Embracing and Thriving in a Distributed Energy Future

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The Big Picture

Challenges

- Flat or declining load growth
- Uncertainty regarding future business model and revenue generation
- Advancements in emerging technologies that are becoming exceedingly more price competitive
- Increasing regulatory pressure for a distributed, efficient energy future
- Rising customer expectations and competition threatening customer relationship

Opportunities

- Building and transportation electrification that grow load while decarbonizing the energy system
- Business Model innovation to create new revenue opportunities
- New cost-effective technologies to enable the transactive grid of the future
- Use regulatory support for DERs to improve grid reliability at lower cost
- Strengthen our customer relationships by advising and providing them with intelligent solutions



DER Strategic Outcomes

The DER Strategy paves the way forward for SMUD to successfully deliver future value to our customers and community, in alignment with our corporate values and business model.

Be Preferred Energy Services Provider/Advisor Provide
Outstanding
Reliability &
Power Quality

Reduce Pressure on Rates

Contribute to Regional Carbon Reduction Extends
Access for All
Customers



Engages customers with new products, services, and advice to help them reach their energy goals



Promotes grid reliability and power quality through the strategic deployment of DERs



Creates new value streams while reducing commodity costs and long-term grid investments



Delivers SMUD's share of a low carbon energy future



Enables all customers to share in the value that more DERs on the grid would yield



Focal Points for DER Strategy







SolarShares for Homes & Businesses

2 programs launched, 3 offerings under development

Scaling from 11 MW in 2016 to goal of 100 MW by 2020

Free fuel for 2 years Promotion

Workplace & Multifamily Charger Incentive offerings

DCFC 'Safety Net' Network Incentives Fuel Switching Pilots for:

Heat Pump Water Heaters

All Electric New Homes, and

Commercial Building retrofits

Pay for Performance Efficiency Programs



Integrating with the Grid



Distribution Management System (DMS) & Distributed Energy Resource Management System (DERMS)

 Operations Visibility, forecasting, and dispatch of DERs to enhance grid reliability under high levels of DER adoption



DER Planning Tool – Customer Adoption Model

- Forecasted Customer-level adoption of combinations of DERS under various potential future rate structures
- Allow tighter planning for optimizing capital investments and getting rate structures and location-based incentives right

