NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

# FERC Reliability Technical Conference

## Panel I: 2016 State of Reliability Report

Remarks of Roy Thilly, Vice Chairman and Chairman-elect, NERC Board of Trustees
North American Electric Reliability Corporation
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Chairman Bay, Commissioners, and fellow panelists, I appreciate the opportunity to speak with you as Vice Chairman and Chairman-elect of the Board of Trustees (Board) of the North American Electric Reliability Corporation (NERC). As a Trustee, I am pleased to give you my views on NERC's accomplishments, the responsibilities of the Board, and key reliability challenges facing the bulk power system (BPS).

I was elected to the Board in 2011 and elected Vice Chairman and Chairman-elect in February of this year. I was a member of the board of directors of NERC's predecessor organization from 1999-2002 and was a member of the special task force that proposed that reliability standards become mandatory and enforceable and that NERC's governance transition to an independent board. I also served on the committee that prepared the initial drafts of the proposed statute that became Section 215 of the Federal Power Act.

I was president and chief executive officer of WPPI Energy from 1992 to 2011. WPPI Energy is a bulk power utility owned by 51 municipal utility member systems located in Wisconsin, Iowa, and Michigan. Before WPPI Energy, I was a partner in a Wisconsin law firm where I represented municipal utilities from several states and other clients before the Federal Energy Regulatory Commission (FERC), and in power supply and transmission negotiations. Throughout my career, I have served in a number of professional capacities, including president of the American Public Power Association, chairman of the Transmission Access Policy Study Group, board member of the American Transmission Company, board member of the Midwest Reliability Organization and chair of MAPP, and co-chair of the Wisconsin Governor's Task Force on Global Warming in 2007-2008. I currently am a member of the Department of Energy's Electric Advisory Committee and serve on several non-profit boards of organizations the deal primarily with land conservation and climate change issues.

Seven weeks from today - July 20th - we will mark the tenth anniversary of FERC's certification of NERC as the Electric Reliability Organization (ERO). The ERO has matured in many ways over the past decade. The ERO model is complex, but I believe it is well-suited to safeguarding the reliability of the bulk electric system by combining essential industry expertise and regional perspectives with a strong NERC staff, independent governance and regulatory oversight.

It is an honor to serve on the NERC Board. The members of the Board are fully engaged in fulfilling NERC's mission. They have been drawn to serve because of the public service nature of the organization and the importance of its work, recognizing that electric reliability is essential to health, safety and our economic well-being. The Board takes its duty to provide independent oversight of the ERO enterprise very seriously and understands that it is responsible to the pubic when reviewing and approving standards, and overseeing

compliance and enforcement, NERC's assessment and analysis work and cyber security information sharing and threat evaluation role.

Over the last ten years, NERC has become a high functioning, mature organization. The ERO's standards development and compliance and enforcement processes have become more efficient and better directed at risk and results. We have improved the capabilities of the Electricity Information Sharing and Analysis Center (E-ISAC) as cyber and physical security risks have grown in importance. Through assessments, reports, events analyses, alerts and educational efforts, the Board seeks to focus NERC, its members, policymakers and the public on the most important risks to reliability. Strengthening partnerships with other entities is an important priority, including with Canada and Mexico, and this Commission. The Board undertakes regular outreach to the leadership of the regional entities, trade associations, state commissions and other stakeholders.

Collectively, these accomplishments and activities have enabled NERC to unify the overall ERO enterprise and achieve a sharp strategic focus on the most serious risks to reliability. I believe the ERO enterprise is well-position to achieve its mission to maintain and enhance the reliability of the bulk system in the public interest.

Gerry Cauley discusses the State of the Reliability report and several of NERC's accomplishments in greater detail. There are a few key areas that I will address from a board member perspective to illustrate the evolution of NERC into a risk-based organization.

As a result of a concerted effort over the last several years by NERC and industry, the standards process has improved through stronger project management and greater attention to drafting. The process has become more efficient, while maintaining its foundation in industry technical expertise. The body of standards is transitioning rapidly to a stable set of clear, concise, and technically sound body of standards that are results-based and concentrated on the most significant threats to the reliability of the BPS.

In my view, the Board has a duty to ensure the development of clear, effective and timely standards and consistent, fair and diligent enforcement of those standards. Together with staff, we have an obligation to subject proposed standards to rigorous review before submittal to FERC and Canadian regulators. Our objective must be to identify any gaps, ambiguities or other concerns, and work with industry to resolve any such concerns prior to filing. While Section 215 provides for regulatory deference to NERC's expertise, it is very clear that we must earn that deference through diligent oversight. I believe we are accomplishing that goal.

We have also witnessed a major transformation of our compliance and enforcement program since I joined the Board. The large backlog in violations, mostly minor, that existed in 2011 has been dramatically trimmed. Most importantly, with FERC's support and guidance, the ERO has moved away from a zero tolerance regime that drained resources for all involved, diminished our ability to prioritize across the ERO enterprise and made the standards drafting process more difficult. Putting in place the find, fix and track

procedure and compliance exceptions has enabled a shift in resources and attention to the most serious risks to reliability by all involved.

At the same time, though a shift in emphasis in compliance and enforcement to continuous improvement and lessons learned, the ERO enterprise is moving to incent best practices and better compliance-related tools and strategies in response to violations. Minor matters are dealt with expeditiously, while tracked to identify any disturbing trends, and violations that present serious risk are receiving serious attention.

These changes have been achieved through a collaborative, multi-year effort by NERC, the regional entities and industry to enhance the Compliance Monitoring and Enforcement Program (CMEP) by focusing on entity specific risk and internal controls. At the same time, a concerted effort has been made by NERC and the regional entities to achieve the consistency required for fair enforcement through the multi-region registered entity program and otherwise. FERC has been an important partner in these improvements. The end result is an improved reliability framework for all.

The Risk-Based Registration (RBR) initiative is another way NERC is striving to more efficiently deploy its resources to address risk. Launched in 2014, RBR is driving consistency throughout the ERO enterprise in identifying and evaluating risks to reliability. Before RBR, attention and resources were deflected to some functions that had minimal impact on reliability. Under RBR, NERC has greater flexibility to consider entity risk in registration.

NERC's reliability assessments and special reports are at the leading edge of risk identification. NERC's periodic assessment work (Long-Term Reliability Assessment, State of Reliability, Seasonal Assessments) evaluate how areas within the three interconnections are positioned in the near and long term with respect to reliability. Also, for the benefit of policymakers, stakeholders and the public, they shine a light on any concerns identified, including resource adequacy, fuel supply and operational risks. Special assessments focused on the Clean Power Plan, gas/electric interdependency and variable energy integration reports have served the same purpose. They have been widely read for their insights into emerging issues and raised awareness of potential reliability problems.

As the Board, we must ensure that assessments are independent, thorough and resource and policy neutral. Given the essential nature of electric service to the public, NERC must take a conservative approach in the studies, while being aggressive in identifying reliability concerns and advocating for reliability.

The changing generation resource mix is among the key challenges facing the BPS today. In 2014, the Board supported creation of the Essential Reliability Services Task Force (ERSTF) to provide insight into trends and potential reliability impacts during a period of rapid resource change. The ERSTF published a report in November 2015 documenting these changes and providing measurements for frequency support, ramping capability, and voltage support.[1] Driven by a combination of factors, the rate of this transformation across the interconnections is presenting new challenges in planning and operation of the BPS. At the same time,

[1] *Essential Reliability Services Task Force Measures Framework Report*, NERC, November 2015.

many changes are occurring at the distribution level. It is critical to understand how these changes may impact BPS reliability.

As these trends continue, the need for strong partnerships with, and coordination among, regulators, planners, and industry is increasingly important. FERC's recent proposals on voltage control and frequency response is a great example of this coordination. I am convinced that the challenges we face from rapid change can be met and accommodated reliably with hard work and coordination by all involved. NERC looks forward to working with FERC, Canadian regulators and industry as we focus on how best to assure reliability in the face of substantial change through standards, market mechanisms, alerts, information sharing, best practices and other strategies.

Gerry Cauley discusses the details of the *State of Reliability* report. I would like to emphasize that we have seen stable and improved reliability of the BPS over the past few years. We have identified key stress factors, including severe weather. Building upon NERC's event analysis expertise, we have a greater understanding of the root causes of problems and are able to better support a learning environment for industry to pursue continual improvement in reliability performance. The goal is to ensure stakeholders and policymakers are well informed concerning system events, emerging trends, risk analysis, lessons learned, and actions needed to mitigate risks to reliability across North America. These efforts, along with NERC assessments, further inform our standards and compliance processes, pursuant to the ERO's statutory responsibility.

One of the biggest changes in my tenure on the Board has been the increasing and ever-evolving threat to reliability from cyber and physical security. It is critical for NERC to have the capabilities needed to monitor and defend against cyber and physical threats to the BPS. The NERC Critical Infrastructure Protection standards provide a strong foundation for security, but these threats require a comprehensive approach that includes information sharing as well as standards. Tools and strategies for containment of any intrusions that do occur, and expeditious restoration, are also essential.

The E-ISAC serves as the main secure information sharing portal for the electricity sector. NERC's E-ISAC provides situational awareness, incident management, coordination, and communication capabilities within the electricity sector through timely, reliable, and secure information exchange. The public/private partnership between NERC and the Electricity Subsector Coordinating Council has been significantly strengthened over the last two years to address security and resiliency. The result has been greatly improved coordination between government, industry and NERC.

Enhancing reliability in North America requires partnerships across many entities, including across international borders. While each individual stakeholder within the ERO has its own footprint for which it is responsible, only NERC, as the international ERO for North America, covers the entire interconnected BPS. We gain significantly by working together to address challenges, whether they are the challenges of our changing resource mix, severe weather, relay misoperations or emerging security threats. FERC, Canadian regulators, the regional entities, the ISO/RTOs, and every operating utility share responsibility for

assuring electric reliability of this vast interconnected system. NERC is responsible for bringing all these parties together.

As we look back at the past ten years since NERC became the ERO, working with staff and industry, the Board has guided NERC through its evolution into a strategic organization with the tools, flexibility, and culture to address the most significant risks to reliability. Standards have evolved and improved. Compliance and enforcement are now focused on the greatest risks, strong internal controls and continuous improvement. NERC's assessments are at the leading edge of risk identification. In partnership at the highest level with industry, the E-ISAC is being expanded to better address ever-evolving cyber and physical security threats.

In summary, great progress has been made on many fronts. Experience proves, however, that we must remain vigilant. Working with FERC, Canadian regulators and industry, the ERO enterprise will continue to improve and evolve in order to take the steps necessary to assure bulk system reliability in the public interest, regardless of the changes and challenges we face. The Board is committed to this obligation.

In closing, I would like to thank the Commission for its participation at our Board meetings. It is essential that we maintain good communications and a close relationship as we work together to assure reliability. I would also like to express the Board's appreciation for FERC staff's many contributions to NERC's work through its active and helpful participation in all of NERC's activities, including on committees, drafting teams, task forces and audits.

I look forward to your questions concerning the state of reliability and the Board's strategic role in guiding the ERO.