Exhibit to Agenda Item #4
Accept the monitoring report for Strategic Direction SD-10, Innovation.

Board Policy Committee and Special SMUD Board of Directors Meeting
Wednesday, September 9, 2020, scheduled to begin at 5:30 p.m.
Virtual Meeting (online)
Delivering innovative solutions, products and services to our customers is a core value. To assure our long-term competitiveness, SMUD shall invest in research and development projects that support its core and key values and integrate emerging technologies and new business models into SMUD’s customer offerings in a way that balances risk and opportunity and benefits our customers and community.
Energy Storage

- Procured 7.4 MW of energy storage toward AB 2514 CEC commitment
- Launched Smart Energy Optimizer residential battery program, which aims to shift battery use with grid needs
- Installed 60 kW of second-life Nissan Leaf car batteries as a stationary battery system integrated with 175 kW DCFC and PV
- Installed residential battery storage unit at Power Academy to train SMUD meter technicians
Electric Transportation

Public and Campus EV Charging
- Installed public 175 kW DCFC at SMUD’s solar port
- Installed 46 Level 2 EVSE and conduit for 68 spaces at SMUD HQ campus
- Distributed $230K in DCFC incentives to Shell Station and the City of Elk Grove
- MOBI units provided power at ECOS Earth Day, Cal Expo, SACOG and other community events

Established CMC Partnerships
- Working with Amply Power to deploy multi-charging depot
- Demonstrating Zeus’ medium-duty truck in SMUD fleet
Generation

• CEC approved Neighborhood SolarShares

• CARB certified three Low Carbon Fuel Standard emission pathways which produce electricity to charge EVs

• Enhanced WattPlan Grid by building a residential solar plus battery storage module

• Supported repowering the previously non-operational New Hope Dairy digester
Load Flexibility

- Enrolled 108 customers in PowerMinder, a controllable heat pump water heater pilot
- Integrated 90kW battery with existing energy management system at the Hyatt to assess performance, integration and grid impacts

Climate Change

- Implemented Natural Refrigerant Incentive Program
- Conducted technical assessment of potential ecosystem service integration at Rancho Seco II Solar project
- Published SMUD’s research and operational activities supporting pollinators
Energy Efficiency & Electric Buildings

- Tested split-system CO$_2$ heat pump water heaters in fourplexes for performance and cost

- Developed heat pump water heater tool to support optimal design for multi-family and commercial applications

- Evaluated effects of Circadian lighting for children with Autism Spectrum Disorder
Improving Reliability with 360 View of the Grid

• Distributed Energy Resource Management System (DERMS)
• Advanced Distribution Management System (ADMS)

Doing Business with SMUD

• Commercial Building Electrification Program
• Advanced Homes Workflow Automation & Contractor Network tool
• Chatbot
• Realwear

SD-10 Innovation: Request the Board accept the SD-10 Monitoring Report.