NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Unofficial Comment Form

Cost Effectiveness Pilot Questions

Do not use this form for submitting comments. Use the electronic form to submit comments on the **Cost Effectiveness Pilot**. The electronic form must be submitted by **8 p.m. Eastern, Thursday, May 26, 2016**.

Documents and information about this project are available on the **Cost Effectiveness Pilot** page. If you have questions, contact Standards Developer, Jordan Mallory (via email) or at (404) 446-9733.

Background

The objective of this proposal is to outline an approach to develop a method toward measuring of Reliability Standard implementation costs. Federal, State and Provincial regulatory authorities, the NERC Board of Trustees, Regional Entities, and many industry stakeholders have expressed interest in the identification of the costs incurred from implementing NERC Reliability Standards compared to risks addressed. The desire is to balance costs and risks during the standards development and revision process.

In the past, determination of the costs from the implementation of NERC Reliability Standards was implicitly considered throughout the standards development process. Through this process, detailed comments are sought and modifications to proposed standards are made based on input from the standards ballot pool, which represents a cross-section of interested participants. However, some entities have requested a more direct assessment of costs, citing a number of different reasons. For example, registered entities have identified the need to estimate implementation costs for budgeting and rate case development. Further, many state regulators would like this information to determine consumer costs implications.

The actual cost to implement a Reliability Standard may be difficult to estimate. In general, registered entities vary in their operations, vulnerabilities, and starting points from which to calculate incremental costs. Hence, the costs for Reliability Standard implementation may vary by orders of magnitude by entity.

Consideration of Risks to Reliability

NERC has transitioned to include risk analysis in all aspects of its regulatory model, focusing the Electric Reliability Organization's (ERO) and stakeholder resources on the highest risks to the reliability of the Bulk Electric System (BES).

Proposed Pilot for Developing Cost Evaluations during Standard Development

The proposal for developing cost evaluations during standard development is as follows. A voluntary questionnaire will be provided to industry participants in order to obtain sufficient information to develop

a high level analysis of the risk reduction to the BES under consideration, as well as the potential costs (e.g. monetary and societal) of not addressing the reliability risks. This questionnaire will be conducted prior to, or in conjunction with, the standard authorization stage (SAR) stage of standard development. If, during the development of a SAR, the drafting team believes there is a need to pose questions to the industry during the drafting phase, it may identify the reliability risk being mitigated and provide industry the opportunity to identify alternate methods to be captured in the standard that may achieve the reduction in risk to the BES in a cost effective manner. If conducted prior to the development of the SAR, questions could be developed in a similar manner to obtain information that may provide insight on SAR development options.

Initial Pilot

There are two outstanding directives from FERC Order No. 786[1] relating to TPL-001-4 — Transmission System Planning Performance Requirements.

- Paragraph 40 directs NERC to modify Reliability Standard TPL-001-4 to address the concern that the six-month threshold could exclude planned maintenance outages of significant facilities from future planning assessments.
- Paragraph 89 directs NERC to consider a spare equipment strategy for stability analysis that is similar to that required for steady state analysis upon the next review cycle of Reliability Standard TPL-001-4.

Project 2015-10: Single Points of Failure TPL-001 from the 2016-2018 Reliability Standards Development Plan is developing a SAR to address potential modifications to TPL-001-4. The results of this pilot will be provided to the drafting team to inform their work on modifying this standard. The following questions are provided to obtain information about risks and costs related to the two directives above.

Questions

1. Reliability Standard TPL-001-4 requires an entity to consider planned maintenance outages greater than six months in duration in its studies. What, if any, risk is there to the reliable operation of the Bulk Power System (BPS), as defined in Section 215 of the Federal Power Act (i.e., "operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance . . . or unanticipated failure of system elements") if planned maintenance outages of less than six months in duration are not considered in studies during one or both seasonal off-peak periods? Please explain your response: The New England States Committee on Electricity ("NESCOE") appreciates the opportunity to submit comments. NESCOE is New England's regional state committee. NESCOE understands that ISO New England ("ISO-NE") will be submitting comments today explaining how the New England region is already well positioned to address reliability risks in connection with planned maintenance outages. This

[1] Link to FERC Order No. 786: http://www.nerc.com/FilingsOrders/us/FERCOrdersRules/E-2 Transmission Planning Rel. Strd.pdf

includes a suite of authorities and procedures that are currently in place to govern the scheduling and management of planned (and unplanned) outages. Last year, ISO-NE received and managed over 6,000 planned and unplanned outages within New England and in neighboring areas. *ISO New England Transmission Equipment Outage Coordination in 2015*, May 11, 2016, at 4. NESCOE agrees with ISO-NE that, compared to the current administrative processes in place in New England, imposing a new standard that requires planning analyses for known planned outages is an inefficient approach to addressing the relevant reliability risks in New England.

a. If there are risks to the reliable operation of the BPS, are the likelihood of the occurrence of these risks low, medium or high? In New England, NESCOE understands the risks to be low for the reasons explained below and in ISO-NE's comments submitted today.

   Please explain your response: There are two factors that mitigate the reliability risk in New England. First, as discussed above, there is an active and ongoing process in New England, under existing protocols, to coordinate and manage outages. Second, because ISO-NE has procedures in place to account for outages, it is prepared to take operational actions to address needs that may arise.

b. What costs should be considered when evaluating these risks or in adding planned maintenance outages less than six months to TPL-001-4? Please explain your response: As a general matter, NESCOE greatly appreciates NERC's initiation of this cost-effectiveness pilot. NESCOE has expressed its strong support in the past for NERC's efforts to incorporate cost-effectiveness analysis into its standard development. It is a priority that the appropriate level of infrastructure is in place to achieve a robust and reliable bulk electric system. Indeed, in New England, consumers have invested heavily in transmission infrastructure for reliability needs. Today, transmission-related costs comprise a greater percentage of a New England consumer's bill than in any other RTO region. NESCOE appreciates these efforts to identify cost-effective approaches to new standards going forward. As NESCOE has stated in past comments, incremental reliability gains cannot be considered in a vacuum, separate from an understanding of the magnitude of risk and cost associated with federal reliability standards. NERC's consideration of costs, reliability risks and benefits should help tailor the most appropriate and cost effective approach to achieving a reliability objective.

   In the spirit of a pilot project, NESCOE offers one early broad observation that might increase industry participation in providing input on the expected costs associated with a proposed new or revised standard. To date, NESCOE understands that NERC has relied on industry participants to volunteer cost estimates related to a proposed standard and that, given the resources involved, many entities decline to provide cost details. One approach to encourage greater participation, and increase understanding of cost impacts, would be for NERC staff or standard development teams ("SDTs") to provide a "straw" or even rough illustrative estimate and seek responses to that information. Entities may be more likely to

review and respond to a number or set of numbers than to produce one from scratch. Further, in light of Order 1000's transition to competitive transmission, cost estimates related to transmission infrastructure may be increasingly considered to be competitively sensitive information. Many transmission owners or developers may not want to offer a sense of costs for public review in the NERC standard development process. Of course, this would require NERC or SDTs to expend resources on putting out a straw. However, given the importance of cost-effective analysis, the priority NERC and many other government officials place on the cost-effectiveness program, and emerging competition in transmission development, this may be a prudent and even necessary investment that would save consumers dollars over the longer-term. To be clear, this is a forward-looking suggestion and is not intended to respond to the specific questions posed here on TPL-001-4.

Regarding the question of cost in connection with TPL-001-4, for the reasons discussed above, imposing a new planning standard in New England for planned outages does not appear to be the most cost-effective approach to address reliability risks associated with planned maintenance outages. ISO-NE already engages in the conservative modeling of reliability needs, with an N-1-1 scenario reflected in the base case. Accordingly, the base case acts as a proxy for units that are unavailable, whether through planned or unplanned events. To remove further facilities for planned maintenance outages, which are already accounted for in existing protocols, would be the equivalent of an N-1-1-1 event. This change would have potentially significant cost implications for New England. The more cost-effective approach in New England is to allow for ISO-NE's existing processes and procedures to plan for, and address, any reliability issues in connection with outages.

c. If you identified one or more risks and identified a likelihood of "medium" or "high", is there a more cost effective manner to reduce them rather than revising TPL-001-4 or is there an preferred approach to revising TPL-001-4 that takes into consideration cost effectiveness?

☐ Yes
☐ No

Please explain your response including descriptions of potential cost effective solutions and the associated benefits to reliability: N/A

2. What, if any, risk to the reliable operation of the BPS, as defined under Section 215 (see question 1 above) is there if an entity does not perform stability analyses for the P0, P1 and P2 categories in TPL-001-4 that consider the possible unavailability of long lead-time equipment? Please explain your response: NESCOE may submit comments on this aspect of TPL-001-4 at a later time.

a. If there are risks to the reliable operation of the BPS, are the likelihood of the occurrence of these risks low, medium or high?

Please explain your response:

b. What costs should be considered when evaluating these risks? Please explain your response:

c. If you identified one or more risks and identified a likelihood of “medium” or “high” is there a cost effective manner to reduce them rather than revising TPL-001-4 or is there an preferred approach to revising TPL-001-4 that takes into consideration cost effectiveness?

☐ Yes
☐ No

Please explain your response including descriptions of potential cost effective solutions and the associated benefits to reliability: