UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

MANDATORY RELIABILITY STANDARDS ) Docket No. RM06-16-000
FOR THE BULK POWER SYSTEM )

SUPPLEMENTAL INFORMATIONAL COMPLIANCE FILING OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
IN RESPONSE TO PARAGRAPH 77 OF ORDER NO. 693

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March 6, 2009
TABLE OF CONTENTS

I. INTRODUCTION  
   
II. NOTICE AND COMMUNICATIONS  
   
III. DISCUSSION  
   
IV. CONCLUSION  

List Attachments

Attachment A – Reliability First Corporation letter to NERC dated October 1, 2007

Attachment B – Western Electricity Coordinating Council letters to NERC dated May 9, 2007 and January 29, 2009
I. INTRODUCTION

In this filing, the North American Electric Reliability Corporation (“NERC”) supplements, for two Regional Entities, information that NERC previously submitted to the Federal Energy Regulatory Commission (“FERC” or the Commission”) regarding the definition of “bulk electric system.” On June 14, 2007, the NERC submitted an informational compliance filing to paragraph 77 of Order No. 693\(^1\) that included “a complete set of regional definitions of bulk electric system and any regional documents that identify critical facilities to which the Reliability Standards apply (i.e., facilities below a 100 kV threshold that have been identified by the regions as critical to system reliability).” In a letter from ReliabilityFirst Corporation (“RFC”) to NERC dated October 1, 2007, RFC noted that it was transitioning its three legacy definitions into a common definition applicable to its members and cited December 2008 as the completion target for this activity in RFC. This supplemental informational filing updates the Commission on this activity and is not intended for Commission approval.

The June 14, 2007 filing also included a discussion of the definition of bulk electric system used by the Western Electricity Coordinating Council (“WECC”). In a letter to NERC dated May 9, 2007, WECC stated it was in the process of developing nine criteria to supplement the NERC Glossary definition of “Bulk Electric System” to clarify the use of the term “generally” in the definition. This supplemental filing also updates the Commission on this activity in WECC.

\(^1\) Mandatory Reliability Standards for the Bulk Power System, (Order No. 693), 118 FERC ¶ 61,218 (2007).
II. NOTICES AND COMMUNICATIONS

Notices and communications with respect to this filing may be addressed to:

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*Persons to be included on the Commission’s official service list.

III. DISCUSSION

ReliabilityFirst Corporation

RFC stated in its response to the NERC request for its definition of “bulk electric system” that it uses the NERC Glossary definition supplemented by additional criteria for use in determining compliance to Reliability Standards. The “bulk electric system” within the RFC footprint is defined as all:

1. Individual generation resources larger than 20 MVA or a generation plant with aggregate capacity greater than 75 MVA that is connected via a step-up transformer(s) to facilities operated at voltages of 100 kV or higher,
2. Lines operated at voltage of 100 kV or higher,
3. Transformers (other than generator support) with both primary and secondary windings of 100 kV or higher, and
4. Associated auxiliary and protection control system equipment that could automatically trip a bulk electric system facility, independent of the protection and control equipment’s voltage level.

The RFC “bulk electric system” excludes:

1. Radial facilities connected to load serving facilities or individual generation resources smaller than 20 MVA or a generation plant with aggregate capacity less than 75 MVA where the failure of the radial facilities will not adversely affect the
steady-state operation of other facilities operated at voltages of 100 kV or higher, and

2. Balance of generating plant control and operation functions (other than protection systems that directly control the unit itself and step-up transformer); these facilities would include relays and systems that automatically trip a unit for boiler, turbine, environmental, and/or other plant restrictions, and

3. All other facilities operated at voltages below 100 kV.

In addition, RFC noted that it is comprised of the former East Central Area Reliability Coordination Agreement (“ECAR”), Mid-Atlantic Area Council (“MAAC”) and Mid-American Interconnected Network (“MAIN”) reliability regions, and needed a transition period to convert from the different legacy definition of the bulk electric system to the definition stated above. As of December 2008, RFC completed this transition. Accordingly, all entities within RFC now subscribe to the stated bulk electric system definition and are required to comply with the NERC Reliability Standards in accordance with the new definition. In addition, RFC has not identified any facilities below the 100 kV threshold for inclusion as part of the bulk electric system.

Western Electricity Coordinating Council

In its May 9, 2007 response to NERC’s original request for WECC’s definition of “bulk electric system,” WECC advised NERC that it uses the NERC Glossary definition which it supplemented with nine additional criteria to clarify facilities which are: (i) above 100 kV but and should not be considered part of the bulk electric system, (ii) below 100 kV and should be considered part of the bulk electric system, and (iii) radial transmission facilities serving only load that should be considered part of the bulk electric system. Subsequently, as indicated in the January 29, 2009 letter, WECC informed NERC that the WECC Board has not approved the nine criteria, and therefore the nine criteria should not be considered part of WECC’s bulk electric

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2 The attached transition plan identified, on a preliminary basis, two items that could take until 2017 to be completed; however, these also were completed as of December 2008.
Accordingly, WECC continues to use the NERC definition alone in its implementation of Regional Entity activities.

IV. CONCLUSION

The North American Electric Reliability Corporation respectfully requests the Commission to accept this supplemental filing to NERC’s June 14, 2007 compliance filing in response to paragraph 77 of Order No. 693.

Respectfully submitted,

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3 WECC recently announced its intent to consider further specificity of the application of the NERC definition in WECC. The first meeting of the Bulk Electric System Definition Task Force (“BESDTF”) is scheduled for April 7-8, 2009.
CERTIFICATE OF SERVICE

I hereby certify that I have served a copy of the foregoing document upon all parties listed on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C. this 6th day of March 2009.

/s/ Rebecca J. Michael
Rebecca J. Michael

Attorney for North American Electric Reliability Corporation
Attachment A

Reliability *First* Corporation letter to NERC dated October 1, 2007
Mr. Gerry Adamski  
Vice President – Standards  
NERC  
Princeton Forrestal Village  
116-390 Village Boulevard  
Princeton, New Jersey 08540-5721

Dear Gerry:

As you are aware, the ReliabilityFirst Board of Directors met on May 9, 2007 and approved a new, single definition of the Bulk Electric System (BES) for our footprint, which we submitted to you for your required filing to FERC. Because ReliabilityFirst is comprised of three heritage regional councils, each of which had a different legacy definition of the BES, this new definition marks a significant shift for some of our users, owners, and operators. Overall we know this action will enhance the reliability of the BES, however. As such, in approving this definition, our Board also acknowledged the need for a transition period to allow our Registered Entities who had planned and operated under a different BES definition time to assess and make modifications they need to, in order to become compliant to the NERC Reliability Standards at voltages less than 230 kV.

Attached is a transition plan including a table listing the transition period for each individual Reliability Standard, the dates when all the Registered Entities are expected to become fully compliant under the new BES definition, and the risk factor associated with each relevant Standard. The attached plan also summarizes the manner in which compliance monitoring and treatment of those entities will take place during the transition period and how ReliabilityFirst will monitor progress on the implementation of the plans.

Please feel free to contact me with any questions.

Sincerely,

Timothy R. Gallagher

cc: David Cook  
    Dave Hilt  
    Stan Szwed  
    Jim Keller  
    Tom Burgess  
    Jeffrey Mitchell  
    James Uhrin

October 1, 2007
Transition Plan to the New ReliabilityFirst Definition of the Bulk Electric System

On May 9, 2007, the ReliabilityFirst Board of Directors approved a new, single definition (see Attachment A) of the Bulk Electric System (BES) for the ReliabilityFirst footprint. This definition was provided to NERC as required for an informational filing NERC submitted to FERC in May 2007. ReliabilityFirst is comprised of the former ECAR, MAAC and MAIN reliability regions, each of which applied different definitions for the Bulk Electric System. Accordingly, it will take some time for some of the Registered Entities within ReliabilityFirst to become fully compliant with the application of this new region-wide definition for their facilities below 230 kV. This transition plan is a composite of the Registered Entities’ transition plans to the new definition, developed in consultation with ReliabilityFirst staff and the ReliabilityFirst Reliability Committee. Please note that several Registered Entities are still working with ReliabilityFirst to clarify what facilities they own or operate that are covered by the new definition. As clarifications take place, the information below is subject to change.

Summary of Transition Plan and Monitoring Provisions

- Generally, most Registered Entity transition plans will be complete by June 1, 2008, with some limited specific exceptions related to several NERC TPL and PRC standards, which will be complete by December, 2008.
- A wide range of effort is reflected in transition plans requiring review/edits of documentation and procedures to include the BES transition facilities. All procedures and document modifications will be complete by June 1, 2008.
- Necessary EMS modifications will be complete by June 1, 2008.
- For transitional BES facility relay mis-operations, additional manpower may be needed to conduct the analysis/corrective action, documentation, and reporting necessary. Due to the number of additional BES elements captured by the new definition, this transition period will take a majority of 2008 to complete.
- For planning/operational planning models/studies, updates will be needed to incorporate additional BES transition facilities including contingency files, facility monitoring files, and plans for additional facilities (e.g. – in the PJM RTEP). These changes will be incorporated into the process and should be complete by June 2008. The results of the planning studies to identify new BES facilities due to the ReliabilityFirst definition change will be approved by the PJM Board of Managers as additions to the RTEP by November, 2008, which will complete these aspects of the transition plan.
- There is a need to incorporate the additional BES transition facilities into existing personnel training programs. Updating and disseminating the requisite training material to all of the system operators should be complete by March, 2008.
- Real-time telemetry of data points for registered TOP’s may require expansion or updates in some cases but does not require additional organizations to register as a TOP. This affects EMS models/updates, contingency files, and facility monitoring files, etc. Completion is targeted for June 2008.
Monitoring the Transition Plans

ReliabilityFirst will monitor completion of the respective transition plans by requiring Registered Entities with transition plan elements to self-report their progress/completion of each element. These self reports will be required to be submitted to the ReliabilityFirst staff by February 1, 2008, May 1, 2008, and October 1, 2008.

- For any anticipated delay beyond the transition plan target dates (or limited specific exception periods) and supporting rationale, the Registered Entity will be required to self-report to the ReliabilityFirst compliance staff sufficiently in advance to permit validation by the ReliabilityFirst Reliability Committee and/or Board as required.

- During the Registered Entity’s defined transition plan period, compliance to the reliability standards per the new BES definition will be maintained for all standards not subject to a Registered Entity’s transition plan. As transition plans are completed, those standards for the Registered Entities then become subject to ‘normal” compliance monitoring activities.

- The BES transition plans will be monitored by ReliabilityFirst compliance staff to completion, including periodic self-reports of progress/status up-dates on 1/08, 5/08, and 10/08; and Registered Entity reports of deviations against target dates, for potential ReliabilityFirst Reliability Committee and/or Board action as required. Should the transition plan actions required to satisfy target completion dates not be met or delayed without just or reasonable cause, the ReliabilityFirst Compliance Staff will take appropriate action (refer to Board Compliance Committee, letter to CEO, other actions).

- By December 2008, the application of the new BES definition will be complete [i.e. all transition plans will be complete] and compliance will be conducted uniformly across the ReliabilityFirst Region.

Transition Plan to the New Definition of the BES by NERC Standard

The table below is an overview that shows the period of time that the ReliabilityFirst Registered Entities have asked for a transition period, by the applicable NERC Standard, to become compliant with the standards under the new region wide definition of the Bulk Electric System. A detailed table provided by each Registered Entity is available from the ReliabilityFirst staff. The summary provides the following:

- The total number of registered entities requiring a transition period
- The total number of RC/BA/TOPs that require a transition period
- The FERC approved NERC Standard by title
- A brief description of the NERC Standard
- The latest date that a registered entity has indicated it needs to become compliant
- The highest Violation Risk Factor of the requirements within the associated NERC Standard
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<th>Number of Registered Entities with a Transition Plan</th>
<th>Total Number of TOPs, BAs, and RCs with a Transition Plan</th>
<th>Approved Reliability Standard that Require a Transition Plan (Standard Number)</th>
<th>Brief Description of the Approved Reliability Standard</th>
<th>Latest Date A Registered Entity will Complete Its Transition Plan</th>
<th>Standard Violation Risk Factor (highest violation risk factor is listed using the August 23rd Matrix)</th>
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These dates are still under review and we are awaiting further information from the registered entities.
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</table>
Attachment A

ReliabilityFirst Definition of the Bulk Electric System
As approved by the ReliabilityFirst Board of Directors, May 9, 2007

The Bulk Electric System within the ReliabilityFirst footprint is defined as all:

- (1) individual generation resources larger than 20 MVA or a generation plant with aggregate capacity greater than 75 MVA that is connected via a step-up transformer(s) to facilities operated at voltages of 100 kV or higher,
- (2) lines operated at voltages of 100 kV or higher,
- (3) transformers (other than generator step-up) with both primary and secondary windings of 100 kV or higher, and
- (4) associated auxiliary and protection and control system equipment that could automatically trip a BES facility, independent of the protection and control equipment’s voltage level.

The ReliabilityFirst Bulk Electric System excludes:

- (1) radial facilities connected to load serving facilities or individual generation resources smaller than 20 MVA or a generation plant with aggregate capacity less than 75 MVA where the failure of the radial facilities will not adversely affect the reliable steady-state operation of other facilities operated at voltages of 100 kV or higher and
- (2) balance of generating plant control and operation functions (other than protection systems that directly control the unit itself and step-up transformer); these facilities would include relays and systems that automatically trip a unit for boiler, turbine, environmental, and/or other plant restrictions, and
- (3) all other facilities operated at voltages below 100 kV.

Clarification to the ReliabilityFirst BES Definition Regarding Protection Systems

The following clarification was made on August 9, 2008 to the ReliabilityFirst BES definition for determining compliance to the applicable protection related Reliability Standards. The ReliabilityFirst Compliance Staff will use it in the monitoring of compliance to the applicable reliability standards:

- The clarification pertains to section (4) above in the ReliabilityFirst BES definition regarding the inclusion of protection systems. Since it is impractical to document every situation for inclusion of protection systems in the BES, a general clarification is made.
- Any protective relays or other control devices that are designed to automatically trip a BES facility when operating correctly for its principal intended function are included in the BES, as part of this definition.
- For example, if a 138/12.47 kV distribution transformer is tapped from a networked 138 kV line (i.e. not radial to load) which is included in the BES, and that distribution transformer contains protective relays that trip that networked 138 kV line out-of-service; then those protective relays and associated control equipment in the 138/12.47 kV distribution substation are included as part of the BES definition.
In another example, if a 138/12.47 kV distribution transformer is tapped from a networked 138 kV line which is included in the BES, and that transformer has protective relays (such as differential relays) that trip only the distribution transformer out-of-service and do not trip the networked 138 kV line; then those protective relays and associated control equipment are not included as part of the BES definition.
Attachment B

Western Electricity Coordinating Council letters to NERC
dated May 9, 2007 and January 29, 2009
May 9, 2007

Mr. Gerry Adamski
Director of Standards
North American Electric Reliability Corporation
116-390 Village Boulevard
Princeton, New Jersey  08540-5731

RE: Regional Definition of Bulk Electric System

Dear Gerry,

The following is provided in response to your April 13, 2007 letter requesting information on Regional definitions of the term “Bulk Electric System.”

At the present time, WECC utilizes the NERC definition for Bulk Electric System (BES). However, the WECC Joint Guidance Committee recently endorsed recommendations previously developed by the WECC Bulk Electric System Task Force (BESTF). These recommendations are comprised of nine “tests” that further clarify the facilities which should be included in BES.

In 2005, WECC formed the BESTF to develop a WECC definition for BES. The task force identified several options for the WECC to address a regional BES definition. However, none of these gained enough support to move forward in the WECC standards approval process. Rather than continue efforts to develop a separate WECC definition for Bulk Electric System, the BESTF adopted a different approach. The BESTF determined the WECC should consider defining the discretion inherent in the word “generally” included in two places in the NERC BES definition. This approach allowed WECC to adopt the NERC definition of BES, but provided additional clarity surrounding the term “generally” such that facilities that are and are not included are clearly delineated.

NERC Definition of Bulk Electric System:

“As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment,
generally operated at voltages of 100 kV or higher. Radial transmission facilities serving
only load with one transmission source are generally not included in this definition.”

NOTE: In the context of the following characteristics, a “Transfer Path” is defined as:
• A transmission path in the WECC’s current Path Rating Catalog*
• A transmission path that has an operating transfer capacity limit currently
  approved by the WECC Operating Transfer Capability Policy Committee*

WECC characteristics adding clarity to the term “generally” as used in the NERC
definition of the Bulk Electric system.

1. The system element is listed in the definition of a Transfer Path

2. An (N-1) outage of the system element necessitates a reduction in a Transfer
   Path’s limit on actual power flow.

3. Measurements of the system element’s electrical parameters (e.g. MW, MVar,
   amperes, frequency or volts) are included in either a System Operating Limit
   (SOL) or an Interconnection Reliability Operating Limit (IROL) being monitored
   by the Reliability Coordinator.

4. An (N-1) outage of the system element is included in the list of outages used by a
   Reliability Coordinator in real-time contingency analysis.

5. Planned outages of the system element are coordinated with neighboring
   transmission providers. As examples, the elements identified in the Northwest
   Power Pool Coordinated Outage System (COS) list of Significant Facilities for
   Outage Coordination in Section H Appendix B*.

6. The system element is either directly involved in supplying off-site station service
   to nuclear power plants, or its loss causes station service problems that require
   corrective actions.

7. The system element is listed in the “WECC-Wide Key Facility List –
   Transmission” table in Appendix 1 of the WECC’s Regional Reliability Plan*.

8. The system element’s status or electrical parameters are incorporated into a
   remedial action scheme described in the WECC Operating Procedures*.

9. The system element is identified by that region’s Reliability Coordinator as being
   part of the “Bulk Electric System”.

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The WECC Joint Guidance Committee will await a response from NERC and FERC to determine whether the WECC specific clarifications listed above should be formalized in the WECC standards process.

Please let me know if you have any questions regarding the enclosed information or if additional information is required.

Sincerely yours,

Steve Rueckert

Steven L. Rueckert

SR: sr
Attachment

* Items referenced above are included in attached response form.
January 29, 2009

Gerry Adamski  
Vice President and Director of Standards  
North American Electric Reliability Council  
116-390 Village Boulevard  
Princeton, NJ 08540

Re: Update to WECC definition of “Bulk Electric System”

Dear Mr. Adamski,

On May 9, 2007, the Western Electricity Coordinating Council (WECC) submitted its response to NERC’s request for regional definitions of the term “Bulk Electric System” (the “May 9 Letter”).¹ WECC is now providing an update on its regional definition of the term Bulk Electric System (BES) so that NERC may amend its compliance filing with FERC.

In the May 9 Letter, WECC stated that it was using the NERC definition of the BES, but had developed a list of nine criteria to clarify those facilities which are:

- a) Above 100 kV and should not be considered part of the Bulk Electric System.
- b) Below 100 kV and should be considered part of the Bulk Electric System.
- c) Radial transmission facilities serving only load and should be considered part of the Bulk Electric System.

As indicated in the May 9 Letter, WECC’s Board of Directors (Board) had not approved the nine proposed criteria. The Board has not approved the criteria in the interim.

WECC’s Reliability Policy Issues Committee (RPIC) undertook a review of WECC’s definition of the BES. RPIC found that in the absence of WECC Board approval of the nine criteria, WECC’s Compliance Department has not used, nor does it plan to use, the proposed criteria in its implementation of its Compliance Management and Enforcement Program (CMEP). In addition, the nine criteria are not used by WECC in the execution of any of its delegated activities and therefore should not be considered part of WECC’s BES definition.

WECC’s RPIC Bulk Electric System Definition Task Force is currently considering what other actions may be needed to clarify the NERC definition of the BES to meet the needs of the

¹ WECC’s May 9 Letter was in response to NERC’s April 13, 2007, request for regional definitions following the Federal Energy Regulatory Commission’s issuance of Order 693, 118 FERC ¶ 61,218 (2007).
Western Interconnection. However at this time, WECC continues to use the NERC definition alone in its implementation of its delegated activities.

WECC will notify NERC if the WECC Board takes any further action on this matter. If you require additional information, please contact Michelle Mizumori at 360-713-6108.

Sincerely,

Louise McCarren
Chief Executive Officer
Western Electricity Coordinating Council