



November 1, 2019
GM 19-263

BOARD OF DIRECTORS

2020 BUDGET

Dear Board Members:

I am pleased to submit SMUD's 2020 Budget proposal. It provides funding for operations and maintenance (O&M) and capital programs needed to successfully meet all the Board's Strategic Directions over the coming year and ensures we will continue to do so in the future.

As a community-owned, not-for-profit utility, we look holistically at our budget, programs, projects, and initiative each year to make sure we deliver value to our customers and community in a way that's as fair and equitable as possible to the 1.5 million people we serve.

As we approach the start of a new decade, we recognize 2020 will be an important year for SMUD, our customers, and community as we initiate new programs and services to achieve our aggressive new carbon reduction goals and continue our conversations with customers and our community related to Net Energy Metering (NEM). In 2019, we released our first-ever Wildfire Mitigation Plan, which formalizes our continued mitigation efforts to reduce risk related to wildfires and lays out the framework for public outreach. In 2020, we will plan the implementation of our multi-year rollout of commercial rate restructuring, which allows us to more closely align our revenue with our costs. Together, these changes help position SMUD to successfully navigate the significant changes facing our industry. We expect the pace of change will continue to increase, making the need to optimize our approaches, right-size mitigation efforts, ensure holistic views and collaborate across the organization more important than ever – all in our effort to maximize the value SMUD brings to our community.

The 2020 budget balances constrained labor and financial resources due to flat energy sales per customer and investments needed to support our carbon reduction goals, wildfire mitigation, technology, and infrastructure investments with our commitment to deliver on our purpose to enhance the quality of life for our customers and community. The Budget includes several initiatives to maximize community impact by leveraging our strategic partnerships, including our Sustainable Communities initiative, the California Mobility Center, our support for the Powerhouse Science Center, and the new child development center. By combining efforts with key community partners, we'll maximize community impact, helping to ensure every dollar we spend delivers value.

Arlen Orchard, Chief Executive Officer & General Manager

In 2020, we maintain our focus on optimization and operational excellence, building on progress we've made to streamline our operations and reduce expected costs to help offset necessary expenditures that support key initiatives and operations. It's one of our top priorities to remain focused on getting the maximum value from every dollar we spend.

The proposed 2020 Budget is \$1.8 billion, which is \$96 million higher than the 2019 Budget, primarily due to higher commodity and O&M expenditures. The 2020 Budget funds a variety of items including investments and programs to support our Integrated Resource Plan (IRP), grid modernization, regulatory compliance requirements for programs like Wildfire and Cybersecurity, and investments to deliver our Sustainable Communities Initiative.

Major capital projects for 2020 include the continued rebuilding of Stations E and G, the White Rock Tunnel Bolt Replacement, starting the expansion of the Solano Wind Farm, and continued work at Union Valley in support of our hydro license. The 2020 Budget includes funding for new and continuing technology projects, such as the Advanced Distribution Management System (ADMS) to provide increased visibility into our distributed energy resources, Workforce Optimization for Energy Delivery to maximize the efficiency of the field crews and field work, and Talent Transformation for Human Resources, Diversity & Inclusion to manage hiring, onboarding and talent management process holistically through one technology platform. This Budget contains funding for corporate contingency and reserve, which aligns with prudent fiscal management practices and is designated for items with the potential of occurring in 2020 but without enough definition to be included within a business unit's budget. In 2020, corporate contingency includes funds for inventory and land purchases, system enhancements for SD-14, additional development projects, and potential new contracts for Community Energy Services.

The O&M budget is increasing primarily due to increases for projects and initiatives to support our IRP carbon reduction goals, including spending on electric transportation incentives and building electrification programs. As the Board knows, electrification is a critical part of our newly-adopted IRP, and an important part of our strategy to continue to provide a leadership role in the region's transformation to a low-carbon future. The budget also funds customer outreach and education for these items. Heightened focus on wildfire mitigation efforts and higher insurance premiums are also contributing to the increased O&M budget.

The 2020 Budget authorizes 19 new full-time positions. In addition to a full-time workforce, the Budget reflects increased funding for SMUD's flexible workforce strategy in support of temporary and part-time work, plus increases in funding for our future workforce pipeline needs with student positions. Most of the new full-time positions are in support of technology programs, some converting contractors to employees to be more cost-effective and others to support the new suite of technology applications and in some cases new skill sets, as our reliance on technology grows. The temporary positions are in Community Energy Services in support of Community Choice Aggregation (CCA) clients. The positions for CCA work are all limited-term as we continue to right size the staffing level for this new line of business.

To fulfill the Strategic Directions you've set for us, especially during this time of industry transformation, strong financial management is imperative. The previously approved rate increases of 3.75% in January 2020 and 3.00% in October 2020 and our year-end cash balances will be sufficient to cover a portion of our planned capital investments; new borrowing in 2020 will fund the remaining capital expenditures.

We expect a modest increase in our customer count in 2020, and a slight decrease in our kWh sales of electricity. We recognize the potential for new growth related to building electrification, electric vehicle adoption, and mixed-use commercial/residential sales growth, but have maintained conservative sales estimates as these markets are complex, and we don't expect to see a material increase until after 2025. We'll continue to monitor these and other factors, including local construction and employment, and manage their impact on our budget and operations.

Budget Breakdown

Here is a brief overview of the 2020 Budget compared to the 2019 Budget:

	2019 (\$M)	2020 (\$M)	Change (\$M)
Commodity	\$448.1	\$474.2	\$26.1
Public Goods	61.3	69.1	7.8
All Other O&M	571.7	614.8	43.1
Sub Total	\$1,081.1	\$1,158.1	\$77.0
Debt Service	186.1	191.9	5.8
Capital and Reserve	443.9	456.6	12.8
Total Authorization	\$1,711.0	\$1,806.5	\$95.5

Totals may reflect minor rounding differences

The 2020 Budget is projecting net income of \$49 million and a fixed charge ratio of 1.69.

The following sections provide details on the specific initiatives and programs funded in the 2020 Budget, grouped by Strategic Direction (SD).

Competitive Rates (SD-2)

The 2020 Budget reflects the phased-in rate increase approach the Board adopted in June 2019. Energy supply commodity costs make up almost half of our total O&M budget. Staff has locked in prices for most of our expected energy requirements for 2020 to ensure cost and rate stability for customers. Only a small portion of budgeted purchases are exposed to short-term market price fluctuations.

We'll enter 2020 with approximately \$82 million in the Hydro Rate Stabilization Fund (HRSF) and \$41 million in the Rate Stabilization Fund (RSF). A transfer of \$8.4 million to the RSF is expected in December 2019 because of higher energy deliveries from Western Area Power Administration (WAPA) from the high hydro generation year. These reserve funds help us

absorb higher energy costs when hydroelectric production is down and serve as a buffer against unexpected financial developments.

In 2020, a large effort will be focused on understanding the value of solar and solar-plus-storage as we seek to develop a NEM successor rate. Additionally, we will seek extensive community input to understand how our customers want us to spend our dollars and where and how they want to invest in achieving a low- carbon future. This work will be reflected in a recommendation on how future rates will help SMUD achieve our low-carbon future through important cost signals as we work to make sure that each dollar we spend achieves the greatest progress toward our goals.

Investments to support our carbon reduction goals, wildfire mitigation, technology, and infrastructure coupled with flat per customer energy usage are putting upward pressure on rates. At the same time, we know our customers expect us to keep our rates low while continuing to deliver safe, reliable, and environmentally responsible power and the products and services they value. Operational Excellence will continue to be a focus across SMUD in 2020 and beyond to free up dollars to minimize rate increases. In 2020, there are many initiatives focused on continuing to make our processes as efficient as possible.

2020 Budget investments and improvements to create efficiencies include:

- **The Energy Trading Dashboard** was created by the Business Intelligence & Analytics team to deliver new datasets, reports, and a dashboard interface that provides easier, faster access to disparate data from multiple sources. This new solution reduces manual data collection efforts and replaces a weekly paper report. Additional technology solutions to further connect and analyze data for the commodity risk management group are funded in the 2020 budget. The suite of solutions are anticipated to bring new insights into the commodity budget.
- **The Technology project portfolio** reduced its planned spending compared to 2019, while still supporting our increasing reliance on technology across the business. This was a result of a more rigorous project prioritization process and better collaboration across business units.
- **The Cosumnes Power Plant (CPP) Advanced Gas Path (AGP)** was upgraded in 2019 making the plant more efficient and able to generate more MWs – from 500MW to 600MW. The increased efficiency and generation are incorporated in the 2020 budget.
- **A series of process improvement actions** are underway to identify, analyze and improve existing business processes within Grid Assets as part of the ongoing Workforce Optimization project. Specifically, the project aims to maximize resource management and operational performance, improve customer service and the employee experience, and reduce costs.

Access to Credit Markets (SD-3)

SMUD proactively manages its strong financial position to maintain our high credit ratings. High credit ratings improve access to credit markets and result in a lower cost of borrowing – the importance of these financial mechanisms grow as we look to invest to achieve our ambitious low carbon future. We target strong financial metrics for cash flow coverage (fixed charge) and liquidity (days cash). The Board sets a minimum fixed charge target of 1.50 times operating cash flow, however, we target a range of 1.65 to 1.70. Our current 2020 forecast plans for a fixed charge coverage of 1.69 times.

SMUD also maintains a strong liquidity position by setting a minimum number of days cash on hand and reserving additional commercial paper capacity. Having available capacity is important to demonstrate to investors and rating agencies our ability to withstand financial stress. When the commercial paper program was expanded to \$400 million in 2019, we set our liquidity planning target to have no less than \$150 million available to provide liquidity for capital spending when necessary or for emergencies or unforeseen capital repairs in the future. The additional liquidity available from open commercial paper capacity is viewed favorably and is considered as adjusted days cash by the rating agencies.

Our current days cash threshold is 130 days — an amount of cash on hand used as a trigger for issuing new debt to replenish cash balances. In 2020, we'll begin moving toward an increased minimum days cash threshold of 150 days to further strengthen our financial position and bring us in line with peer utilities rated similarly in the AA category.

We intend to fund capital expenditures through mid-2020 from a combination of cash and borrowing through the issuance of commercial paper. In the summer of 2020, we intend to refund any outstanding commercial paper with longer term debt. For the remainder of the year, we'll use available commercial paper capacity for any additional capital spending needs that would deplete our cash balances below the minimum 150-day threshold.

We're forecasting to end 2020 with an unrestricted cash balance of \$430 million, and a Rate Stabilization Fund balance of \$41 million, which combined, is approximately 150 days cash. This is in addition to having \$400 million in commercial paper capacity. Combined, our minimum liquidity target will be equivalent to approximately 266 days of cash on hand.

Reliability (SD-4)

Power reliability for our customers remains a top priority. The 2020 Budget funds the ongoing preventive maintenance and capital improvement projects needed to ensure high reliability of our distribution system. Our increased investments in prior years have delivered the desired reliability improvements, and we're continuing to invest in reliability enhancements in 2020. We understand that any power outage is a negative experience for our customers and will continue efforts with proactive communications to customers during outages.

Some major efforts to address reliability in the 2020 Budget are:

- **White Rock Tunnel Bolt Replacement** – This multi-year project will remedy the current end-of-life rock bolts in the White Rock Tunnel. Additionally, the Rock Trap will be improved to protect the White Rock Powerhouse. This project will extend design life by 50 years, allowing continuous operation of the White Rock Powerhouse. Other benefits include reducing operational risk and risk of extended summer month outages, eliminating risk of water flow curtailments to the powerhouse, and eliminating risk to the powerhouse and penstock facilities from damage due to tunnel debris – all of which ensure maximum generation from this carbon-free generation source.
- **69kV Cable Replacement (Pocket Line 7 & 8)** – This project will address over half of SMUD's total direct-buried 69kV cable. The cable within the scope of this project was installed in the 1970s, with some sections installed over 45 years ago. In 2017, there were two failures on Pocket Line 8, in which an average of over 15,000 customers were impacted. This project will significantly and positively impact our reliability measures of outage duration (SAIDI) and outage frequency (SAIFI).
- **4kV, 12kV & 21kV Cable replacement** – In addition to the 69kV project, the 2020 cable replacement program aims to replace approximately 360,000 circuit feet of cable. Our plan is to address the worst performing cable first, which will decrease future outages, repair costs, customer complaints, and reduce the quantity of worst performing circuits.
- **Bulk Substation projects** – In 2020, we'll continue building the substation at Station G and complete Station E.
- **Distribution system expansion and upgrades** to serve load in downtown Sacramento, including 21kV extension projects to serve multiple Department of General Services (DGS) projects, new communities such as Greenbriar and Riola Vineyards and commercial developments such as Centene and Natomas Crossing in the northwest area of our service territory. We'll also expand the system to support indoor cultivation facilities.
- **Re-configure Hurley Bulk substation** with the installation of a 230kV bus-tie circuit breaker to minimize negative impacts should an outage occur at the substation.

Ongoing annual activities in the 2020 Budget include funds for tree trimming to mitigate wildfires and improve reliability, corrective maintenance for primary faults, maintenance of the hydro power plant structures and roads, and continued systematic evaluation of the condition of our assets to determine capital replacement plans and help prioritize maintenance work.

Customer Relations (SD-5), Outreach and Communication (SD-15)

2020 is a crucial year for maintaining and enhancing our strong customer relations and brand loyalty. We want customers to feel in control of their energy usage by reliably delivering energy, information, and the tools they need in a way that is easy, responsive, personal, and collaborative. Our overarching goal is to increase customer loyalty among all our customer segments as measured through our Value for What You Pay metric.

To continue delivering value to our customers and community, our 2020 Budget includes funds for:

- Supporting the 2020 Commercial Rate Restructure, the process to develop a NEM successor rate and continuing the Energy Assistance Program Rate (EAPR) restructure.
- Executing our Sustainable Communities initiative, which helps bring environmental equity and economic vitality to all communities in our service area, with special attention given to historically under-served neighborhoods. Our Sustainable Communities initiative focuses on four key areas: social well-being, a healthy environment, a prosperous economy, and mobility.
- Community development, outreach and education with our SMUD Cares campaign, Shine Awards, and our partnership with the Powerhouse Science Center.
- Construction of the new child development center on Folsom Blvd. in partnership with UC Davis Health and Sacramento State. The center is scheduled to open in early 2021.
- Targeted customer outreach in support of building and vehicle electrification and decarbonization. This includes: expanding products, programs and services for our customers.
- Enhancing our Customer Relationship Management Systems.
- Improving systems and operations through Meter-to-Cash life cycle upgrades and system stabilization efforts.

Safety (SD-6)

SMUD continues to implement a plan to be a recognized leader in safety – Be Safe. Always. In 2020, we'll continue our work to finalize and implement a 5-year Safety Road Map that fosters SMUD's safety culture and leadership and furthers our journey towards our organizational goal of a zero-incident culture.

Key safety commitments in the 2020 Budget are:

- Finalizing a 5-year Safety Road Map that outlines our strategy to continue to build a Safety for Life culture at SMUD for employees, SMUD contractors and the public. The Road Map will focus on roles and responsibilities, priority areas, a strategy to reduce injuries, improved field ergonomics, leading indicators, and milestones.
- Purchasing and implementing a Safety Management System software program to allow for the consolidation of many of SMUD's safety programs and the ability to conduct data trending and analytics.
- Updating and using a new Safely Conducted Observations Reduce Common Hazards (SCORCH) field observation safety tracking system to provide SCORCH teams the ability to use tablets and phones in the field to conduct and track observations. Data can then be more efficiently used for trending, incident investigations, and barrier removal.
- Conducting a second Contractor Safety pre-qualification program pilot. We'll expand implementation of the system and increase the review of high-risk project contracts up to 100 in 2020. Other efforts include improved onboarding, safety plan review, field inspections, and project close out efforts.
- Integrating a Safety for Life culture program into SMUD public safety communications. Safety will partner with Communications to include at least 4 public communication shares on SMUD.org and in other public outreach efforts.
- Training employees on SMUD's root cause analysis software program (TapRoot) for investigating serious incidents and serious near misses.
- Ongoing development and updating of Safety Standards and training programs. Safety is working on updating outdated Safety Standards and developing new training programs in conjunction with the Sacramento Power Academy to improve safety compliance and assist in the integration of safety efforts throughout SMUD's work procedures.
- Ongoing improvements in Safety's communication plan to ensure that Safety messaging is clear, consistent, timely, and drives positive safety changes. The communication plan focuses on internal and external communications to employees, contractors and customers.

Environmental Leadership (SD-7)

SMUD has long been recognized as an environmental leader within our industry and beyond. Our commitment to the environment is evident in the power we deliver to our customers, our community involvement, the materials we buy, and the decisions we make each day. We're always looking to reduce our impact on the environment, conserve resources, and improve

the environment today and for future generations. These efforts benefit our employees, customers and most of all, our community.

A large focus in 2020 is the effort to reduce the use of Sulfur Hexafluoride (SF6), a potent Greenhouse (GHG) gas. SF6 contributes to the greenhouse effect and has more than **22,000 times** the global warming potential of carbon dioxide. Engineering teams are looking into the use of non-SF6 gas equipment at the different voltage levels used on SMUD's electric system. Staff will start reducing dependencies on SF6 gas equipment by using vacuum-interrupting technology on four 69kV breaker replacement projects at Hedge Substation. At higher voltage levels such as 115 and 230kV, clean air technology is in development as SF6 remains the dominant gas used throughout the industry. SMUD engineering teams are working with the California Air Resources Board (CARB) and equipment manufacturers to come up with a manufacturing schedule that is acceptable to all parties and meets CARB's new proposed SF6 regulation to phase out the purchasing of new SF6 equipment by 2025.

Other environmental leadership investments in the 2020 Budget include:

- Working with Sustainable Communities to communicate and bolster the impact of existing and new SMUD Environmental and Safety and Sustainable Communities efforts.
- Reporting SMUD's GHG reductions using CDP (formerly known as the Carbon Disclosure Project). The CDP is a not-for-profit organization that runs the global disclosure system to measure and report on company environmental impacts related to GHG emissions. The CDP report in 2019 and 2020 reports on SMUD's governance and strategy, risk and opportunity management, and emissions management related to climate change. This report, in combination with mandatory and other voluntary GHG reports, provides stakeholders with a measure of SMUD GHG emissions, and reduction efforts to reduce GHG emissions.
- Staff will initiate agreed upon mitigation measures to retrofit utility poles at Solano Wind Farm to be avian safe while expanding our avian field monitoring program under the provisions of our new Eagle Take Permit.
- Developing and implementing environmental justice components into California Environmental Quality Act (CEQA) documents. Staff will work across the organization to develop and evaluate the impacts of incorporated environmental justice changes in our CEQA documents, finalize the components, and pilot these in our CEQA documents in late 2020.
- Increasing environmental sustainability within our workforce and workplace to lower the environmental footprint of our business practices through reduced energy use, water conservation, waste minimization, GHG emission reduction, and Fleet Electrification.

- Continuing recreational improvements such as Ice House Reservoir upgrades, Brush Creek boat launch development, and Loon Lake Reservoir upgrades that we committed to under the new operating license for the UARP.
- Identifying and selecting a developer(s) to transform our former 20-acre corporation yard at 59th Street into a mixed-use, transit-oriented infill development. The objective is to create all-electric single-family and multi-family housing options for different income levels, all-electric neighborhoods, retail and office spaces, and a potential community gathering area.
- Partnering with Procurement to continue enhancing our collaborative procurement process to include new sustainability questions and approaches in supplier partnerships as part of our best practice approach to sustainable purchasing.

Employee Relations (SD-8)

A thriving work environment and culture are top priorities for SMUD to attract, retain, and engage the talent that will drive our region forward. With insights from our 2019 Engagement Pulse survey, we will launch targeted strategies to enhance collaboration, improve communication, and ensure SMUD is a workplace with a culture based on trust and respect for all. Our sustained commitment to diversity and inclusion in the workplace grows increasingly important as we continue to leverage varied skills, experiences, and perspectives to deliver on strategy and open doors to innovation. We consider diversity and inclusion to be key components that help us deliver our strategic objectives, and our goal is to have a diverse and inclusive culture that reflects the broad values of our customers and community.

As change accelerates in the utility industry, we recognize the need for flexibility and nimbleness and the need for our employees to acquire new skills to ensure SMUD remains successful.

Key employee relations investments in the 2020 Budget are:

- Expanding our learning technology capabilities to enable more on-demand learning through an enterprise technology solution.
- Identifying and responding to the most critical talent needs across the enterprise through strategic workforce planning.
- Continuing to pave the way for clearer career paths that will support retention and professional development in 2020 with the launch of a pilot program to help entry-level employees brand, market, and develop their skills and abilities outside of their current roles.

- Implementing mentorship and recognition strategies with Employee Resource Groups, as well as providing increased visibility and partnership opportunities with community organizations as part of our talent acquisition and community relations initiatives.
- Continue to cultivate our employer brand to appeal to prospective and current employees. To improve candidates' experiences, we'll continue to leverage our 2019 investment in GlassDoor and use the platform to advertise job postings and accept applications in 2020.
- Developing a program that will create a sustainable pathway for disadvantaged youth, ages 18-24, to enter skilled trades at SMUD and in the community to provide employment opportunities and help increase diversity in the trades.
- Refining SMUD's new employee onboarding process to include a social networking component. By asking new hires to connect with colleagues inside and outside of their function, they stand to gain a broader understanding of SMUD's business and culture.
- Continuing to evaluate additional ancillary benefits to attract and retain top talent and make enhancements accordingly to our benefits offerings. This addresses the increasingly diverse and multi-generational workforce at SMUD resulting in employees' benefits needs becoming more diverse. A recent Total Rewards survey indicated employees are interested in benefits as wide ranging as legal/estate planning, student loan assistance, and supplemental insurance.

Resource Planning (SD-9)

The Board adopted our Integrated Resource Plan (IRP) in 2018. SMUD has always had an aggressive IRP to meet or exceed goals established by the State for renewable energy and the reduction of carbon emissions. Our new IRP, with updated targets, is focused on an ambitious goal to deliver net-zero-carbon electricity by 2040. Over the next 20 years, we'll invest more than \$6.5 billion in carbon-reducing technology and renewable energy choices for our customers, such as more solar, hydro and wind power as well as energy storage, electric vehicles, and increased electrification of homes and businesses.

SMUD's IRP goes beyond traditional resource planning with goals to significantly reduce carbon emissions from vehicles and buildings, the second- and third-largest GHG emitting sectors of our economy. Our carbon reduction goals will deliver significant community benefits, including a 64% reduction in *regional* carbon emissions by 2040.

Efforts that support our carbon reduction goals in the 2020 Budget include:

- Planning, developing, and implementing projects and customer offerings, including building and vehicle electrification and energy efficiency programs, renewable energy and reliability projects.

- Development of our new local solar projects at Rancho Seco (160MW) and in northern Sacramento County (13MW), both due online in 2020.
 - Development of the new 3MW South Fork Power House hydroelectric plant due online in 2020.
 - Continued development of Solano Phase 4 in Solano County adjacent to our other wind resources.
 - Continued local solar and battery storage site exploration identifying prime locations for these resources for future development.
 - New local system upgrades to be completed in 2020, including line reconductoring and capacitor banks.
 - New solar project (100MW) with the Navajo Tribal Utility Authority in Southern California due online in 2022.
- Continuing the Integrated Distributed Resource Plan study that will provide information about the possible impacts of higher electrification on our grid.
 - Studying the benefits of the proposed CAISO Extended Day-Ahead Market.
 - Transitioning electric vehicle offerings from the “Charge Free for 2 Years” program to a statewide “Point of Purchase” program.
 - Significantly expanding our building electrification offerings with a goal of growing participation by more than 50% over 2019.
 - Coordinating comprehensive messages for marketing and customer engagement around building electrification programs.
 - Working with local and state government to influence policy for local government reach codes at the local level and statewide building codes to encourage building electrification.
 - Proposing NEM 2.0 rate structures that reflect the value of solar and encourage intelligent dispatch of battery storage, either through tariffs or associated programs.
 - Completing work on grid modernization efforts including the Automated Distribution Management System (ADMS) and continuing work on the Distributed Energy Resource Management System (DERMS), both of which lay the foundation for the transactive grid and enable integration of DERs such as solar, energy storage and EVs.

Innovation (SD-10)

One of our core values is delivering innovative solutions, products and services to our customers. We'll investigate, research and demonstrate a variety of projects that support SMUD's strategic goals, including:

- Launching new commercial building electrification offerings such as incentives for heat pump space heating and water heating.
- Researching key barriers to electrification, including:
 - Multi-family/central heat pump water heating system design and performance.
 - Mitigation of panel and grid infrastructure upgrades needed to support IRP electrification goals.
- Launching an emergency replacement program for failed gas water heaters to replace them with electric heat pump water heaters.
- Expanding EV program offerings to provide renewable energy to electric vehicles and begin to offer incentives for medium and heavy-duty EVs and commercial fleets.
- Investing in low-income and Disadvantaged Communities (DAC) sustainability projects through a portfolio of offerings such as:
 - Working with program contractors to install EV charging in support of Sacramento Metropolitan Air Quality Management District's (SMAQMD) Clean Cars 4 All program, where SMAQMD is offering "cash for clunkers" incentives for used EVs to benefit low-income customers.
 - Working with SMAQMD on eMobility hubs with EV charging at specific community locations within DAC.
 - Developing new offerings to support transportation electrification in low-income areas and DAC.
- Conducting managed EV charging research, including support of vehicle-to-grid readiness for school bus electrification. Vehicle-to-grid readiness means the charging infrastructure is ready to support charging the vehicle and a battery storage system for the grid to enable two-way power flow.
- Evaluating battery storage pilots to date (residential behind-the-meter storage, new residential construction, StorageShares, thermal energy storage) and gain Board approval for new proposed AB 2514 storage goals for 2021 through 2023.
- Installing the 4MW Hedge battery storage project in support of StorageShares, with the capability for market participation.
- Planning for Phases 2 and 3 of the DERMS development to enable management and alignment of customer-sited batteries and flexible loads such as EVs, heat pump water heaters, and smart thermostats.

Public Power Business Model (SD-11)

We'll continue to guard local decision making and flexibility as we pursue innovative solutions that meet the needs of our customers and community.

The primary focus areas for Government Affairs activities in the 2020 Budget are:

- Post-2020 carbon policies and regulations.
- Renewable Portfolio Standard regulations.
- Oversight of wildfire mitigation plans.
- Grid charges and other utility fees.
- Federal policies on transmission.
- Energy markets.

Economic Development (SD-13)

SMUD promotes the economic vitality of our region and the growth of our customer base through strategic leadership and active participation in regional economic development partnerships. This includes supporting efforts to retain, recruit, and grow commercial and industrial customers, offering Economic Development Rates and program incentives and providing a SMUD contracting program for certified small business customers. We're also helping build a strong innovation ecosystem through support for start-ups, entrepreneurs and business incubators.

SMUD helps make our region an attractive destination for businesses of all sizes through affordable rates and customized energy solutions.

Key initiatives in the 2020 Budget are:

- Executing on our Sustainable Communities efforts to encourage growth in disadvantaged neighborhoods.
- Providing strategic leadership for local economic development organizations and initiatives.
- Promoting the Economic Development Rate in conjunction with business attraction, retention and growth efforts.
- Supplier Education and Economic Development (SEED) awareness and vendor participation through key partnerships, outreach and the launch of engagement tools including online program webinars; enhancement of the SEED vendor verification

process and development and implementation of a key study to assess small business availability in, and surrounding SMUD's service area to inform a SEED outreach strategy.

- Supporting regional and international interest and investment in the California Mobility Center—a public/private consortium created to fund and commercialize new mobility technologies including customized technical, digital and advanced manufacturing of electric vehicles, autonomous transportation, battery storage, shared mobility solutions, and public transit – as well as develop new business and policy models for adoption on the international stage.

System Enhancement (SD-14)

There are four SD-14 projects included in the 2020 Budget. Three of these projects (Sacramento County's streetscape project at Fair Oaks Blvd between Landis Ave and Angeline Ave; Hazel Ave from Sunset to Madison Ave; City of Citrus Heights project at Auburn Blvd from Rusch Park to I-80) are scheduled for construction in 2020. The fourth project (City of Elk Grove's streetscape project at Elk Grove Blvd from Waterman Rd to School St) will be designed in 2020. These projects will underground the existing overhead facilities that are within the project boundaries.

Information Management and Security (SD-16)

The effective and efficient use of technology is a strategic imperative for all our operations. The 2020 Budget funds technology solutions as well as the components of SD-16.

Key initiatives in the 2020 Budget are:

- Maturing Information Technology Security efforts to make cybersecurity a cornerstone of everything we do with technology. We're expanding our programs to deliver organization-wide 24/7 cyber risk management. This includes improvements in security and privacy governance, risk, CIP, Operational Technology security, and overall employee awareness.
- Application rationalization and enterprise architecture. We're continuing to develop a strategic view of applications with potential future savings to be achieved by retiring or consolidating applications used across SMUD as part of our efforts to update our enterprise application architecture.
- Enhance our customers' experiences with SMUD by continuing to ensure and improve security for digital interactions such as payment technology, mobile applications, and all other digital channels.

Enterprise Risk Management (SD-17)

The 2020 Budget fully funds identified risk mitigation activities. SMUD's enterprise-level risks span the spectrum of operational and strategic business risks and include those associated with energy commodities, strategy, operations, natural hazards, political and regulatory issues, economics, and the environment. Risk assessments and mitigation plans continue to be refined and improved by considering SMUD's changing internal and external risk environment and enhancing how SMUD addresses risks. Risk mitigations for significantly-high and high risks identified in the enterprise risk register will continue to be monitored closely to ensure risks are managed appropriately.

Some key initiatives in the 2020 Budget are:

- Enhancing SMUD's enterprise continuity capabilities.
- Leveraging financial tools to support SMUD's ability to model financial impacts of trends and/or revenue risk, operations and maintenance, and capital spending.
- Mitigating wildfire risk.
- Creating a more agile workforce.
- Developing proposals for our Net Energy Metering successor rate and planning implementation of rates for our commercial customers.

SMUD continues to work closely with compliance and regulatory bodies to stay current with all compliance standards and reviews, and updates procedures and systems to ensure full compliance. SMUD proactively monitors the direction of future standards and manages the strategic direction of our systems to provide safe and reliable energy to our customers.

We'll continue to update the enterprise risk portfolio and provide the Board with leading risk indicators as early warning signals that call for action. The overarching goal is to encourage the integration of risk-based thinking into decision-making at all levels. Enterprise Risk Management will continue to align with Internal Audit and other lines of defense through shared best practices.

Diversified Business (SD-19)

Broadening and diversifying our products and services is a key value for SMUD. In 2020, we will pursue opportunities that benefit our customers and community, create economic value, achieve a balanced and diversified portfolio, leverage and optimize our strengths, assets and expertise, all while maintaining our financial health and reputation.

Some new net revenue areas in the 2020 Budget are:

- Providing EV charging infrastructure as a service to reduce barriers to EV adoption, support our vehicle electrification goals and reduce local carbon emissions.
- Participating in energy and power markets, selling transmission, and ancillary services.
- Continuing work on our Community Energy Services business for Valley Clean Energy and East Bay Community Energy and pursuing additional opportunities that make sense for SMUD and our customers.
- Stand-up the California Mobility Center, a private/public consortium focused on innovation and commercialization, standards and policy, workforce development, and new business models in electric mobility.

2020 promises to be an exciting and transformative year for SMUD and the Sacramento community, and the budget includes funding for setting the Sacramento community on a path to achieving a low-carbon future while also working to enhance the vitality of all Sacramento area residents through our Sustainable Community initiatives. Staff will continue to update the Board on progress throughout the upcoming year.

Respectfully submitted,



Arlen Orchard
Chief Executive Officer and General Manager