Decision 20-05-004 May 7, 2020

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of Southern California Edison Company (U338E) for a Commission Finding that its Procurement-Related and Other Operations for the Record Period January 1 Through December 31, 2018 Complied with its Adopted Procurement Plan; for Verification of its Entries in the Energy Resource Recovery Account and Other Regulatory Accounts; and for net Refund of $22.150 Million Recorded in Five Accounts.	Application 19-04-001

DECISION APPROVING SOUTHERN CALIFORNIA EDISON COMPANY'S 2018 ENERGY RESOURCE RECOVERY ACCOUNT ENTRIES AND RELATED MATTERS

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Summary

This decision approves Southern California Edison Company's (SCE) rate recovery for 2018 Record Year[1] costs as modified herein. First, we find SCE achieved least-cost dispatch of its energy resources and economically-triggered demand response programs pursuant to Standard of Conduct Number Four (SOC 4), with the exception of a $333,510.65 disallowance for SCE's transition cost error.

Second, we find SCE prudently administered, managed and dispatched its Utility Retained Generation Facilities, Qualified Facilities (QF) and other non-QF contracts, in compliance with all applicable rules and regulations and Commission decisions, including but not limited to SOC 4, with the exception of a $1,126,157 disallowance for the Event 1 outage at the Mountainview Generating Station.

Third, we find SCE's recorded entries in 26 accounts are appropriate, correctly stated and in compliance with applicable Commission decisions, with the following modifications: 1) SCE's Litigation Costs Tracking Account (TA) refund shall include an additional $21,827, plus interest, to SCE's customers for the Bonneville Power Authority settlement and 2) SCE shall report the 2018 interest amount from the Department of Energy Litigation Memorandum Account (MA) for review in its 2019 Energy Resource Recovery Account (ERRA) compliance application.

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[1] The record year is from January 1, 2018 to December 31, 2018.

Fourth, the Commission approves a $22.150 million net revenue requirement decrease in SCE's 2019 rate levels associated with costs in the 1) Agricultural Account Aggregation Study MA, 2) Aliso Canyon Demand Response Program Balancing Account (BA), 3) Building Benchmarking Data MA, 4) Department of Energy Litigation MA and 5) Residential Rate Implementation MA as reasonable. Including the $21,827 from the Litigation Costs TA, SCE's total net revenue decrease shall be $22.172 million.

Fifth, this decision grants SCE's proposal to close and eliminate the following accounts: 1) Aliso Canyon Demand Response Program BA, 2) Agricultural Account Aggregation Study MA, 3) Renewable Portfolio Standard (RPS) Costs MA and 4) Purchase Agreement Administrative Costs BA.

Finally, we find SCE's administrative cost entries for its Greenhouse Gas (GHG) Compliance Instrument procurement are reasonable and accurate. We direct SCE hold a workshop with Pacific Gas and Electric Company, San Diego Gas & Electric Company and Public Advocates Office, then submit a petition for modification of Decision 19-04-016 in order to address balancing account treatment for direct GHG costs. SCE shall notify Liberty Utilities (CalPeco Electric) LLC and Pacificorp d/b/a Pacific Power of the working group, and facilitate their participation, which shall be optional.

This proceeding is closed.

1. Factual Background

The Commission established the Energy Resource Recovery Account (ERRA) balancing account mechanism in Decision (D.) 02-10-062 to track fuel and purchased power billed revenues against actual recorded costs of these items. In the same decision, the Commission required regulated electric utilities in California to establish a fuel and purchased power revenue requirement forecast, a trigger mechanism, and a schedule for ERRA applications. Subsequent decisions regarding the ERRA balancing account adopted minimum standards of conduct that regulated energy utilities must follow in performing their procurement responsibilities.

In the annual ERRA forecast application, a utility requests adoption of the utility's forecast of its expected annual fuel and purchased power costs for the upcoming 12 months. Approval of the forecast allows utilities to recover their ERRA revenue requirement in rates.

The Commission is required to perform a compliance review of the ERRA balancing account and related regulatory accounts and certain non-ERRA accounts. A compliance review considers whether a utility complied with all applicable rules, regulations, opinions and laws. A reasonableness review evaluates, not only a utility's compliance, but also whether the data or actions resulting from a forecasted expense are reasonable. The Commission also reviews whether the utility prudently administered its contracts and generation resources and dispatched energy in a least-cost manner in compliance with Standard of Conduct Number Four (SOC 4).

2. Procedural Background

On April 2, 2019, Southern California Edison Company (SCE) filed Application (A.) 19-04-001, requesting compliance review of its procurement-related and other operations, verifications of entries in its ERRA and other regulatory accounts, and a net refund of $22.150 million recorded in five accounts (Application).

The Public Advocates Office (Cal Advocates) and Clean Power Alliance of Southern California (CPA) filed protests on May 2, 2019. SCE filed a reply to the protests on May 13, 2019.

A prehearing conference was held on June 11, 2019 to discuss the issues of law and fact, and to determine the need for hearing and schedule for resolving the matter.

Cal Advocates filed a motion to dismiss SCE's application on September 9, 2019. SCE filed a response to Cal Advocates' motion to dismiss on September 24, 2019 and filed an amendment to its response on September 27, 2019. The assigned Administration Law Judge (ALJ Kline) denied Cal Advocates' motion to dismiss SCE's application by ruling dated October 8, 2019.

Parties served opening testimony on September 25, 2019 and reply testimony on October 25, 2019. The parties filed a joint case management statement on November 1, 2019, indicating they did not wish to cross-examine witnesses on prepared testimony. ALJ Kline took evidentiary hearings off-calendar by email ruling dated November 19, 2019.

Parties filed motions to offer prepared testimony into evidence on December 6, 2019. ALJ Kline identified and admitted testimony into the record, and granted parties' motions to seal portions of prepared testimony as confidential, by ruling dated December 18, 2019.

Parties filed opening briefs on January 13, 2020 and reply briefs on January 31, 2020. ALJ Kline issued a ruling directing SCE to provide select invoices related to disputed amounts in the Litigation Costs Tracking Account (TA) and the Department of Energy Litigation Memorandum Account (MA) for in-camera review by ruling dated January 31, 2020. SCE provided the aforementioned invoices to the assigned ALJ for in-camera review by mail on February 7, 2020. This matter was deemed submitted on February 13, 2020.

3. Burden of Proof and Jurisdiction

The utilities are required to prudently administer all contracts and generation resources, and to dispatch the energy in accordance with the Commission's longstanding procurement priorities of reliability, least-cost and environmental sensitivity.[2] ERRA applications are reviewed under a reasonable manager standard, whereby SCE's actions are evaluated based on whether they "comport with what a reasonable manager of sufficient education, training, experience, and skills using the tools and knowledge at his or her disposal would do when faced with a need to make a decision and act."[3]

The Commission exercises jurisdiction over the activities of public utilities,[4] including electrical corporations.[5] SCE is an investor owned utility (IOU) providing electrical service in California. SCE is therefore an IOU "subject to our jurisdiction, control and regulation."[6] The Commission has jurisdiction to review an IOU's ERRA compliance applications pursuant to Pub. Util. Code § 454.5.

4. Maximum Disallowance Related to SOC 4

SOC 4 provides that "[t]he utilities shall prudently administer all contracts and generation resources and dispatch the energy in a least-cost manner."[7] The Commission adopted a maximum potential disallowance for violations of SOC 4's duty to prudently administer contracts and achieve least-cost-dispatch at

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[2] D.02-10-062 at 17-18.

[3] D.11-10-002 at 11.

[4] Pub. Util. Code § 216(a).

[5] Pub. Util. Code § 218 defines an electrical corporation as every corporation "owning, controlling, operating, or managing any electrical plant."

[6] Pub. Util. Code § 216(b).

[7] D.02-10-062.

twice the utility's annual procurement administrative expenditures, as set in a utility's General Rate Case (GRC).[8] For 2018, SCE's annual procurement administrative expenditure is $29.087 million, and its maximum disallowance is $58.175 million.[9]

5. Issues Before the Commission

The issues to be determined in this proceeding are:

1. Whether SCE achieved least-cost dispatch of its energy resources and economically triggered demand response programs pursuant to SOC 4.
2. Whether during 2018 SCE prudently administered, managed and dispatched the following, in compliance with all applicable rules, regulations and Commission decisions, including but not limited to SOC 4:
   a. Utility Retained Generation Facilities;
   b. Qualifying Facility Contracts (QF); and
   c. Other non-QF contracts.
3. Whether SCE appropriately operated its memorandum accounts and balancing accounts (BA) during the 2018 Record Period; and the recorded entries in the accounts are appropriate, correctly stated and in compliance with applicable Commission decisions.
4. Whether the costs associated with the 1) Agricultural Account Aggregation Study MA, 2) Aliso Canyon Demand Response Program BA, 3) Building Benchmarking Data MA, 4) Department of Energy (DOE) Litigation MA and 5) Residential Rate Implementation MA are reasonable such that the Commission should approve a $22.150 million net revenue requirement decrease in 2019 rate levels.

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[8] D.03-06-067 at 5.

[9] Exhibit SCE-06 at 6.

5. Whether SCE's administrative costs entries for its Greenhouse Gas Compliance Instrument procurement are reasonable, accurate, consistent with Commission and state policies and laws, and whether SCE met its burden of proof regarding its claim for these entries.
6. Whether the rate recovery for 2018 Record Year costs is reasonable and should be authorized.
7. Whether there are any safety considerations raised by this application.

CPA raised the issue of accounting for the benefits of the Tax Cuts and Jobs Act of 2017 (TCJA) for ERRA Record Year 2018 in its protest. SCE and CPA subsequently met and conferred regarding SCE's treatment of benefits for Community Choice Aggregation (CCA) members as a result of the TCJA. They agreed that benefits accrued to the Mountainview Generating Station will be credited through the balancing account associated with this facility. Therefore, the issue of whether CCAs are appropriately credited for benefits incurred is not at issue in this proceeding.

6. Least-Cost Dispatch

Least-cost dispatch refers to utility dispatch of resources in a least-cost manner by using the most cost-effective mix of total resources.[10] In an ERRA compliance proceeding, the Commission considers whether the utility complied with SOC 4, which includes consideration of 1) whether the utility dispatched contracts under its control, 2) whether it disposed of economic long power, and purchased short power in a manner that minimizes ratepayer costs and

[10] D.02-10-062 at 52; D.02-02-074 at 54.

3) whether the utility used the most cost-effective mix of its total resources, thereby minimizing the cost of delivering electrical services.[11]

Least-cost dispatch is a disputed issue in this proceeding with regard to load forecast error and transition cost bidding template error for multi-stage generation resources. Section 6.1 resolves the disputed issue of whether SCE's 2018 load forecasting error was reasonable by finding SCE complied with SOC 4. Section 6.2 resolves the disputed issue of whether SCE's transition cost error was reasonable by disallowing $333,510.65 for SCE's failure to meet the reasonable manager standard.

6.1. Load Forecasting Error

Cal Advocates requests a disallowance for the net cost impacts associated with SCE's inaccurate bundled service load forecasts in 2018.[12] It argues SCE's price forecast accuracy in 2018 was unreasonable compared to past years.[13] SCE, on the other, contends it acted as a reasonable manager by dispatching its resources in a least-cost manner under historically challenging conditions.[14] SCE provides information of its current and historical mean average percentage error (MAPE) for system-level load forecasting as follows: 0.34 percent (%) in 2014, 0.88% in 2015, 1.05% in 2016, 0.93% in 2017 and 1.21% in 2018.[15] When excluding the eight high temperature days in 2018 (which SCE argues accounts for 45% of the costs associated with its load forecast error), SCE states that its system load

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[11] D.11-10-002 at 5.

[12] Cal Advocates Opening Brief (Public) at 12.

[13] Exhibit Pub Adv-01-Errata at 2-6 to 2-16.

[14] Exhibit SCE-07 at 17-28.

[15] *Id*. at 23-25.

forecasting accuracy increased to 0.86% in 2018.[16] Cal Advocates provides its own current and historical MAPE of SCE's bundled customer load forecasting error as confidential information,[17] which highlights the divergence of system and bundled customer load in 2018.

SCE opposes the Cal Advocates' disallowance recommendation, arguing Cal Advocates is holding SCE to a standard of perfection rather than one of reasonableness.[18] SCE also cites to the following challenges to load forecast accuracy it faced in 2018: 1) price volatility, 2) extreme weather resulting in all-time high loads, 3) extreme gas prices leading to extreme power prices, 4) California Independent System Operator's (CAISO) systematic load over-forecast, 5) load forecast variance costs relative to total load procurement costs and 6) uncertainty of predicting SCE's bundled load due to flexible or rolling customer departures due to CCA formation.[19]

Turning to our review of the matter, we first recognize that SCE's load forecasting error increased over prior years. Finding that SCE's load forecast error is elevated, this decision considers the reasonableness of SCE's load forecast error in 2018, when SCE's procurement costs were $983.8 million above its 2019 forecast costs.

To determine whether SCE dispatched its resources in a least-cost manner under the reasonable manager standard, we consider each of SCE's purported obstacles to load forecast accuracy. First, we consider SCE's assertion that price volatility in 2018 contributed to load forecast error. SCE provided a graph of

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[16] *Id.*

[17] Cal Advocates Office Reply Brief (Confidential) at 6.

[18] SCE Opening Brief at 4.

[19] Exhibit SCE-07 at 9-25.

price volatility from 2014, arguing Day-Ahead Default Load Aggregation Points (DLAP) price volatility increased significantly since 2016.[20] The graph shows peak price volatility increased from $40-50/megawatt-hour (MWh) from July to September 2017 to $90-100/MWh from July to September 2018.[21]

Second, SCE provides information regarding extreme weather which it argues contributed to forecast error. SCE reports that while weather modeling accurately predicted a heat wave from July 6-9, 2018, weather models were less accurate at forecasting heat waves from July 24-28, 2018 and August 6-8, 2018. Thereby, high day ahead prices for anticipated heat waves in July 24-28, 2018 and August 6-8, 2018 did not yield commensurate loads, contributing to SCE's overall load forecast error.

Third, SCE argues extreme gas prices in southern California led to extreme power prices, which it argues were also a contributing factor to SCE's load forecast error.[22] SCE states that, in recognition of this correlation, SCE filed a petition for modification of D.15-06-004 and D.16-06-039, as modified by D.16-12-016, to help cap certain gas charges contributing to spiking energy prices.[23]

Fourth, SCE argues the CAISO systematically over-forecast hourly load in 2018, which biased day-ahead market prices upward by up to 4,205 megawatts

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[20] *Id*. at 18-19.

[21] *Id*. at 18.

[22] *Id*. at 20, *citing* CAISO Energy Markets Performance Report (Sep. 23, 2019), http://www.caiso.com/Documents/FinalReport-PricePerformanceAnalysis.pdf.

[23] *Id*. at 21.

(MW).[24] SCE states the CAISO is currently looking at new Day-Ahead market products to address the uncertainty in the Day-Ahead markets.[25]

Fifth, both SCE and Cal Advocates agree market conditions also changed in 2018. Historically, the day-ahead and real-time prices converged.[26] However, this changed in the latter half of 2018 so that day-ahead prices were higher than real-time prices. Therefore, SCE's ratepayers incurred increased costs when SCE purchased excess energy during times of relatively high day-ahead market prices, for which the CAISO reimburses SCE at market prices.[27] SCE's ratepayers also incurred excess costs when SCE under-purchased energy at day-ahead prices when real-time prices were higher.

In addition, Cal Advocates argues forecasting variances associated with CCA load departures in the latter half of 2018 contributed to forecast error. SCE, on the other hand, argues it is difficult to predict the full impact of CCA load migration because CCAs are not required to file binding notices of intent and may change their scheduled customer load departures.[28] Nevertheless, SCE discussed load forecasting improvements SCE undertook to better estimate CCA load departures in the future.

Upon consideration, we recognize 2018 had historically challenging energy market conditions and find that SCE provided sufficient evidence to show it

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[24] *Id*. at 22-23.

[25] *Id*. at 7-8; *citing* CAISO's Day-Ahead Market Enhancements Stakeholder Initiative, http://caiso.com/StakeholderProcesses/Day-ahead-market-enhancements.

[26] Exhibit Pub Adv-01 at 2-4; *citing* CAISO Department of Market Monitoring, 2018 Annual Report on Market Issues & Performance at 65; http://www.caiso.com/Documents/2018AnnualReportonMarketIssuesandPerformance.pdf.

[27] Cal Advocates Opening Brief (Public) at 10.

[28] Exhibit SCE-07 at 8-9.

achieved least-cost dispatch within the reasonable manager standard. SCE's graph of price volatility is sufficient evidence to support SCE's claim that price volatility was a contributing factor to its load forecast errors. We also recognize that the price volatility corresponds to the high-heat days which SCE asserts comprised 45% of the costs associated with SCE's load forecast error. SCE recognized and took steps to moderate price volatility by filing a petition for modification of D.15-06-004 and D.16-06-039. SCE also provided links to CAISO documents showing that the CAISO is working on market products to address the difference in day-ahead and real-time market prices.

While SCE may have potentially optimized some portion of the load forecast to better forecast bundled customer load, it is not reasonable to isolate the portion of excess costs attributable to bundled service customer error from the multitude of other factors affecting load forecast error in 2018. The Commission declines to set a zero standard of load forecast error for least-cost dispatch but may address a threshold of reasonableness for load forecasting error in a future ERRA compliance proceeding.

6.2. Transition Cost Error

The Cal Advocates recommends a disallowance of $333,510.65 for SCE's failure to detect transition cost errors in its reference template[29] following a system upgrade.[30] SCE tested only one sample resource, which was not a multi-stage generation unit. Therefore, SCE was unable to detect the transition cost error for multi-stage generation units during its system upgrade testing. SCE

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[29] SCE has two active templates to calculate commitment costs. One of the templates contains a script to calculate transition costs. The other template contains scripts to calculate start-up, minimum load and transition costs. (Exhibit Cal Adv-01, Attach. 2.1 at 3 (SCE response to question 2.1.)

[30] Cal Advocates Opening Brief at 13.

later detected the error during a routine review of major maintenance expenses for one of SCE's multi-stage generation units on March 2, 2018, and promptly corrected the error.[31] Between December 16, 2017 to March 15, 2018, the CAISO dispatched six of SCE's multi-stage generation units more frequently and in the wrong configuration, at an increased cost of $333,510.65.[32]

SCE argues it acted as a reasonable manager in its setup of bidding templates, as the error favored increased bids, and because SCE acted to correct the mistake upon its discovery.[33]

The Commission finds that a prudent manager would have performed bidding template testing sufficiently robust to detect errors in its various unit types. SCE did not meet its burden to show it prudently managed the testing of its bidding templates, resulting in CAISO dispatch of multi-stage generation units more frequently and in the wrong configuration. This error is similar to input errors the Commission disallowed for the El Segundo Startup cost error in both SCE's 2016 and 2017 ERRA compliance applications.[34] Thus, we cannot find that SCE operated as a prudent manager and disallow $333,510.65[35] in replacement power costs resulting from the transition cost bidding template error.

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[31] SCE Reply Brief at 5.

[32] Cal Advocates Opening Brief at 12-13.

[33] SCE Opening Brief at 8-10.

[34] *See* D.19-10-039; D.18-01-016.

[35] The transition cost error amount was calculated by SCE and adopted by Cal Advocates as its disallowance recommendation.

7. Management of Utility-Owned Generation

SCE operates the following utility-owned generation: 1) hydroelectric, 2) natural gas, 3) Catalina diesel fuel/liquified natural gas and transportation, 4) solar photovoltaic program, 5) fuel cells and 6) nuclear fuel and interim fuel storage.

This decision considers SCE's hydroelectric units in Section 7.1, natural gas units in Section 7.2, solar photovoltaic program in Section 7.3, fuel cells in Section 7.4, nuclear resources in Section 7.5 and energy storage in Section 7.6.

7.1. Hydroelectric Generation

SCE's hydroelectric resources in 2018 consisted of 33 powerhouses with a 1,176 MW total nameplate capacity.[36] SCE's net generation in 2018 was 3,503,919 MWh, which is 95% of the 20-year average, largely due to lower than average annual water runoff.[37] SCE's large hydro units experienced seven unscheduled outages for 2018.[38] SCE proposes to review the reasonableness and prudence of the outage at the Big Creek Unit 5 in SCE's 2019 ERRA compliance review, as the outage began on November 6, 2018 and the cause of the outage is still under investigation.[39]

Cal Advocates recommends no disallowances for SCE's hydroelectric units. No other parties protested or commented on SCE's management of its hydroelectric resources.

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[36] Exhibit SCE-01 at 33.

[37] *Id*. at 44.

[38] *Id*. at 49.

[39] *Id*. at 51.

Upon review, we find SCE operated its hydroelectric facilities as a reasonable manager in 2018. We grant SCE's request to review the Big Creek Unit 5 outage in SCE's 2019 ERRA compliance application.

7.2. Natural Gas

SCE's natural gas resources consist of five black-start capable peakers (peakers) owned by SCE and the Mountainview Generating Station. The peakers[40] had a combined capacity of 245 MW,[41] generated a total of 105,854 MWh, and consumed 1,134,897 million British thermal units (MMBtu) of natural gas at a cost of $8.106 million in 2018.[42]

The Mountainview Generating Station is a two-unit (Units 3 and 4) combined cycle gas-fired power plant with a combined nominal capacity of 1,104 MW.[43] In 2018, the Mountainview Generating Station provided 1,964,851 MWh of power, which is lower than its 2017 output. SCE attributes the lowered generation to increased plant outages, and a change in CAISO dispatch due to lower clearing prices and higher fuel costs.[44]

In addition to scheduled outages, SCE reported 11 scheduled outage extensions and unscheduled outages at the Mountainview Generating Station, as summarized below:

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[40] SCE's peaker units are the Barre, Center, Grapeland, Mira Loma and McGrath peakers.

[41] Exhibit SCE-01 at 54.

[42] *Id*. at 55.

[43] *Id*. at 61.

[44] *Id*. at 62.

1	Oct. 17-25, 2017	Unit 3 Steam turbine - Balancing valve actuators
2	Oct. 17-2017 to Jan. 7, 2018	Unit 3 Steam turbine - Solid particle erosion
3	Jan. 10-11, 2018	Unit 3 Steam turbine - High vibration trip
3a	Jan. 18-22, 2018	Unit 3 Steam turbine - High vibration trip
4	Jan. 11-13, 2018	Unit 3A Combustion Turbine – Water in gas pressure sensing line
5	Oct. 30, 2017 to Jan. 30, 2018	Unit 4 Steam turbine – Solid particle erosion and foreign object damage
6	Oct. 30, 2017 to Feb. 2, 2018	Unit 4A Combustion turbine – Economizer tube leak
7	Apr. 16-17, 2018	Unit 3B Combustion turbine – Fuel gas hydraulic pressure
8	Apr. 18-20, 2018	Unit 4B Combustion turbine – Drum level controller malfunction
9	Aug. 14-15, 2018	Unit 3B Combustion turbine – Circuit breaker motor failure
10	Aug. 21-23, 2018	Unit 4B Combustion turbine – Inlet guide vane failure
11	Oct. 20- Nov. 19, 2018	Unit 3 Combustion turbine – Main transformer failure

Consideration of Events 1, 2 and 6 was deferred from the 2017 ERRA compliance proceeding to the 2018 ERRA compliance proceeding, as the events spanned two record years.[45] Cal Advocates recommends a disallowance for Event 1, as considered in Section 7.2.1.

7.2.1. Mountainview Generating Station – Outage Event 1

The Mountainview generating units, Unit 3 and 4, each consist of two General Electric (GE) 7FA combustion turbine generators and two foster wheeler heat recovery system generators.[46] Each generating unit also has one steam turbine generator, which consists of a high-pressure/intermediate pressure

[45] D.19-10-039 at 16.

[46] SCE Chapter IV workpapers, Apparent Cause Evaluation 2017 Mountainview Unit 3 Steam Turbine Startup Failure (ACE) at 4, fn. 3.

turbine section, a low pressure section and a generator.[47] "The 3A and 3B balancing valves control the flow of steam from the 3A and 3B heat recovery steam generators to the Unit 3 steam turbine."[48]

On October 17, 2017, SCE's contractor, R&B Automation, Incorporated (R&B Automation), installed new electric valve actuators[49] in Unit 3 at a position rotated 90 degrees from its correct orientation, which caused the valves to close instead of open when SCE attempted to start up the unit.[50] On October 18, 2017, the Unit 3 tripped due to high steam pressure. At this time, SCE personnel visually inspected the balancing valves and verified they appeared to be in the correct position.[51] Two additional startups on October 18-19, 2017 also failed due to high exhaust temperatures.[52]

On October 23, 2017, GE[53] requested data for troubleshooting and created a fault tree.[54] After determining the likely cause of the trip was from "steam flow blockage downstream of the HP turbine section," a borescope inspection was conducted on the intermediate pressure section of the steam turbine on

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[47] *Ibid*.

[48] *Ibid*.

[49] "A valve actuator is a mechanical device that uses a power source to operate (i.e. open and close) a valve. This power source can be electrical, hydraulic, or in the case of a Cold Reheat (CRH) balancing valves; pneumatic (air). Each balancing valve is equipped with an actuator to allow for remote operation from the control room via the Digital Control System (DCS)." Exhibit SCE-07, Appendix III-G at 1.

[50] Exhibit SCE-01 at 70-72.

[51] ACE at 4.

[52] *Ibid*. at 4.

[53] GE is the original equipment manufacturer and has a Contract Services Agreement with SCE for the Mountainview Generating Station

[54] Exhibit Cal Adv-01 at 3-22.

October 25, 2017.[55] The borescope inspection found foreign object damage in the steam turbine, and strainers were installed in the steam inlet piping of the intermediate pressure turbine section in order to determine the source of the material that might be causing the blockage. An attempt to restart Unit 3 on October 26, 2017 failed when the unit again tripped due to high exhaust temperatures.[56]

After the October 26, 2017 trip, SCE staff (with the assistance of GE) began rechecking all the possible causes of steam flow blockage and discovered the new actuators were rotated 90 degrees. On October 28, 2017, R&B Automation repositioned the valve actuators to the correct orientation.[57]

Cal Advocates recommends a disallowance of $1,126,157[58] for the cost of replacement power resulting from the misplacement of the valve actuators. Cal Advocates contends SCE failed to act as a reasonable manager by failing to properly oversee work performed by R&B Automation. According to Cal Advocates, the replacement of pneumatic valve actuators with electric valve actuators warranted review in the instruction manual. As SCE destroyed the work authorizations associated with the 2017-2018 outages, Cal Advocates argues SCE could not provide evidence of this reference manual check by R&B

[55] SCE Chapter IV workpapers, Apparent Cause Evaluation 2017 Mountainview Unit 3 Steam Turbine Startup Failure (ACE) at 4.

[56] *Id*. at 4-5.

[57] Exhibit SCE-01 at 72.

[58] SCE Opening Brief at 14.

Automation.[59] Cal Advocates also objects to SCE's destruction of the work authorizations, as discussed below in Section 7.2.3.[60]

SCE opposes Cal Advocates' disallowance request, arguing its actions in response to the forced outage were reasonable. SCE states it promptly conducted an investigation in response to the Unit 3 trip, correctly determined that Unit 3 tripped due to excessively high steam temperature at the discharge section of the steam turbine and attempted several remedial measures until they discovered the cause of the Unit 3 trip to be incorrect installation of the valve actuators.[61] SCE notes that the Mountainview Generating Station's CRH valve actuator type is peculiar to that facility and opposite of the common valve design.[62] R&B Automation reoriented the valve actuator at no additional charge and SCE does not intend to pursue further compensation from this contractor for power replacement costs. In response to Event 1, SCE also implemented the following corrective actions: 1) valve "as left" position will be noted in future work authorization papers, 2) SCE will install better visual indicators on the valves and 3) SCE will perform a concurrent fault-tree analysis during maintenance activities.[63]

The Commission finds that a prudent manager would have properly supervised its contractor to ensure that the valve actuator was properly installed and properly working.[64] The apparent cause of the outage was SCE's failure to

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[59] Cal Advocates Opening Brief at 8.

[60] *Id*. at 5-6.

[61] SCE Opening Brief at 14.

[62] *Id*. at 14.

[63] Exhibit SCE-01 at 72.

[64] *See* D.15-07-014.

indicate the valve position status on the work authorization, which SCE found not relevant to consideration of this outage and destroyed that document after reviewing the work authorization as part of the apparent cause evaluation.[65] The contributing factor was that SCE did not conduct a fault-tree analysis independent of the contractor.[66] The workpapers, particularly SCE's Apparent Cause Evaluation, show SCE staff did not provide sufficient oversight of the contractor once R&B Automation's efforts proved unsuccessful. A reasonable manager should already conduct sufficient oversight of its contractors. We disallowed recovery for a similar lack of contractor oversight at the Mountainview Generating Station in the 2015 ERRA compliance decision.[67]

SCE did not meet its burden to show that it adequately supervised its independent contractor in connection with the valve actuator replacement. Thus, we cannot find that SCE operated as a prudent manager and disallow $1,126,157 in replacement power costs[68] resulting from the Event 1 forced outage.

7.2.2. Prudent Management of Contractors at Mountainview Generating Station and Costs Reimbursement

Cal Advocates recommends the Commission order SCE to report on how GE's reimbursement credit of $1.5 million is used on an annual basis in future ERRA proceedings.[69] SCE objects to further showings of operations and

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[65] ACE at 8.

[66] *Ibid*.

[67] D.19-03-016.

[68] Replacement power costs were calculated by SCE.

[69] Cal Advocates Opening Brief at 7.

maintenance (O&M) expenses in the ERRA proceeding, as O&M costs are reviewed in the GRC proceeding.[70]

This decision declines to adopt the Cal Advocates' recommendation to provide a showing of costs in future ERRA proceedings because these costs are reviewed in the appropriate GRC proceeding.

7.2.3. Retention of Documents

SCE provided generating plant outage reports and root cause analysis reports for outages in their workpapers, but not work authorizations.[71] SCE states that its document retention policy was to retain work authorizations for one year following the completion of the work and to retain records related to the repair, inspection, and general maintenance of facilities and equipment for five year following completion of the work.[72] In January 2020, SCE revised the retention period for work authorization forms to from "one year" to "active," which requires SCE to retain work authorizations (record class EHS1160) relating to outages that meet D.15-03-015 for a period of three years subject to review in active and future proceedings.[73] SCE states it provided all documents in compliance with the standards adopted by the Commission in D.15-03-023.

SCE also states that its work authorization forms contain "a description of the purpose of the job, roles of the participants, matter in which the job will be performed, status of equipment being worked on, risks and mitigations, and a safety checklist" and they "are typically reviewed in response to a safety

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[70] SCE Opening Brief at 13.

[71] Exhibit SCE-07 at 29.

[72] *Ibid*.

[73] SCE Reply Brief at 7-8; SCE Opening Comments at 8.

incident."[74] SCE asserts that work authorizations "do not contain information relevant to the cause of the outage, or subsequent corrective actions taken during and/or after the outages."[75] SCE destroyed the work authorizations related to the Mountainview Generating Station outages after agreeing to defer review of the 2017-2018 Mountain Generating Station outages in the 2017 ERRA compliance application.

Cal Advocates opposes SCE's destruction of its work authorizations if they record inspection activities and argues SCE should retain all documents for active pleadings and future applications.[76] Cal Advocates proposes the Commission require SCE to retain all records pertaining to active and future proceedings for either 1) a minimum of three years after a proceeding has closed or 2) a minimum of five years for records related to the repair, inspection and maintenance of facilities equipment.[77]

In D.15-03-015, the Commission adopted standards of review for SCE to provide for forced outages exceeding 24 hours or scheduled outage extensions that lasted more than one week past the scheduled end date of the outage where the outage affects a unit (or an outage affecting multiple units) with a rating capacity of greater than 25 MW. D.15-03-015 identified areas of agreement[78] as

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[74] *Id*. at 30.

[75] *Ibid*.

[76] Cal Advocates Opening Brief at 5-6.

[77] *Id*.

[78] Areas of agreement included SCE's production of outage reports, NERC event codes, NERC Gads reporting protocols, and 5 years of equivalent availability factor and forced outage factor data for units.

well as areas of future discussion, without foreclosing the opportunity for an additional utility showing for outages.[79]

The Commission directs SCE to retain work authorizations for those outages subject to reporting per D.15-03-105, which are also pending Commission review in an ERRA compliance proceeding. At a minimum, the work authorizations will serve the purpose of showing that SCE was carrying out its proposed corrective actions for valve placement and exercising sufficient oversight of its contractors such as conducting a fault-tree analysis, per its own recommended actions arising out of the Event 1 outage. More generally, the work authorizations may contain other information beneficial to the Commission's evaluation of outages. Other than requiring SCE retain work authorizations for those outages subject to reporting per D.15-03-015 which are also pending review in an ERRA compliance proceeding, the Commission does not adopt any other modification to SCE's document retention policy at this time. This order is similar to the updated document retention policy adopted by SCE in January 2020, with the distinction that work authorization retained for review in SCE's pending ERRA compliance proceedings may extend beyond the three-year period specified in SCE's revised document retention policy.

7.3. Solar Photovoltaic Program

SCE's solar photovoltaic resources consist of 25 sites ranging from 0.5 to 8 MW alternating current (AC), with a total size of 67.5 MW AC or 91.4 MW of Direct Current (DC).[80] SCE's solar projects operated at a 15.1% capacity factor in

[79] D.15-03-023 at Attachment A.

[80] Exhibit SCE-01 at 86.

2018 and produced 89,150 MWh of AC generation.[81] SCE's solar photovoltaic unit performance has degraded close to 0.5% due to normal degradation rates which are exacerbated by the hot and dry conditions in SCE's service territory, particularly in the Inland Empire area where most of the solar photovoltaic units are located.[82]

No parties proposed a disallowance for SCE's solar photovoltaic resources. Upon review, we find SCE operated its solar photovoltaic resources as a reasonable manager in 2018.

7.4. Fuel Cells

SCE operated two demonstration fuel cells in 2018, one at University of California Santa Barbara and a second at California State University San Bernardino. SCE's fuel cells had a total annual electric output of 10,103,132 kWh, and consumed 90,111 MMBtu of natural gas at a cost of $0.652 million in 2018.[83] Neither facility experienced an outage longer than 24 hours in 2018.[84]

No parties proposed a disallowance for SCE's fuel cell resources. Upon review, we find SCE acted as a reasonable manager when operating its fuel cell resources.

7.5. Nuclear Generation

SCE has an ownership interest in the San Onofre Nuclear Generating Station (SONGS), a nuclear power facility which ceased operations in 2013, and the Palo Verde Nuclear Generating Station (PVNGS), a nuclear power facility operated by the Arizona Public Service near Phoenix, Arizona.

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[81] *Id*. at 90.

[82] *Id*. at 90-91.

[83] *Id*. at 93.

[84] *Id*. at 94.

In 2018, SCE's 15.8% share of the PVNGS generation was 4,914,804 MWh. PVNGS's average capacity factor was 90.2%.[85] PVNGS experienced two scheduled (for refueling and maintenance) and four unscheduled outages in 2018.[86] SCE's share of the PVNGS produced a net generation of 4,913 GWh at an overall expense of $33.7 million, equivalent to $6.86/MWh.[87]

No parties proposed a disallowance for SCE's nuclear resources. Upon review, we find SCE acted as a reasonable manager when operating its nuclear resources.

7.6. Energy Storage

SCE's UOG for energy storage consists of the Tehachapi Storage Project, which is an 8 MW/4 hour (32 MWh) utility scale lithium ion battery energy storage system originally funded by the 2009 American Recovery and Reinvestment Act as a demonstration project.[88] The Commission authorized SCE to continue operation of the Tehachapi Storage Project and "permanently move the point of interconnection to the Monolith 12 kilovolt (kV) bus."[89] During 2018, SCE incurred incremental costs from moving the point of interconnection to the 12 kV bus, which also included Tehachapi project closeout costs and ongoing O&M costs.

In resolution E-4954, the Commission required review of the Tehachapi Storage Project in the ERRA starting in 2017. In Resolution E-5019, the

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[85] *Id*. at 98.

[86] *Id*. at 100-104.

[87] *Id*. at 105.

[88] Resolution E-4809.

[89] Exhibit SCE-02 at 149.

Commission approved SCE's continued operation of the Tehachapi Storage Project and one-time costs in 2018.[90]

During 2018, the Tehachapi Storage Project experienced 51 outages due to four categories of component failures and operational issues in the following categories 1) system repairs, 2) grid reliability needs, 3) telemetry and communication issues and 4) planned preventative maintenance.[91]

No parties proposed a disallowance for SCE's energy storage resources. Upon review, we find SCE acted as a reasonable manager when operating its energy storage resources.

8. Contract Administration

SCE provided testimony detailing 164 contract amendments in 2018, including amendments to 1) 68 behind-the-meter resources, 2) 58 natural gas/conventional resources, 3) eight Public Utility Regulatory Policies Act (PURPA) resources, and 4) 30 RPS resources.[92] SCE also terminated, or allowed to expire, 40 of its contracts.[93] Finally, SCE managed 13 force majeure contract claims and 14 contract disputes for reasons other than force majeure.[94] No parties disputed SCE's prudent administration or management of contracts. Cal Advocates found SCE reasonably and prudently conducted its contract administration.[95] Following our review of testimony, we find SCE reasonably and prudently managed its contracts for 2018.

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[90] *See* SCE AL 3980-E and AL 3980-E-A,

[91] Exhibit SCE-02 at 151-152.

[92] Exhibit Pub Adv-01 at 4-2.

[93] *Id*. at 4-9.

[94] *Ibid*.

[95] *Id*. at 4-14.

9. Management of Accounts

SCE requests the Commission find its procurement-related expenditures in 26 accounts appropriate, correctly stated and in compliance with Commission decisions. These accounts are summarized in Table 9.1 and discussed in sections 9.1 through 9.26, below:

Table 9-1. Summary of Accounts for Commission Consideration

No.	Balancing/Memorandum/Tracking Account or Adjustment Mechanism (AM)
1	Agricultural Account Aggregation Study MA
2	Aliso Canyon Demand Response Program BA
3	Building Benchmarking Data MA
4	DOE Litigation MA
5	Residential Rate Implementation MA
6	ERRA BA
7	Energy Settlements MA and Litigation Costs TA
8	New System Generation BA
9	Base Revenue Requirement BA
10	Nuclear Decommissioning AM
11	Public Purpose Programs AM
12	Conservation Incentive Mechanism
13	California Alternative Rates for Energy (CARE) BA
14	Pension Costs BA
15	Post-Employment Benefits Other than Pensions BA
16	Medical Programs BA
17	Short-Term Incentive Program MA
18	Statewide Marketing, Education and Outreach (ME&O) BA
19	Charge Ready Program BA
20	Green Tariff ME&O MA and Enhanced Community Renewables ME&O MA
21	Green Tariff Shared Renewables Administrative Costs MA
22	Local Capacity Requirement Products BA
23	Transportation Electrification Program BA
24	RPS Costs MA
25	Purchase Agreement Administrative Costs BA
26	Pole Loading and Deteriorated Pole Programs BA

Cal Advocates initially disputed the reasonableness of 10 out of 26 accounts. During the proceeding, Cal Advocates withdrew recommendations related to six of the accounts: Base Revenue Requirement BA, Public Purpose Program AM, Energy Settlements MA, Residential Rate Implementation MA, Purchase Agreement Administrative Costs BA, LCR Products BA. SCE and Cal Advocates came to full or partial agreement on issues related to three accounts: Energy Settlements MA, Transportation Electrification Program BA and DOE Litigation MA. Disputed issues of fact or law remaining between Cal Advocates and SCE regarding the DOE Litigation MA, Litigation Costs TA, and Green Tariff Shared Renewables BA, are resolved in Sections 9.4, 9.7, and 9.21, respectively.

SCE also requests approval to refund approximately $22.150 million to its customers upon a Commission finding the costs in five accounts are reasonable as detailed in the Table 9-2 and discussed in detail in Sections 9.1 to 9.5.

Table 9-2. Summary of Revenue Requirement Requests and Refunds

Balancing/Memorandum Accounts	Amount (Millions)
Agricultural Account Aggregation Study MA	$0.078
Aliso Canyon Demand Response Program BA	-$2.331
Building Benchmarking Data MA	$0.564
Department of Energy Litigation MA	-$34.339
Residential Rate Implementation MA	$14.132
Net Over-Collected Balance	-$21.986
Franchise Fees and Uncollectibles	-$0.254
Total Revenue Requirement Change	-$22.150

If the Commission approves the total rate changes SCE requests, it would result in a 0.02% system average rate decrease beginning in 2020, and an average residential customer using 550 kilowatt-hours (kWh) per month would see a decrease of $0.20 per month, from $110.12 to $109.92. SCE's estimate of customer rate changes is summarized in Table 9-3.

Table 9-3. Summary of Proposed Rate Changes Associated with Proposed Net Return to SCE's Customers

Customer Group	Bundled Average Rates			
	Current Rates (¢/kWh)	**Rate Change (¢/kWh)**	**Proposed Rates (¢/kWh)**	**% Change over current**
Residential	18.00	-0.04	17.96	-0.2%
Lighting – Small and Medium Power	16.82	-0.03	16.79	-0.2%
Large Power	1.90	-0.03	11.87	-0.2%
Agricultural and Pumping	13.12	-0.03	13.09	-0.2%
Street and Area Lighting	18.48	-0.02	18.46	-0.1%
Standby	9.86	-0.02	9.83	-0.3%
Total	**15.91**	**-0.03**	**15.87**	**-0.2%**

Finally, SCE requests approval to close the following accounts: Aliso Canyon Demand Response Program BA, 2) Agricultural Account Aggregation Study MA, 3) RPS Costs MA and 4) Purchase Agreement Administrative Costs BA, as discussed below.

9.1. Agricultural Account Aggregation Study MA

The Agricultural Account Aggregation Study MA is a balancing account which records the costs of a study ordered under the SCE 2012 GRC Phase 2 Agricultural and Pumping Rate Group Rate Design Settlement Agreement.[96] This study examined the costs and benefits of agricultural customer account aggregation and had a budget cap of $100,000.[97]

SCE recorded a $78 thousand revenue requirement for the 2013-2018 record period associated with implementation of this study, which includes

[96] D.13-03-031 at 41.

[97] *Ibid.*; SCE AL 2872-E.

1) $4 thousand for travel expenses, 2) $11 thousand for Survey Tool Development and SCE Customer Interviews, 3) $59 thousand for Consulting Services (including analysis, review of customer farm operations, report writing, etc.) and 4) $3 thousand interest.[98]

All expenses for the study are charged back to the Agricultural Class of customers.[99] SCE requests the Commission find the expenses accurate and reasonable, and also requests to eliminate this MA.

No parties protested or commented on SCE's proposal for the Agricultural Account Aggregation Study MA. Upon consideration, we find SCE's recorded expenses in 2013-2018 accurate, reasonable and in compliance with applicable Commission decisions. This decision authorizes SCE to charge $78 thousand back to the Agricultural Class of customers and authorizes SCE to thereafter eliminate the Agricultural Account Aggregation Study MA.

9.2. Aliso Canyon Demand Response Program BA

The Aliso Canyon Demand Response Program BA records the costs associated with demand response programs implemented by SCE to mitigate the effects of the moratorium on natural gas injections at the Aliso Canyon Natural Gas Facility.[100]

The Commission authorized SCE to transfer $2.8 million from the Demand Response Program BA funding for 2016, and authorized a budget of up to $11.828 million in 2017 demand response bridge funding, with the option of using $3 million to implement an Aliso Canyon Demand Response Auction

[98] Exhibit SCE-02 at 125-126.

[99] D.13-03-031 at 41.

[100] D.16-06-029.

Mechanism (DRAM).[101] SCE did not conduct an Aliso Canyon DRAM, and its 2017 bridge funding budget was $8.828 million, for a total budget of $11.628 million.[102] SCE operated its Aliso Canyon Demand Response programs from 2016 to 2018. Through this application, SCE requests to 1) recover $9.297 million revenue requirement for 2016-2018 and return $2.331 million to SCE customers, as summarized below:[103]

Table 9-4. Summary of Revenue Requirement for Aliso Canyon Demand Response Programs from 2016 to 2018

Budget Category	ERRA Forecast	Cost 2016-2018 (million)
Total Budget		- $11.828
Total Cost		$9.297
- Reliability Programs		$0.020
- Price Responsive Programs		$7.427
- Marketing Education and Outreach		$1.850
Net Overcollection		**-$ 2.331**

SCE also seeks to close the Aliso Canyon Demand Response Program BA and eliminate Preliminary Statement JJJ from its tariffs.[104]

No parties protested or commented on SCE's proposal regarding the Aliso Canyon Demand Response Program BA. Upon consideration, we find SCE's request reasonable and approve a revenue requirement of $9.297 million and a net return of $2.331 million to SCE's customers. This decision also authorizes SCE to close the Aliso Canyon Demand Response Program BA and eliminate tariff Preliminary Statement JJJ.

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[101] *Ibid*.

[102] Exhibit SCE-02 at 109.

[103] *Id*. at 111-112.

[104] *Id*. at 108-113.

9.3. Building Benchmarking Data MA

The Building Benchmarking Data MA tracks the costs SCE incurred for maintaining energy usage data, which allowed building owners to report building benchmarking data to the California Energy Commission pursuant to Assembly Bill 802.

SCE seeks to recover $0.564 million for cost incurred during 2017 and 2018 for setting up an automated system for building owners to receive whole building energy consumption data, retiring the manual process in April 2017.[105]

No parties opposed or commented on SCE's Building Benchmarking Data MA revenue request. Upon review, we find SCE's recorded 2018 entries in the Building Benchmarking Data MA appropriate, correctly stated and in compliance with applicable Commission decisions. We authorize SCE's request to recover a revenue requirement of $0.564 million in this account.

9.4. DOE Litigation MA

The DOE Litigation MA records the balance of costs recovered from litigation against the DOE for failure to take spent nuclear fuel from SONGS, for permanent storage in a federal depository, under SCE's contract with the DOE pursuant to the Nuclear Waste Policy Act of 1982.[106] In July 2018, SCE and the other SONGS' owners received $34.572 million for damages incurred from the DOE's failure to take spent nuclear fuel during 2016, less $0.233 million in litigation costs.[107] SCE proposes to return SCE's portion of the DOE settlement

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[105] *Id*. at 127.

[106] *Id*. at 103-104.

[107] *Id*. at 107.

funds (a total of $34.339 million)[108] to its customers through the DOE Litigation MA.

Cal Advocates recommends a disallowance of $70,082.89 in unverifiable litigation expenses, alleging SCE failed to provide it with sufficient evidence to verify the costs by redacting the entirety of the invoices relating to these costs.[109] The assigned ALJ verified the content of the invoices through an in-camera review and, as a result, recovery of the amount is authorized in this decision.

Cal Advocates also recommends the Commission direct SCE to adjust the DOE Litigation MA to reflect an estimated $2.487 million in interest income associated with Round 4 settlement payments.[110] SCE argues there is no interest payment yet as this will be calculated at the time of transfer, which occurs after the 2018 DOE Litigation MA amount is approved in this decision.[111]

Upon consideration, this decision directs SCE to include the DOE Litigation MA interest amount in its 2019 ERRA compliance application for review. Otherwise, the Commission finds SCE's entries in the DOE litigation MA reasonable, correctly stated and in compliance with Commission decision. This decision authorizes SCE to refund $34.339 million in the DOE Litigation MA to its customers.

9.5. Residential Rate Implementation MA

The Residential Rate Implementation MA was established to recover the verifiable incremental costs associated with SCE's transition of residential customers to time-of-use (TOU) rates, and includes recovery of costs associated

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[108] $34.572 million in litigation proceeds and $0.233 million in litigation and other costs.

[109] Cal Advocates Opening Brief at 17-18.

[110] *Id.* at 18.

[111] Exhibit SCE-07 at 57.

with 1) TOU pilots, 2) TOU studies, 3) ME&O and expenses and 4) other reasonable expenses.[112] The Commission directed recovery of the incremental TOU costs in the GRC.[113] Subsequently, the Commission adopted SCE's proposed recovery of these TOU Pilot costs for 2018, 2019, and 2020 in their respective ERRA compliance proceedings.[114] SCE requests recovery of $14.132 million in 2018 for TOU Pilot costs, which includes $13.350 million for O&M expenses and $0.783 million in capital-related revenue requirement.[115]

A disputed issue between SCE and Cal Advocates related to accounting in the Residential Rate Implementation MA was resolved though the course of the proceeding.[116] Upon consideration, this decision finds SCE's entries in the Residential Rate Implementation MA accurate, reasonable and in compliance with applicable Commission decisions, and authorize SCE's revenue requirement of $14.132 million for costs associated with SCE's transition of residential customers to TOU rates.

9.6. ERRA BA

The ERRA BA records the difference between the ERRA-related revenue requirement and SCE's recorded fuel costs and purchased power expenses.[117] Significant adjustments to the 2018 ERRA BA include FERC's approval of a 2006 settlement with Bonneville Power Authority (BPA) resulting in 1) a credit of $41.1 million, 2) a credit of $9.320 million for the annual Mountainview and

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[112] D.15-07-001 at 298, 335 (Ordering Paragraph 12); SCE AL 3251-E.

[113] D.15-07-001 at 298.

[114] D.19-05-020 at 268-269.

[115] Exhibit SCE-02 at 113-124.

[116] Cal Advocates Opening Brief at 19.

[117] SCE-02 at 25.

Imports Physical Settlement, and 3) a $2.127 million credit for a weighted average cost correction in October 2018.[118] The Commission also authorized recovery of the 2018 ERRA balance in SCE's ERRA Trigger Mechanism Application 18-11-009.[119]

A dispute regarding whether direct GHG costs may be recorded in an account other than the ERRA BA is discussed in Section 11. Otherwise, this decision finds SCE's entries for 2018 in the ERRA BA appropriate, correctly stated and in compliance with Commission decisions.

9.7. Energy Settlements MA and Litigation Costs TA

The Energy Settlements MA tracks refunds from generators who overcharged SCE for electricity during the 2000-2001 California Energy Crisis. The Litigation Costs TA is a subaccount of Energy Settlement MA which tracks litigation costs "set-aside" in Federal Energy Regulatory Commission (FERC) investigation settlement agreements and actual litigation costs incurred by SCE.[120]

SCE received a $71.9 million refund in 2018 from settlements with Bonneville Power Authority (BPA) ($41.3 million), Shell Energy ($30.2 million) and Illinova ($0.400 million). SCE recorded $41.1 million from the total settlement amount in to ERRA BA pursuant to D.07-03-005. SCE recorded $29.309 million, the remaining refund less a shareholder incentive of $1.45 million, in the Energy Settlements MA for 2018.[121]

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[118] *Id*. at 26.

[119] D.19-01-045.

[120] D.19-02-024 at 13.

[121] SCE-02 at 73-74.

SCE received $1.38 million for reimbursement of litigation expenses from the 2018 BPA settlement, which SCE is holding in escrow, and plans to credit the Litigation Costs TA for future expenses SCE has yet to incur related to the final clearing of California Power Exchange and CAISO accounts relating to the California Energy Crisis.[122]

9.7.1. Shareholder Incentives for BPA Settlement

Through the course of the proceeding, Cal Advocates and SCE agreed that approximately $21,827, plus interest, was incorrectly retained in the shareholder incentive from the BPA settlement.[123] SCE states that it will refund this amount when the 2018 ERRA review is implemented in rates.[124] This decision approves the parties' proposal to refund an additional $21,827, plus interest, in shareholder incentives to customers through the Energy Settlements MA.

9.7.2. Redacted Invoices for Litigation Costs TA

Cal Advocates recommends a disallowance of $2,042,942.10 in unverifiable litigations costs, for which Cal Advocates alleges SCE provided only completely redacted invoices. The assigned ALJ verified the content of the invoices through an in-camera review. As a result, the Commission authorizes recovery of the amount in the redacted invoices herein.

9.7.3. Balancing Account Treatment for Litigation Costs TA

In testimony, SCE stated that cost recovery for the Litigation Costs TA will be included in the ERRA forecast revenue requirement pursuant to

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[122] SCE-02 at 76-77.

[123] Cal Advocates Opening Brief at 15; Exhibit SCE-07 at 41.

[124] SCE Opening Brief at 21.

D.15-10-037.[125] Cal Advocates objects to revenue requirement recovery of the Litigation TA in the ERRA forecast, arguing SCE is requesting removal of Litigation Costs TA auditing from the ERRA compliance review. According to Cal Advocates, the Energy Settlements MA and Litigation Costs TA tariffs require these costs to be subject to audit in SCE's ERRA proceedings.[126] In response, SCE states that it intends to retain both the Energy Settlements MA and Ligation Costs TA in ERRA review applications for compliance review, and will continue to request a revenue requirement for the Energy Settlements MA and the Litigation Costs TA in the ERRA forecast proceeding as it has done since the 2006 ERRA forecast proceeding.[127]

We look to Commission decisions, applicable Energy Division resolutions, and SCE's tariffs for guidance on the appropriate balancing account treatment for the Litigation Costs TA and find SCE is authorized to recover its revenue requirement through the ERRA forecast proceeding. While we find nothing in the settlement agreement approved in D.15-10-037 which explicitly grants or prohibits recovery of SCE's revenue requirement for the Litigation Costs TA tin the ERRA forecast, resolution E-3894 allows "SCE [to] apply 90% of the net remaining settlement refund monies to ratepayers, through the ERRA Forecast proceeding."[128] Also, in SCE's most recent ERRA forecast decision, we authorized the balance transfer for both the Litigation Costs TA and the Energy Settlements MA.[129] Therefore, we affirm recovery of SCE's revenue requirement

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[125] Exhibit SCE-02 at 70-71.

[126] Cal Advocates Opening Brief at 16.

[127] SCE Reply Brief at 17.

[128] Resolution E-3894.

[129] D.20-01-022 at 21.

for the Litigation Costs TA in the ERRA forecast proceeding. SCE shall continue to submit its Litigation Costs TA for Commission audit in its annual ERRA compliance proceeding.

9.8. New System Generation BA

The New System Generation BA records the costs and benefits (including any associated non-bypassable charges) associated with long-term Power Purchase Agreements (PPAs) procured by the investor-owned utilities (IOUs) for load serving entities in the IOU's service territory.[130]

The costs associated with the unbundled energy and capacity from the PPAs are allocated using the cost-allocation methodology (CAM). The Commission expanded the CAM to apportion SCE's peaker resources, for resource adequacy benefits, to all benefitting customers in D.09-03-031 and D.12-11-051.[131]

While Cal Advocates found no mathematical error in the New System Generation BA, it disputed SCE's recording of direct GHG costs in the New System Generation BA as part of the GHG compliance reporting.[132] We resolve the GHG Compliance instruments dispute in favor of SCE in Section 11 and find SCE's 2018 entries in the New System Generation BA appropriate, correctly stated and in compliance with applicable Commission decisions.

9.9. Base Revenue Requirement BA

The Base Revenue Requirement BA records the difference between Base Revenue Requirement BA-related revenue and Commission-authorized base

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[130] D.07-09-044 at 15 (OP2).

[131] D.09-03-031 and D.12-11-051.

[132] Exhibit Pub Adv-01 at 5-40.

distribution and generation revenue requirements.[133] A disputed issue between SCE and Cal Advocates related to accounting in the Base Revenue Requirement BA was resolved though the course of the proceeding.[134] Upon review, we find SCE's recorded entries in the Base Revenue Requirement BA appropriate, correctly stated and in compliance with applicable Commission decisions.

9.10. Nuclear Decommissioning AM

The Nuclear Decommissioning AM tracks the costs and revenue associated with SONGS and the Palo Verde Nuclear Generating Station. In 2018, this mechanism recorded $4.117 million in spent nuclear fuel expenses, $4.156 million in revenues and $0.301 million in earned interest.[135] In August 2018, SCE transferred $31.489 million from the DOE Litigation MA to the Nuclear Decommissioning AM upon approval of credit balance in the 2015 ERRA Compliance application.[136]

No parties protested or commented on SCE's Nuclear Decommissioning AM. Upon review, we find SCE's recorded entries in the Nuclear Decommissioning AM appropriate, correctly stated and in compliance with applicable Commission decisions.

9.11. Public Purpose Programs AM

The Public Purpose Program AM records the difference between Public Purpose Program revenue and the amounts authorized by the Commission. This includes review of the 1) Electric Program Investment Charge (EPIC);[137] 2)

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[133] Exhibit SCE-02 at 26-37.

[134] Exhibit Pub Adv-01 at 5-38.

[135] Exhibit SCE-02 at 37.

[136] *Id*. at 37-38.

[137] D.12-05-037; SCE AL 2747-E.

energy efficiency programs, low income energy efficiency and authorized CARE administration programs;[138] 3) statewide ME&O activities[139] and 4) intervenor compensation costs, as summarized in Table 9-5.[140]

Table 9-5. Public Purpose Programs Adjustment Mechanism Entries in 2018

Description	Amount (million)
Beginning Balance	20.508
CARE Balancing Account Transfer	-$13.044
Statewide Marketing, Education and Outreach Balancing Account Transfer	-$0.066
EPIC Revenue and Interest Transfer	-$2.073
Procurement Energy Efficiency BA Revenue and Interest Adjustment	-$32.552
Energy Efficiency Financing Programs BA Revenue and Interest Adjustment	-$10.201
Energy Savings Assistance Program AM Revenue and Interest Adjustment	-$3.415
Revenues	-$506.016
Authorized Program Expenses	**$455.129**
Conservation Incentive Adjustment	$69.715
Interest	$0.216
Ending Balance	-$21.800

A disputed issue between SCE and Cal Advocates related to accounting in the Public Purpose Programs AM was resolved though the course of the proceeding.[141] Upon review, we find SCE's recorded entries in the Public Purpose Programs AM appropriate, correctly stated and in compliance with applicable Commission decisions.

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138 D.16-11-022; D.06-12-038.

139 D.13-04-021; SCE AL 2896-E.

140 Exhibit SCE-02 at 38-42.

141 Cal Advocates Reply Brief at 11; SCE Reply Brief at 19.

9.12. Conservation Incentive Mechanism

The Conservation Incentive Mechanism embeds the tiered rate differential into customer delivery charges, to ensure a conservation signal is assigned equally to bundled and unbundled customers.[142] In 2018, SCE recorded a $69.715 million undercollection in the Conservation Incentive Mechanism as a result of a forecast error in the residential tier level sales distribution.[143] SCE assigned this undercollection to the residential customer class through the Public Purpose Program AM.[144]

No parties protested or commented on SCE's Conservation Incentive Mechanism. Upon review, we find SCE's recorded entries in the Conservation Incentive Mechanism appropriate, correctly stated and in compliance with applicable Commission decisions.

9.13. CARE BA

The CARE BA records the difference between 1) CARE discounts provided to customers and billed CARE surcharges, 2) authorized and actual CARE administrative costs, 3) costs of CARE automatic enrollment program, 4) costs of Energy Division's CARE BA audit and 5) CARE BA-related revenues. SCE annually transfers the year-end balance of the CARE BA from the prior year to the Public Purpose Program AM.[145]

In 2018, SCE's costs and revenues associated with the CARE BA are summarized in Table 9-6:[146]

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[142] D.09-08-028.

[143] Exhibit SCE-02 at 43.

[144] *Id*. at 43.

[145] D.06-12-038.

[146] Exhibit SCE-02 at 43-44.

Table 9-6. Summary of CARE BA Entries for 2018

Description	Total (millions)
Beginning Balance (transferred to Public Purpose Program Adjustment Mechanism January 2018)	-$13.044
Subaccounts • CARE Surcharge • CARE-Discount • CARE Administrative Costs (Net) • Cooling Center Program Costs • System Program Costs Total	 -$380.142 $371.910 -$0.697 $0.025 $1.002 -$7.903
Interest	-$0.162
Ending Balance	**-$8.065**

No parties protested or commented on SCE's CARE BA. Upon review, we find SCE's recorded entries in the CARE BA appropriate, correctly stated and in compliance with applicable Commission decisions.

9.14. Pensions Costs BA

The Pensions Costs BA records the difference between the pension costs authorized by the Commission and SCE's annual pension costs. In 2018, SCE transferred a net overcollection of $17.953 million from 2017 to the Base Revenue Requirement BA. The Commission authorized a pension contribution of $88.3 million in 2018 and SCE contributed $48.2 million to its pension in 2018, for a net, adjusted, overcollection of $51.522 million in pension cost funding.[147]

No parties protested or commented on SCE's Pensions Costs BA. Upon review, we find SCE's recorded entries in the Pensions Costs BA appropriate, correctly stated and in compliance with applicable Commission decisions.

[147] *Id*. at 56-58.

9.15. Post-Employment Benefits Other than Pensions BA

The Post-Employment Benefits Other than Pensions BA records the difference between the post-employment benefits other than pension costs and SCE's annual costs for these benefits. In 2018, SCE transferred a net overcollection of $27.472 million from 2017 to the Base Revenue Requirement BA.[148] The Commission authorized a contribution of $29.170 million to the Post-Employment Benefits Other than Pensions BA in 2018, and SCE's total adjusted cost was $2.781 million, for a net adjusted[149] overcollection of $26.561 million.[150]

No parties protested or commented on SCE's Post-Employment Benefits Other than Pensions BA. Upon review, we find SCE's recorded entries in the Post-Employment Benefits Other than Pensions BA appropriate, correctly stated and in compliance with applicable Commission decisions.

9.16. Medical Programs BA

The Medical Programs BA records the difference between the authorized cost recovery of health care plan expenses for SCE employees and their actual health care plan expenses, as authorized in SCE's applicable GRC. The Commission extended use of the Medical Programs BA for 2018-2020.[151] In 2018, SCE transferred an overcollection of $23.499 million from 2017 to the Base

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[148] *Id*. at 59.

[149] Adjustments include $0.285 million SONGS Loader to the initial record year balance, and $0.456 million in earned interest.

[150] Exhibit SCE-02 at 59.

[151] D.19-05-020 at 192 ($110.719 million authorized in 2018 test year).

Revenue Requirement BA and recorded a net overcollection of $32.686 million in health care plan expenses from 2018.[152]

No parties protested or commented on SCE's Medical Programs BA. Upon review, we find SCE's recorded entries in the Medical Programs BA appropriate, correctly stated and in compliance with applicable Commission decisions.

9.17. Short-Term Incentive Program MA

The Short-Term Incentive Program MA[153] records the difference between the authorized amount and actual costs of SCE's Results Sharing Plan, which is a an annual short-term incentive plan paid to SCE's employees.[154] SCE incurred a net overcollection of $20.932 million in the Short-Term Incentive Program MA in 2018.[155]

No parties opposed or commented on SCE's Short-Term Incentive Program MA. Upon review, we find SCE's recorded entries in the Short-Term Incentive Program MA for 2018 appropriate, correctly stated and in compliance with applicable Commission decisions.

9.18. Statewide ME&O BA

The Statewide ME&O BA records the difference between the Commission authorized budget for statewide ME&O activities for energy efficiency and demand response programs, as collected through the Public Purpose Programs Charge.[156] SCE's expenses are incurred by DBB Worldwide Communications

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[152] Exhibit SCE-02 at 49-55.

[153] The Results Sharing Program MA was renamed the Short-Term Incentive Program MA in the 2018 Test Year GRC Decision.

[154] Exhibit SCE-02 at 61.

[155] *Id*. at 63-64.

[156] D.16-09-020.

Group, Incorporated (DDB), which is the third-party designated to administer and implement the Statewide ME&O program. In 2018, SCE's portion of DDB's Statewide ME&O expenses consisted of $2.019 million for demand response programs and $6.429 million for energy efficiency programs.[157]

No parties opposed or commented on SCE's Statewide ME&O BA. Upon review, we find SCE's recorded 2018 entries in the Statewide ME&O BA appropriate, correctly stated and in compliance with applicable Commission decisions.

9.19. Charge Ready Program BA

The Charge Ready Program BA records costs associated with SCE's implementation of the Phase I Charge Ready Program, Market Education Programs and non-labor O&M. The Commission approved a budget of $22 million for the program and required review of the Charge Ready Program BA in SCE's ERRA.[158]

The Energy Division approved SCE 2017 Charge Ready Program Phase I revenue requirement[159] and 2018 Charge Ready Program Phase I requirement.[160] In 2018, SCE incurred a net of $2.472 million revenue requirement for the Charge Ready Program.[161]

No parties protested or commented on SCE's Charge Ready Program BA. Upon review, we find SCE's recorded entries in the Charge Ready Program BA

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[157] Exhibit SCE-02 at 69-70.

[158] D.16-01-023.

[159] SCE AL 3502-E.

[160] SCE AL 3709-E

[161] Exhibit SCE-02 at 80.

appropriate, correctly stated and in compliance with applicable Commission decisions.

9.20. Green Tariff ME&O MA and Enhanced Community Renewables ME&O MA

The Green Tariff Shared Renewables program consists of both a Green Tariff option (which allows customers to purchase energy with a greater share of renewables) and the Enhanced Community Renewables option (which allows customers to purchase renewable energy from community-based projects). The costs for ME&O are recorded in separate accounts for the Green Tariff option (Green Tariff ME&O MA) and the Enhanced Community Renewables option (Enhanced Community Renewables ME&O MA).[162] In 2018, SCE recorded $31,754 in net revenue, $10,851 in total incremental cost and $7,159 in interest in the Green Tariff ME&O MA. SCE recorded no revenue, an incremental cost of $10,878 and $7,159 in interest in the Enhanced Community Renewables ME&O MA.

SCE's 2018 activities related to these accounts included a targeted marketing campaign towards residential and business customers more likely to subscribe to the program, consisting of email and social media campaigns. SCE also executed a 20-year power purchase agreement for 3 MW of community solar in El Mirage, California and launched the first of two community Renewable – Renewable Auction Mechanisms on May 23, 2018.[163] In 2018, SCE enrolled new 368 customers in the Green Rate program for a total of 1,039 accounts.[164]

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[162] Exhibit SCE-02 at 82.

[163] *Id*. at 86.

[164] *Ibid*.

No parties protested or commented on SCE's Green Tariff ME&O MA or Enhanced Community Renewables ME&O MA. Upon review, we find the entries in SCE's Green Tariff ME&O MA and Enhanced Community Renewables ME&O MA appropriate, correctly stated and in compliance with applicable Commission decisions.

9.21. Green Tariff Shared Renewables BA

The Green Tariff Shared Renewables BA records the difference between the costs and revenues collected for the Green Tariff Shared Renewables-commodity resources, used for both the Green Rate option and the Community Renewables option of the Green Shared Tariff Renewables program. In 2018, SCE recorded a net revenue of $441,368 from customers and net expenses of $451,000.[165]

Cal Advocates recommends a total disallowance of $201,478 ($199,782 plus $1,696 in interest) from the Green Tariff Shared Renewables BA because it could verify the corresponding entries for these in the ERRA BA on account of SCE's failure to provide the journal entries in a searchable format.[166] SCE states that both sides of the relevant entries were provided in its rebuttal testimony, at Appendix IV-B.[167]

We reviewed SCE's exhibits related to the Green Tariff Shared Renewables BA and find SCE provided sufficient evidence supporting its transfer of funds between the ERRA BA and the Green Tariff Shared Renewables BA. Accordingly, this decision finds the entries in the Green Tariff Shared

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[165] *Id*. at 90.

[166] Cal Advocates Opening Brief at 16-17.

[167] SCE Opening Brief at 23-24; Exhibit SCE-07 at 48, Appendix IV-B.

Renewables BA appropriate, correctly stated and in compliance with applicable Commission decisions.

9.22. Local Capacity Requirement (LCR) Products BA

The LCR Products BA records the costs of resources procured through the LCR Request for Offers (RFO) for Western Los Angeles and the Moorpark Sub-Area. SCE provided the 2017-2018 costs and expenses associated with the LCR RFOs.[168]

A disputed issue between SCE and Cal Advocates related to accounting in the LCR Products BA was resolved though the course of the proceeding.[169] The total costs associated with these contracts is confidential, but upon review we find them appropriate, correctly states and in compliance with applicable Commission decisions.

9.23. Transportation Electrification Program BA

The Transportation Electrification Portfolio BA records O&M and capital-related revenue requirements associated with five transportation electrification projects approved by the Commission in D.18-01-024, totaling $16.063 million, and an additional $617,800 for evaluating the projects.[170] In 2018, SCE recorded $1.043 million in total costs, including $1.032 million in O&M costs, $0.005 million in labor loaders, and $0.005 million in interest.[171]

SCE and Cal Advocates agree that SCE should 1) show the cumulative balance for each transportation electrification project and 2) SCE should "submit

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[168] Exhibit SCE-02 at 93-94.

[169] Cal Advocates Opening Brief at 19.

[170] D.18-01-024; SCE AL 3734-E.

[171] Exhibit SCE-02 at 96-97.

[Transportation Electrification Portfolio BA] closing sheets to break down project costs in order to verify that SCE observed the authorized cost caps in future ERRA Compliance applications."[172]

We find the additional showing reasonable and direct SCE to show the cumulative balance for each transportation electrification project and submit closing sheets to break down project costs for the transportation electrification pilots approved in Decision 18-01-024 in future ERRA compliance proceedings. We also find the entries in SCE's Transportation Electrification Program BA appropriate, correctly stated and in compliance with applicable Commission decisions.

9.24. RPS Costs MA

The RPS Costs MA was established to record the costs associated with "studies of interconnection facilities and network transmission upgrades necessary to interconnect RPS generation resources contracted in SCE's 2003 and 2005 RPS solicitations, and additional resources to be contracted in the future" and "costs of studies associated with the Tehachapi Wind Resource Area."[173] The RPS Technical Contracts Sub-Account records the costs of contractors hired and managed by the executive director to advance the RPS program goals. The current budget of the RPS Technical Contracts Sub-Account is $1.6 million.[174]

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[172] Cal Advocates Opening Brief at 19.

[173] Exhibit SCE-02 at 97.

[174] *Id*. at 99.

SCE's recorded expenses for 2017 and 2018 were $0. SCE proposes to eliminate this memorandum account and eliminate Preliminary Statement N.39, RPS Costs MA from its tariffs.[175]

The Cal Advocates supports closing the RPS Costs MA. No other parties commented on the RPS Costs MA.

We find the entries in the RPS Costs MA appropriate, correctly stated and in compliance with applicable Commission decisions. We also approve closure of the RPS Costs MA and elimination of Preliminary Statement N.39, RPS Costs MA, from SCE's tariffs.

9.25. Purchase Agreement Administrative Costs BA

The Purchase Agreement Administrative Costs BA records the expenses of SCE's Aggregator Managed Portfolio (AMP) contracts for demand response.[176] The account originally tracks costs associated with eight AMP contracts authorized in D.08-03-017. Later, the account tracked costs of $0.560 million for AMP contracts in 2017. SCE submitted review of its 2017 AMP contracts pursuant for Commission approval in AL 3439-E, allowing review of AMP contract spending for 2017 in the 2018 ERRA Compliance review proceeding.

In 2018, SCE corrected a transfer of $0.048 million from the Demand Response BA to the Purchase Agreement Administrative Costs BA for incorrectly recorded AMP overhead charges.[177] SCE also transferred $0.0004 million from

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[175] *Id*. at 97.

[176] D.08-03-017; SCE AL 2243-E.

[177] Exhibit SCE-02 at 102.

the Base Revenue Requirement BA to the Purchase Agreement Administrative Costs BA to correct recoding of AMP Administrative charges.[178]

SCE had no expenses for this balancing account in 2018 and SCE proposes to eliminate the Purchase Agreement Administrative Costs BA.[179] A disputed issue between SCE and Cal Advocates related to accounting in the Purchase Agreement Administrative Costs BA was resolved through the course of the proceeding.[180]

The Commission's review of the Purchase Agreement Administrative Costs BA finds SCE's management of this balancing account reasonable. We grant SCE's proposal to close the Purchase Agreement Administrative Costs BA.

9.26. Pole Loading and Deteriorated Pole Programs BA

SCE's capital-related revenue requirement for the Pole Loading Program (PLP) and Deteriorated Pole Program (Det Pole) is recorded in the Pole Loading and Deteriorated Pole Program BA.[181] The PLP is an 11 year program, starting in January 2014 and continuing until 2024, to identify and repair or replace poles that do not meet General Order (GO) 95, or other safety and loading, requirements.[182] The Det Pole's purpose is to identify and replace poles that fail the Intrusive Pole Inspection required by GO 165.[183]

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178 *Ibid*.

179 *Id*. at 101-102.

180 Cal Advocates Opening Brief at 19.

181 Exhibit SCE-02 at 130.

182 *Ibid*.

183 *Ibid*.

SCE's PLP and Det Pole program revenue requirement is summarized in the table below.

Table 9-7. Summary of PLP and Det Pole Program BA Entries in 2018[184]

	Amount (millions)
Adjusted Beginning Balance	-$3.883
Authorized Revenue Requirement	-$35.612
Total Recorded Revenue Requirement • PLP O&M Expenses • Total Capital Related Revenue Requirement	$200.683 • $26.054[185] • $174.629
Interest	$1.704
Ending Balance transferred to BRRBA distribution subaccount	**$162.892**

In SCE's 2018 Test-Year GRC, the Commission approved a 2018 Test Year revenue requirement of $186.066 million, $28.106 million in O&M expenses and $348.330 million in capital expenditures.[186] No parties commented on SCE's proposed recovery of costs in this account. We reviewed the Pole Loading and Deteriorated Pole Programs BA 2018 expenses and find they are appropriate, correctly stated and in compliance with applicable Commission decisions.

10. CAISO-Related Costs

SCE indicates it incurred approximately $2,146 million in CAISO-related costs, including 1) $62.9 million in grid management and other operating charges, 2) $2,071 million in net costs of market-related expenses and revenues, 3) $5.7 million FERC fees and 4) $5.8 million in transmission loss charges to deliver Los Angeles Department of Power and Water (LADPW) returned

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[184] *Id*. at 132.

[185] *Id*. at 137.

[186] SCE AL 4136-E, January 1, 2020 (approving revisions to the tariff for the PLP and Det Pole Programs BA); D.19-12-056; D.19-05-020 at 94.

energy.[187] LADPW reimburses SCE for real-time transmission losses by scheduling return energy to SCE.[188]

No parties commented on SCE's CAISO-related costs. We reviewed SCE's testimony on CAISO-related costs incurred during the 2018 record period and conclude they were reasonable, accurate and in compliance with Commission decisions.

11. GHG Compliance Instruments

Each month, SCE incurs GHG compliance obligations due to emissions from SCE-owned and contracted resources.[189] The recorded cost of surrendering GHG compliance instruments is the weighted average cost of the compliance instruments in dollars per metric tons of carbon dioxide equivalent ($/mtCO$_{2e}$), as calculated in the GHG inventory account, multiplied by the emissions in mtCO$_{2e}$.[190] The weighted average cost is an estimate which approximates the expense of the compliance instrument at the time the compliance obligation was incurred.[191] The costs estimate is later refined when there is final settlement[192] with the California Air Resources Board (ARB) or the tolling partner.[193]

Balancing account treatment of the direct GHG costs is a disputed issue in this proceeding. SCE recorded a portion of its 2018 direct GHG costs directly in

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[187] Exhibit SCE-02 at 16-20.

[188] *Id*. at 20.

[189] *Id*. at 144.

[190] *Id*. at 144-145.

[191] *Id*. at 145.

[192] There are two forms of settlement. For physical settlements, SCE delivers GHG certificates from GHG inventory to ARB or a tolling partner. For financial settlement, SCE transfers cash to a tolling partner. (*Id*. at 146.)

[193] *Ibid*.

the New System Generation BA and the remainder in the ERRA BA.
Cal Advocates opposed SCE's recording of direct GHG costs in any account other than the ERRA BA and made the same arguments in SCE's 2020 ERRA forecast application A.19-06-002. In D.20-01-022, the Commission found that SCE was not limited to recording direct GHG costs in the ERRA BA. Subsequently, Cal Advocates modified its position to argue the Commission should clarify the balancing account treatment for each category of resources.[194]

In order to determine the reasonableness of SCE's action, we consider SCE's changed protocol for recording direct GHG costs in 2018. Prior to 2018, SCE recorded all direct GHG costs in the ERRA BA. SCE then calculated the net revenue for CAM-eligible resources for which SCE held dispatch rights[195] and transferred the net revenue to the New System Generation BA on a quarterly basis.[196]

Starting in 2018, SCE began recording all CAISO costs and revenues associated with its CAM-eligible resources directly to the New System Generation BA. SCE's stated reason for recording the direct GHG costs for CAM and non-CAM-eligible resources for which it held dispatch rights was to avoid the quarterly transfer process, which "resulted in unnecessary volatility and complexity in the two accounts."[197] The new method applies to 1) "New Gen" tolling agreements and 2) combined heat and power settlement resources

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[194] Cal Advocates Reply Brief at 10-11.

[195] SCE had dispatch rights to its utility-owned peakers, CAM-eligible resources subject the "Joint Parties Proposal" method of accounting, but not CAM-eligible resources subject to the Energy Auction. SCE's utility-owned peakers do not have GHG compliance instrument obligations.

[196] Exhibit SCE-07 at 71.

[197] Exhibit SCE-07 at 73.

executed pursuant to D.10-12-035.[198] SCE states that the timing of SCE's change in recording methodology corresponds to the elimination of the Energy Auction method of accounting.[199]

Disputes over the treatment of GHG compliance instruments are not novel. Since the Commission issued a methodology for calculating GHG costs, the methodology has been the subject of dispute. The Commission modified the treatment of GHG compliance through petitions for modifications most recently in D.19-04-016. The modified methodology adopted in D.19-04-106 arose from a dispute between Cal Advocates and SDG&E in its ERRA proceeding, and was resolved through an order directing SDG&E, PG&E, and Cal Advocates to hold a workshop to develop a proposal to clarify the weighted average cost of GHG compliance instruments to account for the accrual method of accounting.

The Commission has never directly addressed changing balancing account needs to record direct GHG costs for increased departed customer load growth, including allocation of direct GHG costs to unbundled customers to meet continuing RA obligations or transferring direct GHG costs through from indifference charges through the Portfolio Allocation BA. Accordingly, we direct SCE to convene a working group with PG&E, SDG&E, and Cal Advocates to develop recommendations to address and clarify balancing account treatment for

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[198] SCE's third CAM-eligible resource type, utility-owned peakers, do not have GHG compliance obligations.

[199] Prior to 2017, SCE had two methods of quantifying energy revenues, the "Energy Auction" method and the "Joint Parties Proposal" method. In the "Energy Auction" method, the dispatch rights to a resource are auctioned off to the highest bidder and the revenue from the auction bids are recorded in the New System Generation BA. In the "Joint Parties Proposal" method, SCE dispatches the resource and records the net energy revenues. Thereby, SCE states it did not change the final amount recorded in the New System Generation BA, rather it changed the initial account used to record variable costs, GHG costs and CAISO revenues.

various categories of resources through additional modifications to Attachment C of D.15-01-024, and propose any other necessary modifications to the methodology for calculating recorded GHG costs. Liberty Utilities (CalPeco Electric) LLC and Pacificorp d/b/a Pacific Power shall be notified of the working group, through their attendance is optional. SCE shall file a petition for modification in A.13-08-002 et. al to modify Attachment C of D.15-01-024 within nine months of the issuance date of this decision.

12. Change in Determination of Need for Hearing

Given that no hearings were held in the current proceeding, we change our preliminary and Scoping Memo determination regarding hearings to reflect that hearings were not necessary.

13. Request to File Under Seal and Other Procedural Matters

SCE submitted public and confidential versions of its opening and reply brief. Pursuant to Rule 11.5 and D.06-06-066, SCE filed a motion requesting that the confidential supplemental information be filed under seal. The information referenced in the motion to file under seal and the information contained in the testimony filed under seal constitute commercially sensitive material and include information that falls under the "ARB Confidential" and "Confidential" categories in the Confidentiality Matrix.

We grant confidential treatment of and seal (as detailed in the ordering paragraphs herein) confidential portions of SCE's opening and reply brief. The documents placed under seal shall remain under seal for the applicable period of time set forth in the Confidentiality Matrix in D.14-10-033 and GO 66 D.

Cal Advocates filed public and confidential versions of the *Motion to Dismiss of the Public Advocates Office*, as well as it opens and reply brief. Pursuant to Rule 11.5 and D.06-06-066, Cal Advocates filed motions requesting that the confidential information be filed under seal. The information referenced in the motion to file under seal and the information contained in the testimony filed under seal constitute commercially sensitive material and include information that falls under the "ARB Confidential" and "Confidential" categories in the Confidentiality Matrix.

We grant confidential treatment of and seal (as detailed in the ordering paragraphs herein) confidential portions of Cal Advocates' aforementioned motion along with its opening and reply briefs. The documents placed under seal shall remain under seal for the applicable period of time set forth in the Confidentiality Matrix in D.14-10-033 and GO 66 D.

All rulings by the assigned Commissioner and assigned ALJ are affirmed herein. All motions not specifically addressed herein or previously addressed by the assigned Commissioner or ALJ, are denied.

14. Compliance with the Authority Granted Herein

In order to implement the authority granted herein, SCE must file a Tier 1 Advice Letter within 30 days of the issuance date of this decision.

15. Comments on Proposed Decision

The proposed decision of ALJ Kline in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed by SCE and Cal Advocates on April 20, 2020, and reply comments were filed by SCE and Cal Advocates on April 27, 2020.

Revisions made in response to comments are reflected throughout. Comments that merely reiterate past arguments are not given further consideration.

Cal Advocates requests the Commission grant confidential treatment of a portion of its opening comments on the proposed decision by motion dated April 20, 2020. SCE requests the Commission grant confidential treatment to the confidential portions of its reply comments on the proposed decision by motion dated April 27, 2020. Upon good cause shown, the confidential portions of Cal Advocates opening comments and SCE's reply comments shall be granted confidential treatment for a period of three years. If Cal Advocates or SCE believes it is necessary for this information to remain under seal for longer than three years, either party may file a new motion showing good cause for extending this order for their respective filing by no later than 30 days before the expiration of this order.

16. Assignment of Proceeding

Martha Guzman Aceves is the assigned Commissioner and Zita Kline is the assigned ALJ in this proceeding.

Findings of Fact

1. SCE's current and historical MAPE for system-level load forecasting is as follows: 0.34% in 2014, 0.88% in 2015, 1.05% in 2016, 0.93% in 2017 and 1.21% in 2018.

2. In 2018, SCE incurred increased costs due to load forecast error due to the following: 1) price volatility, 2) extreme weather resulting in all-time high loads, 3) extreme gas prices leading to extreme power prices, 4) CAISO's systematic load over-forecast and 5) load forecast variance costs relative to total load procurement costs.

3. The sample resource SCE used to test its bidding templates could not detect transition cost errors for multistage generating units.

4. Between December 16, 2017 and March 15, 2018, CAISO dispatched SCE's multistage generation units more frequently and at the wrong configuration.

5. SCE detected the transition cost error for multistage generation units during a routine review of major maintenance expenses for one of SCE's Multistage generation units on March 2, 2018.

6. SCE incurred a cost of $333,510 for the transition cost error in its bidding templates.

7. SCE's net generation for its hydroelectric resources in 2018 was 3,503,919 MWh, which is 95% of the 20-year average, largely due to lower than average water runoff.

8. SCE proposes to review the reasonableness and prudence of outage at the Big Creek Unit 5 hydro unit, which started on November 6, 2018, in its 2019 ERRA compliance review.

9. The peakers generated a total of 105,854 MWh and consumed 1,134,897 MMBtu of natural gas at a cost of $8.106 million in 2018.

10. In 2018, the Mountainview Generating Station provided 1,964,851 MWh of power, which is lower than its 2017 output.

11. In addition to scheduled outages, SCE reported 11 scheduled outage extensions and unscheduled outages at the Mountainview Generating Station (Events 1 to 11).

12. The Mountainview Generating Station Event 1 outage was caused by the contractor, R&B Automation.

13. When R&B Automation replaced the pneumatic valve actuators with electric valve actuators, the electric valve actuators were installed at 90 degrees such that turning the valve closed, rather than opened, the valve.

14. R&B Automation repaired the valve actuator placement at no cost to SCE.

15. The cost of replacement power for the Event 1 outage at the Mountainview Generating Station is $1,126,157.

16. SCE's corrective action in response to the Mountainview Generating Station Event 1 outage is to record the "as left" valve position in future work authorizations, 2) install better visual indicators on the valves, 3) perform concurrent fault-tree analysis during maintenance activities.

17. In the Mountainview Generating Station Event 2 outage, SCE repaired solid particle damage to the Unit 3 steam turbine.

18. In the Mountainview Generating Station Event 5, SCE replaced the Unit 4 steam turbine due to solid particle damage and foreign object damage.

19. The Mountainview Generating Station Event 2 outage lasted 17 days longer than Mountainview Generating Station Event 5 outage.

20. The foreign object damage in the Unit 4 steam turbine was caused by slag left in the unit by SCE's independent contractor, General Electric, during the 2013 Unit 4 overhaul.

21. General Electric credited SCE $1.5 million related to performance of its service agreement for operations and maintenance work at the Mountainview Generating Station.

22. SCE destroyed the work authorizations related to the outages for the Mountainview Generating Station in 2017 and 2018.

23. SCE's work authorizations contain a description of the purpose of the job, roles of the participants, matter in which the job will be performed, status of equipment being worked on, risks and mitigations, and a safety checklist.

24. SCE's document retention policy prior to January 2020 was to retain work authorizations for one year following the completion of the work and to retain

records related to the repair, inspection, and general maintenance of facilities and equipment for five years following completion of the work.

25. In January 2020, SCE revised the retention period for work authorization forms to from "one year" to "active," which requires SCE to retain work authorizations (record class EHS1160) relating to outages that meet D.15-03-015 for a period of three years subject to review in active and future proceedings.

26. SCE's solar projects operated at a 15.1% capacity factor in 2018 and produced 89,10 MWh of AC generation.

27. SCE's fuel cells had a total annual electric output of 10,103,132 kWh, consumed 90,111 MMBtu of natural gas at a cost of $0.652 million in 2018.

28. SCE's share of the PVNGS produced a net generation of 4,913 GWh at an overall expense of $33.7 million, equivalent to $6.86/MWh.

29. During 2018, SCE incurred incremental costs from moving the point of interconnection to the 12 kV bus, which also included Tehachapi project closeout costs and ongoing O&M costs.

30. SCE provided testimony detailing 164 contract amendments in 2018, including amendments to 1) 68 behind-the-meter resources, 2) 58 natural gas/conventional resources, 3) eight PURPA resources, 4) 30 RPS resources.

31. SCE terminated, or allowed to expire, 40 of its contracts in 2018.

32. SCE managed 13 force majeure contract claims and 14 contract disputes for reasons other than force majeure in 2018.

33. SCE recorded a $78,000 revenue requirement for the 2013-2018 record period in the Agricultural Account Aggregation Study MA.

34. SCE proposes to return $2.331 million from the Aliso Canyon Demand Response Program BA for 2016 to 2018 to SCE's customers.

35. SCE requests to close the Aliso Canyon Demand Response Program BA.

36. SCE has a revenue requirement of $0.564 million for 2017 to 2018 in the Building Benchmarking Data MA.

37. SCE proposes to return $34.339 million from the Department of Energy Litigation MA to SCE's customers.

38. The assigned ALJ verified $70,082.89 in litigation costs recorded in the Department of Energy Litigation MA expenses from invoices provided for in camera review.

39. SCE did not include the interest income from the Department of Energy Litigation MA in its 2018 ERRA compliance review.

40. SCE has a revenue requirement of $14.132 million in the Residential Rate Implementation MA.

41. SCE proposes to close the Residential Rate Implementation MA.

42. SCE incorrectly retained $21,827 in shareholder incentives to SCE's customers from the Energy Settlements MA.

43. The assigned ALJ verified $2,042,942.10 in litigation costs recorded in the Litigation Costs TA from invoices provided for in camera review.

44. SCE records the costs for five transportation electrification projects in the Transportation Electrification Program BA, but does not show the cumulative balance for each of these projects.

45. Showing the cumulative balance for each transportation electrification project and submitting closing sheets to break down project costs will help verify SCE observed authorized cost caps for the transportation electrification pilots approved in D.18-01-024 in future ERRA compliance proceedings.

46. The RPS Costs MA was created to track to track the costs of interconnection facilities and network transmission upgrades necessary to interconnect RPS resources; it had $0 recorded expenses in 2017 and 2018.

47. SCE requests to close the RPS Costs MA.

48. The Purchase Agreement Administrative Costs BA tracked costs for AMP contracts in 2017 and had no AMP contract costs in 2018.

49. SCE requests to close the Purchase Agreement Administrative Costs BA.

Conclusions of Law

1. SCE achieved least-cost dispatch of its energy resources and economically-triggered demand response programs pursuant to SOC 4 with the exception of a $333,510.65 disallowance for SCE's transition costs.

2. SCE's load forecast error and associated costs in 2018 were reasonable and in conformance with SOC 4 based on historically challenging market conditions.

3. SCE prudently administered, managed, and dispatched its Utility Retained Generation Facilities with the exception of a $1,12,157 disallowance for the Event 1 outage at the Mountainview Generating Station.

4. SCE did not provide sufficient evidence to establish that it acted as a prudent manager in connection with the multi-stage generation unit bidding template transition cost error.

5. It is reasonable to review the Big Creek Unit 5 outage, which started on November 6, 2018, as part of SCE's 2019 ERRA compliance review.

6. SCE did not provide sufficient evidence to establish that it acted as a prudent manager in connection with the Evet 1 unplanned outage at Mountainview Generating Station Unit 3.

7. SCE's actions with respect to the Unit 4 Event 5 outage at the Mountainview Generating Station were reasonable.

8. The Commission should review the $1.5 credit from General Electric for operation and maintenance work at the Mountainview Generating Station in an appropriate GRC proceeding.

9. SCE should retain all work authorizations associated with outages pending review in an ERRA compliance application.

10. SCE operated its solar photovoltaic, fuel cell, nuclear generation and energy storage resources as a reasonable manager in 2018.

11. SCE reasonably and prudently managed and administered its contracts in 2018.

12. The entries in the Aliso Canyon Demand Response Program BA for 2018 are reasonable.

13. The Aliso Canyon Demand Response Program BA should be closed.

14. SCE should include the 2018 interest income from the Department of Energy Litigation MA in its 2018 ERRA compliance review application.

15. SCE should show the cumulative balance for each transportation electrification project and submit closing sheets to break down project costs for the transportation electrification pilots approved in Decision 18-01-024 in future ERRA compliance proceedings.

16. The entries in the Agricultural Account Aggregation Study MA for 2018 are reasonable.

17. The Agricultural Account Aggregation Study MA should be closed.

18. SCE request to switch cost recovery for the Litigation Costs TA from the ERRA compliance to the ERRA forecast should be denied.

19. The RPS Costs MA should be closed.

20. SCE should show the cumulative balance for each transportation electrification project and submitting closing sheets to break down project costs for the transportation electrification pilots approved in D.18-01-024 in future ERRA compliance proceedings.

21. The Purchase Agreement Administrative Costs BA should be closed.

22. With the exception of the Litigation Cost TA, the accounts offered by SCE for review in A.19-04-001 are appropriate, correctly stated and in compliance with prior Commission decisions.

23. With the modification to the Litigation Costs TA made herein, the Litigation Costs TA is appropriate, correctly stated and in compliance with prior Commission decisions.

24. SCE's administrative cost entries for its GHG Compliance Instrument procurement are reasonable and accurate.

25. SCE's opening brief should be granted confidential treatment.

26. Cal Advocates' opening brief should be granted confidential treatment.

27. All rulings of the assigned Commissioner and ALJ should be affirmed.

28. Application 19-04-001 should be approved as modified by this decision.

29. Application 19-04-001 should be closed.

O R D E R

IT IS ORDERED that:

1. Application 19-04-001 is approved consistent with the ordering paragraphs below.

2. Southern California Edison Company is authorized to refund $22.172 million to its customers, which includes its requested net revenue return of $21.150 million and $21,827 for interest earned in 2018 for the Bonneville Power Authority settlement.

3. Southern California Edison Company is disallowed recovery of power purchase costs of $333,510.65 related to the multi-stage generation resources transition cost error.

4. Southern California Edison Company is disallowed recovery of power purchase costs of $1,126,157 related to the Event 1 forced outage of Unit 3 at the Mountainview Generating Station.

5. Southern California Edison Company shall retain work authorizations associated with forced and schedule outages pending review in an ERRA compliance application.

6. Southern California Edison Company is authorized to close and eliminating the associate tariff sheets for the following accounts: 1) Aliso Canyon Demand Response Program Balancing Account (BA), 2) Agricultural Account Aggregation Study Memorandum Account (MA), 3) RPS Costs MA and 4) Purchase Agreement Administrative Costs BA.

7. Southern California Edison Company (SCE) shall convene a working group with Pacific Gas and Electric Company, San Diego Gas & Electric Company, and the Public Advocates Office to discuss balancing account treatment of direct greenhouse gas costs outside of the Energy Resource Recovery Account Balancing Account. SCE shall notify Liberty Utilities (CalPeco Electric) LLC and Pacificorp d/b/a Pacific Power prior to the commencement of the working group, through their attendance in the working group is optional. SCE shall file a petition to modify Decision 19-04-016, which incorporates modifications to address balancing account treatment of direct greenhouse gas costs, within nine months of the issuance date of this decision.

8. No later than 30 days from the issuance of this decision, Southern California Edison Company shall file a Tier 1 Advice Letter to implement the authority granted herein. The tariffs sheets filed in the Advice Letter shall be effective on, or after, the date filed, subject to the Commission's Energy Division determining the tariff sheets comply with this decision.

9. In future Energy Resource Recovery Account compliance proceedings, Southern California Edison Company shall show the cumulative balance for each transportation electrification project and submit closing sheets to break down project costs for the transportation electrification pilots approved in Decision 18-01-024.

10. Southern California Edison Company's (SCE) request to treat as confidential its opening brief is granted for a period of three years from the date of this order. During the three-year period, this information shall not be publicly disclosed except on further Commission order or Administrative Law Judge ruling. If SCE believes it is necessary for this information to remain under seal for longer than three years, it may file a new motion showing good cause for extending this order by no later than 30 days before the expiration of this order.

11. Public Advocates Office's request to treat as confidential its opening brief is granted for a period of three years from the date of this order. During the three-year period, this information shall not be publicly disclosed except on further Commission order or Administrative Law Judge ruling. If Public Advocates Office believes it is necessary for this information to remain under seal for longer than three years, it may file a new motion showing good cause for extending this order by no later than 30 days before the expiration of this order.

12. The determination that hearings are necessary is changed to no hearings needed.

13. All rulings by the assigned Commissioner and assigned ALJ are affirmed.

14. Application 19-04-001 is closed.

This order is effective today.

Dated May 7, 2020, at San Francisco, California.

MARYBEL BATJER
President
LIANE M. RANDOLPH
MARTHA GUZMAN ACEVES
CLIFFORD RECHTSCHAFFEN
GENEVIEVE SHIROMA
Commissioners

APPENDIX A

Acronym List

Acronym	Description
%	Percent
¢/kWh	Cents per kilowatt-hour
$/mtCO$_{2e}$	Dollars per metric tons of carbon dioxide equivalent
A	Application
AC	Alternating Current
ALJ	Administrative Law Judge
AM	Adjustment Mechanism
AMP	Aggregator Managed Portfolio
ARB	California Air Resources Board
BA	Balancing Account
BPA	Bonneville Power Authority
CAISO	California Independent System Operator
Cal Advocates	The Public Advocates Office of the Public Utilities Commission
CAM	Cost-Allocation Mechanism
CARE	California Alternative Rates for Energy
CCA	Community Choice Aggregation
CDWR	California Department of Water and Resources
CHP	Combined Heat and Power
CPA	Clean Power Alliance of Southern California
D	Decision
DDB	DDB Worldwide Communications Group, Incorporated
DetPole	Deteriorated Pole Program
DC	Direct Current
DLAP	Day-Ahead Default Load Aggregation Point
DOE	Department of Energy
DRAM	Demand Response Auction Mechanism

ED	Energy Division
EE	Energy Efficiency
EPIC	Electric Program Investment Charge
ERRA	Energy Resource Recovery Account
F&PP	Fuel and Purchased Power
FERC	Federal Energy Regulatory Commission
GE	General Electric
GHG	Greenhouse Gas
GO	General Order
GRC	General Rate Case
GWh	Gigawatt Hours
IOU	Investor-Owned Utility
kV	Kilovolt
kWh	Kilowatt-hour
LADPW	Los Angeles Department of Power and Water
LCR	Local Capacity Requirement
MA	Memorandum Account
MAPE	Mean Average Percentage Error
ME&O	Marketing Education and Outreach
MMBtu	Million British thermal units
MW	Megawatts
MWh	Megawatt Hours
O&M	Operations and Maintenance
PLP	Pole Loading Program
PPA	Power Purchase Agreement
PURPA	Public Utility Regulatory Policies Act
PVNGS	Palo Verde Nuclear Generating Station
QF	Qualified Facilities
R&B Automation	R&B Automation, Incorporated
RFO	Request for Offers

RPS	Renewable Portfolio Standard
SCE	Southern California Edison
SOC 4	Standard of Conduct Number Four
SONGS	San Onofre Generating Station
TA	Tracking Account
TCJA	Tax Cuts and Jobs Act
TOU	Time of Use

(END OF APPENDIX A)