

## **9.2 Responsibility for Authorized Work on Facilities.**

The ISO shall have authority to approve requests by Participating TOs to work on all energized transmission equipment under the Operational Control of the ISO.

## **9.3 Coordination of Outages and Maintenance.**

### **9.3.1 ISO Outage Coordination Office.**

The ISO Outage Coordination Office shall be established by the ISO and shall coordinate and approve Maintenance Outages of: (i) all facilities that comprise the ISO Controlled Grid and (ii) Participating Generators. The ISO shall additionally coordinate and approve Outages required for new construction and for work on de-energized and live transmission facilities (e.g., relay maintenance or insulator washing) and associated equipment. The ISO Outage Coordination Office will be operational Monday through Friday, except holidays. The Outage Coordination Office is located in Folsom. Each office and the areas of responsibility of that office are detailed in the most recent version of the applicable ISO Operating Procedures, which are posted on the ISO Home Page.

### **9.3.1A Coordinating Maintenance Outages of UDC Facilities.**

Each UDC and the Participating TO with which it is interconnected shall coordinate their Outage requirements that will have an effect on their transmission interconnection prior to the submission by that Participating TO of its Maintenance Outage requirements under Section 9.3.

#### **9.3.1.1 Coordinating Maintenance Outages of CDWR-SWP Participating Generating Units.**

The provisions of Section 9.3 shall apply to CDWR-SWP Participating Generating Units. The submission by CDWR-SWP of an Outage schedule, Outage request, or request to change or cancel an Approved Maintenance Outage, and the ISO's treatment of Outage schedules and requests relating to CDWR-SWP Participating Generating Units, shall be in accordance with Section 9.3, except as otherwise provided in Section 9.3.1.1.1.

**9.3.1.1.1 Coordinating Maintenance Outages of CDWR-SWP**

a. In each Outage schedule, Outage request, and request to change or cancel an Approved Maintenance Outage that CDWR-SWP submits to the ISO for a CDWR-SWP Participating Generating Unit, CDWR-SWP will state whether CDWR-SWP has determined that the proposed maintenance work, and/or the timing of the Outage, is necessary in order for CDWR-SWP to:

- i. Comply with various federal and state legal and regulatory requirements that govern stream flow, water temperature, water quality and quantity, flood control space, after-bay, reservoir, or lake elevation, and other environmental and wildlife constraints (“CDWR-SWP Statutory Compliance Outage”); or
- ii. Maintain reliable operations of critical water infrastructure and not impair its ability to satisfy water delivery or conservation requirements (“CDWR-SWP Water System Reliability Outage”).

b. CDWR-SWP will identify each CDWR-SWP Statutory Compliance or Water System Reliability Outage by designating the Outage with an appropriate cause code in the Outage schedule, Outage request, or request to change or cancel an Approved Maintenance Outage and will provide a description of the requirement or constraint. If the designation of an Outage changes, or the Outage no longer meets the criteria of Section 9.3.1.1.1(a)(i) or (ii), CDWR-SWP will notify the ISO about this change in status as soon as practical but no more than one business day after it occurs.

c. The ISO will not deny, cancel, or reschedule a CDWR-SWP Statutory Compliance or Water System Reliability Outage that CDWR-SWP submits to the ISO in an Outage schedule, Outage request, or request to change or cancel an Approved Maintenance Outage, provided that the Outage request is timely, designates the Outage as a CDWR-SWP Statutory Compliance or Water System Reliability Outage by an appropriate cause code and includes a description of the requirement or constraint.

d. The ISO may contact CDWR-SWP to inquire whether the timing of a CDWR-SWP Statutory Compliance or Water System Reliability Outage can be changed. CDWR-SWP may agree to the change or, after making best efforts to accommodate the change, may notify the ISO that the change is not feasible as determined by CDWR-SWP in its sole discretion due to the described requirement or constraint. In the event that CDWR-SWP determines that changing the timing of the Outage is not feasible due to the described requirement or constraint, the ISO will not deny, cancel, or reschedule that CDWR-SWP Statutory Compliance or Water System Reliability Outage.

e. The ISO will process any Outage that CDWR-SWP submits in an Outage schedule, Outage request, or request to change or cancel an Approved Maintenance Outage, that is not timely, does not contain a cause code identifying the Outage as a CDWR-SWP Statutory Compliance or Water System Reliability Outage or does not include a description of the requirement or constraint, under the otherwise applicable provisions of ISO Tariff Section 9.3 and ISO Operating Procedures.

**9.3.2 Requirement for Approval.**

An Operator shall not take: (i) facilities that comprise the ISO Controlled Grid or (ii) Participating Generators out of service for the purposes of planned maintenance or for new construction or other work except as approved by the ISO Outage Coordination Office. The information relating to each Maintenance Outage submitted by a Participating Generator in accordance with Section 9.3.5 or by a Participating TO in accordance with Section 9.3.5 constitutes a request for a long-range Maintenance Outage and is not considered an Approved Maintenance Outage until the ISO has notified the Participating Generator of such approval pursuant to Section 9.3.6 or the Participating TO pursuant to Section 9.3.6.

**9.3.3 Requests for Outages in Real-Time Operation.**

Requests for Outages of: (i) facilities that comprise the ISO Controlled Grid or (ii) Participating Generators in real-time operation shall be made by the Operator to the ISO Control Center. The ISO will not approve any Outage request made within seventy-two (72) hours of the requested Outage start time unless: (i) the requested Outage could not have been reasonably foreseen and scheduled through the Outage coordination process provided in Section 9.3; and (ii) the requested Outage will not compromise ISO Controlled Grid reliability.

**9.3.4 Single Point of Contact.**

Requests for approvals and coordination of all Maintenance Outages (consistent with Section 9.3.1) will be through a single point of contact between the ISO Outage Coordination Office and each Operator. The Operator shall provide in its initial request and specify from time to time the identification of the single point of contact along with primary and alternate means of communication pursuant to the detailed procedures referred to in Section 9.3.6.

**9.3.5 Method of Communications.**

The primary method of communication from an Operator to the ISO with regard to maintenance and outage planning will be as described in the Operating Procedure on the ISO Home Page. Emergency capabilities, to be used only as a back-up if the primary communication method is unavailable, will include:

- (a) voice;
- (b) fax; and
- (c) electronic (E-mail, FTP file, etc.).

**9.3.5.1 Confirmation.**

When fax or electronic communication is utilized, confirmation from the ISO must be received by the Operator to validate the receipt of the request.

**9.3.5.2 Communication of Approval or Rejection.**

The ISO shall use the same methods in communicating the approval or rejection of an Outage request or approval of a request to change an Approved Maintenance Outage to the relevant Operator.

**9.3.5.2A** Information regarding planned outages for resources providing Regulatory Must-Take Generation shall be provided to the ISO Outage Coordination Office by the Participating TO or UDC having an existing contract with such resource or by a Participating Generator. Information provided will be that obtained by the Participating TO, UDC or a Participating Generator pursuant to the terms of the existing agreement with the Regulatory Must-Take Generation resource or as requested by the ISO. Scheduling and approvals of Maintenance Outages for resources providing Regulatory Must-Take Generation shall continue to be coordinated as detailed in the applicable contract with the Participating TO or UDC, provided the Regulatory Must-Take Generator has not executed a Participating Generator Agreement. If the Regulatory Must-Take Generator has executed a Participating Generator Agreement, it shall comply with Section 9.3.5 and other provisions applicable to Participating Generators.

**9.3.6 Maintenance Outage Planning.**

Each Operator shall, by not later than October 15 each year, provide the ISO with a proposed schedule of all Maintenance Outages it wishes to undertake in the following year. The proposed schedule shall include all of the Operator's transmission facilities that comprise the ISO Controlled Grid and Participating Generators (including its Reliability Must-Run Units). In the case of a Participating TO's transmission facilities, that proposed schedule shall be developed in consultation with the UDCs interconnected with that Participating TO's system and shall take account of each UDC's planned maintenance requirements. The nature of the information to be provided and the detailed Maintenance Outage Planning Procedure shall be established by the ISO. This information shall include:

The following information is required for each Generating Unit of a Participating Generator:

- (a) the Generating Unit name and Location Code;
- (b) the MW capacity unavailable;
- (c) the scheduled start and finish date for each Outage; and
- (d) where there is a possibility of flexibility, the earliest start date and the latest finish date, along with the actual duration of the Outage once it commences.

The following information is required for each transmission facility:

- (a) the identification of the facility and location;
- (b) the nature of the proposed Maintenance Outage;
- (c) the preferred start and finish date for each Maintenance Outage; and
- (d) where there is a possibility of flexibility, the earliest start date and the latest finish date, along with the actual duration of the Outage once it commences.

Either the ISO, pursuant to Section 9.3.7, or an Operator, subject to Section 9.3.6.10, may at any time request a change to an Approved Maintenance Outage. An Operator may, upon seventy-two (72) hours

advance notice, schedule with the ISO Outage Coordination Office a Maintenance Outage on its system, subject to the conditions of Sections 9.3.6.4A, 9.3.6.7, and 9.3.6.8.

**9.3.6.1 Quarterly Updates.**

**9.3.6.1A** Each Participating Generator will provide the ISO with quarterly updates of its long-range Outage schedule referred to in Section 9.3.6 for Generating Units and System Units by the close of business on the fifteenth (15th) day of each January, April, and July. These updates must identify known changes to any previously planned Generating Unit Outages and any additional Outages anticipated over the next twelve months from the time of this report. In this report, each Participating Generator must include all known planned Outages for the following twelve months.

**9.3.6.1B** Each Participating TO will provide the ISO with quarterly updates of the data provided under 9.3.6 by close of business on the fifteenth (15th) day of each January, April, and July. These updates must identify known changes to any previously planned ISO Controlled Grid facility Maintenance Outages and any additional Outages anticipated over the next twelve months from the time of the report. As part of this update, each Participating TO must include all known planned Outages for the following twelve months.

**9.3.6.2 90 Day Look Ahead.**

In addition to changes made at quarterly Outage submittals, each Participating Generator shall notify the ISO in writing of any known changes to a Generating Unit or System Unit Outage scheduled to occur within the next 90 days and may submit changes to its planned Maintenance Outage schedule at any time. Participating Generators must obtain the approval of the ISO Outage Coordination Office in accordance with Section 9 of this ISO Tariff. Such approval may be withheld only for reasons of System Reliability or security.

**9.3.6.3 72 Hour Ahead.**

An Operator may, upon seventy-two (72) hours advance notice (or within the notice period in the Operating Procedures posted on the ISO Home Page), schedule with the ISO Outage Coordination Office a Maintenance Outage on its system, subject to the conditions of Sections 9.3.6.4A, 9.3.6.7 and 9.3.6.8.

**9.3.6.4 Changes to Planned Maintenance Outages.**

A Participating TO may submit changes to its planned Maintenance Outage information at any time, provided, however, that if the Participating TO cancels an Approved Maintenance Outage after 5:00 a.m. of the day prior to the day upon which the Outage is scheduled to commence and the ISO determines that the change was not required to preserve System Reliability, the ISO may disregard the availability of the affected facilities in determining the availability of transmission capacity in the Day-Ahead Market. The ISO will, however, notify Market Participants and reflect the availability of transmission capacity in the Hour-Ahead Market as promptly as practicable.

**9.3.6.4A** The ISO Outage Coordination Office shall evaluate whether the requested Maintenance Outage or change to an Approved Maintenance Outage is likely to have a detrimental effect on the efficient use and reliable operation of the ISO Controlled Grid or the facilities of a Connected Entity. The ISO may request additional information or seek clarification from Participating Generators or Participating TOs of the information submitted in relation to a planned Generating Unit and System Unit Outage or a planned Maintenance Outage. This information may be used to assist the ISO in prioritizing conflicting requests for Outages.

**9.3.6.4B ISO Analysis of Generating Unit Outage Plans**

**9.3.6.4B.1 Calculation of Aggregate Generating Capacity**

The ISO will use the long-range Generating Unit or System Unit Outage schedule referenced in 9.3.6 and, as appropriate, additional approved Outage requests scheduled to start within 90 days, to calculate the aggregate Generation capacity projected to be available in the following time frames:

- (a) on an annual and quarterly basis, the ISO will calculate the aggregate weekly peak Generation capacity projected to be available during each week of the following year and quarter, respectively; and



(b) on a monthly basis, the ISO will calculate the aggregate daily peak Generation capacity projected to be available during the month.

**9.3.6.5 Withdrawal or Modification of Request.**

The Operator of a Participating Generator or a Participating TO's Operator may withdraw a request at any time prior to actual commencement of the Outage. The Operator of a Participating Generator or Participating TO's Operator may modify a request at any time prior to receipt of any acceptance or rejection notice from the ISO Outage Coordination Office or pursuant to Sections 9.3.8.1, 9.3.8.2 and 9.3.8.3, but the ISO Outage Coordination Office shall have the right to reject such modified request for reasons of System Reliability, system security or market impact, because of the complexity of the modifications proposed, or due to insufficient time to assess the impact of such modifications.

**9.3.6.6** Each Participating Generator or Participating TO which has scheduled a planned Maintenance Outage pursuant to Section 9.3.4 must schedule and receive approval of the Outage from the ISO Outage Coordination Office prior to initiating the Approved Maintenance Outage. The ISO Outage Coordination Office will review the Maintenance Outages to determine if any one or a combination of Maintenance Outage requests relating to ISO Controlled Grid facilities, Generating Units or System Units may cause the ISO to violate the Applicable Reliability Criteria. This review will take consideration of factors including, but not limited to, the following:

- (a) forecast peak Demand conditions;
- (b) other Maintenance Outages, previously Approved Maintenance Outages, and anticipated Generating Unit Outages;
- (c) potential to cause Congestion;
- (d) impacts on the transfer capability of Interconnections; and
- (e) impacts on the market.

**9.3.6.7** The ISO Outage Coordinator Office shall acknowledge receipt of each request to confirm or approve a Maintenance Outage for a Generation Unit, System Unit, or Aggregated Unit. Where the ISO Outage Coordination Office reasonably determines that the requested Maintenance Outage or the requested change to an Approved Maintenance Outage, when evaluated together with existing Approved Maintenance Outages, is not likely to have a detrimental effect on the efficient use and reliable operation of the ISO Controlled Grid, the ISO shall authorize the Maintenance Outage or change to the Approved Maintenance Outage, and shall so notify the requesting Operator and other entities who may be directly affected.

**9.3.6.8** Where, in the reasonable opinion of the ISO Outage Coordination Office, the requested Maintenance Outage or requested change to an Approved Maintenance Outage is likely to have a detrimental effect on the efficient use and reliable operation of the ISO Controlled Grid, the ISO Outage Coordination Office may reject the requested Maintenance Outage or requested change to Approved Maintenance Outage. If in the ISO's determination, any of the Maintenance Outages would cause the ISO to violate the Applicable Reliability Criteria, the ISO will notify the relevant Operator, and the Operator will then revise the proposed Maintenance Outage and inform the ISO of the proposed changes. The ISO Outage Coordination Office shall, in a rejection notice, identify the ISO's reliability, security and market concerns which prompt the rejection and suggest possible remedies or schedule revisions which might mitigate any such concerns. The ISO Outage Coordination Office may provide each Operator in writing with any suggested amendments to those Maintenance Outage requests rejected by the ISO Outage Coordination Office. Any such suggested amendments will be considered as an ISO maintenance request and will be approved in accordance with the process set forth in Section 9.3.7 of the ISO Tariff. The determination of the ISO Outage Coordination Office shall be final and binding on the Operator. If, within fourteen (14) days of having made its determination, the Operator requests the ISO Outage Coordination Office to provide reasons for its determination, it shall do so as soon as is reasonably practicable. The ISO will give reasons for informational purposes only and without affecting in any way the finality or validity of the determination.

**9.3.6.9 Failure to Meet Requirements.**

Any request to consider maintenance that does not meet the notification requirements contained in Sections 9.3.8.2 and 9.3.8.3 will be rejected without further consideration, unless Section 9.3.10 applies.

**9.3.6.10** In the event an Operator of facilities forming part of the ISO Controlled Grid cancels an Approved Maintenance Outage after 5:00 a.m. of the day prior to the day upon which the Outage is scheduled to commence and the ISO determines that the change was not required to preserve System Reliability, the ISO may disregard the availability of the affected facilities in determining the availability of transmission capacity in the Day-Ahead Market, provided, however, that the ISO will, as promptly as practicable, notify Market Participants and reflect the availability of the affected facilities in determining the availability of transmission capacity in the Hour-Ahead Market.

**9.3.7 Maintenance Outage Requests by the ISO.**

The ISO Outage Coordination Office may at any time request a Maintenance Outage or a change to an Approved Maintenance Outage from an Operator if, in the opinion of the ISO Outage Coordination Office, the requested Maintenance Outage or change is required to secure the efficient use and reliable operation of the ISO Controlled Grid. In addition, the ISO Outage Coordination Office may, by providing notice no later than 5:00 a.m. of the day prior to the day upon which the Outage is scheduled to commence, direct the Operator to cancel an Approved Maintenance Outage, when necessary to preserve or maintain System Reliability or, with respect to Reliability Must-Run Units or facilities that form part of the ISO Controlled Grid, to avoid unduly significant market impacts that would arise if the Outage were to proceed as scheduled. The Operator, acting in accordance with Good Utility Practice, shall comply with the ISO's direction and the provisions of Sections 9.3.7.1 and 9.3.7.2 shall apply. The ISO shall give notice of any such direction to Market Participants prior to the deadline for submission of initial Preferred Day-Ahead Schedules for the day on which the Outage was to have commenced. For purposes of this section and Section 9.3.3, an "unduly significant market impact" means an unplanned event or circumstance (e.g., unseasonable weather, a Forced Outage of a facility, or other occurrence) that adversely affects the competitive nature and efficient workings of the ISO Markets, and is of such severity

that a prudent Operator would not have scheduled a Maintenance Outage of its facility if the unplanned event or circumstance could have been anticipated.

**9.3.7.1** The Operator may: (1) refuse the request; (2) agree to the request; or (3) agree to the request subject to specific conditions. The Operator, acting in accordance with Good Utility Practice, shall make every effort to comply with requests by the ISO Outage Coordination Office. In the event that the Operator refuses the ISO's request, it shall provide to the ISO Outage Coordination Office written justification for its position within seventy-two (72) hours.

**9.3.7.2** In response the ISO Outage Coordination Office may: (1) overrule any refusal of a Maintenance Outage or a change to an Approved Maintenance Outage by an Operator, in which case the ISO Outage Coordination Office determination shall be final; (2) accept any changes or conditions proposed by the Operator, in which case the Maintenance Outage request or the request to change an Approved Maintenance Outage shall be deemed to be amended accordingly; or (3) reject the change or condition, in which case the ISO Outage Coordination Office and the Operator shall determine if acceptable alternative conditions or changes can be agreed. If the Operator and the ISO Outage Coordination Office cannot agree on acceptable alternative conditions or changes to the ISO Outage Coordination Office's request for a Maintenance Outage or change to an Approved Maintenance Outage, the ISO Outage Coordination Office determination shall be final. If the Operator and the ISO Outage Coordination Office cannot agree on acceptable alternative conditions or changes to the ISO Outage Coordination Office's request for a Maintenance Outage or change to an Approved Maintenance Outage, the ISO may notify the FERC of the dispute and take any other steps that are within its authority to maintain the reliability of the ISO Controlled Grid.

**9.3.7.3** The ISO will compensate the applicable Participating TO or Participating Generator for any direct and verifiable costs that such Participating TO or Participating Generator incurs as a result of the ISO's cancellation of an Approved Maintenance Outage pursuant to this Section 9.3.7. For purposes of this section, direct costs include verifiable labor and equipment rental costs that have been incurred by the applicable Participating TO or Participating Generator solely as a result of the ISO's cancellation of the Approved Maintenance Outage. Each Participating TO or Participating Generator must make a

reasonable effort to avoid incurring any such direct costs through such measures as, but not limited to, the prompt cancellation of all contractual arrangements with third parties related to the Approved Maintenance Outage.

**9.3.7.4** The amount used to compensate each applicable Participating TO and Participating Generator, as described in Section 9.3.7.3, shall be charged to the Scheduling Coordinators in proportion to their metered Demand (including exports) during the Settlement Period(s) of the originally scheduled Outage.

**9.3.8** The ISO Outage Coordination Office shall provide notice to the Operator of the approval or disapproval of any requested Maintenance Outage. Additionally, the ISO Outage Coordination Office shall notify any Connected Entity that may in the reasonable opinion of the ISO Outage Coordination Office be directly affected by an Approved Maintenance Outage. The content of and procedures for such notice shall be established by the ISO.

**9.3.8.1 Data Required.**

The Operator of a Participating Generator owned or controlled by a Participating Generator shall submit to the ISO pursuant to Sections 9.3.4 and 9.3.5.2A its request to confirm the schedule of a planned Maintenance Outage or to change the schedule of a planned Maintenance Outage. Such request must be made to the ISO Outage Coordination Office by no later than 11:30 am three (3) working days prior to the starting date of the proposed Outage (or as specified on the ISO Home Page). Likewise, all Participating TOs shall submit a formal request to confirm or change an Approved Maintenance Outage with respect to any ISO Controlled Grid facility to the ISO Outage Coordination Office in accordance with Sections 9.3.8.2 and 9.3.8.3.

Such schedule confirmation request shall specify the following:

- (a) the Generating Unit or System Unit name and Location Code, or the identification of the transmission system element(s) to be maintained including location;
- (b) the nature of the maintenance to be performed;

- (c) the date and time the Outage is to begin;
- (d) the date and time the Outage is to be completed;
- (e) the time required to terminate the Outage and restore the Generating Unit to normal capacity or the transmission system to normal operation;
- (f) identification of primary and alternate telephone numbers for the Operator's single point of contact; and
- (g) in the case of a request for a change to an Approved Maintenance Outage, the date and time of the original Approved Maintenance Outage.

**9.3.8.2 Three (3) Day Prior Notification.**

Any request to confirm an Approved Maintenance Outage that may affect the transfer capability of any part of the ISO Controlled Grid must be submitted no later than 11:30 am at least three (3) working days prior to the starting date of the Approved Maintenance Outage (or as posted on the ISO Home Page). This Section applies to facilities as described on the ISO Home Page.

Failure to submit a request for an Outage by the proper time may mean a delay in approval from the ISO or may cause that Outage to be designated as a Forced Outage based on the nearness of the request to the requested Outage date.

**9.3.8.3 One (1) Day Prior Notification.**

Any request to confirm or change the Schedule for an Approved Maintenance Outage requiring only one day notice (as detailed on the ISO Home Page) must be submitted no later than 11:30 am at least one (1) day prior to the starting date of the Outage (or as specified on the ISO Home Page). Failure to submit a request for an Outage by the proper time may mean a delay in approval from the ISO or may cause that Outage to be designated as a Forced Outage.

**9.3.8.4 Priority of Outage Requests.** Outage requests which are listed in the long-range maintenance schedules submitted to and approved by the ISO will be given a priority in the scheduling and approval of Outage requests over those which have not been listed.

**9.3.8.5 Delay.** The ISO Outage Coordination Office may delay its approval of an Approved Maintenance Outage schedule if sufficient or complete information is not received by the ISO Outage Coordination Office within the time frames provided in Sections 9.3.8.2 and 9.3.8.3.

**9.3.9 Final Approval, Delay and Withholding.**

On the day on which an Approved Maintenance Outage is scheduled to commence, the Operator shall contact the ISO Control Center for final approval of the Maintenance Outage. No Maintenance Outage shall commence without such final approval (including the time of release, in hours and minutes) being obtained from the ISO Control Center whose decision shall be final. The ISO Outage Coordination Office may delay its approval of a scheduled Maintenance Outage for a Participating Generator if sufficient or complete information is not received by the ISO Outage Coordination Office within the time frames set forth in Section 9.3.8.1. The ISO Control Center shall have the authority to withhold a Final Approval for an Approved Maintenance Outage for reasons of System Reliability, security or system status of the ISO Controlled Grid or market impact. The ISO Control Center shall immediately notify the relevant Operator of its intention to withhold the Final Approval. The Generator Maintenance Outage or ISO Controlled Grid facility Maintenance Outage will then be rescheduled pursuant to this ISO Tariff.

**9.3.10 Forced Outages.**

**9.3.10.1** Coordination of all Forced Outages (consistent with Sections 9.3.4 and 9.3.5.2A) will be through the single point of contact between the Operator and the ISO Control Center.

**9.3.10.1A** Each Participating TO shall report any change or potential change in equipment status of the Participating TO's transmission assets turned over to the control of the ISO or in equipment that affects transmission assets turned over to the control of the ISO immediately upon discovery to the ISO (this will include line and station equipment, line protection, Remedial Action Schemes and communication problems, etc.). Each Participating TO shall also keep the ISO immediately informed upon discovery as to any change or potential change in the Participating TO's transmission system that could affect the reliability of the ISO Controlled Grid. This would include, but is not limited to, adverse weather conditions, fires, bomb threats, system failures, etc.

**9.3.10.2** Any Operator, upon identification of a situation likely to result in a Forced Outage within the next twenty-four (24) hours unless immediate corrective action is taken, where such action requires the removing from service or reducing the maximum output capability of a Generating Unit by 10 MW or more from the value most recently recorded in SLIC, or removing a transmission facility from service, shall communicate directly with the ISO Control Center. All such notifications of Forced Outages shall be communicated to the ISO Control Center with as much notice as possible in order that the necessary security analysis and ISO Controlled Grid assessments may be performed. Any Operator, upon identification of a situation likely to result in a Forced Outage but of a nature not requiring a removal from service until some time more than twenty-four (24) hours in the future will be subject to the provisions of Section 9 of this ISO Tariff with respect to any necessary Outage except the requirements imposing time limits for notification will be waived and the request will be expedited by the ISO provided notice is given as soon as possible.

**9.3.10.2.1** If prior notice of a Forced Outage cannot be given, the Operator of a Generating Unit is required to notify the ISO within 60 minutes after discovering any change in the maximum output capability of at least 10 MW or 5% of the value registered in the Master File, whichever is greater, from the value registered in SLIC that lasts for 15 minutes or longer.

**9.3.10.3** The ISO Control Center shall coordinate any operational changes necessary to accommodate a Forced Outage and Market Participants shall comply with the ISO's instructions given for that purpose.

**9.3.10.4** All Forced Outages shall be communicated by the ISO Control Center to Operators likely to be affected by the Outage using the same procedures adopted for Maintenance Outage coordination procedures.



**9.3.10.5** With respect to Forced Outages of Generating Units that result in a reduction in maximum output capability that lasts 15 minutes or longer of 40 MW or more below the value registered in the Master File and 10% of the value registered in the Master File, the Operator shall provide to the ISO an explanation of the Forced Outage and the estimated return time, within two (2) Business Days after the Operator initially notifies the ISO pursuant to Section 9.3.10.2.1 of the change in maximum output capability. The explanation shall include a description of the equipment failure or other cause and a description of all remedial actions taken by the Operator. Upon request of the ISO, Operators, and where applicable, Eligible Customers, Scheduling Coordinators, UDCs and MSSs promptly shall provide information requested by the ISO to enable the ISO to review the changes made to the maximum output capability or to provide further information relative to the explanation of the Forced Outages submitted by the Operator and to prepare reports on Forced Outages. If the ISO determines that any Forced Outage may have been the result of gaming or other questionable behavior by the Operator, the ISO shall submit a report describing the basis for its determination to the FERC. The ISO shall consider the following factors when evaluating the Forced Outage

was the result of gaming or other questionable behavior by the Operator: 1) if the Forced Outage coincided with certain market conditions such that the Forced Outage may have influenced market prices or the cost of payments associated with out-of-sequence dispatches, out-of-market dispatches, or Real Time Market dispatches above the Marginal Proxy Clearing Price or Non-Emergency Clearing Price Limit, as applicable; 2) if the Forced Outage coincided with a change in the bids submitted for any units or resources controlled by the Operator or the Operator's Scheduling Coordinator; 3) if the ISO had recently rejected a request for an Outage for, or to shut down, the Generating Unit experiencing the Forced Outage; 4) if the timing or content of the notice of the Forced Outage provided to the ISO was inconsistent with subsequent reports of or the actual cause of the Outage; 5) if the Forced Outage or the duration of the Forced Outage was inconsistent with the history or past performance of that Generating Unit or similar Generating Units; 6) if the Forced Outage created or exacerbated Congestion; 7) if the Forced Outage was extended with little or no notice; 8) if the Operator had other alternatives to resolve the problems leading to the Forced Outage; 9) if the Operator took reasonable action to minimize the duration of the Forced Outage; or 10) if the Operator failed to provide the ISO an explanation of the Forced Outage within two (2) Business Days or failed to provide any additional information or access to the generating facility requested by the ISO within a reasonable time.

#### **9.3.10.6 Other Control Areas.**

The ISO Outage Coordination Office shall make all reasonable efforts to coordinate Outages involving other Control Areas or affecting an intertie, import or export capability not under the Operational Control of the ISO to the extent that they may affect the reliability of the ISO Controlled Grid.

#### **9.4 Outage Coordination For New Facilities.**

**9.4.1 Coordination by ISO.** The procedure to energize and place in service any new or relocated piece of equipment, connected to the ISO Controlled Grid, must be set out by the Operator or Connected Entity in a written procedure and coordinated by the ISO Outage Coordination Office.

**9.4.2 Types of Work Requiring Coordination.**

The types of work which the ISO will coordinate includes any new addition, replacement or modification to the ISO Controlled Grid, including:

- (a) transmission lines forming part of the ISO Controlled Grid;
- (b) equipment including circuit breakers, transformers, disconnects, reactive devices, wave traps, forming part of the ISO Controlled Grid;
- (c) Generating Unit interconnections; and
- (d) protection and control schemes, including RAS, SCADA, EMS, or AGC.

**9.4.3 Uncomplicated Work.**

When line rearrangements and/or station equipment work is uncomplicated and easily understood, the ISO Outage Coordination Office may determine that the work can be accomplished using Outages approved in accordance with Section 9.3.6. The ISO Outage Coordination Office will make this determination in coordination with the respective requesting Operator or Connected Entity.

**9.4.4 Special Procedures for More Complex Work.**

**9.4.4.1 Responsibility for Preparation.**

In cases to which 9.4.3 does not apply, it is the responsibility of the requesting Operator or Connected Entity to prepare a written procedure to enable the ISO to approve Outages in a manner that enables the necessary work to proceed. The ISO Outage Coordination Office must approve the procedure.

**9.4.4.2 Information to be Provided to the ISO.**

The written procedure must be received by the ISO Outage Coordination Office a minimum of four (4) weeks prior to the start of procedure. Adequate drawings will be attached to the procedure to help clarify the work being performed and the Outages that will be required to complete the work must be specified. The procedure shall include all of the information referred to on the ISO Home Page.

**9.4.4.3 Approval of the Procedure.**

Upon receipt of the procedure and drawings referred to in Section 9.4.4.2, the ISO Outage Coordination Office will review the procedure and notify the Operator or Connected Entity of any required modifications. The ISO Outage Coordination Office may, at its discretion, require changes to and more detail to be inserted in the procedure. The requesting Operator or Connected Entity will consult with other entities likely to be affected and will revise the procedure, following any necessary or appropriate discussions with the ISO to reflect the requirements of the ISO. Following the ISO approval, an approved copy of the procedure will then be transmitted to the Operator or Connected Entity and the other entities likely to be affected.

**9.4.4.4 Changes to Procedure.**

Once the procedure is approved by the ISO Outage Coordination Office any modifications to the procedure will require the requesting Operator or Connected Entity to notify the ISO Outage Coordination Office with as much lead time as possible of the recommended changes. The modified procedure will then have to be approved by the ISO Outage Coordination Office in accordance with Section 9.4.4.2 and 9.4.4.3.

**9.4.4.5 Approval of Work Requiring Coordination.**

No work can begin pursuant to any approved procedure unless approved by the ISO Outage Coordination Office.

**9.5 Records.**

The ISO and all Operators shall develop procedures to keep a record of approved Maintenance Outages as they are implemented and to report the completion of approved Maintenance Outages. Such records are available for inspection by Operators and Connected Entities at the ISO Outage Coordination Office. Only those records pertaining to the equipment or facilities owned by the relevant Operator or Connected Entity will be made available for inspection at the ISO Outage Coordination Office, and such records will only be made available provided notice is given in writing to the ISO fifteen (15) days in advance of the requested inspection date.

**9.6 Facility Owner.**

The Facility Owner shall remain solely and directly responsible for the performance of all maintenance work, whether on energized or de-energized facilities, including all activities related to providing a safe working environment.

**10 METERING.**

**10.1 Applicability.**

Unless otherwise expressly stated to the contrary, the requirements set forth in these Sections 10.1 to 10.5 inclusive apply only to ISO Metered Entities. If an ISO Metered Entity is also a Scheduling Coordinator, it shall be treated as an ISO Metered Entity for the purposes of Section 10 of the ISO Tariff. Such an ISO Metered Entity will not be required to enter into a Scheduling Coordinator Meter Service Agreement unless it represents any metered entities other than itself. A Scheduling Coordinator Meter Service Agreement entered into by an ISO Metered Entity shall only apply to those metered entities that the ISO Metered Entity represents; the Scheduling Coordinator Meter Service Agreement shall not apply to the ISO Metered Entity other than in its capacity as Scheduling Coordinator for those metered entities.

**10.1.1 Role of the ISO.**

The ISO is responsible for establishing and maintaining the revenue meter data acquisition and processing system (MDAS). MDAS will acquire revenue quality meter data for use in the ISO's Settlement and billing process. The ISO is also responsible for:

- (a) setting standards and procedures for the registration, certification, auditing, testing and maintenance of revenue quality meters and meter data servers; and
- (b) for establishing procedures for the collection, security, validation and estimation of Meter Data for metered entities that are subject to the ISO Tariff.

**10.1.3 Netting.**

**10.1.3.1 Permitted Netting.**

ISO Metered Entities may, when providing Meter Data to the ISO, net values for Generating Unit output and auxiliary Load equipment electrically connected to that Generating Unit at the same point provided that the Generating Unit is on-line and is producing sufficient output to serve all of that auxiliary Load equipment. For example, where a Generating Unit's auxiliary load equipment is served via a distribution line that is separate from the switchyard to which the Generating Unit is connected, that Generating Unit and auxiliary load equipment will not be considered to be electrically connected at the same point.

**10.1.3.2 Prohibited Netting.**

ISO Metered Entities may not net values for Generating Unit output and Load. ISO Metered Entities that serve third party Load connected to a Generating Unit's auxiliary system must add that third party Load to the Generating Unit's output. The ISO Metered Entity may add that third party Load to the Generating Unit's output either by means of a hard wire local meter connection between the metering systems of the third party Load and the Generating Unit or by requesting the ISO to use MDAS to perform the addition. The ISO Metered Entity must ensure that the third party Load has Metering Facilities that meet the standards referred to in the ISO Tariff.

**10.1.5 Access to Meter Data.**

The ISO has complete authority over all rights of access to (and has authority to deny access to) the ISO's revenue meter data acquisition and processing system including servers (where used), interface equipment, and software needed to collect the relevant information for Settlement, billing and related purposes. Each Market Participant acknowledges this ISO authority as a condition of ISO Controlled Grid service and participation. For ISO Metered Entities, authority over the sealing of meters, and all related metering facilities, shall reside solely with the ISO for all ISO designated Meter Points, regardless of any remote electronic access that an ISO Metered Entity or its Scheduling Coordinator may have provided to third parties, except as otherwise may be required by law, FERC, any Local Regulatory Authority or other provision of this ISO Tariff. Meter Data supplied by an ISO Metered Entity shall be

made available by the ISO to the Scheduling Coordinator representing such ISO Metered Entity and the other authorized users identified in its Meter Service agreement, but shall not be disclosed to any other third party except as may otherwise be required by law, FERC, any Local Regulatory Authority or other provision of this ISO Tariff. Access by third parties other than authorized users to Meter Data held by the ISO shall be coordinated through the Scheduling Coordinator representing the relevant ISO Metered Entity that supplied the data and shall not be obtained directly from the ISO on any basis including, without limitation, by the polling of the ISO's revenue meter data acquisition and processing system via WEnet.

**10.1.6 Data Retention by the ISO.**

The ISO will maintain a record of all:

- (a) Meter Data provided to it;
- (b) Settlement Quality Meter Data provided to it; and
- (c) Settlement Quality Meter Data produced by it,

for a period of 18 months on site at the ISO's facilities and for a period of 10 years in the ISO's archive storage facilities. The ISO will, on reasonable notice, provide an Scheduling Coordinator with access to Meter Data or Settlement Quality Meter Data provided that the Scheduling Coordinator requesting access represented the entity that submitted that data at the time the data was submitted to the ISO.

**10.2.1 Responsibilities of ISO Metered Entities.**

**10.2.1.1 Duty to Provide Meter Data.**

ISO Metered Entities shall ensure that Meter Data from their meters directly connected to the ISO Controlled Grid or at interconnections thereto, including interconnections between utility Service Areas which have separate UFE calculations, is made available to the ISO revenue Meter Data acquisition and processing system in accordance with the requirements of these Sections 10.1 to 10.5 and Appendix O. Pursuant to this obligation, the ISO shall establish revenue metering protocols for such ISO Metered Entities.

**10.2.1.2 Format for Data Submission.**

**10.2.1.2.1 Data Provided Directly From ISO Metered Entities.**

ISO Metered Entities must ensure that the Meter Data obtained by MDAS directly from their revenue quality meters is raw, unedited and unaggregated Meter Data in kWh and kVarh values. The ISO will be responsible for the validation, editing and estimation of that Meter Data in order to produce Settlement Quality Meter Data.

**10.2.1.2.2 Data Provided From Meter Data Servers.**

ISO Metered Entities or Scheduling Coordinators representing ISO Metered Entities must ensure that the Meter Data provided to MDAS from a Compatible Meter Data Server identifies the relevant ISO Metered Entity and is raw, unedited and unaggregated Meter Data in kWh and kVarh values. The ISO will be responsible for the validation, editing and estimation of that Meter Data in order to produce Settlement Quality Meter Data.

**10.2.1.3 Format for Data Requests.**

Scheduling Coordinators may obtain Settlement Quality Meter Data relating to the ISO Metered Entities they represent by directly polling MDAS using the Meter Data Request Format. The ISO will use its best efforts to ensure that such data is made available to Scheduling Coordinators within 5 Business Days of the relevant Trading Day.

**10.2.2 Duty to Install and Maintain Meters.**

The ISO may require ISO Metered Entities to install, at their cost, additional meters and relevant metering system components, including real-time metering, at ISO specified Meter Points or other locations as deemed necessary by the ISO, in addition to those connected to or existing on the ISO Controlled Grid at the ISO Operations Date, including requiring the metering of transmission interfaces connecting Zones. In directing the addition of meters and metering system components that would impose increased costs on an ISO Metered Entity, the ISO shall give due consideration to whether the expected benefits of such equipment are sufficient to justify such increased costs. ISO Metered Entities, at their cost, shall install



and maintain, or cause to be installed and maintained, metering equipment and associated communication devices at ISO designated Meter Points to meet the requirements of this Section 10 and Appendix O. Nothing in this Section 10 shall preclude ISO Metered Entities from installing additional meters, instrument transformers and associated communications facilities at their own cost.

**10.2.3 Metering Standards.**

Each ISO Metered Entity shall ensure that each of its meters used to provide Meter Data to the ISO complies with the meter standards and accuracy requirements for meters set forth in Appendix J. In relation to revenue quality meters, the ISO will publish on the ISO Home Page, for information purposes and without liability on the part of the ISO, a list of the types and manufacturers of revenue quality meters that have been independently certified as meeting the standards for revenue quality meters referred to in the ISO Tariff.

**10.2.4 Certification of Meters.**

Each ISO Metered Entity that makes Meter Data available to the ISO shall ensure that metering facilities used to produce such Meter Data have been certified by the ISO as meeting the requirements of Sections 10.1 to 10.5 and Appendix O. Certification of the relevant metering facilities shall only be provided upon the production of such evidence as the ISO may reasonably require to demonstrate that the facilities in question have been documented, inspected and successfully tested by the ISO or an ISO Authorized Inspector for conformance to the standards and accuracy requirements referred to in Appendix J and Appendix O. Meters of End-Use ISO Metered Entities in place as of the ISO Operations Date are deemed to be certified as in compliance with Appendix J and such End-Users shall not be required to enter into meter service agreements with the ISO provided that their Scheduling Coordinators have entered into a meter service agreement with the ISO. ISO certification pursuant to this Section 10.2.4 shall not relieve the ISO Metered Entity from the obligation to ensure that its metering facilities continue to remain in compliance with the requirements of Sections 10.1 to 10.5 and Appendix O.

**10.2.4.1 Requesting Certification.**

An ISO Metered Entity seeking certification of its Metering Facilities shall independently engage an ISO Authorized Inspector to perform certification of its Metering Facilities. An ISO Metered Entity may request the ISO to perform the certification of its Metering Facilities if it would be impractical or impossible for that ISO Metered Entity to engage an ISO Authorized Inspector to perform the certification. The ISO may refuse any such request by an ISO Metered Entity if it is of the opinion that it is not impractical or impossible for that ISO Metered Entity to engage an ISO Authorized Inspector.

**10.2.4.2 Certification by the ISO.**

All requests made to the ISO to perform the certification of Metering Facilities must be made in accordance with the Technical Specifications and be accompanied by the documents referred to in the Technical Specifications. If the ISO agrees to perform the certification of Metering Facilities, the ISO and that ISO Metered Entity will agree the terms and conditions on which the ISO will undertake the certification including the assistance to be provided by the ISO Metered Entity, the responsibility for costs and the indemnities to be provided.

**10.2.4.3 Criteria for Certification.**

Subject to any exemption granted by the ISO under this ISO Tariff, the criteria for certifying the Metering Facilities of ISO Metered Entities pursuant to the ISO Tariff are the criteria set forth in the Technical Specifications.

**10.2.4.4 Certificate of Compliance.**

If the Metering Facilities satisfy the certification criteria (after taking into account any exemptions to the certification criteria granted by the ISO), the ISO will:

- (a) issue a Certificate of Compliance in respect of those Metering Facilities; and
- (b) provide the original Certificate of Compliance to the ISO Metered Entity that requested the certification of those Metering Facilities.

**10.2.4.5 Obligation to Maintain Certification.**

ISO Metered Entities must ensure that their Metering Facilities continue to comply with the certification criteria referred to in the ISO Tariff.

**10.2.4.6 Revocation of Certification.**

The ISO may revoke in full or in part any Certificate of Compliance if:

- (a) it has reasonable grounds to believe that all or some of the Metering Facilities covered by that Certificate of Compliance no longer meet the certification criteria for Metering Facilities contained in the ISO Tariff; and
- (b) it has given written notice to the relevant ISO Metered Entity stating that it does not believe that the identified Metering Facilities meet the certification criteria (including the reasons for that belief) and that ISO Metered Entity fails to satisfy the ISO, within the time period specified in the ISO's notice, that the Metering Facilities meet the certification criteria.

If the ISO revokes in full or part a Certificate of Compliance, the relevant ISO Metered Entity may seek recertification of the relevant Metering Facilities by requesting certification in accordance with Section 10.2.4.6. Such request must indicate that it relates to Metering Facilities in respect of which the ISO has previously revoked a Certificate of Compliance.

**10.2.4.7 Changes to Certified Metering Facilities.**

The ISO's approval must be obtained before any modifications or changes are made to any Metering Facilities of an ISO Metered Entity which have been certified pursuant to the ISO Tariff. The ISO may, at its discretion, require those Metering Facilities to be recertified.

**10.2.5 ISO Authorized Inspectors.**

**10.2.5.1 Published List of Inspectors.**

The ISO will publish on the ISO Home Page, for informational purposes only, a list of the ISO Authorized Inspectors and details of the procedure for applying to become an ISO Authorized Inspector. The ISO will, on request, provide a copy of that list to entities that do not have access to the ISO Home Page.

**10.2.5.2 Current Certificates.**

It is the responsibility of the relevant ISO Metered Entity to ensure that any inspector it engages to undertake the certification of its Metering Facilities holds a current certificate of approval issued by the ISO which authorizes that inspector to carry out the duties of an ISO Authorized Inspector.

**10.2.6 Metering Communications.**

The ISO's revenue meter data acquisition and processing system shall collect and process Meter Data made available by ISO Metered Entities pursuant to meter service agreements. Meter Data for ISO Metered Entities shall be made available to the ISO's revenue meter data acquisition and processing system either directly by the ISO Metered Entity or via a central data server which collects Meter Data for various ISO Metered Entities provided that the central data server does not aggregate or adjust that Meter Data. Meter Data on the ISO's revenue meter data acquisition and processing system may be accessed from the system's database by the ISO Settlement system, other ISO application programs, relevant Scheduling Coordinators and other authorized users as identified in the relevant meter service agreement ("other authorized users") subject to the ISO being satisfied that access by such authorized users will not adversely effect the security of data held by the ISO. ISO Metered Entities shall ensure that their metering facilities are compatible with the ISO revenue meter data acquisition and processing system for these purposes. The ISO may, at its discretion, exempt an ISO Metered Entity from the requirement to make Meter Data directly available to the ISO's revenue meter data acquisition and processing system, for example, where the installation of communication links is unnecessary, impracticable or uneconomic. The ISO shall maintain the revenue meter data acquisition and processing system and remedy any faults occurring in such system. Scheduling Coordinators and other authorized

users requiring Settlement Quality Meter Data for ISO Metered Entities they schedule or supply may obtain such data by polling the revenue meter data acquisition and processing system via WEnet in accordance with Appendix O. Scheduling Coordinators and other authorized users shall not poll the ISO revenue meter data acquisition and processing system for any other purpose, unless specifically authorized in their meter service agreement. During the period in which a Scheduling Coordinator is unable to poll directly the ISO revenue meter data acquisition and processing system, that Scheduling Coordinator will be responsible for providing the ISO with Settlement Quality Meter Data in accordance with Appendix O.

**10.2.7 Meter Service Agreements for ISO Metered Entities.**

**10.2.7.1 Requirement for Meter Service Agreements.**

The ISO shall establish meter service agreements with ISO Metered Entities for the collection of Meter Data. Such agreements shall specify that ISO Metered Entities shall make available to the ISO's revenue meter data acquisition and processing system, Meter Data meeting the requirements of these Sections 10.1 to 10.5 inclusive and Appendix O. The meter service agreement and the ISO Tariff Appendix O shall specify the format of Meter Data to be submitted, which shall be identified by TO, Distribution System, Zone, ISO Controlled Grid interface point and other information reasonably required by the ISO. Meter service agreements will identify other authorized users which are allowed to access the Settlement Quality Meter Data held by the ISO. The ISO will ensure that the relevant UDCs and TOs are included as other authorized users.

**10.2.7.2 ISO Metered Entities.**

ISO Metered Entities will either submit Meter Data directly to MDAS via Compatible Meter Data Servers or their revenue quality meters will be directly polled by MDAS.

**10.2.7.3 Scheduling Coordinator Metered Entities.**

Scheduling Coordinators must use Compatible Meter Data Servers to submit Settlement Quality Meter Data to the ISO for those Scheduling Coordinator Metered Entities that they represent. Scheduling Coordinators shall provide the ISO with the current password and any other information it needs to

access, at all times, the Compatible Meter Data Servers of those Scheduling Coordinators so as to ensure the security of those servers. Each Scheduling Coordinator must also provide the ISO with the WEnet protocol address of the Scheduling Coordinator's file server with which MDAS will interface to obtain or provide Settlement Quality Meter Data.

**10.2.8 Security and Meter Data Validation Procedures.**

The meter service agreement for each ISO Metered Entity and the ISO metering protocols shall set out, in such detail as the ISO may deem necessary, the Meter Data security and validation procedures that the ISO shall apply to the Meter Data made available by each ISO Metered Entity. The ISO may base the security and validation procedures on historical data or an appropriate alternative data source. The ISO shall correct or replace or cause to be corrected or replaced inaccurate or missing data. The procedure may include data correction and substitution algorithms which shall estimate, substitute and flag such inaccurate or missing data. Any necessary correction or replacement shall be approved by the ISO prior to the data being sent to the ISO Settlement system. Security and validation measures for existing Tie Point Meters shall be consistent with existing arrangements with the operators in adjacent Control Areas. Any additional measures or changes to the existing arrangements shall only be implemented upon mutual agreement of the ISO and the operator in the adjacent Control Area.

**10.2.8.1 Meter Site Security.**

Metering Facilities of ISO Metered Entities must meet the following requirements:

- (a) secondary devices that could have any impact on the performance of the Metering Facilities must be sealed; and
- (b) all Metering Facilities (including terminal servers and multiport devices) must be sealed.

**10.2.8.2 Third Party Access to Meters.**

(a) Local Access.

If an ISO Metered Entity desires to grant a third party local access to its revenue quality meters, those meters must be equipped with ISO certified RS-232 or optical ports and software. The ISO may set the password and any other security requirements for locally accessing the revenue quality meters of ISO Metered Entities so as to ensure the security of those meters and their Meter Data. The ISO may alter the password and other requirements for locally accessing those meters from time to time as it determines necessary. The ISO must provide ISO Metered Entities with the current password and other requirements for locally accessing their revenue quality meters. ISO Metered Entities must not give a third party local access to its revenue quality meters or disclose to that third party the password to its revenue quality meters without the ISO's prior approval which shall not unreasonably be withheld. ISO Metered Entities will be responsible for ensuring that a third party approved by the ISO to access its revenue quality meters only accesses the data it is approved to access and that the data are only accessed for the purposes for which the access was approved.

(b) Remote Access.

The ISO may set the password and any other security requirements for remotely accessing the revenue quality meters of ISO Metered Entities so as to ensure the security of those meters and their Meter Data. The ISO will alter the password and other requirements for remotely accessing those meters from time to time as it determines necessary. The ISO must provide ISO Metered Entities with the current password and other requirements for remotely accessing their revenue quality meters. ISO Metered Entities must not give a third party remote access to its revenue quality meters or disclose to that third party the password to its revenue quality meters without the ISO's prior approval which shall not unreasonably be withheld. ISO Metered Entities will be responsible for ensuring that a third party approved by the ISO to access its revenue quality meters only accesses the data it is approved to access and that the data are only accessed for the purposes for which the access was approved.

**10.2.8.3 Third Party Access Withdrawn.**

If, in the reasonable opinion of the ISO, access granted to a third party by an ISO Metered Entity in any way interferes or impedes with the ISO's ability to poll any revenue quality meter, the ISO may require that ISO Metered Entity to immediately withdraw any access granted to a third party.

**10.2.8.4 MDAS Security.**

The ISO will provide to entities that are permitted to access MDAS, the access password and any other requirements needed to access MDAS. The ISO must maintain the security and integrity of Meter Data and Settlement Quality Meter Data received by MDAS.

**10.2.9 Validation, Editing and Estimating of Meter Data.**

**10.2.9.1 ISO Metered Entities.**

Subject to any exemption granted by the ISO under Section 10.3.18, the raw Meter Data which ISO Metered Entities submit to the ISO will be processed by MDAS using the validation, editing and estimation procedures published on the ISO Home Page from time to time in order to produce Settlement Quality Meter Data.

**10.2.9.2 Obligation to Assist.**

At the request of the ISO, ISO Metered Entities shall assist the ISO in correcting or replacing defective data and in detecting and correcting underlying causes for such defects. Such assistance shall be rendered in a timely manner so that the Settlement process is not delayed.

**10.2.9.3 Availability of Meter Data.**

Subject to any exemption granted by the ISO under this ISO tariff, Meter Data must be recorded:

- (a) at 5-minute intervals by Loads and Generators providing Ancillary Services and/or Supplemental Energy; and
- (b) at 1-hour intervals by other ISO Metered Entities.



Meter Data will be collected regularly by MDAS in accordance with the frequency for collection determined by the ISO from time to time. The ISO may also collect Meter Data on demand. The ISO will issue such demands using voice communications. If the ISO issues a demand for Meter Data, the ISO Metered Entity from which the ISO demands that Meter Data must provide that Meter Data to the ISO within 10 minutes of receiving the demand from the ISO or, if that ISO Metered Entity has been granted an exemption from directly interfacing with MDAS pursuant to Section 10.3.18 within the time period specified in that exemption.

**10.2.9.4 Failure to Achieve Required Standards.**

Meter service agreements shall set out appropriate measures and rights the ISO may exercise upon any failure by the other party to meet the requirements for meter standards and accuracy set out in these Sections 10.1 to 10.5 inclusive.

**10.2.9.5 ISO Imposed Penalties and Sanctions.**

The ISO shall have the authority to impose penalties and sanctions, including but not limited to suspension of trading rights, if an ISO Metered Entity provides fraudulent metering data to the ISO. Such penalties shall be approved by FERC.

**10.2.10.1 Requirement for ISO Approval.**

After the ISO Operations Date, ISO Metered Entities may only install revenue quality meters on the low voltage side of step-up transformers if they have obtained the prior approval of the ISO in accordance with Section 10.2.10 of the ISO Tariff. ISO Metered Entities that have installed low voltage side metering, whether such installation was before or after the ISO Operations Date, shall apply the Transformer Loss Correction Factor in accordance with Section 10.2.10.4.

**10.2.10.2 Request for Approval.**

If an ISO Metered Entity wishes to install low voltage side metering, it shall submit a written request to the ISO. That ISO Metered Entity must:

- (a) request approval to apply the Transformer and/or Line Loss Correction Factor to its revenue quality meter or request approval to have MDAS apply the Transformer and/or Line Loss Correction Factor;
- (b) provide detailed reasons to support the request for low side metering;
- (c) provide all of the information in relation to the Transformer and/or Line Loss Correction Factor required by the Technical Specifications; and
- (d) any other information reasonably requested by the ISO.

**10.2.10.3 ISO's Grounds for Approval.**

The ISO shall approve a request made under Section 10.2.10.2 only if the ISO is satisfied that adequate accuracy and security of Meter Data obtained can be assured in accordance with Section 10.2.10 of the ISO Tariff. The ISO's rejection of such a request may be referred to the ISO ADR Procedures if, after using all reasonable good faith efforts, the ISO and an ISO Metered Entity are unable to reach agreement.

**10.2.10.4 Application of Transformer and/or Line Loss Correction Factor.**

ISO Metered Entities will apply the Transformer and/or Line Loss Correction Factor as set forth in the Technical Specifications. If the ISO has approved a request from an ISO Metered Entity for MDAS to apply the Transformer and/or Line Loss Correction Factor, MDAS will apply the Transformer and/or Line Loss Correction Factor set forth in the Technical Specifications. If MDAS is used to apply the Transformer and/or Line Loss Correction Factor, the ISO may require the ISO Metered Entity to pay the reasonable costs incurred by it in applying the Transformer and/or Line Loss Correction Factor

**10.2.11 Audit, Testing Inspection and Certification Requirements.**

ISO Metered Entities are subject to ISO audit, testing and certification requirements for their entire metering system(s), including all relevant communication facilities and instrument transformers. The ISO will have the right to either conduct any audit or test it considers necessary or to witness such audit or test carried out by the ISO Metered Entity or an ISO Authorized Inspector engaged by the ISO Metered Entity or the ISO to carry out those audits or tests.

**10.2.12 Exemptions from ISO Metering Standards.**

The ISO has the authority to grant exemptions from certain ISO metering standards for an ISO Metered Entity provided the ISO annually publishes details of the criteria the ISO will use when considering an application for an exemption and details of specific exemptions which are available. An ISO Metered Entity with an interim exemption shall provide site specific Settlement Quality Meter Data to the ISO in accordance with its meter service agreement and the Appendix O. A Generator connected directly to a UDC Distribution System and that sells its entire output to the UDC in which the Generator is located is not subject to the audit, testing or certification requirements of the ISO.

**10.2.13 Maintenance of Metering Facilities.**

**10.2.13.1 Duty to Maintain Metering Facilities.**

ISO Metered Entities must maintain their Metering Facilities so that those Metering Facilities continue to meet the standards prescribed by the ISO Tariff (including Appendix J).

If the Metering Facilities of an ISO Metered Entity require maintenance in order to ensure that they operate in accordance with the requirements of the ISO Tariff the ISO Metered Entity shall notify the ISO by telephone or other means specified by the ISO of the need for such maintenance. The ISO Metered Entity must also inform the ISO of the time period during which such maintenance is expected to occur. During that period, the ISO Metered Entity or its authorized representative shall be entitled to access those sealed Metering Facilities to which access is required in order to undertake the required maintenance.

During periods for which no Meter Data is available from a meter which has a current Certificate of Compliance, the ISO will substitute estimated meter data for that ISO Metered Entity using the estimation procedures referred to in Section 10.2.9. That estimated meter data will be used by the ISO in its Settlement and billing process.

**10.2.13.2 Repairs.**

If a revenue quality meter of an ISO Metered Entity requires repairs to ensure that it operates in accordance with the requirements of the ISO Tariff, the ISO Metered Entity must immediately notify the ISO of the need for repairing that meter and must ensure that those repairs are completed:

- (a) where there is no Check Meter installed, within 12 hours of the notification to the ISO; or
- (b) where there is a Check Meter installed, within 5 Business Days of the notification to the ISO.

During periods for which no Meter Data is available from a meter which has a current Certificate of Compliance, the ISO will substitute estimated meter data for that ISO Metered Entity using the estimation procedures referred to in Section 10.2.9. That estimated meter data will be used by the ISO in its Settlement and billing process.

In respect of Metering Facilities (other than a revenue quality meter) of an ISO Metered Entity that need repair, the ISO Metered Entity shall notify the ISO of that need and, after consultation with the ISO Metered Entity, the ISO will set the time period in which such repairs must be completed.

**10.2.14 Installation of Additional Metering Facilities.**

**10.2.14.1 ISO Requirement to Install Additional Metering.**

**10.2.14.1.1 ISO Authority to Require Additional Metering Facilities.**

The ISO has authority under Section 10.2.2 the ISO Tariff to require an ISO Metered Entity to install Metering Facilities in addition to those Metering Facilities on the ISO Controlled Grid at the ISO Operations Date. In directing the addition of meters and metering system components that would impose increased costs on an ISO Metered Entity, the ISO shall give due consideration to whether the expected benefits of such equipment are sufficient to justify such increased costs. An ISO Metered Entity may not commence installing those additional Metering Facilities until the ISO has approved its Proposal for Installation.

**10.2.14.1.2 Requirement to Install.**

If the ISO determines that there is a need to install additional Metering Facilities on the ISO Controlled Grid, it will notify the relevant ISO Metered Entity of that need. The ISO's notice to that ISO Metered Entity will include the following information:

- (a) the location of the Meter Point at which the additional Metering Facilities are required;
- (b) the date by which the ISO Metered Entity must install the relevant Metering Facilities;
- (c) the reason for the need to install the additional metering Facilities; and
- (d) any other information that the ISO considers relevant.

**10.2.14.1.3 Obligations of ISO Metered Entity.**

An ISO Metered Entity that is notified by the ISO that it is required to install additional Metering Facilities must:

- (a) give the ISO written confirmation of receipt of that notice within 3 Business Days of receiving that notice;
- (b) submit a Proposal for Installation to the ISO within 45 Business Days of receiving that notice. The Proposal for Installation must set out the following information:
  - i. a description of the proposed Metering Facilities to be installed (which shall include all relevant schematic drawings and one-line drawings);
  - ii. a proposed timetable for the installation; and
  - iii. any other information requested by the ISO in the notice referred to in Section 10.2.14.1.2.

**10.2.14.1.4 Approval or Rejection of a Proposal for Installation.**

The ISO may either:

- (a) unconditionally approve;
- (b) conditionally approve; or
- (c) reject, a Proposal for Installation.

**10.2.14.1.5 Unconditional Approval.**

If the ISO unconditionally approves a Proposal for Installation, it will promptly notify the ISO Metered Entity that the Proposal for Installation has been approved. The ISO Metered Entity shall then commence installation of the Metering Facilities in accordance with the Proposal for Installation.

**10.2.14.1.6 Conditional Approval.**

- (a) Notification of Conditional Approval.

If the ISO conditionally approves a Proposal for Installation, it will promptly notify the ISO Metered Entity that the Proposal for Installation has been conditionally approved and set out in that notice the conditions on which approval is granted and the time period in which each such condition must be satisfied by the ISO Metered Entity.

- (b) Ability to Satisfy Conditions.

If the ISO Metered Entity disputes any condition imposed by the ISO, the ISO Metered Entity must immediately notify the ISO of its concerns and provide the ISO with the reasons for its concerns. If the ISO Metered Entity gives the ISO such a notice, the ISO may amend or waive any of the conditions on which it granted its approval or it may require the ISO Metered Entity to satisfy other conditions. The ISO and the ISO Metered Entity will use all reasonable good faith efforts to reach agreement, and in the absence of agreement either entity may refer the dispute to the ISO ADR Procedures.

(c) Notification of Satisfaction of Conditions.

The ISO Metered Entity must promptly notify the ISO when each condition in the approval has been satisfied and provide to the ISO any information reasonably requested by the ISO as evidence that such condition has been satisfied.

(d) Confirmation of Satisfaction of Conditions.

If the ISO determines that a condition in the approval of the Proposal for Installation has been satisfied, it will give the ISO Metered Entity written confirmation that the condition has been satisfied.

(e) Unsatisfied Conditions.

If the ISO determines that a condition has not been satisfied after having received notice from an ISO Metered Entity, the ISO will notify the ISO Metered Entity that it does not consider the condition satisfied and shall set out in that notice the reason(s) that it does not consider the condition satisfied. If, after using all reasonable good faith efforts, the ISO and the ISO Metered Entity are unable to agree on whether that condition is satisfied, either entity may refer the dispute to the ISO ADR Procedures.

**10.2.14.1.7 Rejection.**

If the ISO rejects a Proposal for Installation, it will promptly notify the ISO Metered Entity that the Proposal for Installation has been rejected and set out in that notice the reason for its rejection. The ISO Metered Entity must submit to the ISO a revised Proposal for Installation within 14 Business Days of receiving such notice of rejection. If the ISO rejects for a second time a Proposal for Installation submitted by an ISO Metered Entity in respect of the same or similar notice issued by the ISO under Section 10.2.14.1.2, the ISO and the ISO Metered Entity will use all reasonable good faith efforts to reach agreement on the requirements and disputed items and in the absence of agreement either entity may refer the dispute to the ISO ADR Procedures.

**10.2.14.1.8 ISO Metered Entities' Election to Install Additional Metering.**

In accordance with Section 10.2.2 of the ISO Tariff, an ISO Metered Entity may choose to install additional metering, including Check Meters. If an ISO Metered Entity installs such additional metering, such metering must, unless the ISO agrees otherwise:

- (a) be installed and maintained at the ISO Metered Entity's cost;
- (b) be located on the ISO Metered Entity's side of any primary meter; and
- (c) not interfere with the accuracy of any primary meter and, if that primary meter is directly polled by the ISO, the ISO's ability to directly poll that meter.

Any Meter Data produced by any such additional metering may be used by the ISO for Settlement and billing purposes in the event of the failure, or during tests or repairs of, the primary meter provided that such additional metering has a current Certificate of Compliance, the ISO Metered Entity gives the ISO prior verbal notice that such meter will be used and the period for which it will be used and, if the primary meter is directly polled by the ISO, the additional metering must also be capable of being directly polled by the ISO.

**10.3 Metering for Scheduling Coordinator Metered Entities.**

**10.3.1 Applicability.**

The requirements set forth in this Section 10.3 shall apply only to Scheduling Coordinators representing Scheduling Coordinator Metered Entities. If a Scheduling Coordinator Metered Entity is also a Scheduling Coordinator, it shall be treated as a Scheduling Coordinator for the purposes of Section 10 of the ISO Tariff and any references to entities that such a Scheduling Coordinator represents shall be deemed to include that Scheduling Coordinator itself.



**10.3.2 Responsibilities of Scheduling Coordinators and the ISO.**

**10.3.2.1 Duty to Provide Meter Data.**

Scheduling Coordinators shall provide the ISO with Settlement Quality Meter Data for all of the Scheduling Coordinator Metered Entities served by the Scheduling Coordinator no later than the day specified in Section 10.3.6. Settlement Quality Meter Data for Scheduling Coordinator Metered Entities shall be either (1) an accurate measure of the actual consumption of Energy by each Scheduling Coordinator Metered Entity in each Settlement Period, or (2) for Scheduling Coordinator Metered Entities connected to a UDC Distribution System and meeting that Distribution System's requirement for load profiling eligibility, a profile of that consumption derived directly from an accurate cumulative measure of the actual consumption of Energy over a known period of time and an allocation of that consumption to Settlement Periods using the applicable Approved Load Profile.

**10.3.2.2 Format for Data Submission.**

Scheduling Coordinators shall submit Settlement Quality Meter Data to MDAS for the Scheduling Coordinator Metered Entities they represent using the Meter Data Exchange Format. Subject to any exemption granted by the ISO under Section 10.3.18, Scheduling Coordinators must ensure that Settlement Quality Meter Data submitted to the ISO is in intervals of:

- (a) 5 minutes for Loads and Generators providing Ancillary Services and/or Supplemental Energy; and
- (b) 1 hour for other Scheduling Coordinator Metered Entities.

Each Scheduling Coordinator shall submit Settlement Quality Meter Data for all of the Scheduling Coordinator Metered Entities that it schedules aggregated by:

- (a) Demand Zone, Load group or bus for Demand;
- (b) the relevant unit for Generation; or
- (c) the Scheduling Point for imports and exports.

The Settlement Quality Meter Data submitted by Scheduling Coordinators may be in either kWh or MWh values.

**10.3.2.3 Format for Data Requests.**

Scheduling Coordinators may obtain Settlement Quality Meter Data relating to the Scheduling Coordinator Metered Entities they represent by requesting extracts from MDAS using the Meter Data Request Format. The ISO will ensure that such data is made available in a timely manner.

**10.3.3 Loss Factors.**

Where a Scheduling Coordinator Metered Entity is connected to a UDC's Distribution System, the responsible Scheduling Coordinator shall adjust the Meter Data by an estimated Distribution System loss factor to derive an equivalent ISO Controlled Grid level measure. Such estimated Distribution System loss factors shall be approved by the relevant Local Regulatory Authority prior to their use. The Scheduling Coordinator shall aggregate its equivalent ISO Controlled Grid-level Meter Data for Scheduling Coordinator Metered Entities

**10.3.4 Load Profile Authorization.**

Scheduling Coordinators shall be responsible for obtaining all necessary authorizations from Local Regulatory Authorities having jurisdiction over the use of profiled Meter Data in any Settlement process in which load profiles are used to allocate consumption to Settlement Periods.

**10.3.5 Communication of Meter Data.**

Each Scheduling Coordinator shall submit Settlement Quality Meter Data for Scheduling Coordinator Metered Entities to the ISO.

**10.3.6 Timing of Meter Data Submission.**

Scheduling Coordinators shall submit either hourly time-stamped Settlement Quality Meter Data for Scheduling Coordinator Metered Entities or profiled cumulative Settlement Quality Meter Data to the ISO for each Settlement Period in a Trading Day within forty-five (45) calendar days of that Trading Day.

Scheduling Coordinators shall submit Settlement Quality Meter Data to the ISO when required to do so by this ISO Tariff and the ISO Payments Calendar. Scheduling Coordinators must also submit Settlement Quality Meter Data on demand. The ISO will issue such demands using voice communications. If the ISO issues a demand for Settlement Quality Meter Data, the Scheduling Coordinator from which the ISO demands that data must submit it to the ISO within 4 hours of receiving the demand from the ISO.

**10.3.7 Meter Standards.**

Each Scheduling Coordinator, in conjunction with the relevant Local Regulatory Authority, shall ensure that each of its Scheduling Coordinator Metered Entities connected to and served from the Distribution System of a UDC shall be metered by a revenue meter complying with any standards of the relevant Local Regulatory Authority or, if no such standards have been set by that Local Regulatory Authority, the metering standards set forth in Appendix J.

**10.3.8 Access to Meter Data.**

The ISO has complete authority over rights of access to (and has authority to deny access to) its revenue meter data acquisition and processing system including servers (where used), interface equipment, and software needed to accept Settlement Quality Meter Data from Scheduling Coordinator Metered Entities for Settlement, billing and related purposes. Each Scheduling Coordinator, on behalf of itself and Market Participants that it serves or represents, acknowledges this ISO authority as a condition of access to the ISO Controlled Grid.

**10.3.8A Collection of Meter Data.**

**10.3.8A.1 Responsibility of Scheduling Coordinators.**

Each Scheduling Coordinator shall be responsible for the collection of Meter Data from the Scheduling Coordinator Metered Entities it represents and for ensuring that the Settlement Quality Meter Data supplied to the ISO meets the requirements of this Section 10.3

**10.3.9 Certification of Meters.**

Scheduling Coordinators shall ensure that revenue meters and related metering facilities of those Scheduling Coordinator Metered Entities whom they represent are certified in accordance with any certification criteria prescribed by the relevant Local Regulatory Authority or, if no such criteria have been prescribed by that Local Regulatory Authority. Scheduling Coordinators shall upon request of the ISO supply promptly copies of all certificates issued by the relevant Regulatory Authority. The End Use Meter of an ISO Metered Entity or a Scheduling Coordinator Metered Entity in place as of the ISO Operations Date is deemed to be certified as in compliance with Appendix J. Once certified, meters for Scheduling Coordinator Metered Entities need not be recertified provided such meters are maintained so as to meet the standards and accuracy requirements prescribed by any relevant Local Regulatory Authority or, if no such standards have been prescribed by that Local Regulatory Authority, such requirements as referred to in Appendix J. Recertification is not required by the ISO upon an election by a Scheduling Coordinator Metered Entity to change its Scheduling Coordinator from which it takes service.

**10.3.10 Requirement for Audit and Testing.**

**(a) Audit and Testing by Scheduling Coordinator**

Each Scheduling Coordinator shall at least annually conduct (or engage an independent, qualified entity to conduct) audits and tests of the Metering Facilities of the Scheduling Coordinator Metered Entities that it represents and the Meter Data provided to the Scheduling Coordinator in order to ensure compliance with all applicable requirements of any relevant Local Regulatory Authority. Scheduling Coordinators shall undertake any other actions that are reasonable necessary to ensure the accuracy and integrity of the Settlement Quality Meter Data provided by them to the ISO.

**(b) Audit and Testing by ISO**

Subject to any applicable Local Regulatory Authority requirements, the Metering Facilities and data handling and processing procedures of Scheduling Coordinators and Scheduling Coordinator Metered Entities are subject to audit and testing by the ISO or an ISO Authorized Inspector in accordance with Section 10.3.14.2 of the ISO Tariff. Subject to any applicable Local Regulatory Authority requirements,

the ISO will have the right to either conduct any audit or test it considers necessary or to witness such audit or test carried out by the Scheduling Coordinator, Scheduling Coordinator Metered Entity or an ISO Authorized Inspector engaged by the Scheduling Coordinator, Scheduling Coordinator Metered Entity or the ISO to carry out those audits or tests.

**10.3.11 Scheduling Coordinator to Ensure Certification.**

If the relevant Local Regulatory Authority has not prescribed any certification criteria for the Metering Facilities of a Scheduling Coordinator Metered Entity, the Scheduling Coordinator representing that Scheduling Coordinator Metered Entity must promptly notify the ISO in writing that no such criteria have been prescribed. That Scheduling Coordinator will then be responsible for ensuring that the Scheduling Coordinator Metered Entities it represents obtain and maintain Certificates of Compliance in respect of all of the Metering Facilities of those Scheduling Coordinator Metered Entities in accordance with Section 10.2.4. Scheduling Coordinators must engage an ISO Authorized Inspector to perform the certification of any Metering Facilities that are to be certified under the ISO Tariff.

**10.3.12 Certification of Meter Data Servers.**

Subject to any exemption granted by the ISO under 10.3.18 the ISO will not accept Settlement Quality Meter Data relating to a Scheduling Coordinator Metered Entity from a meter data server unless that meter data server is a Compatible Meter Data Server.

**10.3.12.1 Confirmation of Certification.**

On the written request of the ISO, each Scheduling Coordinator must give the ISO written confirmation that the Metering Facilities of each Scheduling Coordinator Metered Entity that it represents are certified in accordance with either the criteria of the relevant Local Regulatory Authority or the criteria prescribed by this Section within 5 Business Days of receiving a request from the ISO.

**10.3.12.2 Deemed Certification.**

In accordance with Section 10.3.9 of the ISO Tariff, those revenue quality meters of Scheduling Coordinator Metered Entities that are subject to certification pursuant to the ISO Tariff and which were

installed and operational as of the ISO Operations Date will be deemed to be certified for the purposes of the ISO Tariff. Revenue quality meters that have been fully installed as of the ISO Operations Date but which are not operational as of that date because they were undergoing maintenance or repairs will also be deemed to be certified in accordance with the ISO Tariff.

**10.3.13 Meter Service Agreements for Scheduling Coordinator Metered Entities.**

The ISO shall enter into meter service agreements with Scheduling Coordinators responsible for providing Settlement Quality Meter Data for Scheduling Coordinator Metered Entities to the ISO. Such agreements shall specify that Scheduling Coordinators require their Scheduling Coordinator Metered Entities to adhere to the meter requirements set forth in this Section 10.3.

**10.3.14 Approval by Local Regulatory Authority of Security and Validation Procedures.**

Scheduling Coordinators shall be responsible for obtaining any necessary approval of the relevant Local Regulatory Authority to its proposed security, validation, editing and estimation procedures. The ISO will not perform any validation, editing or estimating on the Settlement Quality Meter Data it receives from Scheduling Coordinators.

**10.3.14.1 UDC and TO Agreements.**

Each Scheduling Coordinator shall be responsible for obtaining any necessary consent from the UDCs on whose Distribution Systems or the Participating TOs on whose transmission facilities the Scheduling Coordinator has Scheduling Coordinator Metered Entities as is necessary to give effect to the procedures governing Meter Data validation and security and inspection and testing of metering facilities. Scheduling Coordinators must verify with the relevant UDC the identity of each Scheduling Coordinator Metered Entity they represent and must notify the UDC of any discrepancies of which they become aware.

**10.3.14.2 Scheduling Coordinator Metered Entity Certification, Testing and Audit.**

Subject to any Local Regulatory Authority requirements, the ISO reserves the right to inspect, test and otherwise audit the entire metering systems of the Scheduling Coordinator Metered Entity connected to the ISO Controlled Grid, from the Meter Data server to the metering system(s), and such systems shall

be subject to ISO audits and tests. However, only the Meter Data server supplying the ISO is subject to ISO certification requirements.

The Scheduling Coordinator or its designated representative shall provide the ISO with all such information, assistance and cooperation the ISO reasonably requires in order to conduct such inspections, tests and audits.

**10.3.14.3 Failure to Achieve Required Standards.**

Subject to any Local Regulatory Authority requirements, meter service agreements shall set out appropriate measures and rights the ISO may exercise upon any failure by the other party to meet the requirements for meter standards and accuracy set out in this Section 10.3.

**10.3.14.4 Data Access.**

Meter Data of a Scheduling Coordinator Metered Entity remains the property of that Scheduling Coordinator Metered Entity and shall be made available to third parties only with its express permission or as otherwise required by law or provided for in this ISO Tariff. The ISO shall be granted access to Meter Data of Scheduling Coordinator Metered Entities obtained by Scheduling Coordinators.

**10.3.15 Exemptions from ISO Metering Standards.**

The ISO has the authority to grant exemptions from certain ISO metering standards for Scheduling Coordinator Metered Entities that are subject to ISO metering standards provided the ISO annually publishes details of the criteria the ISO will use when considering an application for an exemption and details of specific exemptions which are available.

**10.3.16 COMMUNICATIONS**

**10.3.16.1 Facilities Provided by the ISO.**

The ISO will provide the facilities referred to in this 10.3.16.1 to acquire Meter Data from ISO Metered Entities and receive Settlement Quality Meter Data from Scheduling Coordinators.

**10.3.16.1.1 MDAS Master Station.**

The MDAS master station will have a redundant configuration. The primary master station is located in Folsom, the redundant master station is located in Alhambra.

**10.3.16.1.2 WEnet.**

MDAS will use WEnet to acquire Meter Data from ISO Metered Entities and receive Settlement Quality Metered Data from Scheduling Coordinators. WEnet is an ISO-provided Wide Area Network (WAN). WEnet will use the TCP/IP networking protocol.

**10.3.16.1.3 Points of Presence.**

WEnet will have a Point of Presence (POP) in the general vicinity of most ISO Metered Entities and Scheduling Coordinators. The POP is the interface point between WEnet and the facilities provided by ISO Metered Entities and Scheduling Coordinators pursuant to 10.3.16.2 and 10.3.16.3.

**10.3.16.1.4 Facilities Failure.**

In the event that the primary or redundant MDAS master station or WEnet fails, the procedures referred to in Appendix A will be followed by the ISO, ISO Metered Entities and Scheduling Coordinators.

**10.3.16.2 Facilities Provided by ISO Metered Entities.**

ISO Metered Entities must provide the telecommunication facilities referred to in 10.3.16.2.1 to 10.3.16.2.3 inclusive to connect their Compatible Meter Data Servers to the WEnet POP.

**10.3.16.2.1 Telecommunications Channels.**

The ISO Metered Entity must provide one of the following types of telecommunication channels from the WEnet POP to its Compatible Meter Data Servers:

- (a) Digital leased line;
- (b) ISDN channel; or
- (c) frame relay channel.



With the ISO's approval, the revenue quality meters of two or more ISO Metered Entities may be served by one telecommunications channel.

**10.3.16.2.2 Router/Terminal Server.**

ISO Metered Entities must provide router/terminal servers to interface the telecommunication channels to revenue quality meters. Each revenue quality meter will use an RS-232 interface nominally operating at 9600 bits/second.

**10.3.16.2.3 Meter Data Server.**

ISO Metered Entities must use a Compatible Meter Data Server to interface with MDAS.

**10.3.16.3 Facilities provided by Scheduling Coordinators.**

Scheduling Coordinators must use a Compatible Meter Data Server to interface with MDAS.

**10.3.17 METER IDENTIFICATION.**

**10.3.17.1 Scheduling Coordinator Metered Entities.**

If a Scheduling Coordinator Metered Entity is required to identify its revenue quality meters by the relevant:

- (a) Local Regulatory Authority; or
- (b) UDC,

then the Scheduling Coordinator representing that Scheduling Coordinator Metered Entity must, at the ISO's request, provide the ISO with a copy of that information within 5 Business Days of a request by the ISO in a format to be prescribed by the ISO.

If a Scheduling Coordinator Metered Entity is not required by either the relevant Local Regulatory Authority or UDC to identify its revenue quality meters, the Scheduling Coordinator representing that Scheduling Coordinator Metered Entity shall maintain an accurate record of the revenue quality meter of each of the Scheduling Coordinator Metered Entities that it represents from time to time. The record maintained by Scheduling Coordinators must include the information set out in the Technical

Specifications. The Scheduling Coordinator must, at the ISO's request, provide the ISO with a copy of any information contained in that record within 5 Business Days of a request by the ISO in a format to be prescribed by the ISO.

**10.3.18 EXEMPTIONS FROM COMPLIANCE.**

**10.3.18.1 Authority to Grant Exemptions.**

In addition to the specific exemptions granted under the ISO Tariff, the ISO has the authority under the ISO Tariff to grant exemptions from compliance with certain requirements imposed by the ISO Tariff.

**10.3.18.2 Guidelines for Granting Exemptions.**

The ISO will use the following guidelines when considering applications for exemptions from compliance with the ISO Tariff.

(a) Publication of Guidelines

The ISO will from time to time publish the general guidelines that it may use when considering applications for exemptions so as to achieve consistency in its reasoning and decision making and to give prospective applicants an indication of whether an application will be considered favorably.

(b) Publication of Exemption Applications

The ISO will promptly publish on the ISO Home Page a description of each application it receives for an exemption.

(c) Publication of Decision

The ISO will publish on the ISO Home Page details of whether the application was approved or rejected by it and, if the ISO considers it appropriate, the reasons for rejecting the application.

(d) Class Exemptions

In addition to exemptions granted to individual entities, the ISO may grant exemptions that will apply to a class of entities. The ISO may grant class exemptions whether or not it has received any application for an exemption. The ISO will publish details of the class exemptions it has granted on the ISO Home Page.

**10.3.18.3 Procedure for Applying for Exemptions.**

All applications to the ISO for exemptions from compliance with the requirements of the ISO Tariff must be made in writing addressed to the Meter and Data Acquisition Manager, Client Service Department. The ISO will confirm receipt of each application it receives within 3 Business Days of receiving the application. The ISO will decide whether to grant the exemption within 45 Business Days of receiving the application. At any time during that period, the ISO may require the applicant to provide additional information in support of its application. The applicant must provide such additional information to the ISO within 5 Business Days of receiving the request for additional information or within such other period as the ISO may notify to the applicant. If the ISO makes a request for additional information more than 40 Business Days after the date on which it received the application, the ISO will have an additional 7 Business Days after receiving that additional information in which to consider the application. If the applicant does not provide the additional information requested, the ISO may refuse the application in which case it will notify the applicant that its application has been rejected for failure to provide the additional information.

**10.3.18.4 Information to be Included in the Application.**

The application submitted to the ISO must provide:

- (a) a detailed description of the exemption sought (including specific reference to the relevant section(s) of the ISO Tariff giving the ISO authority to grant the exemption) and the facilities to which the exemption will apply;
- (b) a detailed statement of the reason for seeking the exemption (including any supporting documentation);
- (c) details of the entity(s) (if any) to which the exemption will apply;
- (d) details of the location (if any) to which the exemption will apply;
- (e) details of the period of time for which the exemption will apply (including the proposed start and finish dates of that period); and

(f) any other information requested by the ISO.

**10.3.18.5 Permitted Exemptions.**

**10.3.18.5.1 Exemptions from Providing Meter Data Directly to MDAS.**

(a) General

The ISO has the authority under 10.2.6 of the ISO Tariff to exempt ISO Metered Entities from the requirement to make Meter Data directly available to the ISO via MDAS. In addition to the specific exemptions provided under 10.3.18.5.1, the ISO may, at its discretion, grant such an exemption where it considers the requirement to install communication links (or related facilities) between the ISO Metered Entity and WEnet to allow the ISO to directly poll that ISO Metered Entity would be unnecessary, impractical or uneconomic.

(b) Specific Exemptions Available

i. Tie Points

Meters located at tie points are exempted from the requirement that they be directly polled by the ISO provided that the meters at those tie points are revenue quality and they provide hourly, raw Meter Data to the ISO's Power Management System.

The entities responsible for Tie Point Meters must designate a primary meter and the entity responsible for providing the relevant Meter Data to the ISO. Meter Data from any other meter located at that tie point may be provided to the ISO in the event that the primary meter is unable to provide Meter Data to the ISO.

Existing Tie Point Meters will be exempt from the metering standards referred to in the ISO Tariff, if such meters are only used to measure bi-directional Energy.

ii. Generation not Providing Regulation

ISO Metered Entities that are Generators or Participating Generators that are not directly connected to the ISO Controlled Grid and which do not provide Regulation may request the ISO for an exemption from

the requirement that they be directly polled by the ISO in which case they will be treated as Scheduling Coordinator Metered Entities for the purposes of the ISO Tariff.

iii. Scheduling Coordinators inability to directly poll MDAS

If a Scheduling Coordinator does not have the ability as at the ISO Operations Date to directly poll MDAS for the Settlement Quality Meter Data of the ISO Metered Entities that it represents, that Scheduling Coordinator shall have a period of 12 months from the ISO Operations Date in which to install the necessary equipment to enable it to directly poll MDAS. During the period in which a Scheduling Coordinator is unable to directly poll MDAS, that Scheduling Coordinator will be responsible for providing the ISO with Settlement Quality Meter Data for its ISO Metered Entities in accordance with the ISO Tariff.

iv. Generator Profiling

The ISO may permit Generators and Participating Generators with Generating Units of less than 1 MW to use generator profiles, provided that such profiles are reconciled against revenue quality cumulative meters and the ISO has given prior approval to the use of the proposed generator profile. The revenue quality meters used by such Generators and Participating Generators will not be required to have a current Certificate of Compliance at the ISO Operations Date. However, such meters maybe required to have a Certificate of Compliance within a time period prescribed by the ISO after consultation with the relevant Generator or Participating Generator.

v. Small Remote Generators

Remote Generators of less than 10 MW and capacity factors of less than 20% over the past three years, may be granted an exemption from the requirement to be directly polled by the ISO provided that the ISO is able to receive Meter Data for that Generator from a Compatible Meter Data Serve.

**10.3.18.5.2 Exemptions from Meter Standards.**

(a) General

The ISO has the authority under 10.2.12 of the ISO Tariff to exempt ISO Metered Entities from the requirement to comply with the meter standards referred to in the ISO Tariff.

(b) Specific Exemptions Available

i. Data Storage for Existing Meters

Revenue quality meters installed as at the ISO Operations Date are required to have 30 days data storage capacity (new revenue quality meters are required to have 60 days data storage capacity). Existing revenue quality meters that otherwise comply with the meter standards referred to in the ISO Tariff but which do not have 30 days data storage will be exempted from that requirement if there is alternative time stamped meter data storage of 30 days or more.

ii. Voltage Transformers

ISO Metered Entities will be exempt from the requirement to install Voltage Transformers (VT) at 500 kV and higher voltage levels provided that those ISO Metered Entities install Capacity Coupled Voltage Transformers (CCVT) that meet the metering standards referred to in the ISO Tariff. The ISO Metered Entity must establish a testing program to ensure that the CCVT remains within the ISO's accuracy requirements. A copy of such test program must be supplied to the ISO and the ISO may require amendments and/or additions to that program that it reasonably believes are necessary to ensure the accuracy of the CCVT.

iii. Loss Correction Factors

The ISO may grant an ISO Metered Entity an exemption from compliance with the metering standards referred to and the ISO Tariff if, in the ISO's sole discretion, applicable loss correction factors can be applied to existing meters without any materially adverse effect on the accuracy or security of the Meter Data obtained from such meters.

iv. 5 Minute Interval Data

Generators that are ISO Metered Entities and that provide Ancillary Services to the ISO will not be required to provide the ISO with 5 minute interval data until such time as specified by the ISO. Until such time as the ISO requires 5 minute interval data, these entities will be required to provide the ISO with hourly interval data.

v. Request for Direct Polling

Scheduling Coordinators may request the ISO to grant an exemption from the requirement to provide Settlement Quality Meter Data to the ISO for Scheduling Coordinator Metered Entities they represent if those entities are Generators which have requested the ISO, and the ISO has agreed, to directly poll them for Meter Data. Such Generators will be treated as ISO Metered Entities and must comply with all of the requirements relating to ISO Metered Entities in accordance with the ISO Tariff. The Scheduling Coordinator representing such Generators will be required to apply the relevant distribution loss factors to that Generator's Meter Data (the Scheduling Coordinator may obtain that Meter Data from the ISO).

vi. QF Exemptions

If a QF sells all of its Energy (excluding any Energy consumed by auxiliary load equipment electrically connected to that QF at the same point or any Energy sold through "over the fence" arrangements as authorized by Section 218(b) of the California Public Utilities Code) and Ancillary Services to the UDC in whose Service Area it is located pursuant to an existing power purchase agreement (which is authorized under Section 218(b) of the California Public Utilities Code) and there is any inconsistency between that existing power purchase agreement, Section 10 of the ISO Tariff or Appendix J to the ISO Tariff, the existing power purchase agreement shall prevail to the extent of that inconsistency for the term of the agreement. In this context, an existing power purchase agreement shall mean an agreement which has been entered into and is effective as of December 20, 1995.

vii. Combining Generation

A metered entity may elect to meter a group of Generating Units which are electrically connected to the same point by combined total generation output or by individual Generating Unit provided that those Generating Units are Scheduled in the same fashion as they are metered and the Generating Units are not individually providing Ancillary Services.

**10.3.18.5.3 Exemptions from Audit, Testing or Certification.**

The ISO has the authority under 10.2.12 of the ISO Tariff to exempt ISO Metered Entities from the metering standards referred to in the ISO Tariff.