NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Project 2008-12 Coordinate Interchange Standards

Summary of Revisions Made to Standards Posted in September 2010

INT-004-3 — Dynamic Transfers

1. Revised Purpose Statement: "To ensure Dynamic Schedules and Pseudo-Ties are communicated and accounted for appropriately in congestion management tools [for example: the NERC Interchange Distribution Calculator (IDC), the WECC Security Analysis System (SAS)]."
   a. Previous version was: "To ensure Dynamic Schedules are communicated and accounted for appropriately in reliability procedures."
2. Applicability: Removed Reliability Coordinator and Transmission Operator and replaced Purchasing-Selling Entity with Load Serving Entity. The latter provides more specificity.
3. Added Background Section
4. Requirement R1 was revised to replace PSE with Load Serving Entity.
5. Requirement R2 was revised to clarify the trigger for review and the trigger for updating the Interchange for a future time period.
6. Requirements R3 and R4 are created to address the coordination that must occur between all entities involved prior to the initial implementation of a Pseudo-Tie. Requirement R3 is to be implemented until the NAESB registry is able to accept Pseudo-Tie registrations. Requirement R4 is to be implemented when the NAESB registry is able to accept Pseudo-Tie registrations. Until such time, R3 will be in effect.
7. Added Guidelines and Technical Basis Section summarizing the concepts to be considered when establishing Dynamic Transfers.

INT-006-4 — Evaluation of Interchange Transactions

1. Revised Purpose Statement: To ensure that entities conduct a reliability assessment of each Arranged Interchange before it is implemented. The previous purpose statement was: "To ensure that each Arranged Interchange is checked for reliability before it is implemented."
2. Added Background section.
3. References to specific timing (e.g., within one minute) were modified to refer to the action that needs to be accommodated. (e.g., "so that the entity can…" or "in time to…").
4. Former Requirements R5 and R6 were determined to be redundant and were combined into a new Requirement R5. Former Requirements R8 and R9, which were assigned to the Transmission Operator and the Reliability Coordinator, respectively, were deleted.

5. Updated Attachment 1 timing tables for WECC to address scheduling on a 15 minute basis.
6. Added VRFs, Time Horizons, Measures, VSL and other compliance elements (section C).
7. Added guideline and technical basis section that incorporates the required electronic capability for supporting Interchange coordination. These capabilities were originally outlined in a proposed new standard.

INT-009-2 — Implementation of Interchange

1. Purpose Statement was revised by removing the word "exactly" from prior version.
2. Added Background Section
3. Requirement R1 was revised by removing part 1.1 and re-wording the main part of the requirement to include the defined term Composite Confirmed Interchange.
4. Requirement R2 was removed (redundancy with BAL standard).
5. Added new Requirement R2 regarding Attaining and Native Balancing Authorities using a dynamic value emanating from an agreed to source for Pseudo-Ties.
6. Added Requirement R3 requiring coordination with HVDC Transmission Operators.
7. Added VRFs, Time Horizons, Measures, VSL and other compliance elements (section C).

INT-010-2 — Interchange Initiation and Modification for Reliability

1. Revised Purpose Statement: "To provide guidance for required actions on Confirmed Interchange or Implemented Interchange to address reliability events."
    a. Previous version was: "Allow certain types of Interchange schedules to be initiated or modified by reliability entities, and to be exempt from compliance with other Interchange Standards under abnormal operating conditions."
2. Added Background Section
3. Requirement R1 was modified to eliminate the prerequisite that a Balancing Authority experience a loss of resources covered by an energy sharing agreement with respect to requirement applicability. Instead, R1 now applies to any balancing Authority that schedules Interchange in duration of more than 60 minutes as part of an energy sharing agreement.
4. Requirements R2 and R3 were modified to shift compliance from the Reliability Coordinator to the Sink Balancing Authority.
5. Requirement R4 was created to ensure that Reliability Adjustment Arranged Interchanges are initiated only for reliability related reasons.

6. Requirement R5 was created from INT-005-3 Requirement R1, part 1.1 describing the restricted list of entities that have approval rights on a Reliability Adjustment Arranged Interchange
7. Requirement R6 was created to address the fact that when a Reliability Adjustment Arranged Interchange is approved for a Dynamic Schedule, action is required by the Balancing Authority to ensure that the data source feeding the Net Interchange value of ACE value is adjusted in accordance the MW value of the Reliability Adjustment Arranged Interchange.
8. Added VRFs, Time Horizons, Measures, VSL and other compliance elements (section C).

INT-011-1 — Intra-Balancing Authority Transaction Identification

1. Moved all previously posted requirements to the Guidelines and Technical Basis Section of INT-006-4. The CISDT believed that these requirements were good utility practices that fell short of the level of a reliability requirement.
2. Added Background Section.
3. Added a new requirement to address the FERC directive in Order No. 693 regarding the treatment of non-firm point-to-point service used for intra-balancing authority transfers.

Proposed Revisions or Additions to NERC Glossary of Terms

1. Proposed revisions to approved NERC Glossary terms:
   a. **Adjacent Balancing Authority:** A Balancing Authority Area that is interconnected with another Balancing Authority Area either directly or via a multi-party agreement or transmission tariff.

      Existing definition: A Balancing Authority Area that is interconnected another Balancing Authority Area either directly or via a multi-party agreement or transmission tariff.

   b. **Intermediate Balancing Authority:** A Balancing Authority involved in an Interchange Transaction other than the Source Balancing Authority and Sink Balancing Authority**.**

      Existing Definition: A Balancing Authority Area that has connecting facilities in the Scheduling Path between the Sending Balancing Authority Area and Receiving Balancing Authority Area and operating agreements that establish the conditions for the use of such facilities.

   c. **Dynamic Schedule:** A time-varying energy transfer that is updated in real time and included in the Net Interchange Scheduled term in the same manner as an Interchange Schedule in the affected Balancing Authorities' control ACE equations (or alternate control processes).

      Existing definition: A telemetered reading or value that is updated in real time and used as a schedule in the AGC/ACE equation and the integrated value of which is treated as a schedule for interchange accounting purposes. Commonly used for scheduling jointly owned generation to or from another Balancing Authority Area.

d. **Pseudo-tie:** A time-varying energy transfer that is updated in real time and included in the Net Interchange Actual term in the same manner as a Tie Line in the affected Balancing Authorities' control ACE equations (or alternate control processes).

   Existing definition: A telemetered reading or value that is updated in real time and used as a "virtual" tie line flow in the AGC/ACE equation but for which no physical tie or energy metering actually exists. The integrated value is used as a metered MWh value for interchange accounting purposes.

e. **Request for Interchange (RFI):** A collection of data as defined in the NAESB Business Practice Standards, to be submitted to the Sink Balancing Authority for the purpose of implementing bilateral Interchange between a Source and Sink Balancing Authority or within a single Balancing Authority.

   Existing definition: A collection of data as defined in the NAESB RFI Datasheet, to be submitted to the Interchange Authority for the purpose of implementing bilateral Interchange between a Source and Sink Balancing Authority.

f. **Arranged Interchange:** The state where the Sink Balancing Authority has received the Interchange information or intra-Balancing Authority transfer information (initial or revised).

   Existing definition: The state where the Interchange Authority has received the Interchange information (initial or revised).

g. **Confirmed Interchange:** The state where the Sink Balancing Authority has verified the Arranged Interchange.

   Existing definition: The state where the Interchange Authority has verified the Arranged Interchange.

h. **Sink Balancing Authority:** The Balancing Authority in which the load (sink) is located for an Interchange Transaction and the resulting Interchange Schedule.

   Existing Definition: The Balancing Authority in which the load (sink) is located for an Interchange Transaction. (This will also be a Receiving Balancing Authority for the resulting Interchange Schedule.)

i. **Source Balancing Authority:** The Balancing Authority in which the generation (source) is located for an Interchange Transaction and for the resulting Interchange Schedule.

   Existing Definition: The Balancing Authority in which the generation (source) is located for an Interchange Transaction. (This will also be a Sending Balancing Authority for the resulting Interchange Schedule.)

2. Proposed new NERC Glossary terms:

   Composite Confirmed Interchange – The energy profile (including non-default ramp) throughout a given time period, based on the aggregate of all Confirmed Interchange occurring in that time period.

   Attaining Balancing Authority - A Balancing Authority bringing generation or load into its effective control boundaries through a dynamic transfer from the Native Balancing Authority.

   Native Balancing Authority - A Balancing Authority from which a portion of its physically interconnected generation and/or load is transferred from its effective control boundaries to the Attaining Balancing Authority through a dynamic transfer.

   Reliability Adjustment Arranged Interchange - Request to modify a Confirmed Interchange or Implemented Interchange for reliability purposes.

3. Additional terms revised to address FERC directives:

   The CISDT had previously posted proposed requirements to address FERC Order 693, Paragraph 866. These proposed Transmission Operator and Reliability Coordinator requirements related to review of Confirmed Interchange prior to implementation. The CISDT received feedback from stakeholders as well the NERC Operating Committee that the proposed requirements were not necessary as this review was already addressed in other standards. The CISDT reviewed those standards and Interchange is not explicitly noted. The team feels that additional revisions are necessary to meet the directive. Rather than revise requirements, the CISDT is proposing revisions to a defined term as it applies to existing standards. The term is Operational Planning Analysis:

   > Operational Planning Analysis: An analysis of the expected system conditions for the next day's operation. (That analysis may be performed either a day ahead or as much as 12 months ahead.) Expected system conditions include things such as load forecast(s), generation output levels, Interchange, and known system constraints (transmission facility outages, generator outages, equipment limitations, etc.).

   This defined term is used in existing IRO-008-1 (Reliability Coordinator Operational Analyses and Real-time Assessments) and proposed TOP-002-3 (Operations Planning). In IRO-008-1, Requirement R1 specifies that the Reliability Coordinator must perform an Operational Planning Analysis. By explicitly including "Interchange" in the definition of Operational Planning Analysis, the Reliability Coordinator must consider interchange when performing the study. When the results indicate the need for action, the Reliability Coordinator is required to share the results per Requirement R3. TOP-002-3 contains a requirement for the Transmission Operator to perform an Operational Planning Analysis (R1), develop plans for reliable operations based on the results of the Operational Planning Analysis and to notify other entities as to their role in those plans (R3).