2014.
- 2021 TANC COTP/SOTP Budget = $43.8M / SMUD share = $16.7M (2020 Budget = $47.5M / SMUD share = $18.1M).
  - COTP O&M increase and TANC Administration cost decreases (no AGM role)
    - SMUD share of litigation costs reduced due to new agreement (PA-6)
    - Debt Service costs decreased due to bond payoff
    - Included as part of the SMUD Power Budget
Balancing Agency of Northern California (BANC)

- Created in May 2009 as joint powers agency.

- Membership includes: SMUD, Modesto Irrigation District (MID), City of Redding, City of Roseville, City of Shasta Lake and Trinity PUD.

- Provide Balancing Authority (BA) functions for members.

- BANC went operational in May 2011.

- 2021 “Base” BANC Budget = $2.1M / SMUD share = $1.5M (2020 Budget = $2.3M / SMUD share = $1.6M) (Does not include EIM/EDAM costs)
  - Included in the Grid Operations budget