

NERC is ‘moving the needle on reliability,’ addressing distributed resources, CEO says



By Paul Ciampoli, APPA News Editor

Interview - Gerry Cauley, President & CEO, North American Electric Reliability Corporation (NERC)

It has been just over ten years since the North American Electric Reliability Corporation was certified by federal energy regulators as the North American electric reliability organization and in an interview with the American Public Power Association, NERC President and CEO Gerry Cauley detailed several accomplishments that the reliability group has been able to achieve since that milestone event.

And while NERC is “moving the needle on reliability,” as Cauley noted, it is also addressing a wide variety of emerging issues including distributed energy resources.

He also said that the reliability organization is focused on ensuring that resources are harmonized in a way that maintains reliability.

“I think it’s great at 10 years to look back and see where we’ve come and how much we’ve accomplished and I think when you look at it at that scale, you see that there is a lot that’s been accomplished,” Cauley said.

The Federal Energy Regulatory Commission certified NERC as the ERO for North America in July 2006. As the ERO, NERC is responsible for developing and enforcing mandatory electric reliability standards under FERC’s oversight.

“We didn’t have a mandatory set of standards and the compliance and enforcement. We didn’t have that capability prior to the legislation and prior to FERC certifying NERC to be the ERO,” Cauley noted.

“So we’ve got the standards in place and through the standards we’ve been able to effect a number of changes,” he said, noting, as an example, improvements in relay maintenance.

Vegetation management, which was a key contributor to the 2003 blackout in the Northeast, has also been addressed, Cauley said.

In addition, “I think we’ve been able to put a lot of focus on cyber security and physical security through standards and compliance,” he added.

Power outages

Cauley said that another “big area of progress and success is really getting an understanding of power outages being a complex, technical matter.”

NERC has been able to collect “a lot of data around events analysis, root cause analysis, and understand the performance of the grid so that we can focus our efforts and the efforts of industry on fixing particular issues that are most likely to have impacts on customers,” Cauley said.

So the reliability organization has been focusing on things like equipment failures, relay mis-operations, human error, “those kinds of things that we’re seeing as the common thread.”

The idea is to “come up with a way to regulate in a smart manner that says, we want to get everybody to focus on risks and potential failure points and not invest equally in everything, but invest in the most important things,” he noted.

“With that, I think we’re seeing performance numbers – if you look at our state of reliability report published in May – we’re actually seeing improvements in performance of the grid because of this, where we’re having less frequent transmission outages and when we do have outages, they’re less impactful in terms of customer outages and how big the event is, so I think we actually see the results finally in the data that says we’re actually moving the needle on reliability,” Cauley said.

Distributed energy resources

Meanwhile, NERC is proactively addressing issues surrounding the proliferation of distributed energy resources.

NERC in August convened a DER workshop in Atlanta that focused on challenges and opportunities in bulk power system planning and operations associated with larger-scale integration of distributed generation.

The areas that NERC is looking at, which were discussion topics at the NERC DER workshop, is “how do we ensure that the system operator has an awareness of what’s going on in the distributed resources, has information about forecasting and has modeling information from the distributed resources so that we can integrate into the operations and planning of the distributed resources and their role,” Cauley said.

Among the things that NERC is taking a closer look at these days is how can distributed energy resources participate in markets in a way that respects reliability rules, Cauley said.

NERC sees a future in which distributed energy resources will be larger and more significant and have more impact on the grid and be a resource that can be used by the grid, Cauley said.

“But when you think along those lines then we have to say, well, how do the reliability rules come into play, are they going to have to follow some of the reliability rules, will there be impacts upward into the grid from these resources? So all of our work is kind of in that direction.”

Participants in the workshop included “people who are facing this already in their systems,” sharing

what their experiences have been “and we’re going to pull that together and the task force is going to produce a report,” Cauley noted. The task force is scheduled to present it to NERC’s board for approval in February, which will help to lay the groundwork “for how we think distributed resources can be integrated into the grid.”

“A lot of moving parts” in U.S. generation mix

The U.S. generation mix has “a lot of moving parts,” the NERC president and CEO said.

“I think the concern we had early on” was that there would be a rush to retirements of “central dispatch power plants, coal plants and so on, that they would retire so quickly and then not be available,” raising the specter of possible shortages. But, Cauley said, “I think we’re less worried about that at the moment.”

When NERC first looked at the U.S. Environmental Protection Agency’s Mercury and Air Toxics rule and then examined the EPA’s initial proposal around the Clean Power Plan, the reliability organization was “potentially concerned that there might be accelerated retirements,” Cauley said.

The concern was that accelerated retirements could lead to capacity shortages, where there would not be sufficient time to build out new replacement generation and gas pipelines to support the new gas plants, he noted.

While there have been plant retirements, they have not come as quickly as they might have, he said, adding, “I think part of that is just the slippage in the timetable with the implementation of the EPA Clean Power Plan, so there’s some uncertainty around that,” the NERC president and CEO said.

On Feb. 9, the Supreme Court issued a stay of the CPP pending resolution of court cases challenging the EPA plan. Oral arguments in the case occurred on Sept. 27 before the U.S. Court of Appeals for the District of Columbia Circuit. The CPP aims to reduce carbon dioxide emissions from existing power plants.

From NERC’s vantage point, there remains a sufficient amount of capacity from coal plants and nuclear plants “to kind of hold their own,” while various energy industry players have started to move “fairly aggressively toward bringing on new resources, whether it’s a shift to gas or whether it’s a shift to increased renewables,” Cauley noted.

“So right now we’re actually in a bit of a sweet spot,” he said, adding that resources are now, in general, “plentiful across the U.S. for the next few years. So it may come back to be an issue, but right now the issue for us is making sure that the resources are all harmonized in a way that maintains reliability.”