

February 8, 2011

**Statement from Gerry Cauley, President and CEO of NERC
at the Federal Energy Regulatory Commission Technical Conference on
Priorities for Addressing Risks to the Reliability of the Bulk-Power System
(Panel 2)**

“As I mentioned on the first panel this morning, there are major distinctions between conventional risks to the bulk power system, where we can measure actual performance and determine opportunities to improve, and emerging risks where we are left to imagine scenarios that might occur and prepare to avoid or mitigate the consequences. I would like to discuss several categories of such emerging risks and how I believe they should be prioritized.

The first category, and the one I assign the greatest priority among the emerging risks, includes coordinated physical and cyber attacks intended to disable elements of the power grid or deny electric service to specific targets, such as government or business centers, military installations, or other infrastructures. These threats differ from conventional risks in that they result from intentional actions by adversaries and are not simply random failures or acts of nature.

It is difficult to address such risks through a traditional regulatory model that relies mainly on mandatory standards, regulations, and directives. The defensive barriers mandated by our standards will make it more difficult for those seeking to cause harm to the grid, frustrating ordinary hackers or copper thieves, but may not be completely effective in stopping the determined efforts of the adaptable adversaries supported by nation states or more sophisticated terrorist organizations.

The most effective approach against such adversaries is to apply resiliency principles, as outlined in a National Infrastructure Advisory Council (NIAC) report on the grid delivered to the White House in October 2010. I was fortunate to serve on that council along with a number of industry CEOs. Resiliency requires proactive readiness for whatever may come our way. It includes robustness; the ability to minimize consequences in real-time; the ability to restore essential services; and the ability to adapt and learn. Examples of the NIAC team’s recommendations include: 1) a national response plan that clarifies the roles and responsibilities between industry and government; 2) improved sharing of actionable information by government regarding threats and vulnerabilities; 3) cost recovery for security investments driven by national policy; and 4) a strategy on spare equipment with long lead times, such as electric power transformers.

NERC is moving forward with a number of actions to complement our mandatory CIP standards and provide enhanced resilience for the grid, including:

1. A joint partnership announced last week with the Department of Energy, NIST, and NERC to develop comprehensive cyber security risk management guidelines for the entire electric system.
2. Continuing our proactive outreach with government agencies to translate classified threat information into unclassified, actionable information for industry, such as alerts we issued in 2010 on Aurora mitigation, the Stuxnet malware, and a VPN tunneling vulnerability.
3. In 2010 we successfully piloted a program to conduct onsite cyber security sufficiency reviews and will continue that program in 2011.
4. We are developing a North American cyber security exercise to prepare for and test a national response plan.
5. We are working with the Department of Defense to assess worst-case scenarios and ensure that the essential requirements for National security are being addressed.
6. We are working with vendors and industry to demonstrate enhanced physical security systems.

Let me turn now to a second category of emerging risk that I consider urgent because of the potential consequences of physically damaging bulk power equipment and controls, that of geomagnetic disturbances caused by solar flares. We will be convening industry experts at a conference in April this year to validate near-term, cost-effective actions that can be taken to better prepare the North American grid for large scale interference with the Earth's magnetic field. We will be leveraging the mitigation strategies completed in Canada and the Northeast to mitigate these risks after the 1989 Quebec disturbance. NERC will issue an alert with a set of specific near-term actions and a timetable for responses.

A third category of emerging risks is the reliable integration of alternative resources, including renewables and demand response, as well as smart grid technologies. Since NERC's inception the late 1960's, NERC has strived to maintain resource type neutrality in its standards and policies. We have also been a leader in demonstrating synchrophasor applications for a smarter power grid.

In addition to their societal benefits, these new resources and technologies will alter the operating characteristics of generators and loads, changing how we manage the reliability of the grid. NERC's responsibility is to ensure that the industry is adapting its reliability models and operating protocols to accurately reflect actual characteristics of loads and generators in the new world. We are also responsible for ensuring that essential reliability services, such as contingency reserves, voltage control and reactive reserves, generator ride-through capability, frequency response, and other reliability services remain available and deployable across the grid. I view this work as part of our core business over a long period of time. We are not dealing with a crisis of changed technologies, but a coordinated evolution of change.”

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The North American Electric Reliability Corporation's mission is to ensure the reliability of the North American bulk power system. NERC is the electric reliability organization (ERO) certified by the Federal Energy Regulatory Commission to establish and enforce reliability standards for the bulk-power system. NERC develops and enforces reliability standards; assesses adequacy annually via a 10-year forecast, and summer and winter forecasts; monitors the bulk power system; and educates, trains and certifies industry personnel. Learn more at www.nerc.com.

