NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

# Implementation Plan for Project 2010-17: Definition of BES

## Prerequisite Approvals

There are no other Reliability Standards or Standard Authorization Requests (SARs), in progress or approved, that must be implemented before this project can be implemented. However, this definition relies heavily on the fact that an approved exception process exists in the NERC Rules of Procedure.

## ~~Revision to Sections of Approved Standards and Definitions~~

~~There is one new definition associated with this project.~~

~~**Bulk Electric System (BES)**: All Transmission Elements operated at 100 kV or higher, Real Power resources as described below, and Reactive Power resources connected at 100 kV or higher unless such designation is modified by the list shown below.~~

~~**Inclusions:**~~

- ~~I1 - Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, with two windings of 100 kV or higher unless excluded under Exclusions E1 and E3.~~
- ~~I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above.~~
- ~~I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.~~
- ~~I4 - Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage.~~
- ~~I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.~~

~~**Exclusions:**~~

- ~~E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and:~~
  - ~~a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or,~~
  - ~~b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or,~~

  ~~Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.~~
- ~~E2 - A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.~~

- ~~E3 - Local Distribution Networks (LDN): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the Interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:~~

  ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

  ~~a) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;~~

  ~~b) Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN;~~
  ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

  ~~c) Not part of a Flowgate or Transfer Path: The LDN does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).~~

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~~Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.~~

**Effective Dates**

~~The effective date is the date entities are expected to meet the performance identified.~~

This definition shall become effective on the first day of the ~~first~~second calendar quarter~~, 24 months~~ after applicable regulatory approval. In those jurisdictions where no regulatory approval is required~~, all requirements~~ the definition shall go into effect on the first day of the ~~first~~second calendar quarter~~, 24 months~~ after Board of Trustees adoption.

Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition.

The SDT realizes that Order 743 suggested a maximum of 18 months for implementation of a revised definition of the BES. The 24 month period cited here is based on the various rehearing requests filed by entities expected to be affected by the revised definition. Thus, the SDT believes that this is a more realistic timeframe in which to effect any changes.

The SDT believes that the timeframe shown is needed to:

- Effectively produce reasonable transition plans – As shown in Order 743, part of the overall process of revising the definition of BES is for the ERO and Regional Entities to develop transition plans on a region by region basis to accommodate any changes needed in those regions due to the revised definition. The transition plans will include any actions necessary for entities to achieve compliance on any issues brought about by the revised definition.

- Submit any necessary registration changes – While Order 743 states that a revised definition should provide clarity and not necessarily require major changes to registration; it is possible that the revised definition may cause some registration changes. Entities will need time to submit their changes and for those changes to work their way through the process.
- File for exceptions – The revised definition does not exist in a vacuum. There is a corresponding process for entities to request exceptions for specific equipment or configurations. This process will be defined in the NERC Rules of Procedure and will involve individual entities or the Regional Entities having to make a technical case to justify the exception. This process will take some time to complete and it would be expected that there will be an initial backlog of cases to process.
- Provide training – Entities will need to train their operators and personnel on changes to their operations brought about by the revised definition.

The existing definition of BES shall be retired at midnight of the day immediately prior to ~~upon~~ the effective date of the new definition of BES in the particular jurisdiction in which the new definition is becoming effective.