



Chief Executive Officer and General Manager's
Report and Recommendation on

Open Access Transmission Tariff

June 17, 2021 • Volume 1

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**Chief Executive Officer
& General Manager's Report
and Recommendation on**

Open Access Transmission Tariff

Volume 1

June 17, 2021

A Sacramento Municipal Utility District Publication

Chief Executive Officer & General Manager's Report and Recommendation on Rates and Services

Volume 1

June 17, 2021

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Introduction

SMUD's Commitment to Our Customers

The electric utility industry is constantly meeting new challenges due to the combined impacts of wildfire, climate change and cybersecurity risks, advances in technology, customer service expectations and public policy goals and mandates. SMUD continues to provide the Sacramento region with safe, reliable, clean, and competitively priced power for our customers and community.

Overview

SMUD owns and operates high voltage transmission facilities in the Sacramento region, and as the largest member of the Transmission Agency of Northern California (TANC), has rights on the California-Oregon Transmission Project (COTP). SMUD adopted an Open Access Transmission Tariff (OATT) consistent with the regulations established by the Federal Energy Regulatory Commission (FERC). SMUD offers any excess transmission on its COTP transmission rights to other entities that desire to transport energy through to make use of SMUD's surplus COTP capacity.

SMUD's OATT establishes the rates, terms, and conditions under which we will provide such transmission service. Although SMUD is not a jurisdictional public utility subject to FERC's jurisdiction under Section 205 or Section 206 of the Federal Power Act, SMUD voluntarily adopted an OATT. Under the OATT, SMUD provides generator interconnection procedures, network transmission through the SMUD service territory, Ancillary Services, and point-to-point transmission service over SMUD's high voltage transmission facilities and its COTP transmission rights.

This document presents proposed changes to Ancillary Services rates under SMUD's OATT Schedules 1 and 2 to the SMUD Board of Directors, as well as to our customers, community, and the interested public. It recommends approval of a revised OATT with an effective implementation date of September 17, 2021.

Proposed Tariff Revisions

Open Access Transmission Tariff

Issue

Scheduling, System Control and Dispatch Service (Schedule 1) is required to schedule the movement of power through, out of, within, or into a Balancing Authority Area (BAA). This service can be provided only by the operator of the BAA in which the transmission facilities used for transmission service are located. Scheduling involves the accounting of power transaction in advance (day-ahead), hourly, sub-hourly and in real-time. It also requires the accounting of actual flows between entities so that the amount of scheduled interchange is compared to actual interchange and the actual interchange is controlled and monitored by each entities energy management system to remain within acceptable limits of deviation from schedules over time periods. A significant portion of the cost of operating a balancing authority is associated with supporting the scheduling and dispatch function.

In order to maintain transmission voltages on the transmission provider's transmission facilities within acceptable limits, generation facilities and non-generation resources capable of providing this service that are under the control of the BAA operator are operated to produce (or absorb) reactive power and support reliable transmission system operation in the event of system contingencies including those outside the SMUD system which rely on system-wide reactive power support to maintain transfer limits. Thus, Reactive Supply and Voltage Control from Generation or Other Sources Service (Schedule 2) must be provided for each transaction on the transmission provider's transmission facilities and transmission providers whose transmission transfer capabilities benefit from SMUD's voltage support from generation resource or other reactive power resources. The amount of Reactive Supply and Voltage Control from Generation or Other Sources Service that are supplied with respect to the transmission customer's transaction will be determined based on the reactive power support available to maintain transmission voltages within limits that are generally accepted in the region and consistently adhered to by the respective transmission provider.

SMUD applies Schedule 1 and Schedule 2 charges to its own use of its COTP transmission system and to customers who purchase its surplus COTP transmission service through the Open Access Transmission Tariff. Over the past few years there have been various improvements and equipment upgrades to the Energy Management Center (EMC) at SMUD. In addition, staffing costs for work performed in the EMC have increased. These changes all support the scheduling and dispatch services function. SMUD's generation costs that support the related reactive supply and voltage control function have also increased since the last update of this rate. The last update to the Open Access Transmission Tariff was approved by the SMUD Board of Directors in 2017. The current prices per MW for Schedule 1 (\$267.21/MW-month) and Schedule 2 (\$76.94/MW-month) do not reflect SMUD's latest costs associated with providing the services. Approval of these tariff revisions will serve to:

- Ensure the following SMUD's Ancillary Service rates reflect current costs.
 - Schedule 1 – Scheduling, System Control and Dispatch Service

- Schedule 2 – Reactive Supply and Voltage Control from Generation or Other Sources Services

Content of Proposed Tariff

The proposed changes to the existing OATT include updated rates for Ancillary Services provided by SMUD under Service Schedules 1 and 2.

Customer and Revenue Impact

Charges imposed under the new 2021 rate are charged only to those customers taking service under the tariff and reflect the reasonable cost to SMUD of providing tariff service. SMUD’s costs for providing service under the tariff were determined using 2019 actual data. Revenues collected from these services from third party purchases of surplus COTP transmission are treated as credits against the costs other SMUD customers are charged. SMUD collects costs from the Ancillary Services customers to recover a just and reasonable revenue contribution amount from them and offset the charges to other customer also. These revenue credits are incorporated in the development of the rates for the Ancillary Services customers.

Recommendation

Approve the proposed revisions to the OATT Schedule 1 and Schedule 2 effective September 17, 2021.

Summary of Tariff

This section summarizes the proposed Ancillary Service revisions to Schedules 1 and 2.

Ancillary Services

Ancillary Services provide necessary support of transmission capacity and energy between the generating resources and the utility customers’ loads. These services are critical to the reliable operation of the transmission system, in accordance with good utility practice.

The OATT includes revisions for the following two Ancillary Service schedules:

Schedule 1: Scheduling, System Control and Dispatch Service

\$361.72/MW of Reserved Capacity per month.

Schedule 2: Reactive Supply and Voltage Control from Generation or Other Sources Service

\$80.38/MW of Reserved Capacity per month.

Environmental Assessment

- 1.0 Section 21080(b)(8) of the California Public Resources Code and Section 15273 of the California Environmental Quality Act (CEQA) Guidelines (California Code of Regulations, Title 14, Sections 15000, et seq.) provide that CEQA does not apply to the establishment, modification, structuring, restructuring, or approval of rates, tolls, fares, and other charges by public agencies which the public agency finds are for the purpose of:
 - (1) Meeting operating expenses, including employee wage rates and fringe benefits;
 - (2) Purchasing or leasing supplies, equipment, or materials;
 - (3) Meeting financial reserve needs and requirements;
 - (4) Obtaining funds for capital projects necessary to maintain service within existing service areas; or
 - (5) Obtaining funds that are necessary to maintain such intra-city transfers as are authorized by city charter.
- 2.0 Section 15061(b) (3) of the CEQA Guidelines provides that where it can be said with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.
- 3.0 The proposed action to revise the Ancillary Services rates in the Open Access Transmission Tariff (OATT) with an effective implementation date of September 17, 2021, is for the purposes set forth in (1) through (4) of Section 1.0 of the Environmental Assessment. Therefore, this rate action is exempt from the requirements of CEQA.

Compliance

Introduction

California voters approved Proposition 26 in November 2010, and that measure provides that every “levy, charge, or exaction of any kind imposed by a local government” is treated as a tax subject to voter approval, with exceptions discussed below. (Cal. Const., art. XIII C, § 1, subd. (e).) Proposition 26 therefore applies only to charges that are “imposed” by local government. SMUD rates are not “imposed” on customers for purposes of Proposition 26, because that language requires some exercise of government force or authority, which is not involved when a public agency such as SMUD provides services to customers in a competitive market. SMUD customers pay only for the voluntary use of service, and they have meaningful alternatives to that service, such as self-generation with solar, hydro, fuel cell, wind, and geothermal power.

Proposition 26 Does Not Apply to SMUD Rates

Although Proposition 26 therefore does not govern SMUD OATT rates, the rate structure developed for this Chief Executive Officer and General Manager’s Report and Recommendation on Rates and Services (“Report”) complies with Proposition 26, which includes seven exceptions that treat certain charges imposed by local government agencies as fees rather than taxes, four of which are relevant to SMUD OATT charges.

Cost-Justified Fees for Benefits and Services

First, charges for benefits conferred upon the payor, or for specific government services provided directly to the payor, are excepted under Cal. Const., art. XIII C, subdivisions (e)(1) and (e)(2), respectively, provided that the charge does not exceed the reasonable cost of providing that benefit or service. The proposed increases to SMUD’s OATT rates are based upon cost of service principles, because the cost-drivers of the increases are due to additions to SMUD’s facilities, changes with regard to SMUD’s major points of transmission interconnection including joint operation and cost sharing with the Balancing Authority of Northern California, TANC, and the Western Area Power Administration, and escalation of administrative and general expenses. SMUD used actual 2019 costs (the most recent available) and depreciation data to determine the new rates. These cost-drivers affect SMUD’s costs to provide transmission service uniformly to all transmission customers.

Non-Cost-Justified Fees for Use of SMUD Property; Fines and Penalties

Although SMUD’s OATT rates are cost-justified, Proposition 26 also provides exceptions that are not restricted by cost-of-service principles and, in the alternative, apply to SMUD’s OATT rates because they are charges for the use of government property. Proposition 26 provides exceptions for the

following categories of charges, which are not treated as taxes subject to voter approval: (1) charges for the use of government property and (2) fines and penalties. (Cal. Const., art XIII C, § 1, subds (e)(4) and (e)(5).) Unlike charges for benefits and services, which cannot exceed the reasonable cost of providing those benefits and services, Proposition 26 does not limit charges for use of property to the cost of service. SMUD's OATT rates are for the use of SMUD property (e.g., transmission assets), and therefore, those charges would comply with Proposition 26 if it applied (which, as explained above, it does not) even without a showing that such charges are limited to SMUD's costs.

Glossary

Ancillary Services

Those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the Transmission Provider's transmission system in accordance with Good Utility Practice.

Balancing Authority (BA)

The responsible entity that integrates resource plans ahead of time, maintains load-interchange-generation balance within a Balancing Authority Area, and supports interconnection frequency in real time.

Balancing Authority Area (BAA)

An electric power system or combination of electric power systems to which a common automatic generation control scheme is applied in order to: i) match, at all times, the power output of the generators within the electric power system(s) and capacity and energy purchased from entities outside the electric power system(s), with the load within the electric power system(s); ii) maintain scheduled interchange with other Balancing Authority Areas, within the limits of Good Utility Practice; and iii) maintain the frequency of the electric power system(s) within reasonable limits in accordance with Good Utility Practice; and provide sufficient generating capacity to maintain operating reserves in accordance with Good Utility Practice.

Balancing Authority of Northern California (BANC)

The BANC was established on May 8, 2009 and began operation on May 1, 2011 as a North American Electric Reliability Corporation (NERC) registered and certified Balancing Authority (BA) operating an electric system bounded by sufficient metering to measure interchange with others and capable of controlling its resources to match actual interchange and actual frequency with scheduled interchange and scheduled frequency within its metered boundaries and is responsible for meeting Reliability Standards defined by NERC and the Western Electricity Coordinating Council (WECC) for such entities to maintain reliable operation of the Bulk Electric System (BES). BANC (through SMUD) obtains and maintains the necessary systems, staffing, enabling agreements and authorizations to provide BA services. SMUD is the BANC Operator under the SMUD-BANC Operations contract executed on October 22, 2010. The BANC BAA includes the electric systems of SMUD, the California-Oregon Transmission Project, the Western Area Power Administration-Sierra Nevada Region, the Modesto Irrigation District, the City of Roseville, the City of Redding and the Shasta Lake and Trinity public utility districts.

Backup Control Center (BCC)

The Backup Control Center, which is SMUD's operation center when the EMC is not available. It is located within SMUD Rancho Seco facility campus and has the capabilities and technology to complete

all the functions necessary for SMUD's transmission, generation systems and the BANC balancing authority.

California-Oregon Transmission Project (COTP)

The California-Oregon Transmission Project 500 kV transmission line interconnecting the Northwest with California utilities. Of the 1,600 MW transfer capability of this line and as a member of the Transmission Agency of Northern California (TANC), which co-owns the line, SMUD is entitled to 528 MW of transfer capability southbound (or import) and 405 MW of northbound (or export) transfer capability, though this amount may change over time.

Energy Imbalance Market (EIM)

The California Independent System Operator's (CAISO) EIM is an automated, real-time energy wholesale market that matches the lowest cost electricity supply with demand every 15 minutes and dispatches every 5 minutes. EIM participants must submit balanced load and resource schedules (including ramping ability) to the CAISO for each market cycle, using the EIM only for the last-minute unbalanced portion of load versus resources.

Energy Management Center (EMC)

SMUD's Energy Management Center is the primary operation center located adjacent on SMUD's headquarters campus, which controls all of SMUD's transmission, generation systems and the BANC balancing authority.

Energy Management System (EMS)

The computer systems (both hardware and software) and associated tools used by SMUD's System Operators to monitor, control, and optimize the performance of the generation, transmission, gas operations systems and Energy Imbalance Market participation. The EMS performs management of SMUD's generation to match its load and net interchange with neighboring systems, provides transmission system situational awareness, operational control and manages the associated information needed to enable operators to take actions needed to meet applicable reliability standards and criteria for the BANC Balancing Authority Area and SMUD's generation and transmission system, including the real-time monitoring and analysis of the reliability exposure to contingency conditions (i.e. outage events that cause an exceedance of a system operating limit).

FERC

The Federal Energy Regulatory Commission or its successor.

Good Utility Practice

Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost Sacramento Municipal Utility District Open Access Transmission Tariff consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region, including those practices required by Federal Power Act Section 215(a)(4).

Open Access Same-Time Information System (OASIS)

The information system and standard of conduct implemented by the Transmission Provider.

Point-to-Point Transmission Service

The reservation and transmission of capacity and energy from a specified point of receipt to a specified point of delivery.

System Rate

Transmission service rate between the SMUD System and any single point of interconnection between the Transmission Provider and an interconnected third-party transmission provider, as specified on SMUD's OASIS.

Transmission Operator Function (TOP)

The functions of the entity responsible for the reliability of its "local" transmission system, and that operates or directs the operations of the transmission facilities.

Appendix I

Utility Financial Solutions Review Letter – Open Access Transmission Tariff

February 21, 2021

Planning, Pricing and Enterprise Performance (PP&EP)
Sacramento Municipal Utility District
6301 S Street, Mailstop A451
Sacramento, CA 95817-1899

Dear Pricing Staff,

Utility Financial Solutions (UFS) was engaged by the Sacramento Municipal Utility District (SMUD) to provide an independent review of SMUD's 2019 calculation of two Open Access Transmission Tariff Ancillary Charges:

- Schedule 1: Scheduling, System Control and Dispatch Service
- Schedule 2: Reactive Supply and Voltage Control from Generation or Other Sources Service

UFS offered SMUD an industry standard perspective on the development of the Open Access Transmission Tariff Ancillary Service Charges (schedule 1 & schedule 2).

Documents Reviewed

In conducting our review, UFS facilitated several staff discussions regarding calculation of the ancillary charges. Documents reviewed included:

- Ancillary Service 1: Calculation Excel spreadsheet
- Ancillary Service 2: Calculation Excel spreadsheet
- Other data/historical used in compiling/review of above calculations:
 - Generation Projects Audited Financial Statements
 - Supplemental OATT Schedules Information
 - Detailed Assets Records and General Plant Statistics
 - SMUD TANC OASIS Revenues
 - SMUD 2019 Income Statement

Key Findings of Review:

Based upon our review, UFS concludes the following:

1. The proposed ancillary service rate adjustments are required to protect the reliability and financial integrity of SMUD.

2. The calculations were reviewed for reasonableness and consistency with previous calculations. The calculations are consistent, reasonable and follow previous methodologies for calculation of Schedule 1 and 2 ancillary charges in compliance with FERC guidelines and widely accepted costing principles used in electric utility ratemaking.

Sincerely,

Mark Beauchamp

Mark Beauchamp

President

Utility Financial Solutions

Appendix II

High Level Summary of Schedule 1 & 2 Calculations

Schedule 1: Scheduling, System Control and Dispatch Service

Table 1 shows a high-level summary of how the price per MW per month was calculated for Schedule 1.

Table 1 – Summary of Calculations for Schedule 1 Scheduling, System Control and Dispatch Service

Line	Category	Value	Comments
1	System Control & Load Dispatch Operations & Maintenance (O&M)	\$38,427,977	2019 Annual System Control & Load Dispatch Accounting Data
2	Energy Imbalance Market (EIM) Revenue Credit	\$(3,259,728)	EIM Reimbursements
3	Allocation to Balancing Authority (BA)/Transmission Operator (TOP) Function	75%	25% allocated to SMUD load serving function
4	Allocation to TOP Function	60%	Amount used in BANC budget development. BANC/SMUD judgement. 40% allocated to BA function
5	TOP O&M Subtotal	\$15,825,712	(Line 1 + Line 2) × Line 3 × Line 4
6	Total TOP Revenue Credits	\$(6,123,274)	BANC, COTP BA, TANC OASIS Admin, WAPA BA, TANC and SMUD OASIS Ancillary Services (A/S) Schedule #1 Revenues
7	Net TOP O&M	\$9,702,438	Line 5 + Line 6
8	Energy Management System (EMS) Asset to TOP Return	\$882,170	Plant Accounting using TOP Share at 4.51% SMUD Nominal Discount Rate
9	EMS/Backup Control Center (BCC) Asset to TOP Depreciation	\$2,120,383	Plant Accounting using TOP Share
10	Total TOP Revenue Requirement	\$12,704,992	Sum of lines 7, 8, 9*
11	SMUD System Peak (MW)	2,927	Occurred August 15, 2019
12	Schedule 1 Rate per Megawatt per Month	\$361.72	Line 10 ÷ Line 11 ÷ 12 Months

* Total may not add up due to rounding.

Schedule 2: Reactive Supply and Voltage Control from Generation or Other Sources Service

Table 2 shows a high-level summary of how the price per MW per month was calculated for Schedule 2. One new item that was included in the calculation this year, is that of the Reactive Power and Voltage Support Revenue Credit, which directly feeds into the Total Revenue Requirement. This credit amount recognizes Reactive Power revenue collected in 2019 from sales of surplus transmission to third parties.

Table 2 – Summary of Calculations for Schedule 2 - Reactive Supply and Voltage Control from Generation or Other Sources Service

Line	Category	Value	Comments
1	Total Plant Cost	\$689,581,544	Sum of Net Book Value (NBV) for Hydro and Gas Plants
2	Total Plant Nameplate Capacity (kW)	1,900,825	Sum of Rated Capacity for Hydro and Gas Plants
3	Weighted Cost of Capital	4.51%	SMUD Nominal Discount Rate
4	Total Capital Cost	\$31,065,649	Line 1 × Line 3
5	Total Plant Operations & Maintenance (O&M) Expenses	\$68,681,213	Sum of O&M for Hydro and Gas Plants Less Fuel
6	Total Depreciation Expense	\$48,833,275	Sum of Depreciation Expenses for Hydro and Gas Plants
7	Total General & Administrative (G&A)	\$35,041,019	Sum of G&A for Hydro and Gas Plants
8	Reactive Power and Voltage Support Revenue Credit	\$(282,144)	Sum of the third-party Reactive power revenues from surplus transmission sales under SMUD and TANC OATTs
9	Total Revenue Requirement	\$183,339,011	Line 4 + Line 5 + Line 6 + Line 7 + Line 8
10	Schedule 2 Rate per Megawatt per Month	\$80.38	Line 9 ÷ Line 2 ÷ 12 Months ÷ 100 × 1,000**

** The formula divides by 100 to allocate 1% of the generation costs to Reactive Supply and Voltage Control as the share of generation cost attributable to voltage control consistent with SMUD's prior methodology based on industry practice. The formula multiplies by 1,000 to convert from kilowatt to megawatt.