
601 13th Street, NW
Suite 1000 South
Washington, DC 20005-3807
TEL 202.661.2200
FAX 202.661.2299
www.ballardspahr.com

Howard H. Shafferman
Direct: 202.661.2205
Fax: 202.626.9036
hhs@ballardspahr.com

October 28, 2009

The Honorable Magalie Roman Salas
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

Re: Mandatory Reliability Standards for the Bulk Power System;
Docket No. RM06-16-000

Dear Secretary Salas:

Transmitted electronically for filing in the referenced docket are the Joint Comments of the Electric Reliability Council of Texas, ISO New England Inc., the Midwest Independent Transmission System Operator, Inc., and Southwest Power Pool, Inc.

If there are any questions concerning this filing, please call me at (202) 661-2205.

Respectfully submitted,

/s/ Howard H. Shafferman

Howard H. Shafferman
Counsel for
ISO New England Inc.

HHS/

Enclosure

DMEAST #11926071 v6

In the Notice of Public Meeting, the Commission noted that its Office of Electric Reliability (“OER”) initiated this project to develop, for purposes of Section 215 of the Federal Power Act (“FPA”), a methodology to aid in identifying and ranking the elements of the BPS in the United States. The Commission stated that OER staff is seeking to:

- (1) develop a process to distinguish those facilities that should not be considered part of the Bulk-Power System from those facilities that should be considered part of the Bulk-Power System;
- (2) identify the elements needed to operate each of the electric interconnections; and
- (3) rank the importance of those elements.³

The Notice of Public Meeting explained that the project “may” lead to a methodology that could be utilized in future proceedings to aid in refining the scope of what constitutes the BPS subject to Section 215 of the FPA.⁴

³ Notice of Public Meeting at 1.

⁴ *Id.*

II. COMMUNICATIONS

All correspondence and communications regarding these Comments should be addressed to the undersigned as follows:

<p>Matt Morais* Assistant General Counsel ERCOT 7620 Metro Center Drive Austin, TX 78744 Tel: (512) 225-7177 Email: mmorais@ercot.com</p>	<p>Theodore J. Paradise* Senior Regulatory Counsel ISO New England, Inc. One Sullivan Road Holyoke, Massachusetts 01040 Tel: 413.540.4585 Fax: 413.535.4379 E-mail: tparadise@iso-ne.com</p>
<p>Stephen G. Kozey* Vice President and General Counsel Midwest Independent Transmission System Operator, Inc. P.O. Box 4202 Carmel, Indiana 46082-4202 Tel: (317) 249-5431 Fax: (317) 249-5912 E-mail: skozey@midwestiso.org</p>	<p>Howard H. Shafferman, Esq.* Jack N. Semrani, Esq. Ballard Spahr Andrews & Ingersoll, LLP 601 13th Street NW Suite 1000 South Washington, D.C. 20005-3807 Tel: (202) 661-2200 Fax: (202) 661-2299 E-mail: hhs@ballardspahr.com semranij@ballardspahr.com</p> <p>Counsel for ISO New England Inc.</p>
<p>Stacy Duckett* General Counsel & Corporate Secretary Southwest Power Pool 415 North McKinley #140 Plaza West Little Rock, Arkansas 72205 Tel: (501) 614-3296 Fax: (501) 664-9553 E-mail: sduckett@spp.org</p>	

*Attorney or Officer designated for service.

III. COMMENTS

The Filing Parties recognize and appreciate the work that has gone into the Report, and focus these Comments on the context of the Report and certain assumptions and methodologies used therein.

The transmission grid is a vital component of US infrastructure, and reliability of the grid must be a primary goal for all interested parties. To achieve this goal, it is necessary to identify the requisite transmission elements that define the BPS, and the Filing Parties appreciate the Commission's concern that the existing definition of BPS, which is defined in terms of North American Electric Reliability Corporation ("NERC") BES definition, may create coverage gaps. However, the particular shortcomings in the existing definition have not been articulated by the Commission, and it is essential for these shortcomings to be identified so that the methodology can account for and respond to them.

At present, some Regional Entities have specific definitions, but the definition of BES generally consists of all relevant facilities 100 kV or above. As explained below, the Filing Parties believe this approach is not only adequate, but offers advantages over the TIER methodology. Interested stakeholders in a region are most familiar with the system topology and underlying components that comprise the grid in their areas. Accordingly, these entities, with the oversight of their Regional Entity, are best suited to define the BPS for their respective regions, as compared to the methodology set out in the TIER Report. As noted above, to the extent the Commission has specific concerns with the application of these regional definitions, or general concerns with the bright-line 100kV and above standard, the Commission should articulate them first.

The soundness of the underlying premise of the methodology, ranking elements based on their impact upon congestion price separation, is also questionable. Although an element's

impact on congestion may be an indicator for needed investment in the market (*e.g.*, new generation, transmission or demand response capacity), unless a particular contingency cannot be solved, there is not a direct relationship to reliability.

Finally, because the results of the TIER methodology are based on a dynamic input – system topology – the definition of the BPS presumably could change periodically. If the parameters of the BPS are subject to change, arguably this could affect entities’ compliance with standards that involve obligations related to the BPS – *i.e.*, what might be relevant in one year may not be relevant in another. This would be particularly problematic with respect to transmission planning standards that involve evaluation of future systems up to 10 years into the future, and for which the TIER approach could yield a different set of BES facilities in any or all future planning horizon years.

A. The Report and its Methodologies Should Respond to Commission-Identified Deficiencies in the BPS Definition

The Filing Parties are concerned that the TIER Report presents a “cart before the horse” situation. In particular, the Filing Parties believe that the Commission’s efforts to identify and rank the elements of BPS – through initiatives such as the TIER Report – should be preceded by an identification by the Commission of what it perceives as current deficiencies in the application of the BPS definition resulting in risks to reliability. In particular, it is critical to identify at the outset any aspects of power system planning, maintenance and operation that the Commission views as not covered by the current application of the BPS definition.

Without such an initial identification, the methodologies developed to identify BPS elements will not be informed by examination of the most perplexing issues, resulting in an inefficient process and – potentially – inaccurate or incomplete methodologies. The Commission has recognized the value of such an approach in the context of reliability: a laudable example of

a process that begins with problem identification in order to proceed to appropriate solutions is provided by the Commission's initiation of Docket No. RC09-3 to gather information about NPCC's application of the BPS definition.⁵ The Commission could apply that approach in the TIER proceeding, if it believes that a continent-wide review of the BES definition is required as well.

In Order No. 693, the Commission noted that it had concerns with defining the BPS in terms of the NERC BES definition because it believed the latter provided the opportunity to create gaps in the coverage of facilities; specifically, the Commission referenced regional BES definitions that excluded lines below 230 kV that serve Washington DC and New York City.⁶ These limited examples cited in Order No. 693 involve circuits above 100 kV. The Report notes that most regions' BES definitions mirror the NERC definition, which includes all facilities above 100 kV. To the extent there are other facilities that affect the operation of the BPS, the NERC compliance registration process has the ability to include such facilities in the regulatory process. These constructs are broad enough to cover all relevant facilities. To the extent there are certain regions or specific gaps in certain regions, where the BES definitions exclude elements that raise concerns, the Commission should consider more surgical means of identifying and remedying those circumstances.

If the Commission moves forward with a universal BPS definition, it should be based on an objective standard that produces a relatively stable and predictable result to ensure the

⁵See *North American Electric Reliability Corporation and Northeast Power Coordinating Council, Inc.*, Order Directing the Submission of Data, 125 FERC ¶ 61,295 at P 1 (2008) (“the Commission directs the [NERC and NPCC] to submit to the Commission, within thirty days of the date of this order, a comprehensive list of bulk electric system facilities within the United States portion of the NPCC region.”).

⁶ *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, 72 Fed. Reg. 16416 at P 77 (2007).

regulated community has adequate notice and certainty with respect to the standards it is expected to comply with. The filing parties believe employing the current BES 100 kV threshold, but removing the regional discretion language, would accomplish this goal while also achieving the Commission's goal of mitigating the potential for gaps in regulated BPS elements.

B. The Definition of the BPS Should Be Determined by Each Region

BPS is essentially defined by NERC as all relevant facilities identified by Regional Entities that are above 100kv; radial lines serving load are generally excluded. The entities in the respective regions have the best information to assess what facilities should define the BPS, and, therefore, are in the best position to define the BPS. Accordingly, it is reasonable to assume that the existing BPS/BES definitions appropriately reflect the characteristics of those regions.

The Commission has recognized the need for regional differences in many contexts. Indeed, it did so in accepting NERC's definition of BES in Order No. 693, which explicitly states that the BES will be defined by the Regional Reliability Organizations. The rationale for this deference is clear – these entities have intimate knowledge of the BPS in their regions and are in the best position to determine the elements that comprise the BPS.

As described below, the TIER methodology does not appear to offer any advantage over the existing approach to defining BPS/BES. Therefore, the Commission should continue to grant deference to the regions in this regard.

C. The TIER Report and its Methodologies Should Be Premised on Accurate Factual Data and Actual Grid Practices

The Filing Parties are also concerned that the TIER Report and its methodologies may not be premised on accurate factual data and actual grid practices. Two examples are described below.

1. Application of NPCC Criteria

For example, the TIER Report states that “[t]he application of NPCC’s approach in using the impact test as the primary means to define bulk electric system leads *to the exclusion of most facilities below 230 kV* and even some facilities at 230 kV and above.”⁷ The Report also asserts that the “specifics of ... adverse impact ... are at the selection of the individual Balancing Authorities.”⁸ These statements do not accurately describe how NERC Standards are applied in New England. Under ISO-NE’s Commission-approved Transmission Operating Agreements and the ISO-NE Tariff, and the application of NPCC Criteria, a significant number of non-radial 115kV and above transmission facilities are operated and planned by ISO-NE and the New England Transmission Owners in accordance with NERC Standards. All entities that operate such transmission facilities are registered Transmission Operators, and all companies involved in the planning of such facilities are registered Transmission Planners. Moreover, NPCC Criteria do, in fact, define “significant adverse impact” for purposes of assessing the NPCC impact test.⁹

2. Treatment of Generation, Generation Interconnections and Load Interconnections

The TIER Report’s treatment of generation and generation interconnections is apparently based on an incorrect assumption that all generators and generation interconnections are critical.¹⁰ Registered Entities plan and operate the system, *assuming* the loss of generating units, including, most importantly, the single largest contingency, such that these types of losses *will*

⁷ TIER Report at 14.

⁸ *Id.* at n. 14.

⁹ *See* NPCC Criteria, NPCC Document A-7, NPCC Glossary of Terms at 22.

¹⁰ *See* Report at 19 (“any radial connection between generating plants and the rest of the network should be considered among the more important elements in the system”); *id.* at 30 (“these [generator lead] elements are the most important in the system, which is typical in relatively small systems”); *see also id.* at 31.

not have a material impact on grid operations (*i.e.*, exceedence of system limits, cascading outages or equipment damage). The Report's base assumption, however, appears to be that all generators and generation interconnections are critical. For example the methodology does not distinguish between the impacts of the loss of generation units of different capacities, *e.g.* 10MW or 1000MW, and therefore provides no basis for making determinations regarding what should be regulated as part of the NERC BES.

At the same time, the TIER Report appears to treat generation and load connections inconsistently. While the UWM researchers appear to view Generation Interconnections as likely to be considered very important, any transmission that is primarily in a load pocket will have a lower probability of being identified as part of BES. Because reliable grid operations involves balancing generation *and load*, it is not clear why the TIER methodology should result in different outcomes for generation and load pocket interconnections. This inconsistent treatment could also lead to NERC and FERC ignoring the role of demand response, which is contrary to earlier Commission decisions directing NERC to look into how demand response providers should be covered by NERC Standards.¹¹

D. The Methodologies Used in the TIER Report Have Other Significant Shortcomings

The methodologies utilized in the TIER Report simply attempt to describe the relative importance of transmission facilities to other transmission facilities, and have significant shortcomings. Several examples follow.

¹¹ *See, e.g.*, Order No. 706 at P51 (“we believe that NERC should register demand side aggregators if the loss of their load shedding capability, for reasons such as a cyber incident, would affect the reliability or operability of the Bulk-Power System”). In fact, NERC is currently examining the role of demand response. *See, e.g.*, NERC Demand Response Availability Data System, *available at* http://www.nerc.com/docs/pc/drdrtdf/DADS_Phase_III_Final_090109.pdf.

1. Congestion Management Criterion

The TIER methodology ranks system elements based on impact on locational marginal pricing (“LMP”) price separation. Each element is examined under contingency conditions to see what effect curtailed flow on the particular element would have on price separation. This may demonstrate the importance of an element from a market perspective, but the reliability connection is not clear. System contingencies impact flows on elements, which may result in congestion and price separation, but that does not indicate a reliability problem provided the system has the generation capacity available to solve the contingency by changing the generation dispatch.

The intent of the mandatory reliability construct is to ensure reliability of the BPS. This involves maintaining reliable operations of the elements of the BPS and prevention of incidents/events that would interfere with the reliable operation of the BPS. Specifically, the program is intended to prevent system instability, uncontrolled separation or cascading failures. To achieve these reliability goals, the elements of the BPS must be operated within thermal, voltage and stability limits.

An element’s congestion pricing impact is irrelevant to reliable operations/functioning of the BPS as long as limits can be respected. Simply because limiting flow on an element may cause congestion pricing impacts, that market result should not be the driver for defining the elements of the BPS. In fact, it may miss some elements that may be critical to the functioning of the BPS but may not have significant impact on prices if constrained.

The TIER methodology links functionality to an element’s impact on prices, which, in essence, ties the definition of the BPS to its components’ impact to market indices. As described above, although an element’s impact on congestion may be an indicator for needed investment in

the market (*e.g.*, new generation, transmission or demand response capacity), unless a particular contingency cannot be solved, there is not a direct relationship to reliability.

In sum, because the purpose of the NERC Standards is to ensure reliability of the BPS, it is questionable whether the elements of the BPS should be defined in terms of their impact on LMP price separation. As an analytical means of defining a facility's relative impact on the ability to grid to reliably serve customer demand, the TIER methodology is off target.

2. Absence of "Bright Line" Criteria

The TIER Report methodology simply assesses which networked facilities will tend to have a greater or lesser impact on other networked facilities, based on assumptions regarding unconstrained systems. This methodology does not establish, however, a bright line on this continuum of greater-to-lesser-impact that would dictate or inform the decision of whether a particular facility should be included in the BPS.

In a related point, it is unclear how the TIER Report methodology addresses the so-called "anomalies" on the system, *i.e.*, facilities referred to in the Technical Conference as low-voltage facilities found to have impacts on networked facilities, and high-voltage facilities found to have few, if any, impacts on networked facilities.¹² If the issue of concern is where to draw such a bright line or the test for the separation between BPS and non-BPS facilities, the TIER Report does not seem to provide an approach to addressing actual BPS classification. And, if the issue of concern is that there are gaps in coverage under the current BES definition, the TIER Report does not explain how it deals with the apparently important issue of "anomalies".

¹² *Mandatory Reliability Standards For The Bulk Power System*, Docket No. RM06-16-000, Transcript of the September 22, 2009 meeting at 31, lines 3-8 ("And PJM engineers and FERC staff were, in general, they were able to explain that, you know, because of the topology of the system or because of the way the system was built, there were actually logical reasons for some of these anomalies (referring to high voltage facilities with low-impedance values), and that they were consistent with the topology of the system.").

3. The Report Fails To Consider Important Devices

It does not appear that shunt devices such as capacitors, reactors, and other devices that can play an important role in the operation of the BPS have been taken into account in the TIER Report's methodology. Any Commission analysis regarding the usefulness of the TIER Report should examine the impact of excluding these important devices.

E. The TIER Methodology Could Create NERC Reliability Standard Compliance Issues

System topology is a key input for the TIER methodology. Because topology is dynamic, presumably the definition of the BPS would also be dynamic using the TIER methodologies. This could create NERC Reliability Standard compliance issues. For example, TOP-005-1.1 requires Reliability Coordinators ("RC") to identify data requirements related to the operation of the BPS. This data is related to the elements that comprise the BPS. To the extent the definition of the BPS changes, the Regional Reliability Councils presumably would have to redefine their data requirements, and those entities supplying the data would likewise have to update their data lists to ensure it aligned with the new definition of the BPS. Because the TIER methodology does not utilize a clear methodology, such as circuit size, to define the BPS elements, it could create compliance issues because of the potential confusion as to the BPS scope.

In addition, NERC Reliability Standards generally involve the term BES. The Commission adopted this definition as the definition for BPS. However, because it had concerns over potential gaps created by this approach, the Commission stated its intent to revisit this matter. In discussing the issue, the Commission noted the difference in scope between the two definitions; the scope of BPS in FPA Section 215 was broader than the scope of BES. If the Commission moves towards a broader definition of BPS, that presumably would require revising the definition of BES to align with the new BPS definition, which would impact the scope of all

standards that involve the BES. If that occurred, all jurisdictional entities would be required to revisit their compliance posture against the new BES/BPS definition.

Similarly, there are standards that apply to transmission elements based solely on circuit size. It is unclear how a dynamic definition of the BPS would align with such standards. For example, if the BPS definition under the TIER methodology excluded circuits covered under other standards based solely on circuit size, the necessity of regulation of those non-BPS elements could be unclear.

In sum, the uncertainties resulting from a dynamic definition could create confusion and compliance risks.

IV. CONCLUSION

It is difficult to see how the TIER methodology offers any advantage that would warrant displacing the existing BPS/BES definitions in the respective regions. Rather, it appears that it could be counterproductive because it would result in a complicated, watershed change that may impose additional cost, administrative burden and compliance risks without any real benefit. In fact, because its economic focus could exclude facilities that may be relevant to the reliability of the BPS based on the specific characteristics of the regions, it could actually have negative reliability consequences.

The Commission's goal of accurately defining the BPS is worthwhile. However, it is important to be circumspect in consideration of new methodologies. Unless there are clear and significant benefits to be gained, the Commission should not displace the existing methodologies used by the different regions to define the BES/BPS. Further, to the extent the Commission finds value in any particular methodology, it should consider approving such approaches as discretionary tools, rather than exclusive, mandatory means to define the BPS/BES in every region of the nation.

WHEREFORE, the Filing Parties respectfully request that the Commission consider the foregoing comments in its deliberations in this proceeding.

Respectfully submitted,

<p><u>/s/ Matt Morais</u> Matt Morais Assistant General Counsel ERCOT 7620 Metro Center Drive Austin, TX 78744 Tel: (512) 225-7177 Email: mmorais@ercot.com</p>	<p><u>/s/ Theodore J. Paradise</u> Theodore J. Paradise Senior Regulatory Counsel ISO New England, Inc. One Sullivan Road Holyoke, Massachusetts 01040 Tel: 413.540.4585 Fax: 413.535.4379 E-mail: tparadise@iso-ne.com</p>
<p><u>/s/ Stephen G. Kozey</u> Stephen G. Kozey Vice President and General Counsel Midwest Independent Transmission System Operator, Inc. P.O. Box 4202 Carmel, Indiana 46082-4202 Tel: (317) 249-5431 Fax: (317) 249-5912 E-mail: skozey@midwestiso.org</p>	<p><u>/s/ Howard H. Shafferman</u> Howard H. Shafferman, Esq. Jack N. Semrani, Esq. Ballard Spahr Andrews & Ingersoll, LLP 601 13th Street NW Suite 1000 South Washington, D.C. 20005-3807 Tel: (202) 661-2200 Fax: (202) 661-2299 E-mail: hhs@ballardspahr.com semranij@ballardspahr.com</p> <p>Counsel for ISO New England Inc.</p>
<p><u>/s/ Stacy Duckett</u> Stacy Duckett General Counsel & Corporate Secretary Southwest Power Pool 415 North McKinley #140 Plaza West Little Rock, Arkansas 72205 Tel: (501) 614-3296 Fax: (501) 664-9553 E-mail: sduckett@spp.org</p>	

Date: October 28, 2009