ISO shall correspondingly reduce the quantity of the Ancillary Services concerned, which it procures as described in Sections 2.5.14 to 2.5.17. In accordance with Section 2.5.22.11 and Section 2.5.26.2, if a Scheduling Coordinator uses capacity scheduled to self-provide Spinning Reserve, Non-Spinning Reserve, or Replacement Reserve to supply Uninstructed Imbalance Energy to the ISO from a Generating Unit, Curtailable Demand, or System Resource under circumstances that would cause the elimination of payments to the Scheduling Coordinator under Section 2.5.26.2 if the capacity had been bid and was selected by the ISO to supply the Ancillary Service, the Scheduling Coordinator shall pay to the ISO the amount of the payment that would be eliminated under that section.

2.5.20.3 Literal Self Provision by a Metered Subsystem. A MSS operator must be the Scheduling Coordinator or act through a Scheduling Coordinator and must submit the Energy, Ancillary Services, and Adjustment Bids for all End Users within the MSS who are not served by other Scheduling Coordinators.

The MSS operator may provide its Regulation, Spinning Reserve, Non-Spinning Reserve, and Replacement Reserve requirements through any combination of Literal Self Provision, In-Kind Self Provision, or purchases from the ISO. A MSS may utilize a System Unit to participate in the procurement processes of the ISO for Regulation, Spinning Reserve, Non-Spinning Reserve, and Replacement Reserve. A System Unit is defined as one or more resources within a MSS controlled by the MSS operator so as to simulate a single resource for Regulation, Spinning Reserve, Non-Spinning Reserve, and Replacement Reserve with specified performance characteristics. A System Unit must consist of resources located within the MSS or resources dynamically scheduled into the MSS. For

Regulation, Spinning Reserve, Non-Spinning Reserve, and Replacement Reserve, bid evaluation and price determination,

These recordings may be used to audit the Dispatch instructions, and to verify the response of Generating Units, Loads and System Resources to Dispatch instructions.

The Dispatch instruction and all information associated with it shall be logged and recorded by the ISO as soon as practical after issuing each instruction. The ISO Protocols govern the content, issue, receipt, confirmation and recording of Dispatch instructions.

2.5.22.11 Failure to Conform to Dispatch Instructions. All Scheduling Coordinators, Participating Generators, owners or operators of Curtailable Demands and operators of System Resources providing Ancillary Services (whether self provided or procured by the ISO) or whose Supplemental Energy bids have been accepted by the ISO shall be obligated to respond or to secure response to the ISO's Dispatch instructions in accordance with their terms, and to be available and capable of doing so, for the full duration of the Settlement Period. If a Generating Unit, Curtailable Demand or System Resource is unavailable or incapable of responding to a Dispatch instruction, or fails to respond to a Dispatch instruction in accordance with its terms, the Generating Unit, Curtailable Demand or System Resource:

(a) shall be declared and labeled as non-conforming to the ISO's instructions;

(b) cannot set the Hourly Ex Post Price; and

the Scheduling Coordinator for the Participating Generator, owner or operator of the Curtailable Demand or System Resource concerned shall pay to the ISO the difference between the Generating Unit's, Curtailable Demand's or System Resource's instructed and actual output (or Demand) at the Hourly Ex Post Price in accordance with Section 11.2.4.1. This applies whether the Ancillary Services concerned are contracted or self provided.

The ISO will develop additional mechanisms to deter Generating Units, Curtailable Demand and System Resources from failing to perform according to Dispatch instructions, for

example reduction in payments to Scheduling Coordinators, or suspension of the Scheduling Coordinator's Ancillary Services certificate for the Generating Unit, Curtailable Demand or System Resource concerned.

2.5.23 Pricing Imbalance Energy.

2.5.23.1 General Principles. Imbalance Energy shall be priced in two (2) time intervals using the Five Minute Ex Post Price and the Hourly Ex Post Price. The Five Minute Ex Post Price shall be based on the bid of the marginal Generating Units, Loads and System Resources dispatched by the ISO to reduce Demand or to increase or decrease Energy output in each five minute period (including resources that provide Imbalance Energy and Ancillary Services resources that increase or decrease Energy output or reduce Demand).

The marginal Generating Unit, Load or System Resource dispatched in the five (5) minute period is

(a) if generation output is increased, or Demand reduced, the Generating Unit, Load or System Resource with the highest bid that is accepted by the ISO for incremental Generation, or Demand reduction; or

(b) if generation output is decreased, the Generating Unit or System Resource with the lowest bid that is accepted by the ISO for decremental Generation.

2.5.25.6 Black Start. The ISO may test the Black Start capability of a Generating Unit by issuing unannounced dispatch instructions requiring the Generating Unit to start on a Black Start basis. The ISO shall measure the response of the Generating Unit to determine compliance with the terms of the Black Start contract. The Scheduling Coordinator or Black Start Generator as stated in Section 2.5.27.6 for the Generating Unit shall be paid the Generating Unit's contract price for the output under the Black Start test.

2.5.26 Penalties for Failure to Pass Tests and Rescission of Payment for Non-Delivery.

2.5.26.1 Penalties for Failure to Pass Tests. A Generating Unit, Curtailable Demand or System Resource that fails an availability test, as determined under criteria to be established by the ISO, shall be deemed not to have been available to provide the Ancillary Service concerned or the relevant portion of that Service for the entire period the Generating Unit, Curtailable Demand or System Resource was committed to provide the Service, unless appropriate documentation (i.e., daily test records) confirming the availability of that service during the committed period(s) is presented to the ISO. The "committed period" is defined as the total of all the hours/days the Generating Unit, Curtailable Demand or System Resource was scheduled by the ISO to provide the Ancillary Service beginning from: (i) the last successful availability test; or (ii) the last time the Generating Unit, Curtailable Demand or System Resource actually provided Energy or reduced Demand as part of the Ancillary Service; whichever results in a shorter committed period. The Scheduling Coordinator for a Generating Unit or Curtailable Demand that fails an availability test shall not be entitled to payment for the Ancillary Service concerned for the committed period and adjustments to reflect this shall be made in the calculation of payments to the Scheduling Coordinator,

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 Literal Self Provision of Ancillary Services, In-Kind 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 In-Kind 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.

2.5.26.2 Rescission of Payments for Unavailability. If capacity bid into the ISO's Ancillary Services markets from a Generating Unit, Curtailable Demand or System Resource is unavailable, 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 Settlement Period from the capacity of a Generating Unit or System Resource that is obligated to supply Spinning Reserve, Non-Spinning Reserve, or Replacement Reserve to the ISO during such Settlement Period, payments to the Scheduling Coordinator representing the Generating 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 or System Resource is attributable to control exercised by the ISO in that Settlement Period through AGC operation, an RMR Dispatch Notice, or dispatch to avoid an intervention in

Market operations or to prevent a System Emergency; or (ii) a penalty is imposed under Section 2.5.26.1 with respect to the deficiency.

2.5.26.2.2 If the metered Demand of a Curtailable Demand is insufficient to deliver the full amount of the Non-Spinning and Replacement Reserve to which that Curtailable Demand is obligated in that Settlement Period, then the related capacity payments will be rescinded to the extent of that deficiency as explained in Section 2.5.26.2.4 and 2.5.26.2.5, unless a penalty is imposed on that Curtailable Demand for that Settlement Period under Section 2.5.26.1.

2.5.26.2.3 The payment for Energy to be eliminated shall be determined in accordance with Section 11.2.4.1.

2.5.26.2.4 The payment for Ancillary Service capacity otherwise payable under Section 2.5.27.2, 2.5.27.3, and/or 2.5.27.4 shall be reduced by the product of the applicable prices and the amount of Ancillary Service capacity from which the Generating Unit, Curtailable Demand or System Resource that has supplied Uninstructed Imbalance Energy. If a Scheduling Coordinator schedules Ancillary Services through both the Day-Ahead and Hour-Ahead Markets, capacity payments due the Scheduling Coordinator from each market will be rescinded in proportion to the amount of capacity sold to the ISO in each market. The amount of capacity for which payments will be rescinded shall equal the value $UnavailAncServMW_{ixt}$, as defined in Section 11.2.4.1, applied to each Generating Unit and System Resource supplying the Ancillary Service or the value $UnavailDispLoadMW_{ixt}$, as also defined in Section 11.2.4.1, applied to the Curtailable Demand supplying the Ancillary Service.

2.5.26.2.5 Payment shall be eliminated first for any Spinning Reserve capacity for which the Generating Unit, Curtailable Demand or System Resource would otherwise be entitled to payment. If the amount of Ancillary Service capacity from which the Generating 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 or System Resource supplied Uninstructed Imbalance Energy.

2.5.26.3 Rescission of Payments When Dispatch Instruction is Not Followed

If the metered output of a Generating Unit, Curtailable Demand or System Resource is less than the amount of a dispatch instruction issued in accordance with a bid on Spinning Reserve, Non-Spinning Reserve, or Replacement Reserve in any Settlement Period, then the Ancillary Services capacity payments associated with the difference between the sum of the total scheduled Spinning Reserve, Non-Spinning Reserve, and Replacement Reserve, and the actual output shall be rescinded. If the metered Demand of a Curtailable Demand in any Settlement Period is greater than its scheduled Demand net of dispatch instructions, then the capacity payments associated with the difference between its total scheduled Non-Spinning and Replacement Reserve, and actual load reduction as represented by the difference between its metered Demand and scheduled Demand, shall be rescinded. If the Generating Unit, Curtailable Demand or System Resource is scheduled to provide more than one Ancillary Service in the Settlement Period, then the actual output will be attributed to each in proportion to the dispatch instructions issued by the ISO, 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, than 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.

2.5.27 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 then be accounted for and addressed through the WSCC and NERC inadvertent interchange practices and procedures.

Separate payments shall be calculated for each Settlement Period t for each Generating Unit and Curtailable Demand. The ISO shall then calculate a total daily

payment for each Scheduling Coordinator for all the Generating Units and Curtailable Demands that it represents for each Settlement Period t.

The settlements for the Hour-Ahead markets shall be calculated by substituting Hour-Ahead prices in the relevant formulae and deducting any amounts due to the ISO from Scheduling Coordinators who buy back in the Hour-Ahead Market Regulation, Spinning Reserve, Non-Spinning Reserve or Replacement Reserve capacity they sold to the ISO in the Day-Ahead Market.

2.5.27.1 Regulation.

Quantities. The following quantity definitions shall be used for each Scheduling Coordinator in the settlement process:

$AGCQDA_{xt}$ = the Scheduling Coordinator's total quantity of Regulation capacity in Zone X sold through the ISO auction, and scheduled Day-Ahead j for Settlement Period t.

$EnQUnst_{xt}$ = Uninstructed Imbalance Energy increase or decrease in Zone X in real time Dispatch for Settlement Period t, determined in accordance with the ISO Protocols.

Prices. The prices in the Settlement process for Regulation shall be those determined in Section 2.5.14.

Adjustment: penalty described in Section 2.5.26.1.

$PAGCDA_{xt}$ = the market clearing price, PAGC, in Zone X for Regulation capacity in the Day-Ahead market for Settlement Period t.

Payments. Scheduling Coordinators for Generating Units providing Regulation capacity through the ISO auction shall receive the following payments for Regulation:

$$AGCPay_{xt} = AGCQDA_{xt} * PAGCDA_{xt} - Adjustment$$

Scheduling Coordinators for Generating Units shall receive the following payment for Energy output from Regulation:

$EnQUnst_{xt}$ * *Hourly Ex Post Price in Zone X*

2.5.27.2 Spinning Reserve.

Quantities. The following quantity definitions shall be used for each Scheduling Coordinator in the Settlement process:

$SpinQDA_{xt}$ = the Scheduling Coordinator's total quantity of Spinning Reserve capacity in Zone X sold through the ISO auction, and scheduled Day-Ahead for Settlement Period t.

$EnQInst_{xt}$ = Instructed Imbalance Energy output in Zone X in real time Dispatch for Settlement Period t, determined in accordance with the ISO protocols.

Prices. The prices in the Settlement process for Spinning Reserve shall be those determined in Section 2.5.15.

Adjustment = penalty described in Section 2.5.26.1, or rescinded capacity payments described in Section 2.5.26.2 or 2.5.26.3.

$PspDA_{xt}$ = market clearing price, Psp, in Zone X for Spinning Reserve capacity in the Day-Ahead Market for Settlement Period t.

Payments. Scheduling Coordinators for Generating Units, System Units, or System Resources providing Spinning Reserve capacity through the ISO auction shall receive the following payments for Spinning Reserve capacity:

$SpinPay_{xt} = SpinQDA_{xt} * PspDA_{xt} - Adjustment$

Scheduling Coordinators for Generating Units, System Units, or System Resources shall receive the following payments for Energy output from Spinning Reserve capacity:

$EnQInst_{xt}$ * *BEEP Interval Ex Post Price*$_{xt}$

2.5.27.3 Non-Spinning Reserve.

Quantities. The following quantity definitions shall be used for each Scheduling Coordinator in the settlement process:

$NonSpinQDA_{xt}$ = the Scheduling Coordinator's total Quantity of Non-Spinning Reserve capacity in Zone X sold through the ISO's auction and scheduled Day-Ahead for Settlement Period t.

$EnQInst_{xt}$ = Instructed Imbalance Energy output or Demand reduction in Zone X in real time Dispatch for Settlement Period t, determined in accordance with the ISO protocols.

Prices. The prices in the Settlement process for Non-Spinning Reserve shall be those determined in Section 2.5.16.

Adjustment = penalty described in section 2.5.26.1, or rescinded capacity payments described in Section 2.5.26.2 or 2.5.26.3.

$PnonspDA_{xt}$ = market clearing price, Pnonsp, in Zone X for Non-Spinning Reserve capacity in the Day-Ahead Market for Settlement Period t.

Payments. Scheduling Coordinators for Generating Units, System Units, System Resources, or Loads supplying Non-Spinning Reserve capacity through the ISO auction shall be paid the following for the Non-Spinning Reserve capacity:

$$NonspPay_{xt} = NonSpinQDA_{xt} * PnonspDAxt - Adjustment$$

Scheduling Coordinators for Generating Units, System Units, System Resources or Loads shall receive the following payments for Energy output from Non-Spinning Reserve capacity:

$$EnQInst_{xt} * BEEP\ Interval\ Ex\ Post\ Price_{xt}$$

$RepResQDA_{xt}$ = the Scheduling Coordinator's total quantity of Replacement Reserve capacity in Zone X sold through the ISO auction, and scheduled Day-Ahead for Settlement Period t.

$EnQInst_{xt}$ = Instructed Imbalance Energy output or Demand reduction in Zone X in real time Dispatch for Settlement Period t, determined in accordance with the ISO protocols.

Prices. The prices in the settlement process for Replacement Reserve shall be those determined in section 2.5.17.

Adjustment = penalty described in section 2.5.26.1, or rescinded capacity payments described in Section 2.5.26.2 or 2.5.26.3.

$PRepResDA_{xt}$ = market clearing price, PRepRes, in Zone X for Replacement Reserve capacity in the Day-Ahead Market for Settlement Period t.

Payments. Scheduling Coordinators for Generating Units, System Units, System Resources, or Loads providing Replacement Reserve capacity through the ISO auction shall receive the following payments for the Replacement Reserve capacity:

$$RepResPay_{ijt} = (RepResQDA_{xt} -) * PRepResDA_{xt} - Adjustment$$

The payments for Energy output from Replacement Reserve capacity are calculated as follows:

$$EnQInst_{ijt} * BEEP\ Interval\ Ex\ Post\ Price_{xt}$$

2.5.27.5 Voltage Support. The total payments for each Scheduling Coordinator shall be the sum of the short-term procurement payments, based on opportunity cost, as described in Section 2.5.18, and the payments under long term contracts.

2.5.27.6 Black Start.

Quantities. The following quantities shall be used in the Settlement process:

$EnQBS_{ijt}$ = Energy output from Black Start made by Generating Unit i from Scheduling Coordinator j (or Black Start Generator j, as the case may be) for Settlement Period t, pursuant to the ISO's order to produce.

Prices. The prices used in the Settlement process are those described in the contracts referred to in section 2.5.19.

Adjustment = penalty described in section 2.5.26.1.

Payments.

Scheduling Coordinators for owners of Reliability Must-Run Units (or Black Start Generators, as the case may be) shall receive the following payments for Energy output from Black Start facilities:

$BSEN_{ijt}=(EnQBS_{ijt}*EnBid_{ijt})+BSSUP_{ijt}-Adjustment$

where BSSUPijt is the start-up payment for a Black Start successfully made by Generating Unit i of Scheduling Coordinator j (or Black Start Generator j) in Trading Interval t calculated in accordance with the applicable Reliability Must-Run Contract (or the Interim Black Start agreement as the case may be).

2.5.28 Settlement for User Charges for Ancillary Services.

The ISO shall determine a separate hourly user rate for Regulation, Spinning Reserve, Non-Spinning Reserve and Replacement Reserve for each Settlement Period purchased in the Day-Ahead market, and in the Hour-Ahead Market. Each rate will be charged to Scheduling Coordinators on a volumetric basis applied to each Scheduling Coordinator's obligation for the Ancillary Service concerned which it has not self provide