

**Panel III: NERC Standards Development Process and Priorities  
Written Remarks of Thomas J. Galloway, President and Chief Executive Officer  
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## **Introduction**

Good afternoon Chairman Wellinghoff, Commissioners, FERC staff, fellow panelists, and other distinguished participants. I'm Thomas Galloway, president and CEO of the North American Transmission Forum. I appreciate the opportunity to serve on today's panel and provide comments on several important industry topics regarding bulk electric system reliability. These include efforts to improve the quality and timeliness of reliability standards development; efforts to quantify associated costs; the roles of various other initiatives, such as the Reliability Issues Steering Committee (RISC); and the Transmission Forum's role relative to these topics, including communicating lessons learned to the Commission, the Electric Reliability Organization (ERO), and the entire industry to help inform standards development and reliability matters in general. My comments will follow that overall sequence, with particular emphasis on the Forum's role, as I see it, relative to standards improvements as well as other effective tools and techniques to improve reliability.

## **Standards and Compliance**

First, let me say that I personally believe the strategic changes underway by the ERO regarding standards development improvements and compliance reform are sound and represent important, positive shifts. I'll cover these two topics together; as in my mind they are interdependent—with the success of each highly reliant on the other.

## **Standards Improvements**

NERC, the Standards Committee, and the industry in general are placing increased emphasis on proper focus and technical content of standards while streamlining some of the more bureaucratic aspects of the development process. And, while slower than many

would like, work towards elimination of redundant or low-value standards requirements (sometimes referred to as the paragraph 81 effort) is occurring. This will prove increasingly helpful in allowing entities to focus on higher-value requirements. In my view, these actions, as well as several others highlighted by other panelists, are creating a positive trajectory for reliability standards in terms of both quality and timeliness.

That said, my primary input regarding the standards development process improvement can be summed up by borrowing a phrase from Stephen Covey, “start with the end in mind.” Mandatory reliability standards serve a critically important role to help prevent cascading outages and the extensive loss of electrical load, and I believe most industry participants support continual improvements to the standards development processes. But new reliability standard requirements should be viewed as only one, albeit essential, element in a “systems” approach to bulk electric system (BES) reliability improvement. Put simply, new standards requirements may not in all cases represent the most effective, efficient, or timely method to address certain BES reliability risks. It is important to note that every new reliability standard requirement represents a significant investment of finite industry resources, both during development but more extensively on the implementation side, where significant man-hours and other costs are needed to comply.

Given those considerations, we should continue to judiciously scrutinize the expected reliability benefits from each new reliability initiative, including new standard requirements, in the context of the significance, pervasiveness, and persistence of the targeted BES reliability risks as well as the anticipated resources required to implement improvements. The Cost Effective Analysis Process (CEAP) originated by the Northeast Power Coordinating Council (NPCC) provides an effective, first-order decision framework to evaluate the cost-benefit of new standards in this regard.

And we should maintain a broad perspective that considers various effective means (in terms of technical solutions and cost) to advance reliability. The RISC is particularly well postured to support these evaluations, especially the early-stage considerations of a broad range of prospective solutions. Working with the RISC and incorporating other relevant mechanisms, we should ensure that reliability risks are quantified, prioritized, and

evaluated for disposition in a defined sequence and with certain overriding objectives foremost in mind. Some key considerations, several of which are already underway, are as follows:

- Bulk electric system reliability risks or improvement opportunities should be aggregated, objectively quantified, and prioritized in one central list that is refreshed periodically.
- A targeted level of improvement (desired end state) should be defined for each reliability risk or improvement opportunity.
- A comprehensive evaluation should be conducted for each reliability risk or improvement opportunity that considers a broad range of improvement mechanisms/solutions.
- Prospective improvement mechanisms/solutions (individually and in combination) should be ranked based on their projected effectiveness, anticipated costs, and associated timeframe to achieve the end states.
- These factors should be aggregated to determine if a new standard is warranted, the relative priority of that development effort, and whether alternative approaches to reduce the subject reliability risks should be undertaken in lieu of, or in conjunction with, the standards-making.
- Each new standard development effort arising from the above should start with a carefully honed statement of the reliability risk that needs to be addressed as it relates to the reducing the overall potential for widespread or cascading outages.
- Whenever a new standard requirement is warranted, the standard design should strongly emphasize the desired reliability result or outcome and avoid rigid prescription of specific methods to achieve those outcomes.
- Lastly, the basic construct and application of all standards should intentionally and assiduously avoid impediments and disincentives to higher levels of entity performance beyond prescribed mandatory levels.

Forum support for these ideas stems from continued involvement in the process. Many subject matter experts from Forum members contribute indirectly and directly to

reliability standards improvements by participating on NERC technical committees (Operating, Planning, and Critical Infrastructure Protection) and related working groups, the Standards Committee, standards drafting teams, and the more recently composed standards ad hoc development teams. In addition, I anticipate added Forum engagement on specific topics and in selected venues, such as the Reliability Issues Steering Committee (RISC), that are judged as strategically important to advance our mission and vision.

### **Compliance Reform, Reliability Assurance**

Regarding compliance reform, the ERO's signaled move away from a zero-tolerance regime towards more extensive application of reliability risk insights in both compliance monitoring and enforcement is a timely and appropriate evolution. These efforts are congruent with the shifts to make standard processes both more risk-informed and results-oriented. Similar to the objectives for standards development (mentioned previously), certain key principles should be adhered to as enablers for successful compliance improvement initiatives:

- ERO approaches to better define risks and evaluate associated internal controls must work in concert with reliability standards improvements.
  - Reliability standards should focus on achievement of specific objectives regarding well-defined reliability risks.
  - ERO application of risk insights and associated controls within compliance monitoring and enforcement should be centered on ensuring compliance with approved reliability standards.
- The ERO should focus on the WHAT, not the HOW.
  - One size will NOT fit all. Entity risk identification and controls methodologies will vary, rightfully, based on numerous entity specifics, including size, location, functions performed, and corporate culture.
  - The ERO should focus on the effectiveness of an entity's risk identification and controls methodology, not the specific processes or approaches.
  - The shifts underway are significant, and would benefit greatly from field-testing. The urge to declare one approach "the answer" especially at an early stage would likely prove extremely problematic.

- Effective entity reliability risk identification and implementation of associated controls should result in tangible compliance relief. In a truly risk-informed regulatory model, an entity's ability to predictably "find and fix" its own compliance issues represents lower compliance risk and therefore lower reliability risk. As such, regulatory focus and resources should be reapportioned towards less-effective, higher-risk entities.

The Forum has been working aggressively for about the last year on reliability risk and internal controls. We formed a specific working group to focus on these important topics, developed key principles, and are working towards scalable models that can be applied by our various members. Earlier this year, we added evaluation of internal controls as a discrete module within our peer reviews. To complement that effort, we set up a continuous improvement cycle by having working group members serve on the peer reviews to promote an effective risk and controls evaluation and to establish a feedback loop that continually evolves our principles and models. (Forum work to date indicates risk and controls models should be targeted at the objective/functional level versus detailed controls targeted at individual standard requirements.) We've commenced working deliberately to support members scheduled for a risk/controls-focused compliance audit. More recently, we've been working with the ERO in various venues to share insights and other selected information and to discuss philosophies.

## Forum's Role

The Forum's mission is to **promote excellence** in the reliable operation of the electric transmission system with a vision of **continuous reliability improvement**. I view our mission and vision to be completely congruent with and complementary to the ERO's and FERC's mission, vision, and aspirations regarding bulk electric system reliability. Forum members are committed to not only comply with mandatory standards but to seek higher levels of reliability performance. Our basic approach is to facilitate interaction of member subject matter experts in various confidential venues to promote candid sharing of lessons learned, best practices, and other reliability-beneficial information and to foster environments for constructive peer challenge to improve. In addition, our integrated

program design enables continuous improvement. These approaches have proven extremely effective in demonstrably advancing performance in other industries. And, since Forum members constitutes significant majority fractions of our industry both in terms of high voltage circuit miles and peak load served, effective coordinated action by our members represents significant potential for tangible, positive reliability impact.

One important clarification I'll make is particularly relevant today. While the Forum is by design confidential, we are not secretive. Since becoming Forum CEO, I've worked, with member endorsement, to interact more routinely and systematically with other important industry organizations, including both the ERO and FERC. So, while we will carefully honor confidentiality, such as member-specific information, we will in fact deliberately share selected information of strategic reliability value. Our aim in doing so is to inform the collective reliability discussions to best advance our mission and vision.

In venues such as the NERC Board of Trustees meetings, I've reported on our progress establishing strategic collaborations with other organizations to increase the breadth and depth of our capabilities. Recently, we've moved to enter a different form of relationship with NERC via a memorandum of understanding (MOU). This MOU with NERC can help us coordinate and thereby reduce redundant efforts on various topics, as well as serve as the vehicle for sharing selected reliability information. The basic design of this MOU is to enable a series of reliability improvement "projects" such as reducing protection system misoperations that the Forum will lead based on compatibility with our mission, capabilities, and operational construct. I look to the Reliability Issues Steering Committee as an excellent source of candidate topics for consideration under this MOU.

More broadly, a range of other activities are underway at the Forum that could serve to inform the industry's collective discussions, including standards development processes, and promote advancement in both bulk electric system reliability and security. These activities can serve to share reliability risks identified within the Forum that have broader applicability; assure industry progress (at least within the Forum) on selected risks identified by the ERO, FERC, and other sources; and offer alternative approaches for topics and issues that require prompt response or may not lend themselves well to effective or efficient improvement via new standards. Some of these topics and activities include:

- Forum practices are developed for a broad range of reliability topics that in many cases extend beyond the scope of standards. Forum practices serve as a means to promote continually higher levels of member reliability performance. The Forum has a well-attended security practices group that addresses both cyber and physical security which develops these practices and other related documents. Security lends itself well to active information sharing and best practice exchange given the dynamic and evolving nature of the related threats.
- Human performance error reduction (HPER) is another high-priority topic within the Forum. We have a well-established practices group, have developed some aspirational attributes of excellent performance, are developing scalable tools for in-field use, and have included HPER as a specific module within our peer reviews. Based on peer review results, we will establish baseline metrics, commence HPER training, and conduct some member-specific assistance visits later this year. Best practice exchange is a very effective improvement mechanism for this important topic based on the range of tools and techniques available and the relevance of corporate design and culture in selecting the optimum approach. The Forum is also actively working towards capturing no or low consequence (near miss) human errors that potential for transmission reliability impact as a means to proactively address performance gaps and emerging adverse trends.
- Workforce development—including preparing for new technologies; understanding and managing workforce demographics; and worker training, and skills development—is gaining added focus within the Forum. These topics mirror human performance error reduction, as active best practice exchange is an effective advancement tool given the topics linkage to corporate culture.
- Operating experience exchange has been added to Forum peer reviews. This topic evaluates the host member’s effectiveness in actively reviewing and incorporating transmission-centric lessons learned from various sources along with how well the host shares its lessons with other members.

- As mentioned earlier, internal controls has been a high-priority topic with the Forum for over a year. We are continuing to evolve key principles and scalable models based on peer review results as well as engagement with members, the ERO, and other groups, such as the Compliance and Certification Committee (CCC). We view internal controls as one early step towards holistic continuous performance improvement processes essential to our vision.
- Based on recent industry events, the Forum is jointly sponsoring a joint workshop on physical security threats and related practices with one of our strategic partners late this summer. We anticipate opening up a portion of the workshop to non-Forum members based on the significance of this topic. In addition, we expect to conduct a similarly constructed workshop on geomagnetic disturbance (GMD) later this year.
- The Forum places significant value on sharing detailed lessons learned across the membership in a timely fashion. To that end, we've made some recent process changes, including establishing a "challenge board," wherein a group of peers critically evaluates a member's response to an event or disturbance to promote higher quality analyses, effective actions to prevent recurrence, and timely sharing of granular lessons learned.

In conclusion, the Forum is conducting reliability beneficial activities and having a positive impact on a number of fronts. Our basic construct necessitates we maintain certain topics and information as strictly confidential in order to promote full candor and active sharing. That said, we have an interest in interacting more fully with others in the industry – as we have begun to do over the last year – to better advance our mission and vision and to benefit reliability more generally. To that end, we are coordinating with others on some defined topics such as the above, are now opening portions of our workshops to outside attendees, and are working on a protocol to allow sharing of selected Forum products, such as practices, dependent on timing and the nature of the subject area. I appreciate the chance to participate today and would welcome any questions.