

Exhibit to Agenda Item #2

Board Policy Committee Meeting and Special SMUD Board of Directors Meeting
Wednesday, November 14, 2018, Scheduled to begin at 5:30 p.m.
Customer Service Center, Rubicon Room

SD-17 Enterprise Risk Management (ERM)

Effectively balancing and managing risk to further SMUD's policies and business goals is a core value of SMUD.

Therefore:

SMUD will implement and maintain an integrated enterprise risk management process that identifies, assesses, prudently manages and mitigates a variety of risks facing SMUD, including financial, supply, operational, physical security, climate change, legal, legislative and regulatory, and reputational risk.

SMUD is in compliance with SD-17, Enterprise Risk Management Policy

ERM Approach and Methodology

Approach

- Governance (Board Strategic Direction)
- Oversight & Accountability (EROC)
- Consistent Definitions and Language (ERM Framework)
- Integration of ERM with Key Business Processes

Methodology

- Enterprise Risk Analysis (Focused on top risks)
- Monthly EROC Meetings
- Annual and Periodic Review of Enterprise Risk Portfolio







2017-2018 Achievements

ERM Program










- Assessed risk for new business developments (SD-19)
- Conducted fire risk study
- Developed SMUD's Local Hazard Mitigation Plan
- Reviewed and integrated 15 audit reports into risk assessments
- Advanced best practices and business unit application

SD-17 Related Activities and Results

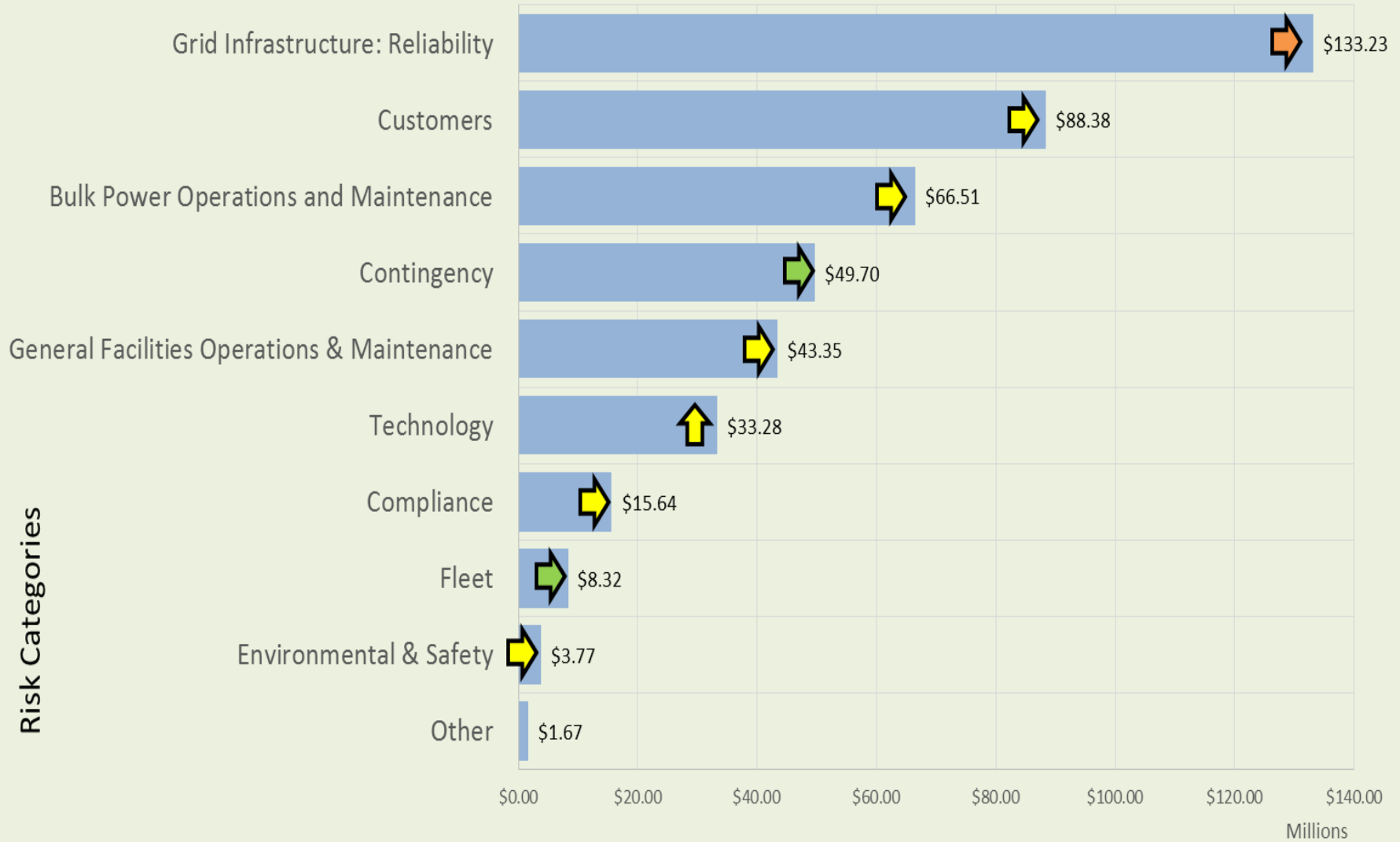
Since the 2017 Annual Monitoring Report, Staff has reduced the residual risk profile of the following:

Category	Enterprise Risk	Changed From	Reduced To
External Risk	FERC Order 1000		
	RPS Eligibility Related Issues		
	Limit on Muni Bond Tax Exemption		

SD-17 Benchmarking SMUD's Practices

NC State & Protiviti Top Risks	SMUD's Current Risk Exposure
Regulatory changes and heightened regulatory scrutiny	
Rapid speed of disruptive innovations	
Resistance to change may restrict necessary adjustments to the business model and core operations	
Succession planning and talent management	
Organization's culture may not sufficiently encourage timely identification and escalation of risk issues	
Cyber security and privacy	
Limited opportunities for growth through customer acquisition or enhancement	
Changing customer expectations	
Growth through joint ventures and other partnerships may be difficult to identify and implement	
Economic conditions may restrict growth opportunities	

Risk used as a Factor in 2019 Capital Dollars Expenditures



Looking Forward

Financial Risks

- Restructure rates to better reflect the cost of service

Operational Risks

- Enhance SMUD's business continuity planning
- Improve safety performance to meet SD-6 Safety DART goal of 1.4 by 2020
- Attract and retain skilled and innovative workforce
- Continue to make progress in strengthening aging infrastructures
- Improve upon current physical security and public safety practices
- Continue cyber security and privacy awareness and compliance activities
- Manage the transition of customers to Time-of Day rates
- Prepare for WECC audit
- Enhance data quality and integrity for better business decisions and customer service

Strategic Risks

- Provide programs and services to reflect changing customer expectations
- Develop, evaluate, and deploy technology and innovative business models to maximize shared value for the utility and the customer
- Restructure rates to better reflect the cost of service
- Create a more agile workforce through mobilization

External Risks

- Continue to positively influence state and federal legislative and regulatory issues

2019 ERM Focus on Top Risks

Risk Title*		Risk Description	Risk Trend	Current Residual Risk	Target Residual Risk
Financial Risk	Budget planning & rate setting	The need to balance increasing costs of business and declining revenue impacts	↑	●	●
Operational Risk	Cyber & Privacy	Protect, detect and prevent cyber and/or data breach	↑	●	●
	Strategic Workforce Agility	SMUD's ability to hire and retain human talent	↑	●	●
External Risk	Innovation	SMUD's agility in responding to new and emerging innovative solutions impact its business model	↑	●	●
	Regulatory	Regulatory changes and heightened regulatory scrutiny	↑	●	●
	Hazards	Natural hazards such as wildfire could increase liability and mitigation costs	↑	●	●

Requested Actions

- Accept the monitoring report for SD-17 Enterprise Risk Management (ERM)
- Discuss, with possible amendment, SD-17, ERM

SD-17 ERM Portfolio: Residual Business Critical Risk Exposure: November 14, 2018

Financial Risks	Operational Risks		Strategic Risks
Budget Planning & Rate Setting	OP: People	Grid Infrastructure: Reliability	Business Model
Financing	Employee Safety	T&D Line Assets	Technology/Competition Driven
Accounting/Financial Report	Ethics/Integrity	<i>Poles</i>	<i>Demand Response</i>
Capital Availability/Cashflow	Illegal Acts/Fraud	<i>Secondary Network</i>	Distributed Generation
Liquidity	Strategic Workforce Agility	<i>Underground Cables</i>	<i>Distributed Storage</i>
Load Variation	OP: Systems and IT	T&D Substation Assets	Electrification of Transport Sector
Retail Load	Applications Support	Telecommunications Assets	Energy Efficiency
Customer owned generation	Cyber Security	New Services & Local Agency Projects	Innovation
Price Volatility	Privacy	Labor: Business Disruption	Changing Customer Expectations
Commodity	Information Management	Legal Risk	Competitive Workforce Total Rewards
Hydro Generation	Data Governance	Operational Excellence	Corporate Governance
Interest Rate	Data Availability	Payroll Disruption	Board Driven
Project Execution	Enterprise-Wide Documentation	Pricing & Rate Design Implementation	GM Driven
Wholesale Credit Default	Grid Operational Systems & Support	EAPR Implementation Process	Enterprise Grant Integration, Execution and Alignment
	Technology Systems Infrastructure	TOD Implementation Process	Sustainable Energy
	OP: Process	Public Safety	Carbon Emission/AB32
	Balancing Authority Operations	Regulatory Compliance Practices	Load Serving Capability
	Bulk Power Op & Maintenance	CPUC General Orders	<i>Renewable Portfolio Standard</i>
	Gas & Gas Pipeline Assets	Environmental Protection	External Risks
	Power Supply Assets	Hydro License	Economy - Business Agility
	Transmission Assets	NERC/FERC Standards	Legislative & Regulatory
	Business Continuity	Nuclear Waste	Federal
	Communications	Revenue Collection Ops & Maintenance	Dodd-Frank Implementation
	Internal Communications/Alignment	Meter to Cash	Limits on Muni Bond Tax Exemption
	<i>Media & Community Relations</i>	Supply Chain	Local Gov't
	Customer Serv Operations: Business Disruption	Material Lifecycle	State
	General Facilities Op & Maintenance		Bay Delta Flow Issues
	Customer Service Center		CEC: Intergrated Resource Planning
	Energy Management Center		Post 2020 Carbon Markets
Legend: by Risk Heat Zone	Existing Corporation Yard		Natural / Other Hazards
Extremely High Residual Risk	Headquarter Building		Wildfire
High Residual Risk	Power Control Center		Climate Change
Medium Residual Risk	Physical Asset Security		
Low Residual Risk			
Extremely Low Residual Risk			
Recent Changes denoted in Purple			

SMUD's Risk & Opportunity Heat Map

