

California Independent System Operator Corporation

Fifth Replacement FERC Electric Tariff

(Open Access Transmission Tariff)

Effective as of January 1, 2019

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 - 13.5.1 Allocation of an Award
 - 13.5.2 Timing of Adjustments
 - 13.5.3 Method of Allocation
- 14. Uncontrollable Force, Indemnity, Liabilities, and Penalties**
 - 14.1 Uncontrollable Forces
 - 14.2 Responsibilities of Affected Entity
 - 14.3 Strikes, Lockouts or Labor Disputes
 - 14.4 Market Participant's Indemnity
 - 14.5 Limitation on Liability
 - 14.5.1 Limitation on Damages
 - 14.5.2 Exclusion of Certain Types of Loss
 - 14.6 Potomac Economics, Ltd. Limitation of Liability
 - 14.7 Allocation of Reliability-Related Penalty Costs
 - 14.7.1 Overview of Process
 - 14.7.2 Direct Allocation of Reliability Standards Penalties
 - 14.7.3 Indirect Allocation of Penalty Costs
- 15. Regulatory Filings**
- 16. Existing Contracts**
 - 16.1 Continuation of Existing Contracts for Non-Participating TOs
 - 16.1.1 Participating TO Obligation
 - 16.1.2 Right to Use and Ownership of Facilities
 - 16.1.3 Existing Contract Dispute Resolution
 - 16.1.4 Conversion of PTO's Rights Under Existing Contracts
 - 16.2 [Not Used]
 - 16.3 Curtailment Under Emergency and Non-Emergency Conditions
 - 16.3.1 Emergency Conditions
 - 16.3.2 Non-Emergency Conditions
 - 16.4 TRTC Instructions
 - 16.4.1 Responsibility to Create TRTC Instructions
 - 16.4.2 Responsible PTO Re Multiple PTO Parties to Existing Contracts
 - 16.4.3 Scheduling Coordinator Responsibilities
 - 16.4.4 Submission of TRTC Instructions
 - 16.4.5 TRTC Instructions Content
 - 16.4.6 Changes and Updates to TRTC Instructions
 - 16.4.7 Treatment of TRTC Instructions
 - 16.4.8 CAISO Role in Existing Contracts
 - 16.4.9 Implementation of TRTC Instructions
 - 16.5 Treatment of Existing Contracts for Transmission Service
 - 16.5.1 System Emergency Exceptions
 - 16.6 Valid ETC Self-Schedules
 - 16.6.1 Validation of ETC Self-Schedules

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- 16.6.2 Treatment of Invalid ETC Self-Schedules
- 16.6.3 Treatment of Valid ETC Self-Schedules
- 16.6.4 Notification to SCs of CAISO Determination
- 16.7 [Not Used]
- 16.8 [Not Used]
- 16.9 The HASP
 - 16.9.1 Scheduling Deadlines
- 16.10 The CAISO's Real-Time Process
- 16.11 Inter-Balancing Authority Area ETC Self-Schedule Bid Changes
- 16.12 Intra-Balancing Authority Area ETC Self-Schedules Changes
- 17. Transmission Ownership Rights (TORs)**
 - 17.1 TRTC Instructions
 - 17.1.1 Responsibility to Create TRTC Instructions
 - 17.1.2 TOR Scheduling Coordinator Responsibilities
 - 17.1.3 Submission of TRTC Instructions
 - 17.1.4 TRTC Instructions Content
 - 17.1.5 Changes and Updates to TRTC Instructions
 - 17.1.6 CAISO Role in Accepting TRTC Instructions
 - 17.1.7 Implementation of TRTC Instructions
 - 17.2 Treatment of TORs
 - 17.2.1 System Emergency Expectations
 - 17.3 Valid TOR Self-Schedule
 - 17.3.1 Validation of TOR Self-Schedules
 - 17.3.2 Treatment of Invalid TOR Self-Schedules
 - 17.3.3 Settlement Treatment of Valid TOR Self-Schedules
 - 17.3.4 Notification to SCs of CAISO Determination
 - 17.4 The HASP
 - 17.4.1 Scheduling Deadlines
 - 17.5 The CAISO's Real-Time Process
 - 17.6 Inter-Balancing Authority Area TOR Self-Schedule Bid Changes
 - 17.7 Intra-Balancing Authority Area TOR Self-Schedule Changes
 - 17.8 Existing Contracts Re TORs for Non-Participating TOs
 - 17.8.1 Participating TO Obligation
 - 17.8.2 Right to Use and Ownership of TORs
 - 17.8.3 Dispute Resolution for Existing Contracts Applicable to TORs
 - 17.9 Conversion of PTOs' Rights Under Existing Contracts Re TORs
 - 17.10 TOR Operations Obligations
- 18. [Not Used]**
- 19. Reliability Coordinator**
 - 19.1 General Provisions
 - 19.2 Access to RC Services
 - 19.3 Supplemental Services – Hosted Advanced Network Applications (HANA)
 - 19.4 Supplemental Services – Physical Security Review
 - 19.5 Roles and Responsibilities
 - 19.6 [Reserved for tariff language pending July 1, 2019, effective date]
 - 19.7 [Reserved for tariff language pending July 1, 2019, effective date]
 - 19.8 Supplemental Services – HANA Services Charge
 - 19.9 Supplemental Services – Physical Security Review Charge
 - 19.10 Dispute Resolution Procedures
 - 19.11 Reliability Coordinator Oversight
 - 19.12 Uncontrollable Forces
 - 19.13 Liability
 - 19.14 Penalties

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- 19.15 Confidentiality
- 19.16 Miscellaneous Provisions in Addition to Section 22

- 20. Confidentiality**
 - 20.1 CAISO
 - 20.2 Confidential Information
 - 20.3 Other Parties
 - 20.4 Disclosure
 - 20.5 Confidentiality

- 21. [Not Used]**

- 22. Miscellaneous**
 - 22.1 Audits
 - 22.1.1 Materials Subject to Audit
 - 22.1.2 CAISO Audit Committee
 - 22.1.3 Audit Results
 - 22.1.4 Availability of Records
 - 22.1.5 Confidentiality of Information
 - 22.1.6 Payments
 - 22.2 Assignment
 - 22.3 Term and Termination
 - 22.3.1 Effective Date of CAISO Tariff
 - 22.3.2 Termination of CAISO Tariff with Board and FERC Approval
 - 22.4 Notice
 - 22.4.1 Effectiveness
 - 22.4.2 Addresses
 - 22.4.3 Notice of Changes in Operating Procedures and BPMs
 - 22.5 Waiver
 - 22.6 Staffing and Training to Meet Obligations
 - 22.7 Accounts and Reports
 - 22.8 Applicable Law and Forum
 - 22.9 Consistency with Federal Laws and Regulations
 - 22.10 Administrative Fees
 - 22.11 Operating Procedures and BPM Development and Amendment
 - 22.11.1 Process for Revisions of Business Practice Manuals
 - 22.11.2 Changes to BPM for BPM Change Management
 - 22.11.3 Requests for and Access to Nonpublic Operating Procedures
 - 22.12 [Not Used]
 - 22.13 Scheduling Responsibilities and Obligations

- 23. Categories of Transmission Capacity**

- 24. Comprehensive Transmission Planning Process**
 - 24.1 Overview
 - 24.1.1 [Not Used]
 - 24.1.2 [Not Used]
 - 24.1.3 [Not Used]
 - 24.1.4 [Not Used]
 - 24.2 Nature of the Transmission Planning Process
 - 24.2.1 [Not Used]
 - 24.2.2 [Not Used]
 - 24.2.3 [Not Used]
 - 24.2.4 [Not Used]
 - 24.3 Transmission Planning Process Phase 1
 - 24.3.1 Inputs to the Unified Planning Assumptions and Study Plan

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- 24.3.2 Content of the Unified Planning Assumptions and Study Plan
- 24.3.3 Stakeholder Input – Unified Planning Assumptions/Study Plan
- 24.3.4 Economic Planning Studies
- 24.3.5 [Not Used]
- 24.4 Transmission Planning Process Phase 2
 - 24.4.1 Conducting Technical Studies
 - 24.4.2 Proposed Reliability Driven Transmission Solutions
 - 24.4.3 Phase 2 Request Window
 - 24.4.4 [Not Used]
 - 24.4.5 Determination of Needed Transmission Solutions
 - 24.4.6 Categories of Transmission Solutions
 - 24.4.7 Description of Transmission Solutions
 - 24.4.8 Additional Contents of Comprehensive Transmission Plan
 - 24.4.9 Phase 2 Stakeholder Process
 - 24.4.10 Transmission Plan Approval Process
- 24.5 Transmission Planning Process Phase 3
 - 24.5.1 Competitive Solicitation Process
 - 24.5.2 Project Sponsor Application and Information Requirements
 - 24.5.3 Project Sponsor and Proposal Qualifications
 - 24.5.4 Project Sponsor Selection Factors and Comparative Analysis
 - 24.5.5 Notice to Project Sponsors
 - 24.5.6 Competitive Solicitation Project Proposal Fee
- 24.6 Obligation to Construct Transmission Solutions
 - 24.6.1 Approved Project Sponsor Reporting Requirements
 - 24.6.2 Delay in the Transmission Solution In-Service Date
 - 24.6.3 Development and Submittal of Mitigation Plans
 - 24.6.4 Inability to Complete the Transmission Solution
- 24.7 Documentation of Compliance with NERC Reliability Standards
- 24.8 Additional Planning Information
 - 24.8.1 Information Provided by Participating TOs
 - 24.8.2 Limitation on Regional Activities
 - 24.8.3 Information Requested from Load Serving Entities
 - 24.8.4 Information from BAAs and Regulators
 - 24.8.5 Obligation to Provide Updated Information
- 24.9 Participating TO Study Obligation
- 24.10 Operational Review and Impact Analysis
 - 24.10.1 [Not Used]
 - 24.10.2 [Not Used]
 - 24.10.3 [Not Used]
 - 24.10.4 [Not Used]
- 24.11 [Not Used]
 - 24.11.1 [Not Used]
 - 24.11.2 [Not Used]
 - 24.11.3 [Not Used]
- 24.12 WECC and Interregional Coordination
- 24.13 Interregional Transmission Proposals in the Regional Process
 - 24.13.1 [Not Used]
 - 24.13.2 [Not Used]
- 24.14 Cost Responsibility for Transmission Additions or Upgrades
 - 24.14.1 Project Sponsor Commitment to Pay Full Cost
 - 24.14.2 Cost of Needed Addition or Upgrade to be Borne by PTO
 - 24.14.3 CRR Entitlement for Project Sponsors Not Recovering Costs
 - 24.14.4 RAC Treatment of New Regional Transmission Facilities Costs
- 24.15 Ownership of and Charges for Expansion Facilities
 - 24.15.1 Transmission Additions and Upgrades under TCA
 - 24.15.2 Access and Charges for Transmission Additions and Upgrades

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- 24.16 Expansion by Local Furnishing Participating TOs
- 24.17 Evaluation of Interregional Transmission Projects
 - 24.17.1 Submission of Interregional Transmission Projects
 - 24.17.2 Interregional Transmission Project Assessment
 - 24.17.3 Selection in the Comprehensive Transmission Plan
 - 24.17.4 Interregional Transmission Project Cost Recovery
 - 24.17.5 Monitoring the Status of Interregional Transmission Projects
 - 24.17.6 Delay in Interregional Transmission Project In-Service Date
- 24.18 Order 1000 Common Interregional Tariff
 - 24.18.1 Annual Interregional Information Exchange
 - 24.18.2 Annual Interregional Coordination Meeting
 - 24.18.3 Interregional Transmission Project Joint Evaluation Process
 - 24.18.4 Interregional Cost Allocation Process
 - 24.18.5 Application of Regional Cost Allocation Methodology
- 25. Interconnection of Generating Units and Facilities**
 - 25.1 Applicability
 - 25.1.1 Interconnection Request and Generating Unit Requirements
 - 25.1.2 Affidavit Requirements
 - 25.2 Interconnection to the Distribution System
 - 25.3 Maintenance of Encumbrances
 - 25.4 Asynchronous Generating Facilities
 - 25.4.1 Asynchronous Generating Facilities-Reactive Power
 - 25.5 Modifications to Generating Facilities
 - 25.5.1 *No Header*
 - 25.5.2 *No Header*
 - 25.5.3 *No Header*
- 26. Transmission Rates and Charges**
 - 26.1 Access Charge
 - 26.1.1 Publicly Owned Electric Utilities Access Charge
 - 26.1.2 Regional Access Charge Settlement
 - 26.1.3 Distribution of RAC Revenues
 - 26.1.4 Wheeling
 - 26.1.5 Unbundled Retail Transmission Rates
 - 26.2 [Not Used]
 - 26.3 Addition of New Facilities After CAISO Implementation
 - 26.4 Effect on Tax-Exempt Status
 - 26.5 [Not Used]
 - 26.6 Location Constrained Resource Interconnection Facilities
 - 26.6.1 LCRIFs that Become Network Facilities
- 27. CAISO Markets and Processes**
 - 27.1 LMPs and Ancillary Services Marginal Prices
 - 27.1.1 Locational Marginal Prices for Energy
 - 27.1.2 Ancillary Service Prices
 - 27.1.3 Regulation Mileage Clearing Price
 - 27.2 Load Aggregation Points (LAP)
 - 27.2.1 Metered Subsystems
 - 27.2.2 Determination of LAP Prices
 - 27.3 Trading Hubs
 - 27.4 Optimization in the CAISO Market Processes
 - 27.4.1 Security Constrained Unit Commitment
 - 27.4.2 Security Constrained Economic Dispatch
 - 27.4.3 CAISO Markets Scheduling and Pricing Parameters
 - 27.5 Full Network Model

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- 27.5.1 Network Models used in CAISO Markets
- 27.5.2 Metered Subsystems
- 27.5.3 Integrated Balancing Authority Areas
- 27.5.4 Accounting for Changes in Topology in IFM
- 27.5.5 Load Distribution Factor
- 27.5.6 Management & Enforcement of Constraints in the CAISO Markets
- 27.6 State Estimator
- 27.7 Constrained Output Generation
 - 27.7.1 Election of Constrained Output Generator Status
 - 27.7.2 Election to Waive COG Status
 - 27.7.3 Constrained Output Generators in the IFM
 - 27.7.4 Constrained Output Generators in RUC
 - 27.7.5 Constrained Output Generators in the Real-Time Market
- 27.8 Multi-Stage Generating Resources
 - 27.8.1 Registration and Qualification
 - 27.8.2 Information Requirements
 - 27.8.3 Changes in Status and Configurations of Resource
- 27.9 Non-Generator Resources MWh Constraints
- 27.10 Election to Use Non-Generator Resource Generic Modeling Functionality
- 27.11 Natural Gas Constraint

- 28. Inter-SC Trades**
 - 28.1 Inter-SC Trades of Energy
 - 28.1.1 Purpose
 - 28.1.2 Availability of Inter-SC Trades of Energy
 - 28.1.3 Submission of Inter-SC Trades of Energy
 - 28.1.4 Information Requirements
 - 28.1.5 General Validation Rules for Inter-SC Trades
 - 28.1.6 Validation Procedures for Physical Trades
 - 28.2 Inter-SC Trades of Ancillary Services
 - 28.2.1 Information Requirements
 - 28.2.2 Validation
 - 28.2.3 Submission of Inter-SC Trades of Ancillary Services
 - 28.3 Inter-SC Trades of IFM Load Uplift Obligation
 - 28.3.1 Information Requirements
 - 28.3.2 Validation
 - 28.3.3 Submission of Inter-SC Trades of IFM Load Uplift Obligation

- 29. Energy Imbalance Market**
 - 29.1 General Provisions.
 - 29.2 EIM Entity Access to the Real-Time Market
 - 29.3 [Not Used]
 - 29.4 Roles and Responsibilities
 - 29.5 [Not Used]
 - 29.6 Communications
 - 29.7 EIM Operations Under Normal and Emergency Conditions.
 - 29.8 [Not Used]
 - 29.9 Outages and Critical Contingencies.
 - 29.10 Metering and Settlement Data.
 - 29.11 Settlements and Billing for EIM Market Participants.
 - 29.12 Creditworthiness
 - 29.13 Dispute Resolution
 - 29.14 Uncontrollable Forces, Indemnity, Liabilities, and Penalties
 - 29.15 [Not Used]
 - 29.16 [Not Used]
 - 29.17 EIM Transmission System

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- 29.18 [Not Used]
 - 29.19 [Not Used]
 - 29.20 Confidentiality
 - 29.21 [Not Used]
 - 29.22 Miscellaneous Provisions in Addition to Section 22.
 - 29.23 [Not Used]
 - 29.24 [Not Used]
 - 29.25 [Not Used]
 - 29.26 Transmission Rates and Charges.
 - 29.27 CAISO Markets and Processes.
 - 29.28 Inter-SC Trades
 - 29.29 [Not Used]
 - 29.30 Bid and Self-Schedule Submission for CAISO Markets.
 - 29.31 Day-Ahead.
 - 29.32 Greenhouse Gas Regulation and EIM Bid Adders.
 - 29.33 [Not Used]
 - 29.34 EIM Operations
 - 29.35 Market Validation and Price Correction
 - 29.36 [Not Used]
 - 29.37 Rules of Conduct
 - 29.38 Market Monitoring
 - 29.39 EIM Market Power Mitigation.
 - 29.40 [Not Used]
 - 29.41 [Not Used]
 - 29.42 [Not Used]
 - 29.43 [Not Used]
 - 29.44 Flexible Ramping Product
- 30. Bid and Self-Schedule Submission for all CAISO Markets**
- 30.1 Bids, Including Self-Schedules
 - 30.1.1 Day-Ahead Market
 - 30.1.2 Real-Time Market
 - 30.2 Bid Types
 - 30.3 [Not Used]
 - 30.4 Proxy Cost and Registered Cost Methodologies
 - 30.4.1 Start-Up and Minimum Load Costs
 - 30.5 Bidding Rules
 - 30.5.1 General Bidding Rules
 - 30.5.2 Supply Bids
 - 30.5.3 Demand Bids
 - 30.5.4 Wheeling Through Transactions
 - 30.5.5 Scheduling Sourcing/Sinking in Same Balancing Authority Area
 - 30.5.6 Non-Generator Resource Bids
 - 30.5.7 E-Tag Rules and Treatment of Intertie Schedules
 - 30.6 Bidding and Scheduling of PDRs and RDRRs
 - 30.6.1 Bidding and Scheduling of PDRs
 - 30.6.2 Bidding and Scheduling of RDRRs
 - 30.6.3 Net Benefits Test for PDRs or PDRRs
 - 30.7 Bid Validation
 - 30.7.1 Scheduling Coordinator Access
 - 30.7.2 Timing of CAISO Validation
 - 30.7.3 DAM Validation
 - 30.7.4 RTM Validation
 - 30.7.5 Validation of ETC Self-Schedules
 - 30.7.6 Validation and Treatment of Ancillary Services Bids
 - 30.7.7 Format and Validation of Operational Ramp Rates

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- 30.7.8 Format and Validation of Start-Up and Shut-Down Times
- 30.7.9 Format and Validation of Start-Up Costs and Shut-Down Costs
- 30.7.10 Format and Validation of Minimum Load Costs
- 30.8 Bids on Out-of-Service Paths at Scheduling Points Prohibited
- 30.9 Virtual Bids
 - 30.9.1 Virtual Bid Components
- 30.10 Use of AC Solution and Nodal MW Constraints
- 30.11 Filings to Recover Commitment-Related Fuel Costs
- 30.12 Eligibility to Submit Filings to Recover Marginal Fuel-Related Costs
 - 30.12.1 Applicability
 - 30.12.2 Notice and Process
 - 30.12.3 Documentation Required for FERC Filing
 - 30.12.4 Payment and Allocation Costs Recovered Per FERC Order
- 31. Day-Ahead Market**
 - 31.1 Bid Submission and Validation in the Day-Ahead Market
 - 31.2 Day-Ahead MPM Process
 - 31.2.1 The Market Power Mitigation Process
 - 31.2.2 Bid Mitigation for RMR Units
 - 31.2.3 Bid Mitigation for Non-RMR Units
 - 31.3 Integrated Forward Market
 - 31.3.1 Market Clearing and Price Determination
 - 31.3.2 Congestion and Transmission Losses Cost Determination
 - 31.3.3 Metered Subsystems
 - 31.4 CAISO Market Adjustments to Non-Priced Quantities in the IFM
 - 31.5 Residual Unit Commitment
 - 31.5.1 RUC Participation
 - 31.5.2 Metered Subsystem RUC Obligation
 - 31.5.3 RUC Procurement Target
 - 31.5.4 RUC Procurement Constraints
 - 31.5.5 Selection and Commitment of RUC Capacity
 - 31.5.6 Eligibility for RUC Compensation
 - 31.5.7 Rescission of Payments for RUC Capacity
 - 31.6 Timing of Day-Ahead Scheduling
 - 31.6.1 Criteria for Temporary Waiver of Timing Requirements
 - 31.6.2 Information to be Published on Secure Communication System
 - 31.6.3 Conditions Permitting CAISO to Abort Day-Ahead Market
 - 31.6.4 [Not Used]
 - 31.7 Extremely Long-Start Commitment Process
 - 31.8 Constraints Enforced at Interties
 - 31.8.1 Scheduling Constraints
 - 31.8.2 Physical Flow Constraints
- 32. [Not Used]**
- 33. [Not Used]**
 - 33.1 [Not Used]
 - 33.2 [Not Used]
 - 33.3 [Not Used]
 - 33.4 [Not Used]
 - 33.5 [Not Used]
 - 33.6 [Not Used]
 - 33.7 [Not Used]
 - 33.8 [Not Used]
 - 33.8.1 [Not Used]
 - 33.9 [Not Used]

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- 34. Real-Time Market**
- 34.1 Inputs to the Real-Time Market
 - 34.1.1 Day-Ahead Market Results as Inputs to the Real-Tie Market
 - 34.1.2 Market Model and System Information
 - 34.1.3 Bids in the Real-Time Market
 - 34.1.4 Real-Time Validation of Schedules and Bids
 - 34.1.5 Mitigating Bids in the RTM
- 34.2 The Hour-Ahead Scheduling Process
 - 34.2.1 The HASP Optimization
 - 34.2.2 Treatment of Self-Schedules in HASP
 - 34.2.3 Ancillary Services in the HASP and FMM
 - 34.2.4 HASP Results
 - 34.2.5 Cessation of the HASP
- 34.3 Real-Time Unit Commitment
 - 34.3.1 RTUC Optimization
 - 34.3.2 Commitment of Fast Start and Short Start Units
 - 34.3.3 [Not Used]
- 34.4 Fifteen Minute Market
 - 34.4.1 Real-Time Ancillary Services Procurement
- 34.5 Real-Time Dispatch
 - 34.5.1 Real-Time Economic Dispatch
 - 34.5.2 Real-Time Contingency Dispatch
 - 34.5.3 Real-Time Manual Dispatch
- 34.6 Short-Term Unit Commitment
- 34.7 General Dispatch Principles
- 34.8 Dispatch Instructions to Units, Participating Loads, PDRs, and RDRRs
- 34.9 Utilization of the Energy Bids
 - 34.9.1 [Not Used]
 - 34.9.2 [Not Used]
 - 34.9.3 [Not Used]
 - 34.9.4 [Not Used]
- 34.10 Dispatch of Energy from Ancillary Services
 - 34.10.1 [Not Used]
 - 34.10.2 [Not Used]
- 34.11 Exceptional Dispatch
 - 34.11.1 System Reliability Exceptional Dispatches
 - 34.11.2 Other Exceptional Dispatches
 - 34.11.3 Transmission-Related Modeling Limitations
 - 34.11.4 Reporting Requirements
- 34.12 CAISO Market Adjustment to Non-Priced Quantities in the RTM
 - 34.12.1 Increasing Supply
 - 34.12.2 Decreasing Supply
- 34.13 Means of Dispatch Communication
 - 34.13.1 Response Required by Resources to Dispatch Instructions
 - 34.13.2 Failure to Conform to Dispatch Instructions
- 34.14 Metered Subsystems
 - 34.14.1 [Not Used]
- 34.15 Treatment of Resource Adequacy Capacity in the RTM
 - 34.15.1 [Not Used]
 - 34.15.2 [Not Used]
 - 34.15.3 [Not Used]
 - 34.15.4 [Not Used]
 - 34.15.5 [Not Used]
 - 34.15.6 [Not Used]
- 34.16 Real-Time Activities in the Hour Prior to Settlement Period
 - 34.16.1 Confirm Interchange Transaction Schedules (ITs)

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- 34.16.2 [Not Used]
- 34.16.3 [Not Used]
- 34.17 Rules for Real-Time Dispatch of Imbalance Energy Resources
 - 34.17.1 Resource Constraints
 - 34.17.2 Calculation of Dispatch Operating Points After Instructions
 - 34.17.3 [Not Used]
 - 34.17.4 Inter-Hour Dispatch of Resources with Real-Time Energy Bids
 - 34.17.5 Inter-Hour Resources Dispatch without Real-Time Energy Bids
 - 34.17.6 Intra-Hour Exceptional Dispatches
- 34.18 Ancillary Services in the Real-Time Market
 - 34.18.1 Dispatch of Self-Provided Ancillary Services
- 34.19 Dispatch Information and Instructions
 - 34.19.1 Dispatch Information to be Supplied by the CAISO
 - 34.19.2 Dispatch Information to be Supplied by SC
 - 34.19.3 Dispatch Information to be Supplied by UDCs
 - 34.19.4 Dispatch Information to be Supplied by PTOs
 - 34.19.5 Dispatch Information to be Supplied by Balancing Authorities
- 34.20 Pricing Imbalance Energy
 - 34.20.1 General Principles
 - 34.20.2 Determining Real-Time LMPs
- 34.21 Temporary Waiver of Timing Requirements for the RTM
 - 34.21.1 Criteria for Temporary Waiver
 - 34.21.2 Information to be Published on Secure Communication System
- 34.22 Real-Time Dispatch of RDRRs
 - 34.22.1 Testing of RDRRs
- 35. Market Validation and Price Correction**
 - 35.1 Market Validation
 - 35.2 Timing of Price Correction Process
 - 35.3 Finality of Prices Subject to the Price Correction Process
 - 35.3.1 Price Corrections and Changes Pursuant to FERC Orders
 - 35.3.2 Processing and Publication Issues
 - 35.4 Scope of Price Corrections
 - 35.5 Price Correction Methodology
 - 35.6 Weekly Price Correction Report
- 36. Congestion Revenue Rights**
 - 36.1 Overview of CRRs and Procurement of CRRs
 - 36.2 Types of CRR Instruments
 - 36.2.1 CRR Obligations
 - 36.2.2 CRR Options
 - 36.2.3 Point-To-Point CRRs
 - 36.2.4 [Not Used]
 - 36.2.5 Monthly CRRs
 - 36.2.6 Seasonal CRRs
 - 36.2.7 Long Term CRRs
 - 36.2.8 Limitations on Funding of CRRs
 - 36.3 CRR Specifications
 - 36.3.1 Quantity
 - 36.3.2 Term
 - 36.3.3 On-Peak and Off-Peak Specifications
 - 36.4 FNM for CRR Allocation and CRR Auction
 - 36.4.1 Adjustments to the FNM in Preparing the CRR FNM
 - 36.4.2 Simultaneous Feasibility
 - 36.4.3 Outages that may Affect CRR Revenue; Scheduling Requirements
 - 36.5 Candidate CRR Holder and CRR Holder Requirements

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- 36.5.1 Creditworthiness Requirements
- 36.5.2 Required Training
- 36.6 [Not Used]
- 36.7 Bilateral CRR Transactions
 - 36.7.1 Transfer of CRRs
 - 36.7.2 Responsibility of the CAISO
 - 36.7.3 CRR Holder Reporting Requirement
- 36.8 CRR Allocation
 - 36.8.1 Structure of the CRR Allocation Process
 - 36.8.2 Load Eligible for CRRs and Eligible CRR Sinks
 - 36.8.4 Eligible Sources for CRR Allocation
 - 36.8.5 Load Migration Between LSEs
 - 36.8.6 Load Forecasts Used to Calculate CRR MW Eligibility
 - 36.8.7 Reconfiguration of CRRs
- 36.9 CRR Allocation to OBAALSEs
 - 36.9.1 Showing of Legitimate Need
 - 36.9.2 Prepayment of Wheeling Access Charge
 - 36.9.3 CRR Eligible Quantities
 - 36.9.4 Eligible CRR Sources and Sinks
 - 36.9.5 Priority Nomination Process
- 36.10 CRR Allocation to Merchant Transmission Subsystems
- 36.11 CRR Allocation to Merchant Transmission Facilities
 - 36.11.1 Eligibility for Merchant Transmission CRRs
 - 36.11.2 Procedure for Allocating Merchant Transmission CRRs
 - 36.11.3 CRRs Allocated to a Transmission Facility Project Sponsor
- 36.12 [Not Used]
- 36.13 CRR Auction
 - 36.13.1 Scope of the CRR Auctions
 - 36.13.2 Responsibilities of the CAISO Prior to Each CRR Auction
 - 36.13.3 CRR Holder Creditworthiness
 - 36.13.4 Bids in the CRR
 - 36.13.5 Eligible Sources and Sinks for CRR Auction
 - 36.13.6 Clearing of the CRR Auction
 - 36.13.7 Announcement of CRR Auction Results
- 36.14 CRR Implications of new IBAAAs or Modifying Existing IBAAAs
 - 36.14.1 Coordination of IBAA Changes with Release of CRRs
 - 36.14.2 Modification to CRR Settlement to Reflect IBAA Changes
 - 36.14.3 IBAA Change Impact on Adequacy of Previously-Released CRRs
- 36.15 [Not Used]
- 37. Rules of Conduct**
 - 37.1 Objectives, Definitions, and Scope
 - 37.1.1 Purpose
 - 37.1.2 Objectives
 - 37.1.3 Application of Other Remedies
 - 37.1.4 [Not Used]
 - 37.1.5 Administration
 - 37.2 Comply with Operating Instructions
 - 37.2.1 Compliance with Orders Generally
 - 37.2.2 [Not Used]
 - 37.2.3 Operations and Maintenance Practices
 - 37.2.4 Resource Adequacy Availability
 - 37.2.5 [Not Used]
 - 37.2.6 [Not Used]
 - 37.3 Submit Feasible Bids and Submissions to Self-Provide
 - 37.3.1 Bidding Generally

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- 37.3.2 Exceptions
- 37.4 Comply with Available Reporting Requirements
 - 37.4.1 Reporting Availability
 - 37.4.2 Scheduling and Final Approval of Outages
 - 37.4.3 [Not Used]
 - 37.4.4 Enhancements and Exceptions
- 37.5 Provide Factually Accurate Information
 - 37.5.1 [Not Used]
 - 37.5.2 Inaccurate or Late Actual SQMD
- 37.6 Provide Information Required by CAISO Tariff
 - 37.6.1 Required Information Generally
 - 37.6.2 Investigation Information
 - 37.6.3 Audit Materials
 - 37.6.4 Review by FERC
- 37.7 [Not Used]
- 37.8 Process for Investigation and Enforcement
 - 37.8.1 Purpose; Scope
 - 37.8.2 Referrals to FERC
 - 37.8.3 Investigation
 - 37.8.4 Notice
 - 37.8.5 Opportunity to Present Evidence
 - 37.8.6 Results of Investigation
 - 37.8.7 Statement of Findings and Conclusions
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 - 37.8.10 Review of Determination
- 37.9 Administration of Sanctions
 - 37.9.1 Assessment, Waivers and Adjustments
 - 37.9.2 [Not Used]
 - 37.9.3 Settlement
 - 37.9.4 Disposition of Proceeds
- 37.10 Miscellaneous
 - 37.10.1 Time Limitation
 - 37.10.2 No Limitation on other Rights
- 37.11 Method for Calculating Penalties
 - 37.11.1 Inaccurate or Late Actual SQMD Penalty
 - 37.11.2 Inaccurate or Actual SQMD Penalty without Recalculation Settlement Statement

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39. Market Power Mitigation Procedures

- 39.1 Intent of CAISO Mitigation Measures; Additional FERC Filings
- 39.2 Conditions for the Imposition of Mitigation Measures
 - 39.2.1 Conduct Inconsistent with Competitive Conduct
- 39.3 Categories of Conduct that May Warrant Mitigation
 - 39.3.1 Conduct Regarding Bidding, Scheduling or Facility Operation
 - 39.3.2 Market Effects of Rules, Standards, Procedures, Other Items
 - 39.3.3 Using Different Prices in Other Markets as Appropriate
 - 39.3.4 Foregoing Category List Subject to Amendment as Appropriate
- 39.4 Sanctions for Physical Withholding
- 39.5 FERC-Ordered Measures
- 39.6 Rules Limiting Certain Energy, AS, and RUC Bids
 - 39.6.1 Maximum Bid Prices
- 39.7 Local Market Power Mitigation for Energy Bids
 - 39.7.1 Calculation of Default Energy Bids
 - 39.7.2 Competitive Path Designation

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- 39.7.3 Default Competitive Path Designations
- 39.8 Eligibility for Bid Adder
 - 39.8.1 Bid Adder Eligibility Criteria
 - 39.8.2 New Generating Units
 - 39.8.3 Bid Adder Values
- 39.9 CRR Monitoring and Affiliate Disclosure Requirements
- 39.10 Mitigation of Exceptional Dispatches of Resources
 - 39.10.1 Measures for Resources Eligible for Supplemental Revenues
 - 3.10.2 Resources Not Eligible for Supplemental Revenues
 - 39.10.3 Eligibility for Supplemental Revenues
 - 39.10.4 Limitation on Supplemental Revenues
 - 39.10.5 Calculation of Exceptional Dispatch Supplemental Revenues
- 39.11 Market Power Mitigation Applicable to Virtual Bidding
 - 39.11.1 Affiliate Disclosure Requirements
 - 39.11.2 Monitoring of Virtual Bidding Activity
- 40. Resource Adequacy Demonstration for all SCs in the CAISO BAA**
 - 40.1 Applicability
 - 40.1.1 [Not Used]
 - 40.2 Information Requirements for Resource Adequacy Programs
 - 40.2.1 Load Serving Entities
 - 40.2.2 Non-CPUC Load Serving Entities
 - 40.2.3 [Not Used]
 - 40.2.4 Load-Following MSS
 - 40.3 Local Capacity Area Resource Requirements for SCs for LSEs
 - 40.3.1 Local Capacity Technical Study
 - 40.3.2 Allocation of Local Capacity
 - 40.3.3 Procurement of Local Capacity Area Resources by LSEs
 - 40.3.4 [Not Used]
 - 40.4 General Requirements on Resource Adequacy Resources
 - 40.4.1 Eligible Resources and Determination of Qualifying Capacity
 - 40.4.2 Net Qualifying Capacity Report
 - 40.4.3 General Qualifications for Supplying Net Qualifying Capacity
 - 40.4.4 Reductions for Testing
 - 40.4.5 Reductions for Performance Criteria
 - 40.4.6 Reductions for Deliverability
 - 40.4.7 Submission of Supply Plans
 - 40.5 [Not Used]
 - 40.5.1 [Not Used]
 - 40.5.2 [Not Used]
 - 40.5.3 [Not Used]
 - 40.5.4 [Not Used]
 - 40.5.5 [Not Used]
 - 40.6 Requirements for SCs and Resources for LSEs
 - 40.6.1 Day-Ahead Availability
 - 40.6.2 Real-Time Availability
 - 40.6.3 Additional Availability Requirements or Resources that are Not Long Start Units or Extremely Long Start Resources
 - 40.6.4 Use-Limited Resources Additional Availability Requirements
 - 40.6.5 Additional Availability Requirements for System Resources
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 - 40.6.9 Firm Liquidated Damages Contracts Requirements
 - 40.6.10 Exports of Energy from Resource Adequacy Capacity
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- 40.6.12 Participating Load, PDRs, and RDRRs
- 40.7 Compliance
 - 40.7.1 Other Compliance Issues
 - 40.7.2 Penalties for Non-Compliance
- 40.8 CAISO Default Qualifying Capacity Criteria
 - 40.8.1 Applicability
- 40.9 Resource Adequacy Availability Incentive Mechanism
 - 40.9.1 Introduction to RAAIM
 - 40.9.2 Exemptions
 - 40.9.3 Availability Assessment
 - 40.9.4 Additional Rules on Calculating Monthly and Daily Average Availability
 - 40.9.5 Availability Standard
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 - 40.9.7 Reporting
- 40.10 Flexible RA Capacity
 - 40.10.1 Flexible Capacity Needs Assessment
 - 40.10.2 Allocation of Flexible Capacity Needs
 - 40.10.3 Flexible Capacity Categories
 - 40.10.4 Effective Flexible Capacity
 - 40.10.5 Flexible RA Capacity Plans
 - 40.10.6 Flexible RA Capacity Must-Offer Obligation
- 41. Procurement of RMR Generation**
 - 41.1 Procurement of Reliability Must-Run Generation by the CAISO
 - 41.2 Designation of Generating Unit as Reliability Must-Run Unit
 - 41.3 Reliability Studies and Determination of RMR Units Status
 - 41.4 Reliability Must-Run Contracts
 - 41.5 RMR Dispatch
 - 41.5.1 Day-Ahead and RTM RMR Dispatch
 - 41.5.2 RMR Payments
 - 41.5.3 RMR Units and Ancillary Services Requirements
 - 41.6 Reliability Must-Run Charge
 - 41.6.1 No Offsets to Responsible Utility's CAISO Invoice Payments
 - 41.6.2 Refunds of Disputed Amounts on RMR Invoices
 - 41.6.3 Time-Frame for Responsible Utility to Dispute RMR Invoices
 - 41.6.4 Disputes After Operational Compliance Review
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 - 41.6.6 RMR Owner's Rights as a Third Party Beneficiary
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 - 41.9 Exceptional Dispatch of Condition 2 RMR Units
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- 42. Adequacy of Facilities to Meet Applicable Reliability Criteria**
 - 42.1 Generation Planning Reserve Criteria
 - 42.1.1 *No Header*
 - 42.1.2 Applicable Reliability Criteria Met in Peak Demand
 - 42.1.3 Applicable Reliability Criteria Not Met in Peak Demand
 - 42.1.4 Lowest Cost Bids Satisfying Applicable Reliability Criteria
 - 42.1.5 CAISO to Take Necessary Steps to Ensure Criteria Compliance
 - 42.1.6 Long Term Forecast for Information Purposes
 - 42.1.7 Reliance on Market Forces to Maximize Possible Extent
 - 42.1.8 Allocation of Costs Incurred by CAISO in Trading Hour to SCs
 - 42.1.9 Costs for Difference in Schedules and Real-Time Deviations
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42.2.2 Allocation of Transferred Frequency Response Costs Incurred

43. Capacity Procurement Mechanism

- 43.1 Applicability
- 43.2 Capacity Procurement Mechanism Designation
 - 43.2.1 SC Failure to Show Sufficient Local Capacity Area Resource
 - 43.2.2 Collective Deficiency in Local Capacity Area Resources
 - 43.2.3 SC Failure to Show Sufficient Resource Adequacy Resources
 - 43.2.4 CPM Significant Events
 - 43.2.5 Exceptional Dispatch CPM
 - 43.2.6 Capacity at Risk of Retirement Needed for Reliability
 - 43.2.7 Cumulative Deficiency in Flexible RA Capacity
- 43.3 Terms of CPM Designation
 - 43.3.1 SC Annual Plan Failure to Show Local Capacity Area Resources
 - 43.3.2 SC Month Plan Failure to Show Local Capacity Area Resources
 - 43.3.3 Annual Plan Collective LCA Resources Insufficient
 - 43.3.4 SC Failure to Show Sufficient Resource Adequacy Resources
 - 43.3.5 Term – CPM Significant Event
 - 43.3.6 Term – Exceptional Dispatch CPM
 - 43.3.7 Term – Capacity at Risk of Retirement Needed for Reliability
 - 43.3.8 Term – Flexible Capacity CPM Designation
- 43.4 Selection of Eligible Capacity Under the CPM
 - 43.4.1 Limitation of Eligibility for Flexible Capacity CPM Designation
 - 43.4.2 Designation Amount
 - 43.4.3 Simultaneous Designations
- 43.5 Obligations of a Resource Designated Under the CPM
 - 43.5.1 Availability Obligations
 - 43.5.2 Obligation to Provide Capacity and Termination
 - 43.5.3 Availability Obligations for Simultaneous Designations
- 43.6 Reports
 - 43.6.1 CPM Designation Market Notice
 - 43.6.2 Designation of a Resource Under the CPM
 - 43.6.3 Non-Market and Repeated Market Commitment on Non-RA Capacity
 - 43.6.4 [Not Used]
- 43.7 Payments to Resources Designated Under the CPM
 - 43.7.1 Monthly CPM Capacity Payment
 - 43.7.2 Resource-Specific CPM Capacity Payment
 - 43.7.3 Market Payments
- 43.8 Allocation of CPM Payment Costs
 - 43.8.1 LSE Shortage of Local Capacity Area Resources in Annual Plan
 - 43.8.2 LSE Shortage of Local Capacity Area Resources in Month Plan
 - 43.8.3 Collective Deficiency in Local Capacity Area Resources
 - 43.8.4 LSE Shortage of Demand or Reserve Margin Requirement in Plan
 - 43.8.5 Allocation of CPM Significant Event Costs
 - 43.8.6 Allocation of Exceptional Dispatch CPM
 - 43.8.7 Allocation of CPM Costs for Resources at Risk of Retirement
 - 43.8.8 Allocation of CPM Flexible Capacity Costs
- 43.9 Crediting of CPM Capacity
- 43.10 [Not Used]

43A. Capacity Procurement Mechanism

- 43A.1 Applicability
- 43A.2 Capacity Procurement Mechanism Designation
 - 43A.2.1 SC Failure to Show Sufficient Local Capacity Area Resources
 - 43A.2.2 Collective Deficiency in Local Capacity Area Resources
 - 43A.2.3 SC Failure to Show Sufficient Resource Adequacy Resources

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- 43A.2.4 CPM Significant Events
 - 43A.2.5 Exceptional Dispatch CPM
 - 43A.2.6 Capacity at Risk of Retirement Needed for Reliability
 - 43A.2.7 Cumulative Deficiency in Flexible RA Capacity
 - 43A.3 Terms of CPM Designation
 - 43A.3.1 SC Annual Plan Failure to Show Local Capacity Area Resources
 - 43A.3.2 SC Month Plan Failure to Show Local Capacity Area Resources
 - 43A.3.3 Annual Plan Collective LCA Resources Insufficient
 - 43A.3.4 SC Failure to Show Sufficient Resource Adequacy Resources
 - 43A.3.5 Term – CPM Significant Event
 - 43A.3.6 Term – Exceptional Dispatch CPM
 - 43A.3.7 Term – Capacity at Risk of Retirement Needed for Reliability
 - 43A.3.8 Term – Flexible Capacity CPM Designation
 - 43A.4 Selection of Eligible Capacity Under the CPM through Competitive Solicitation Processes (CSP) and General Eligibility Rules
 - 43A.4.1 Offer Rules to the CSPs
 - 43A.4.2 Administering the CSPs
 - 43A.4.3 Designation Amount.
 - 43A.5 Obligations of a Resource Designated Under the CPM
 - 43A.5.1 Availability Obligations.
 - 43A.5.2 Obligation to Provide Capacity and Termination
 - 43A.5.3 Availability Obligations for Simultaneous Designations.
 - 43A.5.4 Individualized Non-Availability Charges and Availability Incentive Payments
 - 43A.6 Reports
 - 43A.6.1 CPM Designation Market Notice
 - 43A.6.2 Designation of a Resource Under the CPM
 - 43A.6.3 Non-Market and Repeated Market Commitment of Non-RA Capacity
 - 43A.6.4 Publication of Offers Submitted to the Competitive Solicitation Process
 - 43A.7 Payments to Capacity Designated Under the CPM
 - 43A.7.1. Calculation of Monthly CPM Capacity Payment
 - 43A.7.2 Payments for Overlapping CPM Designations to the Same Resource
 - 43A.7.3 Market Payments
 - 43A.8 Allocation of CPM Capacity Payment Costs
 - 43A.8.1 LSE Shortage of Local Capacity Area Resources in Annual Plan
 - 43A.8.2 LSE Shortage of Local Capacity Area Resources in Month Plan
 - 43A.8.3 Collective Deficiency in Local Capacity Area Resources
 - 43A.8.4 LSE Shortage of Demand or Reserve Margin Requirement in Plan
 - 43A.8.5 Allocation of CPM Significant Event Costs
 - 43A.8.6 Allocation of Exceptional Dispatch CPMs
 - 43A.8.7 Allocation of CPM Costs for Resources at Risk of Retirement
 - 43A.8.8 Allocation of Flexible Capacity CPM Costs
 - 43A.9 Crediting of CPM Capacity
 - 43A.10 [Not Used]
- 44. Flexible Ramping Product**
- 44.1 In General.
 - 44.2 Uncertainty Awards
 - 44.2.1 Optimization.
 - 44.2.2 Variable Energy Resources.
 - 44.2.3 Eligibility for Uncertainty Award.
 - 44.2.4 Determination of Uncertainty Requirement.
 - 44.3 Forecasted Movement
 - 44.3.1 Generally.
 - 44.3.2 RTD Forecasted Movement.
 - 44.3.3 FMM Forecasted Movement.

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Appendix A Master Definition Supplement

Appendix B Pro Forma Agreements

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Appendix B.2	Participating Generator Agreement
Appendix B.3	Net Schedule Participating Generator Agreement
Appendix B.4	Participating Load Agreement
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Appendix B.11	Congestion Revenue Rights (CRR) Entity Agreement
Appendix B.12	Metered Subsystem (MSS) Entity Agent Agreement
Appendix B.13	Resource-Specific System Resource Agreement
Appendix B.14	Demand Response Provider Agreement (DRPA)
Appendix B.15	Convergence Bidding Entity Agreement (CEBA)
Appendix B.16	Pseudo-Tie Participating Generator Agreement (PPGA)
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Appendix B.18	Energy Imbalance Market Scheduling Coordinator Agreement (EIMSCA)
Appendix B.19	Energy Imbalance Market Participating Resource Agreement (EIMPRA)
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Appendix B.21	Distributed Energy Resource Provider Agreement (DERPA)
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Appendix C Locational Marginal Price

Appendix D Black Start Generating Units

Appendix E Submitted Ancillary Services Data Verification

Appendix F Rate Schedules

Appendix G Pro Forma Reliability Must-Run Contract

Appendix H Congestion Revenue Rights Transition Period

Appendix I Station Power Protocol

Appendix J Grandfathered Metering and Settlement Provisions for Trading Days Prior to October 1, 2011, and Grandfathered Standard Capacity Product Provisions

Appendix K Ancillary Service Requirements Protocol (ASRP)

Appendix L Method to Assess Available Transfer Capability

Appendix M Dynamic Scheduling Protocol (DSP)

Appendix N Pseudo-Tie Protocol

Appendix O CAISO Market Surveillance Committee

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Appendix Q	Eligible Intermittent Resource Protocol (EIRP)
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