

2.5.24.1 Additional Requirements for Black Start Units.

A Participating Generator who wishes to offer Black Start must ensure that the requirements set out in Appendix D to this ISO Tariff are met in relation to the Generating Units from which Black Start will be offered.

2.5.25 Methodology For Procurement of Ancillary Services Upon Commencement of ISO Operations.

2.5.25.1 [NOT USED]

2.5.25.2 Usage Charge in Ancillary Service Bid Evaluation.

As of the ISO Operations Date, the ISO will not incorporate forecast Usage Charges into its Ancillary Service bid evaluations as the means to evaluate Ancillary Service bids across Zones when Congestion is present.

2.5.25.3 Market Based Prices.

Public utilities under the FPA must submit bids for Ancillary Services capped at FERC authorized cost-based rates unless and until FERC authorizes different pricing. Public utilities under the FPA shall seek FERC Ancillary Services rate approval on bases consistent with the ISO time-frame for contracting for each Ancillary Service (hourly rate for some Ancillary Services, annual rate or otherwise for other Ancillary Services) so that cost-based bids and market based bids for each service shall be on comparable terms. All other entities may use market-based rates not subject to any restrictions. Public utilities under the FPA which have not been approved to bid at

by auditing of response to ISO Dispatch instructions, and by analysis of the appropriate Meter Data, or interchange schedules. Participating Generators, owners or operators of Loads, operators of System Units or System Resources and Scheduling Coordinators shall notify the ISO immediately whenever they become aware that an Ancillary Service is not available in any way. All Participating Generators, owners or operators of Loads and operators of System Units or System Resources shall check, monitor and/or test their system and related equipment routinely to assure availability of the committed Ancillary Services. These requirements apply whether the Ancillary Services are contracted or self provided. For a duration specified by the ISO, the ISO may suspend the technical eligibility certificate of a Scheduling Coordinator for a Generating Unit, System Unit, Load or System Resource, which repeatedly fails to perform. The ISO shall develop measures to discourage repeated non-performance on the part of both bidders and self providers.

2.5.25 Periodic Testing of Units.

The ISO may test Generating Units, System Units, Loads and System Resources in the manner described herein. The frequency of testing shall be within such timeframes as are reasonable under all the circumstances. Scheduling Coordinators shall manage the resulting Energy output if notification of testing permits the Energy to be scheduled. If a Generating Unit, System Unit, Load, or System Resource fails to meet requirements in a test under this section, the ISO shall notify the relevant Participating Generator, owner or operator of Loads, System Units or System Resources, or Scheduling Coordinator of such failure as soon as reasonably practicable after the completion of the test. Failure to meet requirements shall lead to the penalties described in Section 2.5.26.

2.5.25.1 Regulation. The ISO shall continuously monitor the response of a Generating Unit, System Unit, or System Resource to the ISO's Regulation instructions in order to determine compliance with Dispatch instructions.

2.5.25.2 Spinning Reserve. The ISO shall test the Spinning Reserve capability of a Generating Unit, System Unit or System Resource by issuing unannounced Dispatch instructions requiring the Generating Unit, System Unit or System Resource to ramp up to its ten minute capability. The ISO shall measure the response of the Generating Unit,

provided that any such penalty shall be reduced to reflect any adjustment made over the duration of the committed period under Section 2.5.26.2 or 2.5.26.3.

System Units engaged in self provision of Ancillary Services, or providing Ancillary Services to the ISO are subject to the same testing, compensation, and penalties as are applied to individual Generating Units engaged in self provision or provision of Ancillary Services. To perform testing, the ISO will bias the MSS's MSRE to test the responsiveness of the System Unit.

If payments for capacity for a particular Ancillary Service in a particular Settlement Period would be rescinded under more than one provision of this Section 2.5.26, the total amount to be rescinded for a particular Ancillary Service in a particular Settlement Period shall not exceed the total payment due in that Settlement Period.

2.5.26.2 Rescission of Payments for Unavailability. If capacity scheduled into the ISO's Ancillary Services markets from a Generating Unit, Curtailable Demand, System Unit or System Resource is unavailable during the relevant BEEP Interval, then payments will be rescinded as described herein. For self-provided Ancillary Services, the payment obligation shall be equivalent to that which would arise if the Ancillary Services had been bid into each market in which they were scheduled.

2.5.26.2.1 If the ISO determines that a Scheduling Coordinator has supplied Uninstructed Imbalance Energy to the ISO during a BEEP Interval from the capacity of a Generating Unit, System Unit or System Resource that is obligated to supply Spinning Reserve, Non-Spinning Reserve, or Replacement Reserve to the ISO during such BEEP Interval, payments to the Scheduling Coordinator representing the Generating Unit, System Unit or System Resource for the Ancillary Service capacity used to supply Uninstructed Imbalance Energy and for Energy supplied from such capacity shall be eliminated to the extent of the deficiency, except to the extent (i) the deficiency in the availability of Ancillary Service capacity from the Generating Unit, System Unit or System Resource is attributable to control exercised by the ISO in that BEEP Interval through AGC operation, an RMR Dispatch Notice, or dispatch to avoid an intervention in

Payment shall be eliminated first for any Spinning Reserve capacity for which the Generating Unit, Curtailable Demand, System Unit or System Resource would otherwise be entitled to payment. If the amount of Ancillary Service capacity from which the Generating Unit, System Unit or System Resource has supplied Uninstructed Imbalance Energy exceeds the amount of Spinning Reserve capacity for which it would otherwise be entitled to receive payment, payment shall be eliminated for Non-Spinning Reserve capacity, and then for Replacement Reserve capacity, until payment has been withheld for the full amount of Ancillary Service capacity from which the Generating Unit, Curtailable Demand, System Unit or System Resource supplied Uninstructed Imbalance Energy.

2.5.26.2.6 For each BEEP Interval in which a Generating Unit, Curtailable Demand, System Unit or System Resource fails to supply Energy from Spinning Reserve, Non-Spinning Reserve or Replacement Reserve capacity in accordance with a Dispatch instruction, or supplies only a portion of the Energy specified in the Dispatch instruction, the capacity payment will be pro-rated to reflect the unavailability in that BEEP Interval of the difference between (1) the total MW of the particular Ancillary Service scheduled in that Settlement Period and (2) the amount of Energy, if any, supplied in response to the Dispatch instruction in that BEEP Interval.

2.5.26.2 Rescission of Payments When Dispatch Instruction is Not Followed

If the total metered output of a Generating Unit, Curtailable Demand, System Unit or System Resource is insufficient to deliver the amount of Instructed Imbalance Energy associated with a Dispatch instruction issued in accordance with a bid on Spinning Reserve, Non-Spinning Reserve, or Replacement Reserve in any BEEP Interval, then the capacity payment associated with the difference between the total scheduled amount of each Ancillary Service for which Insufficient Energy was delivered, and the actual output attributed to the response to the Dispatch instruction on each Ancillary Service, shall be rescinded. However, no capacity payment shall be rescinded if the shortfall in the metered output of the Generating Unit, Curtailable Demand, System Unit, or System Resource is less than a deadband amount published by ISO on the ISO Home Page at least twenty-four hours prior to the BEEP Interval. For any BEEP Interval with respect to which no deadband amount has been published by the ISO, the deadband amount shall be zero MWH.

If the Generating Unit, Curtailable Demand, System Unit or System Resource is scheduled to provide more than one Ancillary Service in the Settlement Period, then the actual output will be attributed first to Replacement Reserve, then to Non-Spinning Reserve, and finally to Spinning Reserve, and the capacity payments associated with the balance of each Ancillary Service shall be rescinded. If the same Ancillary Service is scheduled in both the Day Ahead and Hour Ahead Markets, then payments shall be rescinded in proportion to the amount of each Ancillary Service scheduled in each market.

2.5.26.4 Penalties applied pursuant to Section 2.5.26.1, and payments rescinded pursuant to Section 2.5.26.2 and 2.5.26.3 shall be redistributed to Scheduling Coordinators in proportion to ISO Control Area metered Demand and scheduled exports for the same Trading Day.

2.5.26.5 If the ISO determines that non-compliance of a Load, Generating Unit, System Unit or System Resource, with an operating order or Dispatch instruction from the ISO, or with any other applicable technical standard under the ISO Tariff, causes or exacerbates system conditions for which the WSCC imposes a penalty on the ISO, then the Scheduling Coordinator of such Load, Generating Unit, System Unit or System Resource shall be assigned that portion of the WSCC penalty which the ISO reasonably determines is attributable to such non-compliance, in addition to any other penalties or sanctions applicable under the ISO Tariff.

2.5.26 Settlements For Contracted Ancillary Services.

Based on the prices and quantities determined in accordance with this Section, the ISO shall operate a daily Settlement

function for Ancillary Services it contracts for with Scheduling Coordinators.

The ISO shall calculate imbalances between scheduled, instructed and actual quantities of Energy provided based upon Meter Data obtained pursuant to Section 10. Schedules between Control Areas shall be deemed as being delivered in accordance with Good Utility Practice. The difference between actual and scheduled interchange shall then be addressed in accordance with the WSCC and NERC inadvertent interchange practices and procedures. Following this practice, all dynamic schedules for Ancillary Services provided to the ISO by other Control Areas shall be deemed delivered to the ISO. The difference between the Energy requested by the ISO and that actually delivered by the other Control Area shall

Scheduling Coordinators for Generating Units shall receive payment for Energy output from Regulation in accordance with settlement for Uninstructed Imbalance Energy under Section 11.2.4.1.

$$\sum_i [(EnQUnst_{ixt} * HourlyExPostPriceinZoneX) + REPA_{ixt}]$$

REPA_{ixt} = the Regulation Energy Payment Adjustment for Generating Unit i in Zone X for Settlement Period t calculated as follows:

$$[(R_{UPixt} * C_{UP}) + (R_{DNixt} * C_{DN})] * \max (\$20/MWh, P_{xt})$$

Where

R_{UPixt} = the upward range of generating capacity for the provision of Regulation from Generating Unit i in Zone X included in the bid accepted by the ISO for Generating Unit i for Settlement Period t, weighted in proportion to the ISO's need for upward Regulation. The weighting factors will be specified within a range from 0-100 percent. The weighting factors will be set at the discretion of the ISO based on system conditions, and will be set at a level that will provide sufficient incentive to the market to supply upward Regulation for the ISO's purposes of satisfying WSCC criteria and NERC control performance standards. The ISO shall post the weighting factors consistent with the ISO Weighting Procedure, posted on the ISO website.

R_{DNixt} = the downward range of generating capacity for the provision of Regulation for Generating Unit i in Zone X included in the bid accepted by the ISO for Generating Unit i for Settlement Period t, weighted in proportion to the ISO's need for downward Regulation. The weighting factors will be

specified within a range from 0-100 percent. The weighting factors will be set at the discretion of the ISO based on system conditions, and will be set at a level that will provide sufficient incentive to the market to supply downward Regulation for the ISO's purposes of satisfying WSCC criteria and NERC control performance standards.

The ISO shall post the weighting factors consistent with the ISO Weighting Procedure, posted on the ISO website.

$$\begin{aligned} C_{UP} &= 1 \\ C_{DN} &= 1 \\ P_{xt} &= \end{aligned}$$

the Hourly Ex Post Price for Zone X in Settlement Period t.

The ISO may modify the value of the constants C_{UP} or C_{DN} within a range of 0-1 either generally in regard to all hours or specifically in regard to particular times of the day, after the ISO Governing Board approves such modification, by a notice issued by the Chief Executive Officer of the ISO and posted on the ISO Internet "Home Page," at <http://www.caiso.com>, or such other Internet address as the ISO may publish from time to time, specifying the date and time from which the modification shall take effect, which shall be not less than seven (7) days after the Notice is issued.

REPA shall not be payable unless the Generating Unit is available and capable of being controlled and monitored by the ISO Energy Management System over the full range of its Scheduled Regulation capacity for the entire Settlement Period at least the ramp rates (increase and decrease in MW/minute) stated in its bid. In addition, the total Energy available (R_{UP} plus R_{DN}) may be adjusted to be only R_{UP} or only R_{DN} , a percentage of R_{UP} or R_{DN} , or the sum of R_{UP} and R_{DN} , depending on the needs of the ISO for each direction of Regulation service.

