



## Overview



### Record Peak Demand



### Authorized Budget

**\$1.57**  
billion

### Customer Contracts (year end)

**628,952**



### Employees (year end)

**2,293**

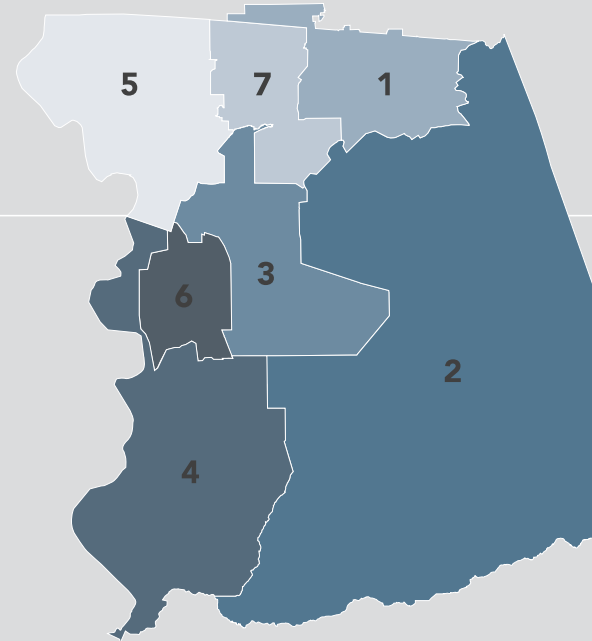


### Credit Rating

**AA** Standard & Poor's

**Aa3** Moody's

**AA** Fitch



### SMUD Service Area and Board Member Wards

The Sacramento Municipal Utility District generates, transmits and distributes electricity to a 900-square-mile territory that includes California's capital city, Sacramento County, and small portions of Placer and Yolo counties. As a publicly owned utility, SMUD is governed by a seven-member Board of Directors elected by the voters to staggered four-year terms. The SMUD Board of Directors determines policy and appoints the chief executive officer and general manager, who is responsible for SMUD's day-to-day operations.

#### Executive Management

**Arlen Orchard**  
CEO & General Manager

**Laura Lewis**  
Chief Legal Officer & General Counsel

**Jennifer Davidson**  
Chief Financial Officer

**Paul Lau**  
Chief Grid Strategy & Operations Officer

**Gary King**  
Chief Workforce Officer

**Frankie McDermott**  
Chief Energy Delivery Officer

**Nicole Howard**  
Chief Customer Officer

**Stephen Clemons**  
Chief Information Officer

#### Board of Directors

**Brandon Rose**  
Ward 1

**Nancy Bui-Thompson**  
Ward 2

**Gregg Fishman**  
Ward 3  
President 2018

**Genevieve Shiroma**  
Ward 4  
Vice President 2017

**Rob Kerth**  
Ward 5

**Dave Tamayo**  
Ward 6  
Vice President 2018

**Bill Slaton**  
Ward 7  
President 2017



While I'm pleased to report that SMUD had an outstanding financial year in 2017, the steps we took last year to lay the foundation for a successful future will prove at least as significant to our customers and community moving forward. There's no time to waste in an industry changing as fast as ours. As technology, customer expectations, big data and climate change reshape our industry, SMUD is nimbly adapting to meet the challenges and embrace the opportunities that come our way.

This report shines a light on SMUD's 2017 accomplishments, which were numerous. By implementing Time-of-Day Rates for all residential customers, we're aligning rates with costs while giving customers greater control over their electricity bills. We revamped our low-income assistance program to ensure that rate relief and energy efficiency programs are targeted to help those customers who need it most. The remarkable growth of our SolarShares® program gave some of our largest business customers the opportunity to meet their clean-energy and sustainability goals while ensuring that SMUD retains these customers for the next 20 years. We secured new revenue streams by contracting to provide services to two new community choice aggregators located in Northern California.

What these accomplishments have in common is that they'll help SMUD meet the challenges of a rapidly changing energy environment. Our updated five-year strategic plan is focused on SMUD's core purpose of enhancing the quality of life for our customers and community while strengthening our long-term financial vitality and viability.

SMUD will be operating under a different business model early in the next decade. We recognize that our relationship with our customers will look very different as it moves to one where control is shared among SMUD, our customers and third parties. We are reshaping many of our business practices, programs and services to ensure we remain the trusted partner our customers first turn to for all of their energy related needs.

Even with a 1.5-percent rate increase for residential customers in 2018, SMUD's electricity rates remain among the lowest in California. The rate increase is helping us make additional investments in the grid, technology projects and communication infrastructure. Here at SMUD we embrace the need to transition to a low-carbon economy. We're on track to exceed the state's renewable energy mandate of 33 percent by 2020, and our energy supply is currently around 50 percent carbon free.

SMUD's financial position is extremely strong. Our net income in 2017 was \$181.4 million, or \$53.7 million more than planned. We were able to replenish our Rate and Hydro Stabilization funds and to make a sizable contribution to our post-employment benefits trust for retiree medical costs. Our credit ratings are the best they've been in more than three decades.

The biggest challenge to the day-to-day business of providing reliable electric service in 2017 came in January and February, when the heaviest storms in recent memory caused extensive damage to SMUD's system and widespread outages. Our customers

appreciated the SMUD crews that worked around the clock to restore their power. Technology helped improve the customer experience with our improved outage map providing better information on estimated restoration times. We also took full advantage of Facebook, Twitter and other channels to keep our customers informed and answer their questions. Fortunately, there was a silver lining to the wet winter: Record snowfall in the Sierra Nevada ensured full reservoirs for hydroelectric generation in SMUD's Upper American River Project.

In our 70 years of providing reliable, affordable power to the residents and businesses of California's capital region, we've come to be regarded by our customers as a prized community asset. They trust their community-owned utility to always put their interests first.

To commemorate our 70th anniversary in 2017 and reiterate our commitment to making this a better place to live, SMUD initiated the "Shine" community development and beautification program. We awarded more than \$400,000 in grants to 20 nonprofit organizations across our service territory who will use the funds to improve the neighborhoods and communities they service. Our employees once again showed their passion for doing the right thing by raising more than \$470,000 and volunteering 15,000 hours through the SMUD Cares employee giving and volunteer program.

While it's a challenging time in our industry, SMUD's performance in 2017 shows we're headed in the right direction. I'm confident in saying we're built to last.

Sincerely,



Arlen Orchard  
CEO & General Manager



# 2017 Year in Review

# Did you know?

SMUD has provided more than **\$500 million** in **energy efficiency** loans since 1990.

Since 1997, SMUD has spent \$813 million on energy efficiency programs, an investment that **saved 2,982 gigawatt hours** of electricity – enough to power 351,000 homes for one year.

**The difference** in SMUD's current electric rates versus PG&E's means a savings of about **\$600 million** each year for **SMUD customers** – money that stays in the **community.**



## Comparison of typical electric bills among utilities

Typical monthly residential bills @ 750 kWh

Utility	Monthly Bill	% SMUD below Utility
SMUD	\$110.30	
PG&E	\$177.41	37.8%
Roseville	\$112.78	2.2%
Turlock	\$116.24	5.1%
Modesto	\$133.02	17.1%
LADWP	\$135.47	18.6%
SCE	\$151.71	27.3%
SDG&E	\$224.78	50.9%

Rates as of April 1, 2018



## Weathering a wild winter

The storms that battered Northern California in January and February were a double-edged sword.

Heavy snowfall in the Sierra Nevada ensured that the reservoirs in the Upper American River Project would be filled to the brim, providing clean and inexpensive hydroelectricity to SMUD customers in the energy-intensive summer months. The snowpack, coupled with above-average rainfall at lower elevations, enabled SMUD to bolster our Hydro Rate Stabilization Fund.

But wind and rain also damaged power lines across SMUD's service territory, causing an unusually high number of customer outages in the first two months of the year. SMUD experienced four "major events," a classification in which more than 10 percent of SMUD customers experience power outages during that specific storm.

Measures taken in 2017 to improve reliability included:

- Replaced more than 1,200 power poles;
- Trimmed more than 90,000 trees;
- Installed 38 remote-operated 69-kilovolt switches that helped distribution system operators restore large groups of customers without power more quickly;
- Delivered an Outage Intelligence Tool that helps engineers perform reliability analysis more quickly and efficiently; and
- Piloted LiDAR technology that helps identify diseased trees that have potential to cause power outages.

## Customers give SMUD high grades

For the 16th consecutive year, SMUD received the highest scores of any California utility in the J.D. Power and Associates survey of residential customers. SMUD also topped all state utilities in the J.D. Power survey of business customers. In the business customer satisfaction study, we received the highest score in the nation for Corporate Citizenship.

Additionally, SMUD received the highest scores in the nation in the Cogent 2017 Residential Trusted Brand & Customer Engagement Study conducted by Marketing Strategies International. SMUD received top scores in “Engaged Customer Relationship” and “Brand Trust” for electric-only and electric-gas combination utilities.

## SMUD credit ratings upgraded

SMUD’s credit ratings were upgraded by Fitch and by S&P from AA- to AA. This is the strongest SMUD’s credit ratings have been in 33 years.

The upgrades will save SMUD and our customers a significant amount of money. For instance, the upgrades will save SMUD \$350,000 over the life of just one of SMUD’s upcoming bond transactions.

Fitch’s press release noted, “The rating upgrade reflects SMUD’s strong and sustainable financial performance, moderate leverage with manageable capital needs, and management’s proactive plans to comply with environmental mandates and adapt to a rapidly evolving industry.”



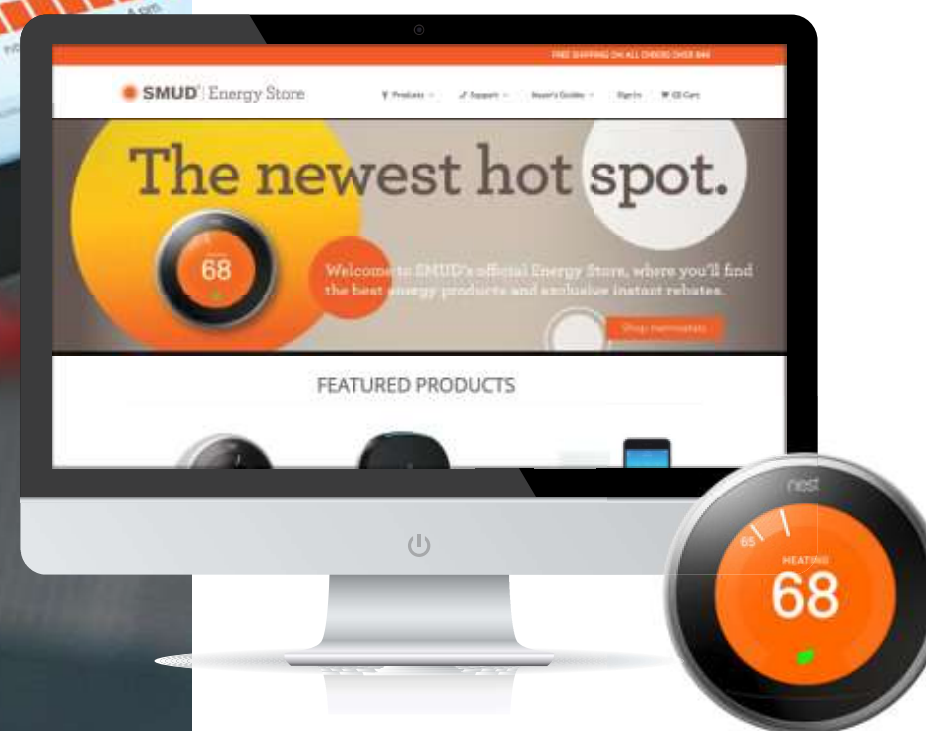
## Digital first

More than 50 percent of our customers would rather do business with us digitally. By 2020, SMUD will be a digital-first company, meaning digital channels will be the primary way our customers interact with us.

SMUD currently offers customers multiple digital channels: Email, web, text, chat, social media and e-commerce. In November, we rolled out an all-new smud.org, and a mobile app is in development and will be available in 2018.

Online transactions include paperless billing, budget billing, custom due dates, auto bill payments, “move in and move out,” high bill alerts, rebate applications and payment arrangements for customers who have trouble paying a monthly bill.

In 2017, SMUD enhanced its digital offerings by launching the online SMUD Energy Store with an e-commerce partner that offers a variety of energy efficiency and connected home products. Many of the items available include rebates.



The outage map on smud.org is the first place customers turn for information when their power is out. The map identifies the locations of our outages, indicates when the customer can expect service restoration, and includes an “outage description” so customers can find out what caused the outage.

SMUD customers can set preferences for text and e-mail alerts about their SMUD bill and energy usage:

- The Mid-Bill Alert lets customers know where they stand on the 16th day of their bill cycle.
- The Bill Threshold Alert gives customers an alert if they go over the set amount they’ve established.
- The High Bill Alert informs customers if their bill will be higher than usual.

In 2017, more than 35,000 residential customers were receiving bill alert. Additionally, SMUD offers online tools that help customers understand the costs and benefits of rooftop solar and electric vehicles.

Moving to a digital-first strategy is a win-win for SMUD and its customers. Customers get what they want how they want it, and SMUD benefits from improved customer satisfaction and lower operating costs.

## SMUD sets energy storage goals

Energy storage is the capture of energy produced at one time for use at a later time. The SMUD Board in 2017 adopted a target of 9 megawatts of energy storage to be procured by Dec. 31, 2020, in SMUD's service territory.

SMUD expects to meet roughly 80 percent of the target with battery energy storage systems and 20 percent with thermal energy storage systems. SMUD also set a longer term goal to install 75 megawatts of storage by 2026.

While storage remains expensive, experts see declining prices for the batteries, perhaps reaching parity from a pricing standpoint as early as 2025.

## Moving the needle on electric transportation

As a longtime supporter of electric transportation, SMUD helped lay the groundwork for Sacramento being designated the first "Green City" in the Volkswagen Electrify America Investment Plan. The automotive giant committed \$44 million in funding to the capital region, approximately 35 percent of which will be devoted to making electric transportation more accessible in low-income communities.

Electrify America should increase electric vehicle adoption in the Sacramento region by augmenting and complementing existing efforts that lacked the necessary investment to reach their full potential.

SMUD began supporting electric transportation in the 1990s as a way to improve Sacramento's air quality. While continuing to electrify more of its transportation fleet, SMUD has built six fast-charging stations across the region since 2014 and is partnering with local school districts and the air district on electrifying school buses. SMUD also offers a "charge free for two years" incentive to encourage customers to buy or lease electric vehicles.



## Reducing car-pole accidents

With one eye on public safety and the other on limiting power outages, SMUD initiated a five-year pilot program in 2017 aimed at reducing the damage caused by vehicles crashing into power poles.

The number of car pole accidents has increased in recent years, due to a variety of factors, including increased traffic and distracted drivers. It's not a problem confined to SMUD: Utilities across the country are seeing a spike in vehicle accidents that affect power reliability.

SMUD's pilot program focuses on power poles and electrical equipment that's been on the receiving side of a collision more than once. Among the measures being taken are removing and relocating power poles; installing high-visibility reflective strips; and wrapping poles with protective barriers known as "Raptors." Installed at the base of a power pole, the yellow Raptor is designed to absorb the impact of a vehicle crash.

A single pole replacement can cost more than \$11,000, and poles can take upwards of eight hours to replace.

## Big year for SolarShares®

From a modest beginning on a turkey ranch in rural Sacramento County sprang one of SMUD's most popular clean energy programs.

That would be SolarShares, the innovative program that provides customers the opportunity to purchase solar power and bypass the cost and effort associated with installing solar panels on their rooftops and businesses.

The program started in 2007 with the construction of a 1-megawatt solar array on a turkey ranch in southeastern Sacramento County that sold out almost immediately. At that time, the price of solar generation required sizable subsidies on SMUD's part.

By 2016, however, the declining price of solar generation prompted SMUD to develop a commercial SolarShares program to help business customers meet their sustainability goals. SMUD built an 11-megawatt solar farm at Rancho Seco that provides clean, non-carbon power to the Golden One Center and state office buildings.

SolarShares for large commercial customers took off like a rocket in 2017, jumping from 10 megawatts in January to 113 megawatts at the end of the year. Among those signing SolarShares agreements with SMUD in 2017 were the California Department of General Services; Apple; Sacramento Regional County Sanitation District and Sacramento Area Sewer District; Gekkeikan-Sake; City of Sacramento; Los Rios Community College School District; and the San Juan Unified School District.