

# 2018 Budget

## Budget Summary

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## Overview

The 2018 Budget totals \$1.74 billion. This represents an increase of \$161 million from the 2017 Budget. The 2018 Budget is a request to authorize new spending.

The 2018 SMUD Budget summarized on the following pages is a blueprint of planned operating, public goods and debt service expenses and capital expenditures for the fiscal year beginning January 1, 2018. Historical comparisons to the 2017 Budget adopted by the Board on December 1, 2016 are shown to put the 2018 Budget in perspective. A forecast of actual 2017 expenses is also shown.

The O&M and Capital Budgets are shown by Business Unit. SMUD Business Units correspond to business processes which deliver specific products and services to SMUD customers. The core business processes are represented by the Customer & Community Services, Energy Operations and Energy Assets Business Units. Included within Energy Operations and Customer/Community are Public Good costs related to energy efficiency, low income assistance, renewable generation and research and development. These costs are shown separately because they are designated as Public Goods programs as determined by statute. In 2017, SMUD had a realignment moving some processes to different business units. The 2018 Budget reflects these changes, and some of the 2017 Budget numbers have been moved to reflect these changes for comparison purposes. The total 2017 Budget Dollars for O&M, Public Good and Capital are unchanged; where applicable, dollars are adjusted between the business units.

The Technology, Internal Services and Corporate Services Business Units provide services which enable the other business units to perform their work. The planning and budgeting philosophy is to more accurately plan and measure the total cost of SMUD business processes and set performance improvement targets for the processes and Business Units that will most efficiently accomplish strategic goals. This budgeting methodology also most efficiently allocates and plans resources from throughout SMUD to the Business Units and work processes.

Within each Business Unit budget, work processes are subdivided into business segments and individual business processes. Budget detail is provided at both levels. Business segments and processes enable each business unit to effectively plan and measure performance of its operations at a manageable level.

The budgeted costs shown under each core Business Unit include all the costs of performing the work planned for 2018. These include labor costs from departments throughout SMUD which perform work in the core business processes. Labor costs include employee benefits. Also included in the budget is a surcharge allocation of internal service costs such as transportation, facilities, technology, human resources, and security. Expenditures budgeted by Technology and Internal Services represent those process costs that are not allocated to the core business units, such as dedicated software implementations or enhancements that do not meet minimum SMUD criteria for capitalization. The Corporate Services budget includes insurance and risk management, cash and debt management, and corporate legal, reliability compliance, legislative, regulatory and government relations, planning and performance, executive management and Board of Directors; a portion of this budget is allocated to Capital and Public Good.

The 2018 Budget includes the following major components:

**OPERATING EXPENSES:** Expenses related to producing and acquiring energy, operating and maintaining the electrical delivery system, providing service to customers including public goods (energy efficiency, low income assistance, new renewable generation sources, and research and development of advanced technologies) programs, and corporate activities. Included within this category as a separate line item are commodity costs associated with energy supply. These costs include purchased power, fuel for energy production, and transmission wheeling costs.

Also included under Energy Operations are fuel, operating and interest expense associated with CVFA's Carson Cogeneration plant, SCA's Procter & Gamble plant, SPA's Campbell Soup Cogeneration plant, SFA's Cosumnes Power Plant, and NCGA No. 1 pass-through gas costs. These expenses are shown in the SMUD Budget because SMUD will reimburse CVFA, SCA, SPA, SFA and NCGA No. 1 for their costs under the terms of the Power and Gas Purchase Agreements. The detail CVFA, SCA, SPA, SFA and NCGA No. 1 Budgets are also in separate booklets as they will be approved by the CVFA, SCA, SPA, SFA and NCGA No. 1 Commissions.

**CAPITAL INVESTMENT:** Investment in additions and improvements to SMUD's property, plant and equipment. The Capital Investment budget includes all qualifying costs related to acquiring or constructing tangible and intangible assets which meet SMUD's capitalization guidelines - cost exceeding \$5,000 and an estimated service life greater than two years. SMUD follows Federal Energy Regulatory Commission (FERC) capitalization guidelines which dictate the inclusion of all direct costs (labor, employee benefits, materials, services and other) and a proportionate share of indirect costs (engineering and construction supervision and support, transportation, insurance, etc.) related to capital projects. Capital assets are depreciated on a straight-line basis over their estimated useful service life.

**ALLOCATED:** Costs in the two supporting business units, Technology and Internal Services, which enable the core business units to perform work. These costs are allocated to both O&M and capital costs, based on the quantity of labor hours. The aggregated allocated costs for Technology and Internal Services are presented in the budget documentation separately as information only; the actual costs are reflected in each of the Business Unit's budgets as the total cost of their work processes.

**DEBT SERVICE:** Interest expense on and principal repayments of SMUD's outstanding long-term debt and commercial paper notes, any revenues or payments on interest rate swaps, and trustee fees and debt issuance costs. Detail is provided in the Budget Summary.

# Budget Summary

## Description of Cost Categories

<b>Activity Type Labor</b>	SMUD employee labor planned to a business unit work process. Each Activity Type has a standard hourly charge-out rate that is based on productive (non-leave) hours, average annual employee salaries, and includes benefits.
<b>Materials &amp; Equipment</b>	Materials and equipment either issued from inventory or purchased for a specific project or task.
<b>Dues &amp; Publications</b>	Dues and publications and general membership requirements to accomplish work.
<b>General Expenditures</b>	All services and other non-material costs not covered by other specific cost categories including training, travel, rents, leases, licenses, fees, taxes, etc.
<b>Outside Services</b>	The cost of outside services contracts, consultants, and outside legal service.
<b>Advertising</b>	The cost of advertising.
<b>Utilities &amp; Postage</b>	The cost of telephones, other utilities and postage.
<b>Insurance</b>	The cost of property and liability insurance related expenditures.
<b>Rebates &amp; Incentives</b>	The cost of energy efficiency rebates and incentives.
<b>Commodities</b>	The cost of purchased power, wheeling, and fuel for SMUD and JPA generating plants.
<b>Surplus/Whsl Pwr Sales</b>	The revenue generated from selling energy which is not needed to meet SMUD retail load.
<b>LI/LS Rate Discount</b>	The discount given to customers who qualify for the Low Income or Medical Energy Discount (MED) rate subsidy.
<b>Cost Reductions/Reimb</b>	Reimbursements, cost-sharing grants, or pass-through amounts received from outside parties to reduce net costs.
<b>Cost Center Overhead</b>	A rate developed to recover the indirect costs of a Cost Center. Includes Activity Type labor for administration, supervision, training, and miscellaneous general expenses such as office supplies and travel. It is assessed per hour of Activity Type Labor planned directly to the work.
<b>Surcharges</b>	Surcharge rates developed to recover 1) an allocation of internal service costs such as transportation and technology assessed per hour of Activity Type Labor planned directly to the work, 2) the costs of procuring outside service agreements (excluding outside legal service) and cost of procuring, storing, and handling materials and equipment assessed relative to the contract amount or whether material issued from inventory or purchased specifically for a project or task, 3) miscellaneous general and administrative SMUD expenses including insurance and risk management, cash management, debt management, and other assessed to capital and public good projects based on a flat percentage of overall SMUD activity type labor.

# O&M Budget Summary



Description (\$000s)	2017 Budget	2017 Forecast	2018 Proposed	\$ Change vs Cur Yr Frcst	% Change vs Cur Yr Frcst
<i>Customer/Community (excl. PubGd)</i>	104,023	102,650	113,733	11,083	11%
<i>Public Good</i>	50,864	43,709	40,324	(3,386)	-8%
<b>Customer/Community</b>	<b>154,887</b>	<b>146,360</b>	<b>154,057</b>	<b>7,697</b>	<b>5%</b>
<i>Energy Assets (excl. JPA)</i>	184,450	188,612	200,359	11,748	6%
<i>JPA Interest Expense</i>	9,811	9,811	8,674	(1,137)	-12%
<b>Energy Assets</b>	<b>194,262</b>	<b>198,423</b>	<b>209,033</b>	<b>10,610</b>	<b>5%</b>
<i>Commodity (net)</i> [1]	468,919	440,811	435,134	(5,678)	-1%
<i>Energy Operations (excl. PubGd)</i>	70,878	77,111	78,854	1,743	2%
<i>Public Good</i>	16,243	11,763	14,681	2,917	25%
<b>Energy Operations</b>	<b>556,040</b>	<b>529,686</b>	<b>528,669</b>	<b>(1,017)</b>	<b>0%</b>
<b>Internal Svcs</b>	<b>13,907</b>	<b>16,381</b>	<b>13,221</b>	<b>(3,160)</b>	<b>-19%</b>
<b>Technology</b>	<b>24,212</b>	<b>30,949</b>	<b>37,464</b>	<b>6,515</b>	<b>21%</b>
<b>Corporate Services</b>	<b>43,243</b>	<b>44,287</b>	<b>63,041</b>	<b>18,754</b>	<b>42%</b>
<b>Other Employee Benefits</b> [2]	<b>29,112</b>	<b>95,089</b>	<b>29,859</b>	<b>(65,230)</b>	<b>-69%</b>
<b>O&amp;M Budget Authorization</b>	<b>\$1,015,664</b>	<b>\$1,061,175</b>	<b>\$1,035,345</b>	<b>(\$25,831)</b>	<b>-2%</b>
<b>Revenue</b>	<b>(7,504)</b>	<b>(7,425)</b>	<b>247</b>	<b>7,672</b>	<b>103%</b>
<b>O&amp;M Net</b>	<b>\$1,008,160</b>	<b>\$1,053,750</b>	<b>\$1,035,592</b>	<b>(\$18,159)</b>	<b>-2%</b>

[1] Net of surplus sales. The 2018 Budget assumes median water year.

[2] Other Post-Employment Benefits (OPEB) and Workers Compensation - These benefits are not allocated or included as a labor expense in the Business Units.

# O&M Budget Summary (continued)



Cost Category* (\$000's)	2017 Budget	2017 Forecast	2018 Proposed	\$ Change vs Cur Yr Frcst	% Change vs Cur Yr Frcst
<b>ActivityType Labor</b>	<b>\$196,062</b>	<b>\$199,444</b>	<b>\$211,833</b>	<b>\$12,389</b>	<b>6%</b>
Material & Equipment	12,849	13,670	10,929	(2,742)	-20%
Dues & Publications	3,996	5,671	6,288	617	11%
General Expenditures	16,492	18,074	24,373	6,298	35%
Outside Services	122,199	118,401	146,742	28,342	24%
Advertising	3,602	3,203	3,866	662	21%
Utilities & Postage	7,712	7,345	7,397	52	1%
Insurance	9,520	9,219	13,166	3,947	43%
Rebates & Incentives	26,551	23,148	22,784	(364)	-2%
Commodities [1]	506,668	495,116	499,013	3,897	1%
Surplus/Whsl Pwr Sales	(37,750)	(54,305)	(37,817)	16,488	30%
LI/LS Rate Discount	0	0	0	0	0%
<b>Non-Labor Expenditures</b>	<b>671,840</b>	<b>639,542</b>	<b>696,740</b>	<b>57,197</b>	<b>9%</b>
<b>Cost Reduction/Reimb</b>	<b>(11,460)</b>	<b>(11,347)</b>	<b>(40,103)</b>	<b>(28,756)</b>	<b>253%</b>
<b>Cost Center Overhead</b>	<b>46,246</b>	<b>52,799</b>	<b>46,755</b>	<b>(6,043)</b>	<b>-11%</b>
<b>Surcharges</b>	<b>74,052</b>	<b>75,837</b>	<b>81,586</b>	<b>5,749</b>	<b>8%</b>
<b>Expenditures Subtotal</b>	<b>976,740</b>	<b>956,275</b>	<b>996,811</b>	<b>40,537</b>	<b>4%</b>
JPA Interest	9,811	9,811	8,674	(1,137)	-12%
Other Employee Benefits	29,112	95,089	29,859	(65,230)	-69%
SmartSacramento® Partners	0	0	0	\$0	0%
<b>O&amp;M Budget Authorization [2]</b>	<b>\$1,015,664</b>	<b>\$1,061,175</b>	<b>\$1,035,345</b>	<b>(\$25,831)</b>	<b>-2%</b>
Revenue	(7,504)	(7,425)	247	7,672	103%
<b>O&amp;M Net</b>	<b>\$1,008,160</b>	<b>\$1,053,750</b>	<b>\$1,035,592</b>	<b>(\$18,159)</b>	<b>-2%</b>

# O&M Budget Summary (continued)

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[1] Net of surplus sales. The 2018 Budget assumes median water year.

[2] O&M Budget Authorization includes Public Good. A summary of Public Good is provided on the following page. The budget resolution provides up to a ten percent contingency per line item.

\*Cost categories described on page 33



# O&M Budget Summary (continued)



## Public Good

Cost Category (\$000's)	2018 Proposed	2018 Summary (\$000)	Customer/ Community	Energy Operations	Total
ActivityType Labor	\$10,858	Energy Efficiency	\$28,512	\$736	\$29,248
Non-Labor Expenses	36,611	Residential Assistance	8,716	0	8,716
Cost Reduction/Reimb	0	Renewables	3,095	0	3,095
Expenditures	47,470	Research & Development	0	13,945	13,945
Cost Center Overhead	2,280				
Surcharges	5,255				
<b>Public Good Budget Authorization</b>	<b>\$55,004</b> [1]	<b>Public Good Budget Authorization</b>	<b>\$40,324</b>	<b>\$14,681</b>	<b>\$55,004</b>
Revenue	0	Revenue	0	0	0
Rate Subsidy	41,058	Rate Subsidy	0	0	41,058
<b>Total Public Good</b>	<b>\$96,062</b> [2]	<b>Total Public Good</b>	<b>\$40,324</b>	<b>\$14,681</b>	<b>\$96,062</b>

[1] Public Good expenditures are included in SMUD O&M summary (this table is information only)

[2] Specific information is provided within Customer/Community & Energy Operations Business Unit Documentation

The O&M Budget for 2018 totals \$1,036 million, which is \$19.7 million or 2 percent higher than the 2017 Budget.

**Commodities:** The Energy Operations Commodity budget for 2018 of \$435.1 million is lower than the 2017 Plan. Details on the commodity assumptions in the 2018 Budget are found on pages 24 – 28.

## **Business Unit:**

- **Energy Operations:** Excluding commodities and public good, O&M costs in 2018 Budget total \$78.9 million, which is \$8.0 million or 11 percent higher than the 2017 Budget. The 2018 budget is higher due to implementation costs for participation in the Energy Imbalance Market (EIM), movement of PowerDirect program from Customer/Community Services and expansion of the new Strategic Planning business area within Resource & New Business Strategy.
- **Energy Assets:** Excluding JPA interest, the 2018 Budget for O&M totals \$200.4 million, which is \$15.9 million or 9 percent higher than the 2017 Budget. The 2018 budget includes costs for several hydro O&M projects and repairs due to the 2017 winter storm damage, higher overhaul expenses, Solano Wind Phase 3 increases in operational expenses due to the April 2018 buyback, and offset by reductions in the Jones Fork Penstock painting contract.
- **Customer/Community:** Excluding public good, the 2018 O&M Budget is \$113.7 million; this is \$9.7 million higher than the 2017 Budget. The increases are primarily driven by changing business needs, Time of Day readiness, increasing customer programs such as SolarShares® and electric vehicle programs and in anticipation of new revenue opportunities within the indoor cultivation industry.
- **Corporate Services:** O&M costs in the 2018 budget total \$63 million, which is \$19.8 million or 46 percent higher than the 2017 budget. This increase is primarily driven by increased insurance needs, new work surrounding Community Choice Aggregators, and increased regulatory activity.

- **Technology:** 2018 O&M budget is \$37.5 million, this is \$13.3 million higher than the 2017 budget. The increase is related to the costs of planning for capital projects as well as planning and implementing O&M projects proposed for 2018 such as supply chain software updates, build out of SMUD Energy Store marketplace, enhancement of SMUD's web and IVR services, mobile work management, GIS mapping of SMUD assets, and information security initiatives such as Critical Infrastructure Protection and Data Loss Prevention.
- **Internal Services:** O&M total is \$13.2 million; this is a decrease of \$0.7 million. This decrease is primarily due to the transition from planning to construction for the Headquarters Rehabilitation project and a reduction in long-term facility asset management planning.

Specific information is provided within each Business Unit's Documentation

**Public Good:** Total Public Good is \$96.1 million, a decrease of \$17.7 million, after inclusion of grant revenues and rate subsidy. The Public Good Budget is \$55 million. The difference is because the Budget represents the cash disbursement portion of the program that requires Board authorization.

The subsidy for low income customers is decreasing by \$6.1 million, or 13%. By December 2018, the number of subsidized customers is expected to be approximately 90,835. The total cost of the EAPR subsidy is budgeted at \$39.3 million in 2018. The subsidy for customers who use medical equipment has increased by less than \$0.1 million to \$1.7 million. Total subsidies are \$41.1 million.

Energy efficiency spending has been adjusted downwards by \$2.7 million to reflect observed and expected flatter growth in total energy sales, and the incorporation of savings from building and equipment codes and standards. Incorporation of savings from codes and standards was included as a component of the portfolio to match standard industry practice going forward. The energy efficiency budget remains in line with the goal of achieving savings of 1.5% of average annual retail energy sales.

We completed reservations of SB-1 funds and are in the final stages of the program. To date we installed more than the 125MW goal. The SB-1 solar surcharge will remain at 0.16 cents per kWh and end in Q1 2018.

There is a decrease in the research and development budget in Energy Operations due to a movement of spending for the new Strategic Planning business area within Resource & New Business Strategy.

Specific information is provided within Customer & Energy Operations Business Unit Documentation

**Other Employee Benefits:** SMUD's Other Employee Benefits, is \$29.9 million, an increase of \$0.7 million. This item consists of the O&M portion (unfunded liability) of Other Post-Employment Benefits (OPEB) expense of \$26.0 million and \$3.9 million of workers compensation.

The total OPEB cost of \$33.9 million is the sum of the O&M portion of \$26.0 million and the current year contribution of \$7.9 million. OPEB are costs related to other post employment benefits other than pension (primarily health and dental insurance), for SMUD current and future retirees.

**Revenue:** SMUD has included in our proforma revenue from electric sales, in addition to forecasted revenue from Greenergy®, field service charges, and customer connection charges. Revenue from electric sales has increased compared to the 2017 Budget due to the impact of the 2018 rate increase. The proforma also reflects the SB-1 surcharge of 0.16 cents per kWh, ending in January 2018.

# Capital Budget Summary



Description (\$000s)	2017 Budget	2017 Forecast	2018 Proposed	\$ Change vs Cur Yr Frct	% Change vs Cur Yr Frct
Customer/Community	\$ 2,956	\$ 2,759	\$ 3,318	\$ 559	20%
Energy Assets	179,510	106,497	207,481	100,984	95%
Energy Assets Resource Projects [1]	28,652	29,032	76,909	47,876	165%
Energy Operations	3,349	4,603	6,496	1,893	41%
Energy Operations Resource Projects [1]	5,834	5,371	6,675	1,304	24%
Internal Services [2]	75,631	33,132	88,195	55,063	166%
Technology	65,670	49,334	72,422	23,088	47%
Corporate Contingency	0	0	42,900	42,900	100%
<b>CAPITAL SUBTOTAL</b>	<b>\$ 361,602</b>	<b>\$ 230,728</b>	<b>\$ 504,396</b>	<b>\$ 273,668</b>	<b>119%</b>
Reserve [3]	15,000		15,000	15,000	100%
<b>Capital Budget Authorization</b>	<b>\$ 376,602</b>	<b>\$ 230,728</b>	<b>\$ 519,396</b>	<b>\$ 288,668</b>	<b>125%</b>
Revenue [4]	(600)	(1,147)	(487)	660	58%
<b>Capital Net</b>	<b>\$ 376,002</b>	<b>\$ 229,581</b>	<b>\$ 518,909</b>	<b>\$ 289,328</b>	<b>126%</b>

[1] Includes projects that support the Integrated Resource Plan

[2] Internal Services capital projects include \$66M for Headquarters Rehabilitation in 2018

[3] 2018 Reserve Identified activities: end-of-year project carryover and capital contingency; not listed in Business Unit documentation

[4] DOE Grant Reimbursement

# Capital Budget Summary (continued)



Project Summary (\$000s)	2018 [1]	2019-20 [2]
<i>Meters</i>	3,163	-
<i>Other Customer</i>	155	-
<b>Customer/Community</b>	<b>\$ 3,318</b>	<b>\$ -</b>
<i>New Substation</i>	69,721	92,206
<i>Line Projects</i>	38,543	9,239
<i>Substation Lifecycle and Improvements</i>	25,190	4,307
<i>Cable Replacement</i>	21,902	-
<i>New Services/Local Agency</i>	14,022	1,209
<i>Pole Replacement</i>	13,271	-
<i>Transmission</i>	10,116	4,704
<i>Hydro Production</i>	8,460	7,374
<i>Renewable Production</i>	2,233	1,056
<i>Gas Pipeline</i>	1,982	10
<i>Thermal Production</i>	1,495	150
<i>Other Energy Assets</i>	546	194
<b>Energy Assets</b>	<b>\$ 207,481</b>	<b>\$ 120,448</b>
<i>Solano Wind Phase 3 Buyback</i>	31,700	-
<i>Thermal</i>	14,500	14,500
<i>Hydro License</i>	12,328	15,185
<i>Hydro Other</i>	11,321	21,081
<i>Decommissioning</i>	5,775	9,952
<i>Other Energy Assets Resource</i>	1,284	5,769
<b>Energy Assets Resource</b>	<b>\$ 76,909</b>	<b>\$ 66,486</b>
<i>Energy Operations Technology</i>	3,979	466
<i>Interconnection</i>	2,473	-
<i>Substation Land &amp; Easement</i>	44	590
<b>Energy Operations</b>	<b>\$ 6,496</b>	<b>\$ 1,056</b>

# Capital Budget Summary (continued)



Project Summary (\$000s)	2018 [1]	2019-20 [2]
Gas	4,639	6,500
Transmission	2,036	2,748
<b>Energy Operations Resource</b>	<b>\$ 6,675</b>	<b>\$ 9,248</b>
Headquarters Rehabilitation	69,409	189
Facilities	8,504	1,091
Vehicle Replacement	8,315	-
Environmental	1,968	4,187
<b>Internal Services</b>	<b>\$ 88,195</b>	<b>\$ 5,467</b>
Telecom	13,963	11,845
DMS	11,650	12,760
Shared Services Technology	10,194	971
Grid Technology	14,584	7,184
Customer Technology	8,228	136
IT Lifecycle and Infrastructure	8,203	227
Time of Day	3,611	475
Information Security	749	-
Other Technology	1,240	-
<b>Technology</b>	<b>\$ 72,422</b>	<b>\$ 33,599</b>
Corporate Contingency [4]	42,900	-
<b>Capital Subtotal</b>	<b>\$ 504,396</b>	<b>\$ 236,304</b>
Reserve [3]	15,000	-
<b>Capital Budget Authorization [1] [2]</b>	<b>\$ 519,396</b>	<b>\$ 236,304</b>

[1] Requested Board Authorization amount for 2018 spending.

[2] Provided for Board information as an estimate of the amount needed to complete projects started in 2018 or earlier. 2019-20 costs do not include amounts for ongoing annual programmatic spending or for projects starting after 2018.

[3] 2018 Reserve identified activities: end-of-year project carryover and capital contingency.

[4] 2018 Corporate Contingency



# Capital Budget Summary (continued)



Cost Category* (\$000's)	2017 Budget	2017 Forecast	2018 Proposed	\$ Change vs Cur Yr Frcst	% Change vs Cur Yr Frcst
<b>ActivityType Labor</b>	\$55,860	\$52,734	\$63,905	\$11,172	21%
<i>Material &amp; Equipment</i>	86,236	54,999	77,898	22,899	42%
<i>Dues &amp; Publications</i>	178	156	208	52	34%
<i>General Expenses</i>	15,593	8,751	75,246	66,494	760%
<i>Outside Services</i>	168,113	90,392	270,214	179,822	199%
<i>Utilities &amp; Postage</i>	0	4	0	(4)	-98%
<i>Insurance</i>	564	674	592	(82)	-12%
<b>Non-Labor Expenses</b>	270,683	154,977	424,157	269,180	174%
<b>Cost Reduction/Reimb</b>	(16,450)	(22,451)	(39,426)	(16,975)	76%
<b>Expenditures</b>	310,093	185,260	448,636	263,377	142%
<b>Cost Center Overhead</b>	18,168	17,214	18,008	793	5%
<b>Surcharges</b>	33,341	28,254	37,752	9,497	34%
<b>Capital Total</b>	\$361,602	\$230,728	\$504,396	\$273,667	119%
<b>Reserve</b> [1]	15,000		15,000	15,000	100%
<b>Capital Budget Authorization</b>	\$376,602	\$230,728	\$519,396	\$288,667	125%
<b>Revenue</b> [2]	(600)	(1,147)	(487)	660	58%
<b>Capital Net</b>	\$376,002	\$229,581	\$518,909	\$289,328	126%

\*Cost categories described on page 33

[1] 2018 Reserve Identified activities: end-of-year project carryover, and capital contingency not listed in Business Unit documentation. Reserve forecast included within line items above.

[2] DOE Grant Reimbursement

SMUD has two categories of capital for budget authorization, Annual and Reserve Capital. Annual Capital are projects with completion dates or specific milestone dates within the current budget year and as such budget dollars are requested during the annual budget cycle. Projects that were approved in prior years but have not been completed are resubmitted to the Board annually for approval to continue the project. Reserve Capital projects will be completed if load growth or customer growth is greater than expected, or if there are unexpected expenditures, or if there are projects in which the planning phase will be completed and work will begin in 2018.

A summary of Business Unit Capital is provided on the following pages and specific information is provided within each Business Unit's Documentation.

**Capital:** The proposed 2018 capital investment budget is \$519.4 million, for planned investment in generation, transmission, distribution, buildings, vehicles, technology and other assets critical to meeting the energy needs of our customers. Proposed ongoing capital expenditures go through a rigorous evaluation and prioritization process, based on value and risk, to ensure we fund those that have the highest contribution to the Board's strategic directives. Resource projects are evaluated and funded through the Integrated Resource Planning process. This total includes the Reserve Capital Budget of \$15.0 million for unexpected end-of-year project carryover and capital contingency.

**Customer/Community Capital:** Customer Business Unit capital expenditures include \$3.3 million for metering equipment.

**Energy Assets Capital:** These projects represent capital improvements and investment in the energy assets infrastructure such as overhead and underground lines and substations that deliver electricity to our customers. Proposed capital investment for 2018 is \$207.5 million. Of this total, \$35.2 million is for pole and cable replacement, replacing approximately 1,000 poles and removing approximately 700 historical cable faults. \$94.9 million is for improvements to existing substations, rebuilds of Station G and Station E, construction of the new Franklin substation as well as the new Street Car project. \$14 million is for new services and local agency work.

**Energy Assets Resource Projects:** Resource project capital spending for the 2018 budget totals \$76.9 million, of which \$23.7 million is for hydro. There is \$31.7 million to re-purchase the Solano Wind Phase 3 site. In addition, \$5.8 million is for nuclear decommissioning.

**Energy Operations Capital:** These projects focus on customer interconnection, telemetry and substation land. The proposed capital investment for 2018 is \$6.5 million.

**Energy Operations Resource Projects:** Resource project capital spending for the 2018 Budget totals \$6.7 million, which includes \$2.0 million for CoSu transmission line and \$4.6 million for new power and gas projects and gas reserves.

# Capital Budget Summary (continued)



**Internal Services Capital:** Internal Services Business Unit capital investments in the 2018 Budget total \$88.2 million. Of this, \$69.4 million is for the Headquarters Rehabilitation, \$8.5 million is for facilities improvements, \$8.3 million for vehicle replacements, and \$2.0 million for pollution remediation.

**Technology Capital:** Technology Business Unit capital projects are for additions or improvements to SMUD's computer network, including hardware and operating software, the SAP enterprise software system, distribution automation systems, document management, desktop and laptop PCs, and telecommunications and telephone system infrastructure. The Technology capital budget for 2018 totals \$72.4 million. The business unit is planning \$8.2 million for lifecycle and infrastructure programs to replace storage, network, and applications out of support. \$8.3 million will support projects to improve the customer experience, primarily through enhancements to billing and web interactions. \$40.2 million supports projects to improve grid assets design, GIS improvements, DMS improvements and telecom improvements. This includes replacement of the two-way radio system, the microwave path, and infrastructure for a next generation network.

**Corporate Capital:** Corporate Business Unit capital investments in the 2018 Budget total \$42.9 million. The business unit is holding contingency money for the following potential items: Delta Tunnels, Load Serving Capacity projects, Headquarters Rehabilitation, EMC Building alternatives, indoor cultivation infrastructure, and reimbursements related to storm damage in 2017.

Specific information is provided within each Business Unit's Documentation

# Allocated Budget Summary



Description (\$000s)	2017 Budget	2017 Forecast	2018 Proposed	\$ Change vs Cur Yr Frcst	% Change vs Cur Yr Frcst
<i>Supply Chain</i>	\$ 14,091	\$ 13,706	\$ 14,229	\$ 523	4%
<i>Fleet &amp; Fuel</i>	8,492	8,145	8,569	424	5%
<i>Other Internal Services</i> [1]	42,260	41,129	42,770	1,641	4%
<b>Internal Services</b>	<b>64,843</b>	<b>62,981</b>	<b>65,568</b>	<b>2,588</b>	<b>4%</b>
<b>Technology</b>	<b>41,868</b>	<b>43,176</b>	<b>51,408</b>	<b>8,232</b>	<b>19%</b>
<b>Total Allocated Budget</b> [2]	<b>\$106,711</b>	<b>\$106,156</b>	<b>\$116,976</b>	<b>\$10,820</b>	<b>10%</b>

[1] Other Internal Services: Health & Safety, Organizational Development, Inclusion, Fire Protection, Security, Postal & Print Shop, Graphics, Human Resources, Labor Relations, Facilities and Fleet (excluding fuel)

[2] Allocated Budget expenditures are included in all SMUD Business Unit's O&M and Capital summaries (this table is information only)

# Allocated Budget Summary (continued)



Cost Category* (\$000's)	2017 Budget	2017 Forecast	2018 Proposed	\$ Change vs Cur Yr Frcst	% Change vs Cur Yr Frcst
<b>ActivityType Labor</b>	<b>\$50,278</b>	<b>\$49,407</b>	<b>\$55,374</b>	<b>\$5,967</b>	<b>12%</b>
<i>Material &amp; Equipment</i>	7,061	8,453	7,529	(924)	-11%
<i>Dues &amp; Publications</i>	38	55	61	7	12%
<i>General Expenses</i>	1,282	1,503	1,123	(380)	-25%
<i>Outside Services</i>	28,948	26,532	31,839	5,307	20%
<i>Advertising</i>	153	87	153	66	75%
<i>Utilities &amp; Postage</i>	1,038	1,457	1,560	103	7%
<i>Insurance</i>	161	99	161	62	62%
<b>Non-Labor Expenses</b>	<b>38,680</b>	<b>38,186</b>	<b>42,426</b>	<b>4,241</b>	<b>11%</b>
<b>Cost Reduction/Reimb</b>	<b>(111)</b>	<b>(209)</b>	<b>(81)</b>	<b>128</b>	<b>61%</b>
<b>Expenditures</b>	<b>88,847</b>	<b>87,384</b>	<b>97,720</b>	<b>10,336</b>	<b>12%</b>
<b>Cost Center Overhead</b>	<b>13,425</b>	<b>14,349</b>	<b>14,456</b>	<b>107</b>	<b>1%</b>
<b>Surcharges</b>	<b>4,440</b>	<b>4,423</b>	<b>4,800</b>	<b>377</b>	<b>9%</b>
<b>Total Allocated Budget</b> [1]	<b>\$106,711</b>	<b>\$106,156</b>	<b>\$116,976</b>	<b>\$10,820</b>	<b>10%</b>

[1] Allocated Budget expenditures are included in all SMUD Business Unit's O&M and Capital summaries (this table is information only)

The Allocated Budget for 2018 totals \$117 million, which is \$10.3 million higher than the 2017 budget. This is shown as **information only** as 100% of these allocated expenditures are included in the budget dollars of all SMUD O&M and Capital described in this documentation. Internal Services and Technology costs are allocated to business units based on the quantity of labor hours.

- **Internal Services Allocated:** The budget for Internal allocated is \$65.6 million. It is increasing by \$700 thousand over 2017 budget. This small increase is driven by planned labor increases. Allocated maintenance work returns to normal levels in 2018.
- **Technology Allocated:** Technology Allocated in the 2018 budget is \$51.4 million, an increase of \$9.5 million over 2017 budget. 2018 reflects increased labor hours and outside services costs for ongoing support of enterprise systems, the new Data Analytics and Network Transformation efforts, as well as support of Energy Trading systems. Additionally, 2018 reflects increases in maintenance and support costs for the SAP Enterprise system, Smart Meter network support services hosting fees (Silver Spring Networks), new distribution and sub-transmission design tool, Enterprise document management system, information security systems, data center co-location fees, Microsoft licenses, and various databases.

Specific information is provided within Internal & Technology Business Unit Documentation

# Position Summary



Executive Hierarchy Position Count Full Time & Limited Term	2017 Full Time	2017 Limited Term	2017 Approved Positions [1]	2018 Full Time	2018 Limited Term	2018 Positions Planned	Position Increase/ Decrease
CEO & General Manager	31	1	32	38	7	45	13
Chief Legal Officer	41	0	41	41	1	42	1
Chief Financial Officer	85	5	90	84	8	92	2
Chief Energy Delivery Officer	692	18	710	694	16	710	0
Chief Grid Strategy & Operations Officer	279	3	282	286	4	290	8
Chief Customer Officer	410	17	427	411	20	431	4
Chief Workforce Officer	354	22	376	365	15	380	4
Chief Information Officer	217	9	226	230	9	239	13
<b>Full-Time</b>			<b>2,109</b>			<b>2,149</b>	<b>40</b>
<b>Limited Term</b>			<b>75</b>			<b>80</b>	<b>5</b>
<i>Part Time (20+ hours)</i>			100			106	<b>6</b>
<i>Casual (incl. Annuitants)</i>			43			23	<b>(20)</b>
<i>Students</i>			34			62	<b>28</b>
<b>SMUD Total</b>	<b>2,109</b>	<b>75</b>	<b>2,361</b>	<b>2,149</b>	<b>80</b>	<b>2,420</b>	<b>59</b>

[1]Total Approved 2017 positions shown by Executive includes minor organization changes



# Labor Summary



Executive Hierarchy (\$000)	2017 Budget	2018 Proposed	\$ Change vs Prev Yr Budget	% Change vs Prev Yr Budget
CEO & General Manager	\$5,342	\$7,381	\$2,039	38%
Chief Legal Officer	5,427	5,461	35	1%
Chief Financial Officer	11,138	10,893	(245)	-2%
Chief Generation & Grid Assets Officer	88,136	91,736	3,601	4%
Chief Grid Strategy & Operations Officer	36,627	39,559	2,932	8%
Chief Customer Officer	41,165	43,768	2,602	6%
Chief Workforce Officer	37,070	38,785	1,715	5%
Chief Information Officer	27,987	30,777	2,790	10%
Regular Labor*	\$238,407	\$252,356	\$13,950	5.85%
Overtime Labor	\$14,485	\$16,004	\$1,519	10.49%
<b>SMUD TOTAL</b>	<b>\$252,891</b>	<b>\$268,360</b>	<b>\$15,469</b>	<b>6.12%</b>

\*Regular labor includes paid leave ----- 2017 Budget not adjusted for organizational realignment

# Labor Budget Summary (continued)

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**Position Count:** The full-time count is identified in the Board Resolution and the budget provides funding for less than the total position count to account for vacancies during the hiring process.

**Labor Salaries:** The labor summary reflects the cost of wages for SMUD employees. The budget for labor and associated benefit costs is included on the previous budget summary pages.

# 2018 Budget Debt Service

Powering forward. Together.



# Debt Service Budget

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The following schedules show the summary and details of the 2018 Budget for Debt Service. The District issues Electric Revenue Bonds and Commercial Paper Notes to finance long-lived capital assets. The Debt Service Budget includes accrued interest expense on outstanding Electric Revenue Bonds and Commercial Paper Notes, net of any swap revenues tied to debt issues, scheduled principal repayments of Bonds and Commercial Paper, trustee fees associated with administration of debt service payments, and interest expense and issuance costs associated with planned new debt issues.

**Revenue Bond Interest** totals \$91.1 million in the 2018 Budget, an increase of \$5.2 million from 2017.

**Commercial Paper Interest** totals \$4.1 million in the 2018 Budget, an increase of \$0.1 million from 2017. Short-term interest rates assumed for 2018 are similar to those assumed for 2017.

**Scheduled Principal Repayments** of revenue bonds and commercial paper notes total \$90.9 million in 2018, a \$7.2 million decrease from 2017.

**Trustee and Rating Agency Fees** of \$250,000 are the same as budgeted in 2017.

**Bond Issuance Costs** of \$1,120,000 are included for the 2018 new bond issuance and refunding transaction.

# Debt Service Budget (continued)



Debt Service (\$000s)	2017 Budget	2017 Forecast	2018 Proposed	\$ Change vs Frctst	% Change vs Frctst
Interest Expense <sup>1</sup>	\$89,934	\$91,812	\$95,198	\$3,386	4%
Principal Repayments	98,155	98,155	90,920	(7,235)	-7%
Fees/Bond Issuance Cost	755	843	1,370	527	63%
<b>Total Debt Service</b>	<b>\$188,844</b>	<b>\$190,810</b>	<b>\$187,488</b>	<b>(\$3,322)</b>	<b>-2%</b>
Allocated to JPAs	(\$6,308)	(\$6,308)	(\$6,389)	(\$81)	1%
<b>NET DEBT SERVICE</b>	<b>\$182,536</b>	<b>\$184,502</b>	<b>\$181,099</b>	<b>(\$3,403)</b>	<b>-2%</b>

1) Build America Bonds are shown gross of the rebate of \$9.2 million expected in 2018. The budget authorization is requested gross of the rebate.

# Debt Service Budget (continued)

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The Debt Service component of the 2018 Budget totals \$187.5 million, a decrease of \$1.3 million or 0.7 percent from 2017.

Interest expense represents accrued interest on revenue bonds and commercial paper, net of any related swap revenue. The credit for debt service charged to the JPAs represents the portion of the interest expense on the District's investments in the PG&E Line 301/400 pipeline, the local gas pipeline (including Cosumnes extension) and the Rosa natural gas reserves which is allocated to the cogeneration plants for fuel delivery and included in the SMUD and JPA budgets under fuel commodity. Principal repayments represent scheduled repayment of revenue bonds and commercial paper notes.

<b>Debt Service Summary (\$000's)</b>	<b>2017 Budget</b>	<b>2017 Forecast</b>	<b>2018 Proposed</b>	<b>% Change Proposed to Frct</b>
<b><u>DESCRIPTION</u></b>				
REVENUE BOND INTEREST <sup>1</sup>	85,857	87,014	91,057	4.6%
COMMERCIAL PAPER INTEREST <sup>2</sup>	4,077	4,798	4,140	-13.7%
<b>TOTAL INTEREST EXPENSE</b>	<b>89,934</b>	<b>91,812</b>	<b>95,198</b>	<b>3.7%</b>
PRINCIPAL	98,155	98,155	90,920	-7.4%
TRUSTEE AND RATING AGENCY FEES	375	243	250	2.9%
BOND ISSUANCE COSTS	380	600	1,120	86.7%
<b>TOTAL BUDGETED DEBT SERVICE</b>	<b>188,844</b>	<b>190,810</b>	<b>187,488</b>	<b>-1.7%</b>

1) Includes net debt related swap payments and interest on long-term, variable rate, and subordinated debt.

Variable rate assumed to be 2.89% including marketing and other fees including net swap payments.

Build America Bonds are shown gross of the rebate of \$9.2 million in 2018.

2) Assumes an interest rate of 2.07% (incl. all related fees & swaps) on avg. commercial paper balance of \$200 million.

# Debt Service Budget (continued)



Date Issued	Issue	1/1/2018 Principal Balance	Issued Interest Rate	Final Maturity Date	2018 Scheduled Principal Payment	2018 Interest Expense
<b>Electric Revenue Bonds</b>						
Jun-97	Series K <sup>1</sup>	117,625	5.25% to 5.90%	2024	14,170	726
May-08	Series U (Refunding)	219,895	3.00% to 5.00%	2028	20,610	6,774
May-09	Series V <sup>2</sup>	200,000	6.322% (4.11% net)	2036	-	12,644
Jul-10	Series W <sup>3</sup>	250,000	6.156% (4.00% net)	2036	-	15,390
Sep-11	Series X (Refunding)	228,995	1.50% to 5.00%	2036	18,170	10,971
Jan-12	Series Y (Refunding)	185,515	3.00% to 5.00%	2033	5,120	8,873
May-13	Series A	132,020	3.75% and 5.00%	2041	-	6,592
May-13	Series B (Refunding)	97,220	3.00% to 5.00%	2033	3,245	4,598
Jul-16	Series D (Refunding)	149,890	5.00%	2028	-	7,331
Dec-17	Series E (Refunding) <sup>5</sup>	173,695	3.00% to 5.00%	2028	26,605	7,533
	<b>Subtotal</b>	<u>1,754,855</u>			<u>87,920</u>	<u>81,430</u>
<b>Subordinated Electric Revenue Bonds<sup>4</sup></b>						
Feb-12	Series L	70,500	Variable	2041	1,500	1,589
Feb-12	Series M	70,500	Variable	2041	1,500	1,589
Jul-18	Series N	141,000	Variable	2041	-	1,450
Jul-18	Series O - New Issue <sup>6</sup>		Variabe	2047	-	5,000
	<b>Subtotal</b>	<u>282,000</u>			<u>3,000</u>	<u>9,627</u>
	Total Outstanding Bonds	<u>2,036,855</u>	Principal & Interest Payments		<u>90,920</u>	<u>91,057</u>
	<b>Total Debt Service</b>				<u><b>90,920</b></u>	<u><b>91,057</b></u>

1) Swapped to a variable rate for the life of the debt, interest expense net of swap payment. Interest expense without swap would be \$6,431,605.

2) Interest expense gross of federal government Build America Bond rebate of \$4,142,174.

3) Interest expense gross of federal government Build America Bond rebate of \$5,041,764.

4) Interest Expense shown for variable rate revenue bonds include liquidity facility, remarketing, and swap fees associated with each applicable revenue bond issue.

5) Refunding issue forecast for 2017.

6) New money issue forecast for 2018.