Good morning and a warm welcome to our 17th annual meeting of the PJM membership. It’s good to be back in the great state of Maryland on the shores of the Chesapeake Bay. We try to mix the locales for our annual meetings and consider places convenient to members, and it works – this is our largest gathering ever with about 500 in attendance.

I remind you that just four months ago, both the Great Lakes and the Chesapeake Bay froze over. Fishermen have huts for ice fishing on the lakes, but this past winter the huts weren’t there to keep the fishermen warm, but to keep their beer from freezing. My son, who went to school at the University of Wisconsin on Lake Mendota, said that’s important. He says, “Give a man a fish, and he will eat for a day; teach him how to ice fish, and he will drink cold beer for a lifetime.”

Seriously, it’s been an extremely challenging year!

It’s hard to believe that the last time I addressed this group we were still finalizing East Kentucky Power Cooperative’s integration into PJM. We’re delighted to have EKPC in the PJM community. As of the close of business Friday, PJM officially has 900 members, which is more than double the membership of 2007.

**Coming Challenges**

Over the last year, the PJM community has dealt with many challenges. We kept the lights on during some of the most extreme weather in recent memory. We’ve enhanced security and long-term reliability of the grid and we are efficiently dealing with the consequences from the massive shift from coal to gas.

Well, guess what! There are still plenty of challenges, including the large uncertainty in load forecasts and the largest fuel switch in history.

Analysts we’ve talked to are absolutely convinced we’ll have load growth somewhere between minus 1 and plus 5 percent – a scary wide range. Our official forecast is about plus 1 percent,
which is the lowest I’ve seen forecasted in my entire career, but it is still be the equivalent of adding 1,600 megawatts of peak load to the system each year.

Meanwhile, we are still in the midst of the largest fuel switch in history and managing the retirement of 26,000 megawatts of coal generation – largely being replaced by new natural gas plants, demand response and transmission upgrades. Many remain skeptical about this fuel transition, but PJM and our members are navigating this challenge. Next year our reserve margins will be tighter, but the PJM system will be reliable – meeting all NERC standards.

One consequence of our increasing mix of gas and renewables is declining wholesale prices. PJM’s all-in wholesale prices were 60 percent higher in 2008 than the 5.3 cents per kilowatt-hour average in 2013. By comparison, in the Southeast in 2013, all-in wholesale prices were about 40 percent higher than in PJM. That PJM 5.3 cents per kilowatt-hour was before gas prices temporarily went crazy in January 2014.

Meeting Extreme Weather Challenges
While the past year gave us a well-deserved rest from derechos and super-storms, the weather was still extreme, and at times it was simply brutal. First, an unseasonal September heat wave (20° above normal) hit the PJM region as fall generation and transmission maintenance was already under way. PJM and transmission-owning members pulled together, and, except for a few serious problems caused by local 69-kV and 138-kV equipment issues, did an exceptional job on meeting the challenges of the weather roulette wheel. We also saw record performance (5,782 megawatts) from our demand-response providers, illustrating just how important a role DR can play in the future.

Then it was winter’s turn at extreme weather. January saw us in the grip of the worst cold spell in two decades, and we ended up setting eight of the 10 all-time winter peaks in a single month. The peak load of 141,846 megawatts was 35,000 megawatts higher than a typical January peak. 35,000 megawatts is approximately equal to the demand of Philadelphia, Baltimore and Washington, D.C. combined. Power use soared. In fact, 32 U.S. states use less electricity in a year than the PJM region used during the single month of January 2014. Again, we saw maximum efforts from the professionals across PJM and member companies to keep people warm and safe. Safe is important at minus 16 degrees Fahrenheit.

While conditions on the system were tight in January, I want to make it clear at NO time was the PJM region a whisker away from rolling blackouts. I’ve seen various reports that we were 300 or 400 megawatts away from rotating blackouts. That’s just wrong.

For about 5 minutes on our worst day – January 7 – Synchronized Reserves were 500 megawatts. But, during that hour, PJM had an additional 1,167 MW of primary reserves for a total of 1,667 MW in 10-minute reserves, which is 350 MW larger than our N-1 contingency. Although reserves were low, several steps remained available to operators before electricity
interruptions would have been necessary. For example, PJM could have implemented a
temporary voltage reduction, which would have yielded as much as 2,000 MW of additional
capacity. But, that voltage reduction – which we were prepared to do, and would have been
unnoticeable to almost all consumers – was not necessary, and no one was interrupted. This
was not the case in the winter of 1993 and ’94 when we did have rotating blackouts – the last
time it was this cold and ice prevented the movement of fuel.

Lessons Learned from Extreme Weather Experiences
The extreme temperature challenges in September and January showed us several important
things. They reminded us of the great physical resilience designed into the system. A poorly
planned grid simply could not have kept up with the record demands. They showed us the value
of cooperation and coordination among PJM members and also with FERC.

But, they also revealed some vulnerabilities. September confirmed that demand response is
most useful when resources are flexible with year-round availability and shorter lead times.
January taught us that over-relying on capacity from distant systems carries a lot of risk. During
the first cold wave, imports, including some firm capacity we were counting on, were cut by third
parties to preserve reliability on their own systems. Firm capacity simply needs to be more
dependable, and we’re very pleased that the FERC has recognized that reasonable capacity
import limits needed to be put in place.

January also put a spotlight on the critical differences between the gas market and electricity
market. As we increasingly depend on gas for generation (21,000 megawatts of new natural gas
capacity have cleared our RPM auctions), it is imperative that the gas and electric markets work
together more efficiently. Before we face another winter, we need to have improved schedules
for gas nominations that do not lock generators into take-or-pay scheduling decisions over
three-day weekends. As Mike Kormos testified, bankers’ hours do not meet the 24 X 7 needs for
energy customers.

The single most serious problem was the 22 percent forced outage rate on the coldest day,
January 7. By this December we need to have better provisions for ensuring that generators
have been tested and are winterized. We cannot test at negative 16° without it being negative
16°, but we will test things such as starting dual-fuel units on oil in early December.

Building Resilience
We’re working on these and many other initiatives with the ultimate goal of making the grid more
resilient.

Resilience is not just about hardening critical infrastructure against the forces of wind and water
and manmade threats. Resilience is about having capacity and energy to meet the demand
even when extreme weather takes its toll on the power system. To date, PJM’s capacity
auctions have produced more than 28,000 megawatts of new iron on the ground, going a long way toward replacing the coal retirements.

Resilience is also about building out the system to make it even more robust than it is today. For example, the Susquehanna-Roseland line, I’m very pleased to note, is progressing ahead of schedule. Thanks to PSEG, PP&L and the White House for making it a national priority project. The first phase is now energized, and the entire 500-kV line is expected to be operational before the summer of 2015.

Resilience is about adding technologies that will make the grid much more visible in real-time for operators. Currently, we have 385 phasor measurement units installed at 83 substations in the PJM region.

Resilience is also about making natural gas more deliverable, demand response more flexible and capacity imports more reliable. These are just some of the things that are occupying those of us in this room and at our respective organizations throughout the region.

**Members Will Meet the Challenges**

It would be wonderful if the path to success was a straight line and predictable. But, we all know that isn’t the case. For example, as the EPA announces its CO₂ rules on June 2, the probability of change is ever-increasing.

Successfully meeting the challenges will take people who are nimble, responsive and highly skilled to roll with these changes while, at the same time, fulfilling our top priority: keeping the lights on. It will take people like you – right here in this room and across the entire PJM community.

Electricity not only “brings good things to life.” Life as we know it depends on electricity. We are all in the public service business.

Thank you for the opportunity to serve you, our members. I look forward to a very exciting and challenging 2014.

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