

# RTO West Single Control Area Model (Attachment)

## BC Control Area Implementation

### ***Introduction***

This document will describe an operating structure for an RTO in the Pacific N.W (which would be comprised of RTO West and the BC IGO) that would both provide seamless integration of wholesale transmission services in BC with the rest of the RTO West transmission services and respect Canadian sovereignty in areas where Canadian regulatory oversight is required. The RTO West Single Control Area Model (described in a separate document) will meet both of these objectives, with the modifications described in this attachment. These modifications pertain to billing and settlement and the actual physical deployment of generators in British Columbia. The modifications are necessary to respect Canadian sovereignty and do not give any advantage to market participants in BC.

BC plans to participate in the RTO by forming an independent grid operator (BC IGO) that meets all of the FERC 2000 requirements for independence and will be regulated by the British Columbia Utilities Commission (BCUC). It will have responsibility to regulators in BC for the tariff, ratemaking and reliability of the BC grid, in accordance with rules and business practices developed with RTO West. At the same time, it will sign a detailed contract with RTO West describing its functions and responsibilities regarding the implementation of the RTO-wide tariffs.

This attachment describes the three functional modifications in the BC Control Area Implementation that have been made to the RTO West Single Control Area Model.

### ***Functional differences between the IGO and the ACC***

The RTO West Single Control Area Model document describes the primary functions of an Area Control Center as having the responsibility:

1. to work within the guidelines established by RTO West to maintain grid security;
2. to implement switching activities in response to contingencies;
3. and, to implement the NERC approved security coordinator procedures in the case of emergencies.

In the BC Control Area Implementation, the BC IGO will perform these same three functions. In addition, the BC IGO will be involved in some aspects of billing and settlement (4<sup>th</sup> function), will offer a Generator Physical Dispatch Service for all

generators located in BC (5<sup>th</sup> function) and will assure reliable operation under normal operating conditions (6<sup>th</sup> function).

4. Billing and Settlement- For transmission and ancillary services that fall within the BCUC's jurisdiction, the BC IGO may be required by statute or regulation to be involved in some aspects of the billing and settlement of some of the services described in this document. The exact level of involvement cannot be determined without a regulatory proceeding and ruling from the BCUC. BC Hydro's position in that eventual proceeding will support the minimization of the BC IGO's involvement in billing and settlement for both the FTR auction market and the generation products sold into the IOS market.
5. Generator Physical Dispatch Service is a service that an SC can choose to contract with the BC IGO to provide the following:
  - (i) for the SC's generating units that are not providing Regulation IOS to RTO West, the SC would forward to the BC IGO the SC's generating unit-specific instructions for the physical dispatch of the generating units that are under the SC's control and are located in BC; the BC IGO would then electronically communicate those signals to the generating units.
  - (ii) for the SC's generating units that are located in BC and are providing Regulation IOS to RTO West, the RTO West Direct Digital Control (DDC) signals that would otherwise be sent electronically from RTO West to the SC's GCC would instead be sent electronically from RTO West to the BC IGO and from there to the SC's generating units.

This service, which may be procured on a voluntary basis by any SC that is responsible for the dispatch of generators located within BC, will be offered to all such SC's on a comparable, nondiscriminatory basis. The rate for this service will be cost based and approved by the BCUC under a BCUC-approved tariff. The BC IGO's ability to offer Generator Physical Dispatch Service on a comparable, nondiscriminatory basis will be monitored by RTO West.

6. Responsibility for Reliable Operations- As described below, the BC IGO will receive information from SCs and from RTO West that will allow it to assure reliable operation, under both normal and emergency conditions, of facilities that are located in BC.
  - (i) RTO West and the BC IGO would agree on the intra-hour ramping requirements for the BC IGO's control area. RTO West would determine which resources should be ramped using the BC IGO requirements and the costs of the resources in each of the RTO's Balancing Energy stacks. RTO West may choose to issue orders to

ramp resources within the BC IGO's control area and create dynamic schedules between RTO West and the BC IGO, which it will telemeter to the BC IGO. In this way, RTO West would ensure efficient coordination between all of the resources outside of the BC IGO's control area and those within the IGO's area. In addition, this process would ensure that system constraints are met, and ensure that the BC IGO receives - through actual ramping of IOS resources and through dynamic schedules between RTO West and the BC IGO - the energy needed to keep the BC IGO's Area Control Error (ACE) within NERC performance standards.

RTO West would convey the dispatch orders for resources located in BC to the BC IGO, which would validate the orders for consistency with the security requirements of the BC IGO grid. In the event that the resource dispatch orders would violate those security requirements, the BC IGO would resolve this problem with RTO West pursuant to RTO West protocols. Otherwise, the BC IGO would forward the resource dispatch orders to the SCs whose IOS resources are to be ramped. These SCs would be responsible for implementing the ramps, either directly by communicating with their generating units or by conveying the unit-specific instructions to the BC IGO under the terms of the Generator Physical Dispatch Service.

- (ii) The same basic process would be used for shorter-time frame response (i.e., the use of Regulation IOS). Direct Digital Control (DDC) signals would be sent electronically from the BC IGO to RTO West's real-time computer, where they would be automatically processed and distributed back to the GCCs of the appropriate SCs and, for those SCs who chose to contract for Generator Physical Dispatch Service, the BC IGO. This process would also result in the creation of real-time dynamic schedules between RTO West and the BC IGO.
- (iii) For most contingencies requiring the dispatch of reserves, the BC IGO (which would remain responsible for real-time monitoring of grid conditions) would contact RTO West, which would deploy the appropriate resources from RTO West's Balancing Energy stack. For the most-serious system emergencies, the BC IGO would have direct access to the RTO West Balancing Energy stacks, and would be allowed to make deployment decisions, consistent with the emergency plans developed between RTO West (in its role as Security Coordinator for the grid), the BC IGO and the ACCs of the other RTO West transmission owners.

## **Technical and contractual issues related to the BC Control Area Model**

Under the BC Control Area Implementation, the BC IGO would participate in the deployment of ancillary services and assure reliable operation of the grid. From a technical perspective, this would require electronic links between RTO West and the BC IGO to communicate the real time status of RTO West Operating Plan and to deploy resources through RTO West, as described above. From a contractual perspective, the BC IGO would contract with RTO West to perform the BC grid operations role in the best interest of the market without compromising the service quality of the BC grid. This should in no way interfere with or inhibit the commercial relationship between the SC's and RTO West.