NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Proposed Definitions for the NERC Glossary of Terms

Project 2008-12: Coordinate Interchange Standards

The Coordinate Interchange Standards Drafting (CISDT) proposes revisions to ten (10) defined terms in the NERC Glossary of Terms. The CISDT also proposes four (4) new defined terms to be included in the Glossary. These defined terms are used in the INT family of standards and in a few other standards as discussed below.

Proposed revised definitions (redlined):

Dynamic Interchange Schedule or Dynamic Schedule: A time-varying energy transfer ~~telemetered reading or value~~ that is updated in R~~r~~eal-time and ~~used~~ included in the Net Interchange Schedule term in the same manner as an Interchange Schedule in the affected Balancing Authorities' control ACE equations (or alternate control processes). ~~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.~~

This defined term was revised to provide clarity that a **Dynamic Schedule** is updated in Real-time and is included in the Net Interchange Schedule term in the affected Balancing Authorities' control ACE equations (or alternate control processes). Dynamic Schedules are commonly used for scheduling jointly owned generation to or from another Balancing Authority Area. The revisions to this defined term align with the NERC's Dynamic Transfer Reference Guidelines, (Version 2). This document states (page85):

> A dynamic schedule is implemented as an interchange transaction that is modified in real-time to transfer time-varying amounts of power between BAs. A dynamic schedule typically does not change a BA's operational responsibility; that is, the native BA continues to exercise operational control over, and provides basic BA services to, the dynamically scheduled resources.
>
> Dynamic schedules are to be accounted for as interchange schedules by the source, sink, and contract intermediary BA(s), both in their respective ACE equations, and throughout all of their energy accounting processes. Requirement to incorporate into the contract intermediary BA's ACE is subject to regional procedures.

This defined term is also used in BAL-002-WECC, BAL-003-0.1b and BAL-005-0.2b. BAL-003-0.1b will be superseded by BAL-003-1 when it becomes effective April 1, 2015. This defined term is not used in BAL-003-1. It is also contained in the defined term "Reporting ACE" as part of the NIS (Scheduled Net Interchange) term. The "Reporting ACE" definition has not

been approved by FERC. The revisions to this defined term do not change the intent of the requirements in which it is used. The revisions provide additional clarity for these requirements.

Pseudo-Tie: A time-varying energy transfer ~~telemetered reading or value~~ that is updated in R~~r~~eal-time and included in the Net Interchange Actual (NI_A) term in the same manner as a Tie Line in the affected Balancing Authorities' control ACE equations (or alternate control processes).~~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.~~

This defined term was revised to provide clarity that a **Pseudo-Tie** is updated in Real-time and is included in the Net Interchange Actual (NI_A) term in the affected Balancing Authorities' control ACE equations (or alternate control processes). Pseudo-Ties are commonly used as a "virtual" tie line flow in the ACE equation but for which no physical tie or energy metering actually exists. The revisions to this defined term align with the NERC's Dynamic Transfer Reference Guidelines, (Version 2). This document states (page 87):

> Pseudo-ties are often employed to assign generators, loads, or both from the BA to which they are physically connected into a BA that has effective operational control of them. Thus, pseudo-ties often provide for change of BA operational responsibility from the native to the attaining BA and at the same time make the attaining BA provider of BA services. In practice, pseudo-ties may be implemented based upon metered or calculated values. All BAs involved account for the power exchange and associated transmission losses as actual interchange between the BAs, both in their ACE equations and throughout all of their energy accounting processes.

This defined term is also used in BAL-002-WECC, BAL-003-0.1b and BAL-005-0.2b. BAL-003-0.1b will be superseded by BAL-003-1 when it becomes effective April 1, 2015. This defined term is not used in BAL-003-1. The revisions to this defined term do not change the intent of the requirements in which it is used. The revisions provide additional clarity for these requirements.

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

This defined term is also contained in the defined term "Emergency Request for Interchange" and the revisions to this defined term do not change the intent of the "Emergency Request for Interchange". By removing references to the Interchange Authority, this definition is now based solely on NAESB Business Practice Standards and definitions rather than any entity that may be responsible for its application for reliability.

Arranged Interchange - The state where a Request for Interchange (initial or revised) has been submitted for approval. ~~the Interchange Authority has received the Interchange information (initial or revised).~~

This defined term is also in MOD-004-1, R11 and R12; also in the "Confirmed Interchange" definition which is also revised under this project. MOD-004-1 was retired under Project 2012-05. Its requirements were incorporated into MOD-001-2, which passed ballot December 20, 2013. This term is not used in the new standard. By removing references to the Interchange Authority, this definition is now based solely on NAESB Business Practice Standards and definitions rather than any entity that may be responsible for its application for reliability. The revisions to this defined term do not change the intent of the requirements or defined terms in which it is used. The revisions provide additional clarity for these requirements and defined terms.

Confirmed Interchange - The state where no party has denied and all required parties have approved ~~the Interchange Authority has verified~~ the Arranged Interchange.

This defined term is also in definition of "Implemented Interchange". By removing references to the Interchange Authority, this definition is now based solely on NAESB Business Practice Standards and definitions rather than any entity that may be responsible for its application for reliability. The revisions to this defined term do not change the intent of the other defined term in which it is used. The revisions provide additional clarity for that defined term.

The defined terms **Request for Interchange (RFI), Arranged Interchange and Confirmed Interchange** are necessary to define the various stages of creation through implementation of Interchange. These defined terms were revised to better align with industry expectations and NAESB business practices.

Adjacent Balancing Authority - A Balancing Authority Area whose Balancing Authority Area ~~that~~ is interconnected with another Balancing Authority Area either directly or via a multi-party agreement or transmission tariff.

This defined term is also BAL-002-1a (Interpretation); BAL-005-0.2b (R9, R14); BAL-006-2 (R2, R3, R4); COM-001-2 R5, R6 (not FERC approved); EOP-001-2.1b (Interpretation); Defined terms "Net Actual Interchange" (contains "Adjacent BA Area"), Net Interchange Schedule" and "Reserve Sharing Group".

Intermediate Balancing Authority - A Balancing Authority on the scheduling path of an Interchange Transaction other than the Source Balancing Authority and Sink 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.~~

This defined term is also BAL-006-2 but only in the Compliance Monitoring Process section (Section D, item 1.1)

Sink Balancing Authority - The Balancing Authority in which the load (sink) is located for an Interchange Transaction and any resulting Interchange Schedule. ~~(This will also be a Receiving Balancing Authority for the resulting Interchange Schedule.)~~

This defined term is also BAL-002-WECC; BAL-006-2 but only in the Compliance Monitoring Process section (Section D, item 1.1); IRO-006-EAST, R3.3; Definition of "RFI" and WECC term "Contributing Schedule" and "Relief Requirement".

Source Balancing Authority - The Balancing Authority in which the generation (source) is located for an Interchange Transaction and for any resulting Interchange Schedule. ~~(This will also be a Sending Balancing Authority for the resulting Interchange Schedule.)~~

This defined term is also BAL-002-WECC; BAL-006-2; IRO-006-EAST-1 (R3.3); Definitions of "Request for Interchange" and the WECC term "Contributing Schedule".

The defined terms **Adjacent Balancing Authority, Intermediate Balancing Authority, Sink Balancing Authority and Source Balancing Authority** are necessary to define the various Balancing Authorities involved in the implementation of Interchange and their relationships with regards to Interchange. These defined terms were revised to better align with industry expectations and NAESB business practices.

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 was revised to meet a FERC Order 693 Directive (paragraph 866) and is used in IRO-008-1 - Reliability Coordinator Operational Analyses and Real-time Assessments. 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. Further, Requirement R2 specifies that the Reliability Coordinator must perform a Real-time Assessment. By explicitly including "Interchange" in the definition of Real-time Assessment, the Reliability Coordinator must consider interchange when performing the study. When the results of either of these studies indicate the need for action, the Reliability Coordinator is required to share the results per Requirement R3.

Proposed new definitions:

Reliability Adjustment Arranged Interchange – A request to modify a Confirmed Interchange or Implemented Interchange for reliability purposes.

The defined term **Reliability Adjustment Arrange Interchange** was developed to accurately reflect the types of Interchange that are adjusted for reliability reasons by a Reliability Coordinator or Transmission Operator. This defined term aligns with industry expectations and NAESB business practices.

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.

The defined term **Composite Confirmed Interchange** was developed to define what is to be included in INT-009-2, Requirement R1 to ensure that a Balancing Authority agrees to a Composite Confirmed Interchange with each of its Adjacent Balancing Authorities. This defined term aligns with industry expectations and NAESB business practices.

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.

The defined terms **Attaining Balancing Authority and Native Balancing Authority** are necessary to define the various Balancing Authorities involved in the implementation of Dynamic Transfers and their relationships with regards to Dynamic Transfers. These defined terms were developed to align with industry expectations and NAESB business practices.