Exhibit to Agenda Item #1c

Energy Delivery 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 Delivery
2021 Proposed Budget & Initiatives

Frankie McDermott
Chief Energy Delivery Officer
### Business Segments & Functions

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November 11, 2020
2021 Proposed Budget by Theme

- **Keeping the Lights On**
  - $332.3M

- **Optimization/Operational Excellence**
  - $44.4M

- **Risk Mitigation**
  - $27.0M

- **Embracing the Future**
  - $497.7M

Total Allocated Costs: $1,215.4M
Keeping the Lights On

Major shifts in work continued in 2020 (SD-2, 4)

- Regulatory Requirements & Changes are Driving Additional Work and Cost (e.g. Wildfire Mitigation, Vegetation Management and UARP Recreation License Implementation)
- Despite COVID-19, Core Work Continues to Grow
- Loss of Experience / High Attrition Rates Due to Tight Labor Market for Line and Vegetation Management Crews
- Dependency on Outside Services Drives Up Cost
- Condition Based Corrective Maintenance, Mechanical Discovery, and Aging Infrastructure Needs

| 2,550 Subdivision Lots | 1,020 Poles Replaced |
| 199 Commercial Projects | 360K Feet Cable Replacement |
| 96,800 Trees (Veg Mgmt) | 3,675 Solar Residential Designs |

New/Upgraded Substations

- 2012-2016: 2 Transmission Substations, 19 Distribution Substations
- 2017-2023: 6 New/Upgraded Substations
Keeping the Lights On

We’ve kept the lights on during the COVID-19 pandemic with a strong commitment to employee and community safety (SD-4, 6, 8)

- Implementation of COVID-19 Safety Protocols and Measures
- Development of New Communication Processes & Procedures to Allow for Social Distance Requirements and Remote Work
- No Work Stoppages: Work Activities that Support Local Agency Projects, Public Safety & Compliance Projects, and our Local Economy were not Impacted
- Our Highly Engaged Workforce Were Key to Keeping the Lights On

Electrical Work at the South Fork Powerhouse
Keeping the Lights On

Maintaining a safe and reliable energy grid, while also addressing future capacity needs, hydro license requirements, aging infrastructure, and recent legislation are the primary spending drivers in 2021 (SD-4, 9, 17)

- Grid Substation Improvements & New Capacity
  - Substations E, G, and H
- Aging Infrastructure
  - Distribution Substation Replacements
  - Transmission Substation Circuit Breakers
- Transition of the Chili Bar Hydro Facility to SMUD
- Cable & Pole Replacement
- Upper American River Project (UARP) License Implementation Projects
- Thermal Plant Maintenance & Overhaul (Procter & Gamble)
- Vegetation Management

Substation E: Before and After Construction
Despite the increase in core work and other fiscal challenges, we continue to optimize our processes and reduce cost (SD-2)

- Decrease in Budget Spending Level:
  - Energy Delivery O&M + Capital Year-Over-Year Budget Decrease of ($6.89M)
  - Reductions in Spending Across all Planning Themes Except for 2040 Energy Plan Projects and Vegetation Management (Mandated Tree Trimmer Wage Increases)
Optimization & Operational Excellence

Examples of Energy Delivery Cost Savings:
Business Process Optimization & Unit Cost Improvements (SD-2)

- GO-165 Corrective Maintenance
- Cable Replacement (including emergency)
- Under Ground Fault Repairs
- Pole Replacement
- Annual Line Patrol
- Detailed Line Inspections
- Field Force Training Process Efficiency gains
- Equipment Efficiency improvements at Cosumnes Power Plant (e.g. ECOMAX, TRU-CURVE, Combustion Hardware)
- Aux Boiler Operations (SCA – Procter Co-Gen, CVFA – Carson Co-Gen)
- Solano 2 Wind Turbine Efficiency
- Advanced Gas Path & DLN 2.6+ upgrades at Cosumnes Power Plant (CPP)

$45.6M Committed Savings 2017 to 2021
We’re also increasing our power plant efficiency and safety through upgrades and improvements (SD-4, 6)

- **Power Plant Improvements:**
  - Control Upgrades at Multiple Hydro Facilities
  - Hydro: Camino 1 Rehabilitation
  - Upper American River Project (UARP) Dissolved Gas Analyzers & Bushing Monitoring
Our Workforce Optimization Project is improving process inefficiencies, reducing costs, and improving the quality of our work (SD-2, 4, 5, 8)

Workforce Optimization Accomplishments to Date:

- Detailed Line Inspections (DLI), Annual Line Patrols (ALP), Pole Replacement Visualization, MVP Development, Click (work groups completed)
- Use Case 1: Line Inspectors (Rule 15, 16, Subdivision)
- Use Case 2: Gas Pipeline
- Use Case 3: Substation Maintenance and Station Recorders
- Enhancements for Use Case 1, 2 & 3
- WFO Power Business Intelligence Reporting Dashboard

Substation Electrical Foreman Using Click Mobile While in the Field
Risk Mitigation

We’ve implemented wildfire mitigation programs that are reducing risk and driving down SMUD wildfire insurance costs (SD-4, 6, 17)

- Upper American River Project (UARP) Transmission Wildfire Mitigation Program

- State Responsibility Area (SRA) Hardening

- Upper American River Project (UARP) 4kV Undergrounding
Embracing the Future

We continue implementing projects in support of the 2040 Energy Plan (SD-2, 4, 7, 9)

- Renewable Project Development Such as Solano Wind and Rancho Seco Photovoltaic Solar (PV2)

- Execution of 2040 Energy Plan Projects:
  - New Solar Projects and Estimated Capacity:
    - McClellan – 17MW
    - Laguna – 50MW
    - Placer (Country Acres) – 310MW
  - Hedge Battery Storage
Embracing the Future

The Commercial Development segment continues to grow (SD-4, 5, 13)

- Commercial Development has 199 Active Projects Including: Kaiser Campus Downtown, MLS Soccer Stadium, and Aggie Square
- Rental Market Continues to be Strong Across the Service Territory
- Expected Growth in Retail Market Slowed Down Due to COVID
- COVID has Accelerated Future Year Projects into the Current Pipeline
- Remote Workers from the Bay Area and Low Interest Rates are Driving Migration into the Sacramento Region

**Challenges:**
- Supply Side Challenges - Lack or Delay of Materials
- Uncertainty Around COVID Regulations / Continued Shutdowns
- Concerns for Safety and Homelessness Downtown
- Economic Instability from Shutdowns
Our commitment to diversity, equity, and inclusion continues with additional career pathways to reach all parts of our community (SD-8)

- Powering Careers Initiative:
  - Started in 2020
  - Partnership with the Greater Sacramento Urban League
  - Six Week Curriculum that Provides Hands-On Trade Skills and Commercial Driver Training

- Changes in Recruitment Strategy is Creating Additional Opportunities Through the Increased Use of Entry Level Positions