

California Independent System Operator Corporation
Fifth Replacement Tariff

Table of Contents

Appendix F Rate Schedules..... 2
Schedule 1..... 2
Schedule 2..... 9
Schedule 3..... 10
Schedule 4..... 24
Schedule 5..... 25
Schedule 6..... 26
Schedule 7..... 27

Appendix F Rate Schedules

Schedule 1

Grid Management Charge

Part A – Monthly Calculation of Grid Management Charge (GMC)

The GMC consists of the following separate service charges: (1) the Market Services Charge; (2) the System Operations Charge; and (3) the CRR Services Charge. The GMC revenue requirement, determined in accordance with Part C of this Schedule 1, shall be allocated to the service charges specified in Part A of this Schedule 1 as follows: forty-nine (49) percent to Market Services; forty-nine (49) percent to System Operations; and two (2) percent to CRR Services. Starting in 2017 and every three (3) years thereafter, the CAISO will conduct an updated cost of service study, in consultation with stakeholders and using costs from the previous year. In conducting each cost of service study, the CAISO will recalculate the three service charge percentages and the rates for the fees and charges that constitute the Grid Management Charge as set forth in Section 11.22. In addition, the cost of service study results will be used to update the RC Funding Percentage used to calculate the annual RC Funding Requirement, as well as the real time percentages of the Market Services and System Operations service charges used to calculate the EIM Administrative Charges. If, based on the cost of service study results, the service category revenue requirement allocation percentages or the level of fees and charges have changed, the CAISO will submit tariff amendments to reflect such changes pursuant to Section 205 of the FPA.

1. The rate for the Market Services Charge will be calculated by dividing the annual GMC revenue requirement allocated to this service category by the forecast annual gross absolute value of MW per hour of Ancillary Services capacity awarded in the Day-Ahead and Real-Time Markets, MWh of Energy cleared in the Day-Ahead market, Virtual Demand Award, Virtual Supply Award, and FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy, less the forecast annual gross absolute value of such Energy as may be excluded for a load following MSS pursuant to an MSS agreement, Standard Ramping Energy, Regulation Energy, Ramping Energy Deviation, Residual Imbalance Energy, Exceptional Dispatch Energy and Operational Adjustments for the Day-Ahead and Real-Time.
2. The rate for the System Operations Charge will be calculated by dividing the annual GMC revenue requirement allocated to this service category by forecast annual gross absolute value of MWh of real-time energy flows on the ISO Controlled Grid, net of amounts excluded pursuant to Part E of this Schedule.
3. The rate for the CRR Services Charge will be calculated by dividing the annual GMC revenue requirement allocated to this service category by the forecast annual sum of

California Independent System Operator Corporation
Fifth Replacement Tariff

awarded MW of CRRs per hour.

The rates for the foregoing charges shall be adjusted automatically each year, effective January 1 for the following twelve (12) months, in the manner set forth in Part D of this Schedule.

Part B – Quarterly Adjustment, If Required

Each component rate of the GMC will be adjusted automatically on a quarterly basis, up or down, so that rates reflect the annual revenue requirement as posted on the CAISO Website, as applicable, if the estimated revenue collections for that component, after accounting for revenue collected from the Bid Segment Transaction Fee, the CRR Transaction Fee, the Inter-Scheduling Coordinator Trade Transaction Fee, the Scheduling Coordinator ID Charge and the TOR Charge, on an annual basis, change by more than two (2) percent or \$1 million, whichever is greater, during the year. Such adjustment may be implemented not more than once per calendar quarter, and will be effective the first day of the next calendar month.

The rates will be adjusted according to the formulae listed in Appendix F, Schedule 1, Part A with the billing determinant(s) readjusted on a going-forward basis to reflect the change of more than two (2) percent or \$1 million, whichever is greater, from the estimated revenue collections provided in the annual informational filing.

Part C – Costs Recovered through the GMC

As provided in Section 11.22.2 of the CAISO Tariff, the GMC includes the following costs, as projected in the CAISO's budget for the year to which the GMC applies:

- CAISO Operating Costs;
- CAISO Financing Costs, including debt service on CAISO capital expenditures;
- CAISO Other Costs and Revenues, including penalties, interest earnings and other revenues;
- CAISO Operating Cost Reserve adjustment; and
- CAISO Cash Funded Capital and Project Costs

Such costs, for the CAISO as a whole, are allocated to the service charges that comprise the GMC: (1) Market Services, (2) System Operations, and (3) CRR Services, according to the factors listed in Part A of this Schedule 1, and

adjusted annually for:

- any surplus revenues from the previous year as deposited in the CAISO Operating Reserve Account, or deficiency of revenues, as recorded in a memorandum account;

divided by:

- forecasted annual billing determinant volumes;

adjusted quarterly for:

California Independent System Operator Corporation
Fifth Replacement Tariff

- a change in the volume estimate used to calculate the individual GMC components, if, on an annual basis, the change is two (2) percent or \$1 million, whichever is greater, from the estimated revenue collections provided in the annual informational filing.

The GMC revenue requirement formula is as follows:

GMC revenue requirement =

CAISO Operating Costs + CAISO Financing Costs + CAISO Other Costs and Revenues + CAISO Operating Cost Reserve adjustment + CAISO Cash Funded Capital and Project Costs,

[The "USoA" reference below is the FERC Uniform System of Accounts, and is intended to include subsequent re-numbering or re-designation of the same accounts or subaccounts.]

Where,

- (1) CAISO Operating Costs include:
 - (a) Transmission expenses (USoA 560-574);
 - (b) Regional market expenses (USoA 575.1-575.8);
 - (c) Maintenance accounts (USoA 576-576.5)
 - (d) Customer accounting expenses (USoA 901-905);
 - (e) Customer service and informational expenses (USoA 906-910);
 - (f) Sales expenses (USoA 911-917);
 - (g) Administrative & general expenses (USoA 920-935);
 - (h) Taxes other than income taxes that relate to CAISO operating income (USoA 408.1); and
 - (i) Miscellaneous, non-operating expenses, penalties and other deductions (USoA 426 subaccounts).
- (2) CAISO Financing Costs include:
 - (a) For any fiscal year, scheduled principal and interest payments, sinking fund payments related to balloon maturities, repayment of commercial paper notes, net payments required pursuant to a payment obligation, or payments due on any CAISO notes. This amount includes the current year accrued principal and interest payments due in the first one hundred twenty (120) days of the following year.
 - (b) The debt service coverage requirement, which is a percentage of the senior lien

California Independent System Operator Corporation
Fifth Replacement Tariff

debt service, i.e., all debt service that has a first lien on CAISO net operating revenues. The coverage requirement is twenty-five (25) percent, unless otherwise specified by the rate covenants of the official statements for each CAISO bond offering.

- (3) CAISO Other Costs and Revenues include:
 - (a) Interest earnings (USoA 419) on funds not restricted by bond or note proceeds specifically designated for capital projects or capitalized interest. Unrealized gains or losses shall be excluded and realized gains and losses shall be included. If it has been determined that a permanent impairment in an investment has occurred, it shall be included.
 - (b) Miscellaneous revenues, which includes fees and fines assessed and collected by the CAISO (USoA 421, 456, 457.1 and 457.2 subaccounts).
 - (c) Other interest expenses (USoA 431) not provided for elsewhere.
- (4) CAISO Operating Cost Reserve adjustment is the sum of:
 - (a) The actual excess or shortfall in collections of the prior year's rates compared to the budgeted amounts;
 - (b) The actual excess or shortfall in CAISO Operating Costs, CAISO Other Costs and Revenues and CAISO Financing Costs for the prior year compared to the budgeted amounts except any excess in the prior year budgeted amount for self-insured healthcare costs compared to actual self-insured healthcare costs;
 - (c) The estimate of current year collections and costs compared to budgeted amounts for the current year; and
 - (d) The change in CAISO Operating Cost Reserve consistent with the level of the CAISO Operating Cost Reserve requirement.
- (5) CAISO Cash-Funded Capital and Project Costs include funding from current year revenue for approved capital and projects.

A separate revenue requirement shall be established for each component of the GMC by developing the revenue requirement for the CAISO as a whole and then assigning such costs to the service categories using the allocation factors provided in Appendix F, Schedule 1, Part A.

Part D – Information Requirements

Budget Schedule

The CAISO will convene, prior to the commencement of the annual budget process, an initial meeting with stakeholders to: (a) receive ideas to control CAISO costs; (b) receive ideas for projects to be considered in the capital budget development process; and, (c) receive suggestions for reordering CAISO priorities in the coming year.

Within two (2) weeks of the initial meeting, the ideas presented by the stakeholders shall be communicated in writing to the CAISO's officers, directors and managers as part of the budget development process, and a copy of this communication shall be made available to stakeholders.

The CAISO shall submit the following information either at the initial meeting with stakeholders or subsequent to the initial submission of the draft budget to the CAISO Governing Board: (a) proposed capital budget with indicative projects for the next subsequent calendar year, a budget-to-actual review for capital expenditures for the previous calendar year, and a budget-to-actual review of current year capital costs; and, (b) budget-to-actual review of expenditures and activities for the previous calendar year, and a budget-to-actual review of expenditures for the current year.

Subsequent to the initial submission of the draft budget to the CAISO Governing Board, the CAISO will provide stakeholders expenditures and activities in detail for the next subsequent calendar year (in the form of a draft of the budget book for the CAISO Governing Board). Certain of this detailed information which is deemed commercially sensitive will only be made available to parties that pay the CAISO's GMC (or regulators) who execute a confidentiality agreement.

The CAISO shall provide such materials on a timely basis to provide stakeholders at least one full Board meeting cycle to review and prepare comments on the draft annual budget to the CAISO Governing Board.

At least one month prior to the CAISO Governing Board meeting scheduled to consider approval of the proposed budget, the CAISO will hold a meeting open to all stakeholders to discuss the details of the CAISO's budget and revenue requirement for the forthcoming year.

Prior to a final recommendation by the CAISO Governing Board on the CAISO's draft annual budget, the CAISO shall respond in writing to all written comments on the draft annual budget submitted by stakeholders and/or the CAISO shall issue a revised draft budget indicating in detail the manner in which the stakeholders' comments have been taken into consideration.

The CAISO will provide no fewer than forty-five (45) days for stakeholder review of its annual budget between initial budget posting and final approval of the budget by the CAISO Governing Board.

Budget Posting

After the approval of the annual budget by the CAISO Governing Board, the CAISO will post on the CAISO Website the CAISO operating and capital budget to be effective during the subsequent fiscal year, and the billing determinant volumes used to develop the rate for each component of the GMC, together with workpapers showing the calculation of such rates.

Periodic Financial Reports

The CAISO will create periodic financial reports consisting of an income statement, balance sheet, capital projects report and such other reports as are required by the CAISO Governing Board. The periodic financial reports will be posted on the CAISO Website not less than quarterly.

Part E – System Operations Charge Exemption for Certain Long-Term Power Supply Contracts

- (1) The real time MWh Energy flows from Generating Units with certain existing power supply contracts will be exempt from the System Operations Charge until the first opportunity to renegotiate the contract or the contract expires. To be eligible for this exemption, the generating unit and the power supply contract must meet the following criteria:
 - (a) The generator owner must be the Scheduling Coordinator for the generating unit;
 - (b) The power supply contract may not be with another Scheduling Coordinator that has the same parent company as the generator owner;
 - (c) The power supply contract may not be with the same Scheduling Coordinator ID Code as the Generating Unit;
 - (d) The power supply contract precludes the supplier from recovering additional GMC costs incurred as a result of the GMC rate design that became effective on January 1, 2012:
 - (e) The power supply contract must have been executed prior to January 1, 2011;
 - (f) The duration of the power supply contract must be such that it is three (3) years or more until the termination of the contract or the first opportunity to renegotiate the terms and conditions of the contract.
- (2) To establish eligibility for exemption from the Systems Operation charge, the generator owner must submit the following information in accordance with the procedures set forth on the ISO website:
 - (a) Power supply contract timeline, including the execution date and either termination date or the earliest date upon which the contract may be renegotiated;
 - (b) Resource ID;
 - (c) SCID; and,
 - (d) Effected MW.
- (3) An officer of the generation owner company must provide a signed affidavit attesting to

California Independent System Operator Corporation
Fifth Replacement Tariff

the information that demonstrates the power supply contract eligibility for the exemption.

Part F –[Not Used]

California Independent System Operator Corporation
Fifth Replacement Tariff

Schedule 2

[Not Used]

Schedule 3

Regional Access Charge and Wheeling Access Charge

1 Objectives and Definitions.

1.1 Objectives.

- (a) The Access Charge is the charge assessed for using the CAISO Controlled Grid. It consists of two components, the Regional Access Charge (RAC) and the Local Access Charge (LAC).
- (b) The RAC is based on one CAISO Grid-wide rate.
- (c) The LAC will be determined by each Participating TO. The LAC of Non-Load-Serving Participating TOs may also be project specific. Each Participating TO will charge for and collect the LAC, subject to Section 26.1 of the CAISO Tariff and Section 13 of this Schedule 3.
- (d) The Wheeling Access Charge is paid by Scheduling Coordinators for Wheeling as set forth in Section 26.1.4 of the CAISO Tariff. The CAISO will collect the Wheeling revenues from Scheduling Coordinators on a Trading Interval basis and repay these to the Participating TOs based on the ratio of each Participating TO's Transmission Revenue Requirement to the sum of all Participating TOs' Transmission Revenue Requirements.

1.2 Definitions

Unless the context otherwise requires, any word or expression defined in the Master Definition Supplement shall have the same meaning where used in this Schedule 3.

2 Assessment of Regional Access Charge.

All UDCs and MSS Operators in a PTO Service Territory serving Gross Loads directly connected to the transmission facilities or Distribution System of a UDC or MSS Operator in a PTO Service Territory shall pay to the CAISO a charge for transmission service on the Regional Transmission Facilities included in the CAISO Controlled Grid. A UDC or MSS Operator that is also a Participating TO shall pay, or receive payment of, if applicable, the difference between (i) the Regional Access Charge applicable to its transactions as a UDC or MSS Operator; and (ii) the disbursement of Regional Access Charge revenues

California Independent System Operator Corporation
Fifth Replacement Tariff

to which it is entitled pursuant to Section 26.1.3 of the CAISO Tariff.

3 TAC Areas.

- 3.1** TAC Areas are based on the Control Areas in California prior to the CAISO Operations Date. Three TAC Areas will be established based on the Original Participating TOs: (1) a Northern Area consisting of the PTO Service Territory of Pacific Gas and Electric Company and the PTO Service Territory of any entity listed in Section 3.3 or 3.5 of this Schedule; (2) an East Central Area consisting of the PTO Service Territory of Southern California Edison Company and the PTO Service Territory of any entity listed in Section 3.4, 3.5 or 3.6 (as indicated therein) of this Schedule 3; and (3) a Southern Area consisting of the PTO Service Territory of San Diego Gas & Electric Company. Participating TOs that are not in one of the above cited PTO Service Territories are addressed below.
- 3.2** If the Los Angeles Department of Water and Power joins the CAISO and becomes a Participating TO, its PTO Service Territory will form a fourth TAC Area, the West Central Area.
- 3.3** If any of the following entities becomes a Participating TO, its PTO Service Territory will become part of the Northern Area: Sacramento Municipal Utility District, Western Area Power Administration - Sierra Nevada Region, the Department of Energy California Labs, Northern California Power Agency, City of Redding, Silicon Valley Power, City of Palo Alto, City and County of San Francisco, Alameda Bureau of Electricity, City of Biggs, City of Gridley, City of Healdsburg, City of Lodi, City of Lompoc Utility Department, Modesto Irrigation District, Turlock Irrigation District, Plumas County Water Agency, City of Roseville Electric Department, City of Shasta Lake, and City of Ukiah or any other entity owning or having contractual rights to Regional or Local Transmission Facilities in Pacific Gas and Electric Company's Control Area prior to the CAISO Operations Date.
- 3.4** If any of the following entities becomes a Participating TO, its PTO Service Territory will become part of the East Central Area: City of Anaheim Public Utility Department, City of Riverside Public Utility Department, City of Azusa Light and Water, City of Banning Electric, City of Colton, City of Pasadena Water and Power Department, The Metropolitan Water District of Southern California and City of Vernon or any other entity owning or having contractual rights to Regional or Local

California Independent System Operator Corporation
Fifth Replacement Tariff

Transmission Facilities in Southern California Edison Company's Control Area prior to the CAISO Operations Date.

- 3.5** If the California Department of Water Resources becomes a Participating TO, its Regional Transmission Revenue Requirements associated with Regional Transmission Facilities in the Northern Area would become part of the Regional Transmission Revenue Requirement for the Northern Area while the remainder would be included in the East Central Area.
- 3.6** If the City of Burbank Public Service Department (Burbank) and/or the City of Glendale Public Service Department (Glendale) become Participating TOs after or at the same time as the Los Angeles Department of Water and Power becomes a Participating TO, then the PTO Service Territory of Burbank and/or Glendale would become part of the West Central Area. Otherwise, if Burbank or Glendale becomes a Participating TO, prior to Los Angeles, its PTO Service Territory will become part of the East Central Area. Once either Burbank or Glendale are part of the East Central Area, they will not move to the West Central Area if such area is established.
- 3.7** If the Imperial Irrigation District or an entity outside the State of California should apply to become a Participating TO, the CAISO Governing Board will review the reasonableness of integrating the entity into one of the existing TAC Areas. If the entity cannot be integrated without the potential for significant cost shifts, the CAISO Governing Board may establish a separate TAC Area.

4 [NOT USED]

5 Determination of the Access Charge.

- 5.1** The Access Charge consists of a Regional Access Charge (RAC) and a Local Access Charge (LAC) that is based on a utility-specific rate established by each Participating TO in accordance with its TO Tariff.
- 5.2** Each Participating TO and Approved Project Sponsor will develop, in accordance with Section 6 of this Schedule 3, a Regional Transmission Revenue Requirement (RTRR PTO) consisting of a Transmission Revenue Requirement for (i) Regional Transmission Facilities; (2) Transmission Facilities that are not yet in operation but have been approved under Section 24 and assigned to the Approved Project Sponsor, that will be Regional Transmission Facilities when placed under the CAISO's Operational Control; and (iii) to the extent the costs have not been recovered,

California Independent System Operator Corporation
Fifth Replacement Tariff

Location Constrained Interconnection Facilities. The RTRR PTO includes the TRBA adjustment described in Section 6.1 of this Schedule 3. If an Approved Project Sponsor that is a Non-Load-Serving Participating Transmission Owner has been assigned responsibility to construct and own a Local Transmission Facility because the CAISO concluded, pursuant to Section 24.4.10, that it was not reasonable to divide construction responsibility, the Approved Project Sponsor shall include any authorized pre-operational cost recovery for the Local Transmission Facility in its Local Transmission Revenue Requirement. The division of the total revenue requirement associated with the facility between Regional and Local Transmission Revenue Requirements shall be consistent with Appendix F, Schedule 3, Sections 11 and 12.

5.3 The Gross Load amount in MWh shall be established by each Participating TO and filed at FERC with each Participating TO's Transmission Revenue Requirement (GLPTO).

5.4 The Regional Access Charge shall be equal to the sum of the Regional Transmission Revenue Requirements of all Participating TOs and Approved Project Sponsors, divided by the sum of the Gross Loads of all Participating TOs.

6 Regional Transmission Revenue Requirement.

6.1 The Regional Transmission Revenue Requirement of a Participating TO or an Approved Project Sponsor will be determined consistent with CAISO procedures posted on the CAISO Website and shall be the sum of:

- (a) the Participating TO's Regional Transmission Revenue Requirement (including costs related to Existing Contracts associated with transmission by others and deducting transmission revenues actually expected to be received by the Participating TO related to transmission for others in accordance with Existing Contracts and Interregional Transmission Projects, less the sum of the Standby Transmission Revenues) or the Approved Project Sponsors Regional Transmission Revenue Requirement; and
- (b) the annual Regional TRBA adjustment, which shall be based on the principal balance in the Regional TRBA as of September 30 and shall be calculated as a dollar amount based on the projected Transmission Revenue Credits as adjusted for the true up of the prior year's difference between projected and actual credits. A Non-Load-Serving Participating

California Independent System Operator Corporation
Fifth Replacement Tariff

TO shall include any over- or under-recovery of its annual Regional Transmission Revenue Requirement in its Regional TRBA. If the annual Regional TRBA adjustment involves only a partial year of operations, the Non-Load-Serving Participating TO's over- or under-recovery shall be based on a partial year revenue requirement, calculated by multiplying the Non-Load-Serving Participating TO's Regional Transmission Revenue Requirement by the number of days the Regional Transmission Facilities were under the CAISO's Operational Control divided by the number of days in the year. An Approved Project Sponsor shall include any over- or under-recovery of its annual Regional Transmission Revenue Requirement in its Regional TRBA. If the annual Regional TRBA adjustment involves only a partial year, the Approved Project Sponsor's over- or under-recovery shall be based on a partial year revenue requirement, calculated by multiplying the Approved Project Sponsor's Regional Transmission Revenue Requirement by the number of days the transmission facilities were under construction based on the construction plan required in accordance with Section 24.6.1, as such plan may be updated by the construction plan status report, divided by the number of days in the year.

7 [NOT USED]

8 Updates to Regional Access Charges.

8.1 Regional Access Charges and Regional Wheeling Access Charges shall be adjusted: (1) on January 1 and July 1 of each year when necessary to reflect the addition of any New Participating TO and (2) on the date FERC makes effective a change to the Regional Transmission Revenue Requirements of any Participating TO or Approved Project Sponsor. Using the Regional Transmission Revenue Requirement accepted or authorized by FERC, consistent with Section 9 of this Schedule 3, for each Participating TO and Approved Project Sponsor, the CAISO will recalculate on a monthly basis the Regional Access Charge applicable during such period. Revisions to the Transmission Revenue Balancing Account adjustment shall be made effective annually on January 1 based on the principal balance in the TRBA as of September 30 of the prior year and a forecast of Transmission Revenue Credits for the next year.

California Independent System Operator Corporation
Fifth Replacement Tariff

- 8.2** Any refund associated with a Participating TO's or Approved Project Sponsor's Transmission Revenue Requirement that has been accepted by FERC, subject to refund, shall be provided as ordered by FERC. Such refund shall be invoiced in the CAISO Market Invoice.
- 8.3** If the Participating TO withdraws one or more of its transmission facilities from the CAISO Operational Control in accordance with Section 3.4 of the Transmission Control Agreement, then the CAISO will no longer collect the TRR for that transmission facility through the CAISO's Access Charge effective upon the date the transmission facility is no longer under the Operational Control of the CAISO. The withdrawing Participating TO shall be obligated to provide the CAISO will all necessary information to implement the withdrawal of the Participating TO's transmission facilities and to make any necessary filings at FERC to revise its TRR. The CAISO shall revise its transmission Access Charge to reflect the withdrawal of one or more transmission facilities from CAISO Operational Control.
- 9 Approval of Updated Regional Revenue Requirements.**
- 9.1** Participating TOs and Approved Project Sponsors will make the appropriate filings at FERC to establish their Transmission Revenue Requirements for their Local Access Charges and the Regional Access Charge, and to obtain approval of any changes thereto. All such filings with the FERC will include a separate appendix that states the RTRR, LTRR (if applicable) and the appropriate Gross Load data and other information required by the FERC to support the Access Charges. The Participating TO or Approved Project Sponsor will provide a copy of its filing to the CAISO and the other Participating TOs and Approved Project Sponsors in accordance with the notice provisions in the Transmission Control Agreement.
- 9.2** Federal power marketing agencies whose transmission facilities are under CAISO Operational Control shall develop their Regional Transmission Revenue Requirements pursuant to applicable federal laws and regulations, including filing with FERC. All such filings with FERC will include a separate appendix that states the RTRR, LTRR (if applicable) and the appropriate Gross Load data and other information required by the FERC to support the Access Charges. The procedures for public participation in a federal power marketing agency's ratemaking process shall be posted on the federal power marketing agency's website. The federal power marketing

California Independent System Operator Corporation
Fifth Replacement Tariff

agency shall also post on the website the Federal Register Notices and FERC orders for rate making processes that impact the federal power marketing agency's Regional Transmission Revenue Requirement. The Participating TO will provide a copy of its filing to the CAISO and the other Participating TOs in accordance with the notice provisions in the Transmission Control Agreement.

10 Disbursement of Regional Access Charge Revenues.

10.1 Regional Access Charge revenues shall be calculated for disbursement to each Participating TO and Approved Project Sponsor on a monthly basis as follows:

- (a) the amount determined in accordance with Section 26.1.2 of the CAISO Tariff ("Billed RAC").
- (b)
 - (i) for a Participating TO that is a UDC or MSS Operator and has Gross Load in its TO Tariff in accordance with Appendix F, Schedule 3, Section 9, then calculate the amount each UDC or MSS Operator would have paid and the Participating TO would have received by multiplying the Regional Utility-Specific Rates for the Participating TO whose Regional Transmission Facilities served such UDC and MSS Operator times the actual Gross Load of such UDCs and MSS Operators;
or
 - (ii) for a Non-Load-Serving Participating TO and Approved Project Sponsors, then calculate the Non-Load-Serving Participating TO's or Approved Project Sponsor's portion of the total Billed RAC in subsection (a) based on the ratio of the Non-Load-Serving Participating TO's and Approved Project Sponsors Regional Transmission Revenue Requirement to the sum of all Participating TOs' and Approved Project Sponsor's Regional Revenue Requirements.
- (c) if the total Billed RAC in subsection (a) received by the CAISO less the total dollar amounts calculated in subsection (b)(i) and subsection (b)(ii) is different from zero, the CAISO shall allocate the positive or negative difference among those Participating TOs that are subject to the calculations in subsection (b)(i) based on the ratio of each

California Independent System Operator Corporation
Fifth Replacement Tariff

Participating TO's Regional Transmission Revenue Requirement to the sum of all of those Participating TOs' Regional Transmission Revenue Requirements that are subject to the calculations in subsection (b)(i). This monthly distribution amount is the "RAC Revenue Adjustment."

(d) the sum of the RAC revenue share determined in subsection (b) and the RAC Revenue Adjustment in subsection (c) will be the monthly disbursement to the Participating TO.

10.2 If the same entity is both a Participating TO and a UDC or MSS Operator, then the monthly Regional Access Charge amount billed by the CAISO will be the charges payable by the UDC or MSS Operator in accordance with Section 26.1.2 of the CAISO Tariff less the disbursement determined in accordance with Section 10.1(d) of this Schedule 3. If this difference is negative, that amount will be paid by the CAISO to the Participating TO.

11 Determination of Transmission Revenue Requirement Allocation Between Regional and Local Transmission Facilities.

11.1 Each Participating TO shall allocate its Transmission Revenue Requirement between the Regional Transmission Revenue Requirement and Local Transmission Revenue Requirement based on the Procedure for Division of Certain Costs Between the Regional and Local Transmission Access Charges contained in Section 12 of this Schedule.

12 Procedure for Division of Certain Costs Between the Regional and Local Transmission Access Charges.

12.1 Division of Costs:

(a) Substations

Costs for substations and substation equipment, including transformers:

- (i) If the Participating TO has substation TRR information by facility and voltage, then the TRR for facilities and equipment at or above 200 kV should be allocated to the RTRR and the TRR for facilities and equipment below 200 kV should be allocated to the LTRR;
- (ii) If the Participating TO has substation TRR information by facility but not by voltage, then the TRR for facilities and equipment should be allocated to the

California Independent System Operator Corporation
Fifth Replacement Tariff

RTRR and to the LTRR based on the ratio of gross substation investment allocated to RTRR to gross substation investment allocated to LTRR pursuant to Section 12.1(a)(i); or

- (iii) If the Participating TO does not have substation TRR information by facility or voltage, then the TRR for facilities and equipment should be allocated to the RTRR and to the LTRR based on the Participating TO's transmission system-wide gross plant ratio. The system-wide gross plant ratio is determined once the costs that can be split between Regional Transmission Facilities and Local Transmission Facilities for all facilities has been developed in accordance with Sections 12.1(a) through (c), then the resulting cost ratio between Regional Transmission Facilities and Local Transmission Facilities shall be used as the system-wide gross plant ratio.
- (iv) Costs of transformers that step down from Regional Transmission Facility to a Local Transmission Facility, to the extent the Participating TO does not have the revenue requirement information available to allocate the costs, should be allocated consistent with the procedures for substations addressed above.

(b) Transmission Towers and Land with Circuits on Multiple Voltages

For transmission towers that carry both Regional Transmission Facilities and Local Transmission Facilities on the same tower, the cost of these assets should be allocated two-thirds to the RTRR and one-third to the LTRR. If the transmission tower has only Regional Transmission Facilities, then the costs of these assets should be allocated entirely to the RTRR. If the transmission tower has only Local Transmission Facilities, then the TRR of these assets should be allocated entirely to the LTRR. Provided that the Participating TO does not have land cost information available on a basis that distinguishes the Local and Regional Transmission Facilities, in which case the costs should be allocated on that basis, the costs for land used for transmission rights-of-way for towers that carry both Local and Regional Transmission Facilities should be allocated two-thirds to the RTRR component and one-third to the LTRR.

California Independent System Operator Corporation
Fifth Replacement Tariff

(c) Operation and Maintenance, Transmission Wages & Salaries, Taxes, Depreciation and Amortization, and Capital Costs

If the Participating TO can delineate costs for transmission operations and maintenance (O&M), transmission wages and salaries, taxes, depreciation and amortization, or capital costs on a voltage basis, the costs shall be applied on a bright-line voltage basis. If the costs for O&M, transmission wages and salaries, taxes, depreciation and amortization, or capital costs, are not available on voltage levels, the allocation to the RTRR and the LTRR should be based on the Participating TO's system-wide gross plant ratio defined in Section 12.1(a).

(d) Existing Transmission Contracts

If the Take-Out Point for the Existing Contract is a Regional Transmission Facility, the Existing Contract revenue will be credited to the RTRR of the Participating TO receiving such revenue. Similarly, the Participating TO that is paying charges under such an Existing Contract may include the costs in its RTRR. If the Take-Out Point for the Existing Contract is a Local Transmission Facility, the Existing Contract revenue will be credited to the RTRR and the LTRR of the receiving Participating TO based on the ratio of the Participating TO's RTRR to its LTRR, prior to any adjustments for such revenues. The Participating TO that is paying the charges under the Existing Contract will include the costs in its RTRR and LTRR in the same ratio as the revenues are recognized by the Participating TO receiving the payments.

(e) Division of the TRBA Adjustment between RTRR and LTRR

- (i) Wheeling revenues associated with transactions exiting the CAISO Controlled Grid at Scheduling Points or Take-Out Points that are at Regional Transmission Facilities shall be reflected as Regional TRBA adjustment components;
- (ii) Wheeling revenues associated with transactions exiting the CAISO Controlled Grid at Scheduling Points or Take-Out Points that are at Local Transmission Facilities shall be attributed between Regional and Local TRBA adjustment components based on the Regional and Local Wheeling Access Charge rates assessed to such transactions by the CAISO and/or the Participating TO;
- (iii) Any Local Access Charge amounts paid pursuant to Section 26.1 of the CAISO Tariff for the Local Transmission Facilities of a Non-Load-Serving Participating TO shall be reflected as a component of the Local TRBA adjustment associated with the Local Access Charge;
- (iv) CRR revenues from CRRs allocated to Participating TOs shall be assigned to Regional or Local TRBA adjustment components based on whether the path related to the CRR is Regional or Local; and,

California Independent System Operator Corporation
Fifth Replacement Tariff

- (v) Other Transmission Revenue Credits shall be allocated between Regional and Local TRBA adjustment components on a gross plant basis.

13 Local Access Charge for a Non-Load-Serving Participating TO. Pursuant to Section 26.1 of the CAISO Tariff, the provisions of this Section 13 of this Schedule 3 shall apply to a Non-Load-Serving Participating TO that has Local Transmission Facilities.

13.1 Local Transmission Revenue Requirement. The Local Transmission Revenue Requirement of a Non-Load-Serving Participating TO shall be calculated separately for each individual project that includes one or more Local Transmission Facilities or shall be calculated for a group of Local Transmission Facilities if all are part of projects directly connected to the facilities of the same Participating TO(s). The Local Transmission Revenue Requirement will be determined consistent with CAISO procedures posted on the CAISO Website and shall be the sum of:

- (a) the Non-Load-Serving Participating TO's Local Transmission Revenue Requirement for the relevant Local Transmission Facility or group of facilities; and
- (b) the annual Local TRBA adjustment for the relevant Local Transmission Facility or group of facilities, which shall be based on the principal balance in the Local TRBA as of September 30 and shall be calculated as a dollar amount based on the projected Transmission Revenue Credits as adjusted for the true up of the prior year's difference between projected and actual credits. In accordance with Section 26.1 of the CAISO Tariff, the Non-Load-Serving Participating TO shall include any over- or under-recovery of its annual Local Transmission Revenue Requirement in its Local TRBA. If the annual Local TRBA adjustment involves only a partial year of operations, the Non-Load-Serving Participating TO's over- or under-recovery shall be based on a partial year revenue requirement, calculated by multiplying the Non-Load-Serving Participating TO's Local Transmission Revenue Requirement by the number of days the Local Transmission Facilities were under the CAISO's Operational Control divided by the number of days in the year.

California Independent System Operator Corporation
Fifth Replacement Tariff

13.2 Updates to Local Access Charges. Unless otherwise agreed by the affected Participating TOs, a Non-Load-Serving Participating TO shall adjust its Local Access Charges and Local Wheeling Access Charges (1) when necessary to reflect any new transmission addition directly connecting a Participating TO to the Local Transmission Facilities of the Non-Load-Serving Participating TO; (2) on the date FERC makes effective a change to the Local Transmission Revenue Requirement of the Non-Load-Serving Participating TO; and (3) on the date FERC makes effective a change to Gross Load of a Participating TO directly connected to the Non-Load-Serving Participating TO. Using the Local Transmission Revenue Requirement accepted or authorized by FERC, consistent with Section 9 of this Schedule 3, for the Non-Load-Serving Participating TO, the CAISO will recalculate the Local Access Charge applicable during such period. Revisions to the Local TRBA adjustment shall be made effective annually on January 1 based on the principal balance in the Local TRBA as of September 30 of the prior year and a forecast of Transmission Revenue Credits for the next year.

For service provided by a Non-Load-Serving Participating TO, any refund associated with a Non-Load-Serving Participating TO's Transmission Revenue Requirement that has been accepted by FERC, subject to refund, shall be provided as ordered by FERC. Such refund shall be invoiced in the CAISO Market Invoice.

If the Non-Load-Serving Participating TO withdraws one or more of its transmission facilities from the CAISO Operational Control in accordance with Section 3.4 of the Transmission Control Agreement, then the CAISO will no longer collect the TRR for that transmission facility through the CAISO's Access Charge effective upon the date the transmission facility is no longer under the Operational Control of the CAISO. The withdrawing Non-Load-Serving Participating TO shall be obligated to provide the CAISO will all necessary information to implement the withdrawal of the Participating TO's transmission facilities and to make any necessary filings at FERC to revise its TRR. The CAISO shall revise its transmission Access Charge to reflect the withdrawal of one or more transmission facilities from CAISO Operational Control.

13.3 Approval of Updated Local Transmission Revenue Requirement. A Non-Load-Serving Participating TO will make the appropriate filings at FERC to establish its Transmission Revenue Requirement for its Local Access Charge, and to obtain approval of any changes thereto. All

California Independent System Operator Corporation
Fifth Replacement Tariff

such filings with the FERC will include a separate appendix that states the LTRR and other information required by the FERC to support the Local Access Charge. The Non-Load-Serving Participating TO will provide a copy of its filing to the CAISO and the other Participating TOs in accordance with the notice provisions in the Transmission Control Agreement.

Federal power marketing agencies whose transmission facilities are under CAISO Operational Control shall develop their Local Transmission Revenue Requirements pursuant to applicable federal laws and regulations, including filing with FERC. All such filings with FERC will include a separate appendix that states the LTRR and other information required by the FERC to support the Access Charges. The procedures for public participation in a federal power marketing agency's ratemaking process shall be posted on the federal power marketing agency's website. The federal power marketing agency shall also post on the website the Federal Register Notices and FERC orders for rate making processes that impact the federal power marketing agency's Local Transmission Revenue Requirement. The Non-Load-Serving Participating TO will provide a copy of its filing to the CAISO and the other Participating TOs in accordance with the notice provisions in the Transmission Control Agreement.

13.4 Disbursement of Local Access Charge Revenues. Unless otherwise agreed by the affected Participating TOs, Local Access Charge revenues of a Non-Load-Serving Participating TO shall be calculated for disbursement to that Non-Load-Serving Participating TO on a monthly basis as the sum of Local Access Charges billed by the CAISO to the UDCs or MSS Operators of Participating TOs pursuant to Section 26.1 of the CAISO Tariff.

13.5 Payment of Local Access Charge. Notwithstanding the separate accounting for the Local Access Charge specified in Section 26.1 of the CAISO Tariff and this Section 13 of this Schedule 3, if the same entity is both a Participating TO and a UDC or MSS Operator, then the monthly Regional Access Charge amount, and any Local Access Charge amount pursuant to this Section 13 of this Schedule 3, billed by the CAISO will be the charges payable by the UDC or MSS Operator in accordance with Sections 26.1.2 and 26.1 of the CAISO Tariff less the disbursement determined in accordance with Section 10.1(d) of this Schedule 3. If this difference is negative, that amount will be paid by the CAISO to the Participating TO.

California Independent System Operator Corporation
Fifth Replacement Tariff

14 Wheeling Access Charges.

- 14.1 CAISO Charges on Scheduling Coordinators for Wheeling.** The CAISO will charge Scheduling Coordinators for a Wheeling Out or a Wheeling Through transaction the product of the Wheeling Access Charge and the total of the hourly Schedules or awards of Wheeling in MWh for each Trading Interval at each Scheduling Point associated with that transaction pursuant to Section 26.1.4 of the CAISO Tariff.
- 14.2 Wheeling Access Charge.** The Wheeling Access Charge for each Participating TO shall be as specified in Section 26.1.4 of the CAISO Tariff.
- 14.3 CAISO Payments to Transmission Owners for Wheeling.** The CAISO will pay all Wheeling revenues to Participating TOs on the basis of the ratio of each Participating TO's Transmission Revenue Requirement (less the TRR associated with Existing Rights and Interregional Transmission Projects) to the sum of all Participating TOs' TRRs (less the TRRs associated with Existing Rights and Interregional Transmission Projects) as specified in Section 26.1.4.3 of the CAISO Tariff and in the applicable Business Practice Manual. The Local Wheeling Access Charge shall be disbursed to the appropriate Participating TO in accordance with the applicable Business Practice Manual.
- 14.4 Weighted Average Rate for Wheeling Service.** The weighted average rate payable for Wheeling over joint facilities at each Scheduling Point shall be calculated as the sum of the applicable Wheeling Access Charge rates for each applicable TAC Area or Participating TO as these rates are weighted by the ratio of the Available Transfer Capability for each Participating TO at the particular Scheduling Point to the total Available Transfer Capability for the Scheduling Point. The calculation of this rate is set forth in more detail in the applicable Business Practice Manual.

California Independent System Operator Corporation
Fifth Replacement Tariff

Schedule 4

Eligible Intermittent Resources Forecast Fee

A charge up to \$.10 per MWh shall be assessed on the metered Energy from (a) Eligible Intermittent Resources; (b) Variable Energy Resources that are EIM Participating Resources; and (c) the variable component of Hybrid Resources as a Forecast Fee, provided that Generating Units smaller than 10 MW that are not Participating Intermittent Resources and that sell power pursuant to a power purchase agreement entered into pursuant to PURPA prior to entering into a PGA or Net Scheduled PGA shall be exempt from the Forecast Fee.

The rate of the Forecast Fee shall be determined so as to recover the projected annual costs related to developing Energy forecasting systems, generating forecasts, validating forecasts, and monitoring forecast performance, that are incurred by the CAISO as a direct result of participation by Eligible Intermittent Resources, Variable Energy Resources that are EIM Participating Resources, and the variable component of Hybrid Resources in CAISO Markets, divided by their projected annual Energy production.

The initial Forecast Fee, and all subsequent changes as may be necessary from time to time to recover costs incurred by the CAISO for the forecasting conducted on the behalf of Eligible Intermittent Resources, Variable Energy Resources that are EIM Participating Resources, and the variable component of Hybrid Resources pursuant to the foregoing rate formula, shall be set forth in a Business Practice Manual.

California Independent System Operator Corporation
Fifth Replacement Tariff

Schedule 5

[NOT USED]

California Independent System Operator Corporation
Fifth Replacement Tariff

Schedule 6

CPM SCHEDULES FOR CPM DESIGNATIONS UNDER SECTION 43A

Monthly CPM Capacity Payment

The monthly CPM Capacity Payment shall be calculated in accordance with Section 43A.7.1.

Availability

The target availability for a resource designated under CPM is 95%. Incentives and penalties for availability above and below the target are as set forth in the table below, entitled "Availability Factor Table." The CAISO shall calculate availability on a monthly basis using actual availability data. The CPM Availability Factor for Forced Outages for each month shall be calculated using the following curve:

AVAILABILITY FACTOR TABLE

Availability	Capacity Payment Factor	CPM Availability Factor
100%	3.3%	1.1.39
99%	3.3%	1.106
98%	3.3%	1.073
97%	2.5%	1.040
96%	1.5%	1.015
95%	-	1.000
94%	- 1.5%	.985
93%	-1.5%	.970
92%	-1.5%	.955
91%	-1.5%	.940
90%	-1.5%	.925
89-80%	-1.7%*	.908-.755
79-41%	-1.9%*	.736-.014
-40%	-	0.0

*The "Capacity Payment Factor" decreases by 1.7% and 1.9% respectively for every 1% decrease in availability.

The CPM Capacity Payment shall be adjusted upward from the 95% availability starting point by the positive percentages listed as the "Capacity Payment Factor" above, by multiplication by the amounts listed for each CPM Availability Factor above 95%, so that, for example, if a 97% availability is achieved for the month, then the CPM Capacity Payment for that month would be the monthly value for 95% plus an additional 4% (1.5% for the first percent availability above 95%, and 2.5% for the second percent availability above 95%), i.e., multiplication of the otherwise applicable CPM Capacity Payment by the CPM Availability Factor of 1.040. Reductions in the CPM Capacity Payment shall be made correspondingly according to the "Capacity Payment Factor" above for monthly availability levels falling short of the 95% availability starting point, by multiplication by the amounts listed for each CPM Availability Factor below 95%.

Schedule 7

Reliability Coordinator Services Charge

The Reliability Coordinator Services Charge shall be based on the RC Funding Requirement. The RC Funding Requirement will consist of the annual costs associated with the CAISO's provision of Reliability Coordinator Services, including the annual costs associated with maintaining shared reliability coordinator tools such as the Western Interchange Tool and the Enhanced Curtailment Calculator. The CAISO will determine the RC Funding Requirement based on the percentage of its overall revenue requirement attributable to the cost of providing RC Services. This percentage, known as the RC Funding Percentage, will initially be determined by assessing the costs associated with providing RC Services, using data from the CAISO's 2016 cost of service study modified to reflect the assessed RC Services costs, and based on the expected number of customers that will have committed to take RC Services by the RC Services Dates provided in Section 19.2(b)(6). This percentage will be updated in conjunction with the triennial cost of service study conducted by the CAISO as described in Schedule 1, Part A of this Appendix F. The RC Funding Requirement will be calculated, on an annual basis, as the product of this percentage multiplied by the annual revenue requirement for the same year.

The RC Funding Requirement will be developed utilizing the procedures associated with the development of the GMC revenue requirement, as set forth in Schedule 1, Part D of this Appendix F. Entities taking RC Services from the CAISO will have the opportunity to participate in that annual budget process. The RC Funding Percentage will be 9%, which will thereafter be used to calculate the annual RC Funding Requirement. The annual RC Funding Requirement will be assessed to applicable RC Customers, including Scheduling Coordinators that serve load in the CAISO Balancing Authority Area, in proportion to the Net Energy for Load or Net Generation for the period during which this rate is in effect.

The RC Funding Requirement will be treated as a component of the revenue in the CAISO Other Costs and Revenues category, for purposes of calculating the costs recovered through the GMC, as set forth in Schedule 1, Part C of this Appendix F.

The annual RC rate per MWh is calculated by taking the annual RC Funding Requirement less the known minimum RC Services Charge for the applicable year divided by the sum of 1) the annual Net Energy for Load MWh for all Balancing Authorities with load and Transmission Operators and 2) the annual Net Generation MWh for all generators connected to generation-only Balancing Authorities and Transmission Operators that the CAISO anticipates will take RC Services for the applicable year. The rates for the RC Services Charge shall be adjusted each year, effective January 1.

The annual RC Services Charge for each RC Customer will be calculated as follows:

- For RC Customers that are, or are located in, generation-only Balancing Authorities, multiplying the annual RC Services Charge rate by the total Net Generation in MWh as determined in accordance with Section 19.6. The RC Services Charge for such RC Customers that are Balancing Authorities shall be calculated by removing any total Net Generation associated with Transmission Operators within such Balancing Authorities that have elected to receive direct billing of RC Services from the CAISO.
- For RC Customers that are, or are located in, Balancing Authority Areas with load, multiplying the annual RC Services Charge rate by the total Net Energy for Load in MWh as determined in accordance with Section 19.6 of the CAISO Tariff. The RC Services Charge for such RC Customers that are Balancing Authorities shall be calculated by removing any total Net Energy for Load associated with transmission operators within such Balancing Authorities that have elected to receive direct billing of RC Services from the CAISO.
- For RC Customers that are located in the CAISO's Balancing Authority Area and Scheduling Coordinators that serve load in the CAISO Balancing Authority Area, multiplying the annual RC Services Charge rate by the RC Customer's share of the total NERC/WECC Metered

California Independent System Operator Corporation
Fifth Replacement Tariff

Demand in MWh for the CAISO Balancing Authority Area determined in accordance with Section 11.20.9.

- There will be a minimum annual RC Services Charge of \$5,000. This charge will be applied to RC Customers that either have no Net Energy for Load or Net Generation for a particular period as set forth in Section 19.6 of the CAISO Tariff, as well as RC Customers whose annual RC Services Charge, as calculated in accordance with this Schedule 7, would otherwise be less than \$5,000.
- For RC Customers that take RC Services for less than a full year in either the initial or final year of participation, the annual RC Services Charge will be pro-rated according to the period that the RC Customer takes service during such year, rounded up to the nearest month.

Any excess or shortfall in the RC Services Charge collected as compared to the RC Funding Requirement for a particular year will be credited or debited, as applicable, to the CAISO Operating Reserve Account.