Ralph Izzo, Chairman of the Board, President and Chief Executive Officer

Public Service Enterprise Group

Subcommittee on Energy

Energy and Commerce Committee

U.S. House of Representatives

May 10, 2018

Introduction and PSEG Overview

Good morning Chairman Upton, Ranking Member Rush, Ranking Member Pallone of the full Committee and my home state of New Jersey, and members of the Subcommittee. My name is Ralph Izzo and I am the Chairman, President and Chief Executive Officer of Public Service Enterprise Group, a diversified public utility holding company headquartered in Newark, New Jersey that owns generation, electric and gas transmission and distribution facilities.

Our utility PSE&G is a 114-year old company and is the largest electric and gas distribution and transmission utility in the State of New Jersey. We serve 2.2 million electric customers. We own approximately 1567 circuit miles of transmission that is operated by PJM Interconnection, LLC (PJM), the independent grid operator in a region that spans 13 states and the District of Columbia. PSE&G has received the prestigious ReliabilityOne Award as the most reliable electric utility in the Mid-Atlantic region for 16 years in a row.

Thank you for the opportunity to speak this morning on the future of the transmission grid, and what it will take to ensure we have the policies in place to continue to drive the right investments to serve our customers. I want to first outline the value proposition to customers of our efforts to modernize and strengthen the transmission grid. Then I'd like to focus on existing federal policy. While many steps have been taken to encourage transmission investment in recent years, FERC's Order 1000 stands out as a measure that has hindered efficient transmission planning and should be repealed.

PSE&G Grid Investments and Value Proposition

PSE&G's first concern in the area of transmission is, and has always been, the long-term reliability of the grid. We are a franchised public utility with an obligation to serve under state law. If the lights go out in New Jersey, we are the ones that customers call, and we are the ones

elected leaders call. At the same time, PSE&G is always seeking to make cost-effective investments. We know we do not have a blank check – we must answer to our regulators and customers. Our investments must be prudent.

Let me give you a sense of the investments PSE&G has been making in our system, and what the value of these investments has been to our customers. PSE&G has been actively involved in upgrading and adding to its transmission system over the last several years. For instance, we are in the process of converting our aging 26 kV system to a more robust 69 kV system. Our 26 kV system was built in the 1920s and was fine for its time but is not adequately suited to address long-term customer needs. For our new 69 kV facilities, we are using modernized equipment and stronger poles with a higher capacity for moving power throughout our system.

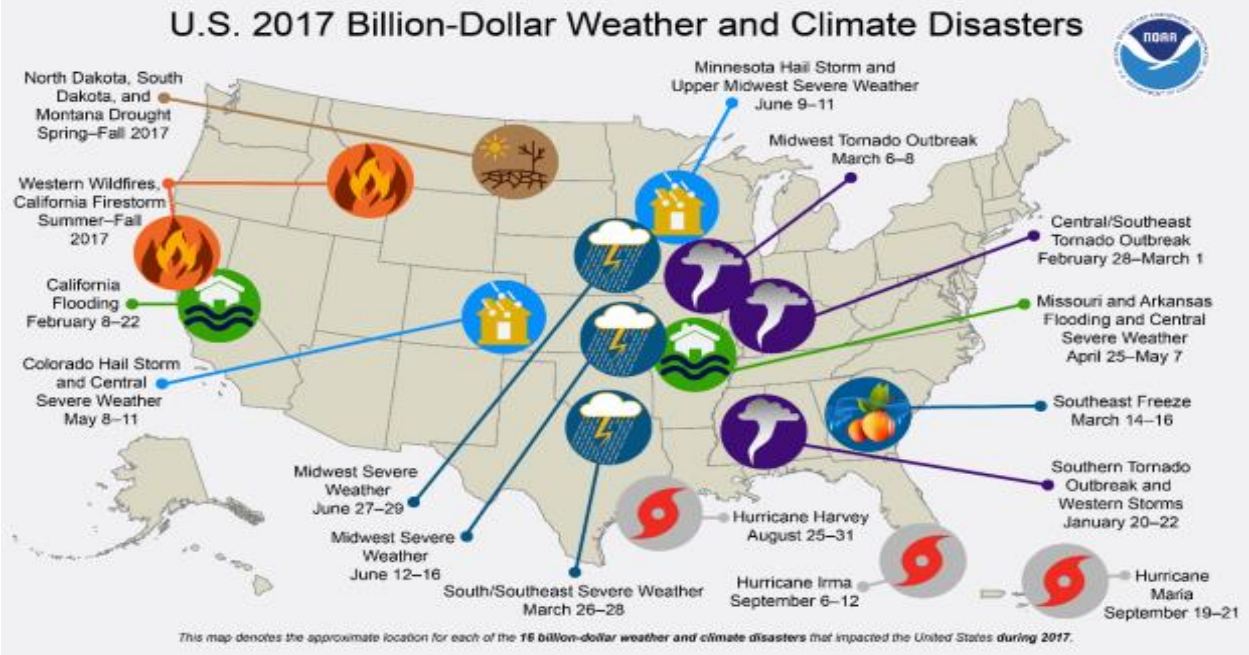
Our investments have also included large and challenging Extra High Voltage (EHV) transmission projects covering hundreds of miles in some of the most densely populated areas in the nation. This includes the Susquehanna-Roseland project completed several years ago by PSE&G and PPL, which replaced 90 year-old towers along the transmission backbone that powered the industrial northeast corridor nearly a century ago. We have also constructed many smaller projects on city streets and in tight areas that put us in close proximity to residents, including replacing 1920s vintage poles and stations before a reliability threat presents itself. And finally, Superstorm Sandy in 2012 devastated New Jersey and presented extraordinary challenges to the transmission and distribution systems in our area, prompting us to replace, harden, smarten, and even *move* electric infrastructure to improve the resilience of the system against the extreme weather events that are becoming all too common.

Collectively, these projects have achieved multiple objectives – addressing reliability concerns, improving resiliency, reducing congestion and increasing access to lower cost generation resources.

But just what is the value proposition to customers of these investments? The transmission infrastructure that moves vast amounts of electricity is essential to economic well-being and quality of life. As President George W. Bush said around the time the Energy Policy Act was signed into law, “We have modern interstate grids for our phone lines and our highways. It's time for America to build a modern electricity grid.” Transmission remains absolutely critical from both an economic standpoint and from a reliability and security standpoint.

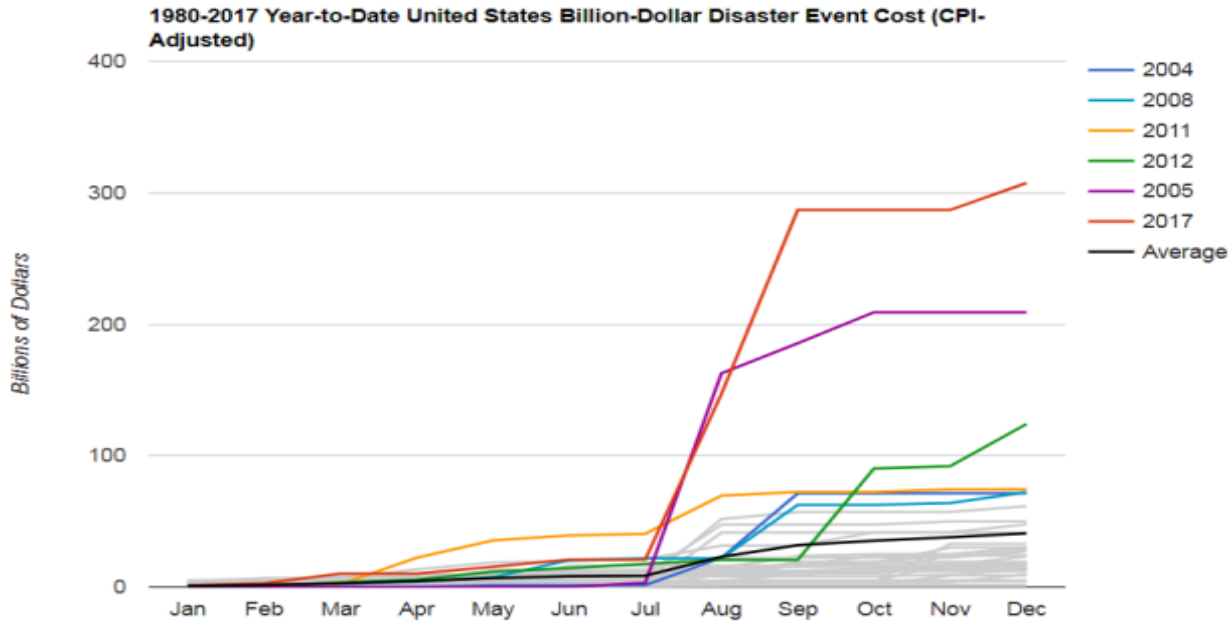
When the power is out, the results are economically devastating. In 2017 alone there were sixteen (16) costly weather and climate events in the United States and Puerto Rico, including Hurricanes Harvey, Irma and Maria. **And these 16 events cost over $300 billion**. While we cannot control the weather, we can proactively continue to make investments that will better prepare our customers for these events by both preventing outages and minimizing their duration. Superstorm Sandy cost New Jersey customers 775 million hours of lost electricity service. Yet, due to our investments in our transmission system, during the period between

2013 and 2017, the number of unplanned outages on the transmission system (138kv and above) declined from 111 to 44. Thus, our investments have paid dividends for our customers.



https://www.climate.gov/news-features/blogs/beyond-data/2017-us-billion-dollar-weather-and-climate-disasters-historic-year

Given that we are seeing more and more extreme weather, continued resilience investments are vital. As FERC Commissioner Richard Glick recently noted, "the record demonstrates that, if a threat to grid resilience exists, the threat lies mostly with the transmission and distribution systems, where virtually all significant disruptions occur. It is, after all, those systems that have faced the most significant challenges during extreme weather events." Although I am sure Commissioner Glick was not suggesting we should ignore generation resiliency, he rightly identifies that transmission resilience investments are needed to ensure that the lights remain on, that trains and planes can run, that businesses can operate and that people can go to work.



https://www.climate.gov/news-features/blogs/beyond-data/2017-us-billion-dollar-weather-and-climate-disasters-historic-year

There is no better testament to the criticality of our grid than the fact that bad actors are increasingly trying to take it down. As FERC Commissioner Cheryl LaFleur testified before this Subcommittee a month ago, "Hacks on the grid are constant. Every year, electric grid attacks are either a slight majority or slightly below 50 percent" of all cyber attacks in the United States. PSE&G is working closely with PJM and with other transmission owners in the region to ensure that the grid remains secure from physical and cyber security threats. This will not be an easy or static fix, and will require ongoing investment to build redundancy into the system.

Any period of major infrastructure development and replacement raises questions about the cost of these investments; these questions are appropriate, and are an important part of balancing resiliency and cost. And yet, as the data above suggests, **not** investing in our critical infrastructure will cost customers far more in many cases than making the initial investments in upgrades. In addition, notwithstanding my company's investment in needed transmission over the past several years, the typical PSE&G residential customer electric bill has actually declined 7% from its 2010 level due to lower prices for electric supply. This makes for an opportune time to make needed investments.

In our region, transmission investments have the corollary benefit of reducing congestion on the grid, which in turn further lowers costs for customers. In PJM's Independent Market Monitor's (IMM) 2017 State of the Market Report, the IMM noted that, while in 2008, congestion costs totaled 6.0% of PJM billing, in 2017, the percentage had declined to 1.7%.

Federal Policy

Mr. Chairman, there is no question that transmission investment over the past decade or more has been supported by many federal policies that explicitly recognize the importance of transmission, as well as the inherent risk to investors of large transmission projects. By contrast, other more recent policies such as FERC's Order 1000 have introduced complexity and confusion in the transmission planning process, and should be re-examined before its worst consequences begin to manifest themselves to consumers.

By way of history, we all remember the Northeast Blackout in August 2003. This event knocked out power across the Eastern United States and parts of Canada, affecting approximately 50 million people and resulting in 592 million hours of lost electricity service. Shortly after the Blackout, Congress enacted the Energy Policy Act, articulating a statutory directive to bolster investment in the Nation's transmission infrastructure, reduce congestion and lower overall cost to consumers. Congress designated the North American Electric Reliability Corporation (NERC) as an Electric Reliability Organization, with the authority to issue mandatory reliability standards and impose them on the industry. Implementing the Energy Policy Act, FERC then issued an Order establishing important transmission rate incentives that would be available to transmission owners to stimulate investment.

In 2011, a federal Rapid Response Team for Transmission (RRTT) was formed, made up of nine agencies, to accelerate transmission development by streamlining the federal permitting process. The RRTT found that seven projects, including the PSE&G/PPL Susquehanna-Roseland project, were of national priority. Finally, in 2016, the DOE released a Final Rule to streamline and expedite transmission projects, viewing this action as an important step to spur continued transmission development.

All of these steps have been important, and efforts in these areas should continue. But I'd like to turn my attention to a more recent policy initiative that stands in stark contrast to these other helpful measures: that is the misstep known as FERC's Order 1000. Enacted in 2011 by FERC under then Chairman Wellinghoff, it was touted as a landmark reform that would "promote efficient and cost-effective transmission planning…"; "remove barriers to development of transmission facilities…" and "promote competition in regional transmission planning processes."

My company opposed Order 1000 when it was initially proposed, because we felt it was a misguided effort to carry out climate and environmental policy through planning of the transmission grid. While we wholeheartedly support the agenda to move toward cleaner, lower-emitting sources of energy, our view was that upending the transmission planning process that worked well was not the right answer and would create more problems than it solved.

Far from the promised efficiency, what Order 1000 has sown in transmission planning in the PJM region is political discord among states; confusion as to the process among transmission planners, potential transmission investors and grid operators; wasted dollars by all involved --- and predictably, delay. It's no wonder that the vast majority of transmission being built in PJM today is occurring outside the Order 1000 process.

Our most direct experience with transmission planning in the era of Order 1000 has been a competitive solicitation process run by the PJM grid operator for a project called Artificial Island, a needed transmission upgrade to address voltage issues at PSEG's 3,500 megawatt nuclear site in Southern New Jersey. PSE&G has been selected to build a sizeable portion of the line but not the entire project.

PJM opened the bidding on the Artificial Island project in April 2013. To call the process chaotic would be generous. We have seen the RTO make an initial project selection only to later reverse itself. We have watched the RTO attempt to arbitrate disputes between states. At one point the RTO had to suspend and reboot the entire solicitation. We have seen the RTO try to scrutinize, interpret and validate the fine print and exclusions when a developer says it will adhere to a cost cap for construction. We have seen the RTO try to play the role of mediator between stakeholders. We have seen the RTO try to pre-judge the feasibility of certain projects based on their ability to secure environmental permits.

Mr. Chairman, very few of these are appropriate roles for a regional grid operator. They don't have the resources, and in many of these instances they don't have the expertise, nor should they. It should be no surprise that this process is now in year five and has yet to yield a constructed transmission solution to solve the reliability problem on this section of the grid.

Yet if it were just a matter of what Order 1000 is not achieving, it might be tempting to leave it intact and just find a work-around, and turn our attention to other problems.

But it's important to also look at how Order 1000, if left on the books, would change the very nature of transmission investment, not necessarily with the long-term need of customers in mind. The fact is, Order 1000 even at its best would not facilitate the type of robust transmission solutions that provide long-term value to customers. A project such as Susquehanna-Roseland, which resolved 23 PJM-identified reliability violations, replaced aging infrastructure and reduced congestion, would not ever emerge from an Order 1000 competitive solicitation because it would be deemed to "cost" too much. Order 1000 drives investment to the band-aid, shorter-term solution, not the solution that is most cost-effective for customers in the long run. This hardly seems the path to effectively address the risks customers face from an aging infrastructure, extreme weather, cyber and physical security threats and the urgent need for a diverse and resilient generation supply.

Some may discount our observations on Order 1000 as sour grapes over a single project outcome. But the truth is that since the adoption of Order 1000 the better part of a decade ago,

several independent grid operators have recognized the need to limit its application, and many have started to share their views more publicly. Last year PJM CEO Andy Ott stated that the Order is "almost like a solution in search of a problem. It's actually creating more of a challenge to investment."

Mr. Ott's sentiments were echoed by Southwest Power Pool CEO Nick Brown who remarked that the Order "created more overhead and more uncertainty at a time when we didn't need more overhead in order to invest in transmission."

In fact, the embrace of Order 1000 across the country has been tepid at best:

- No planning region in the U.S. that is outside of an organized RTO/ISO market has opened up a single competitive transmission bidding opportunity post-Order 1000.
- One ISO region – the ISO-New England – has not opened a single competitive solicitation.
- The New York ISO began its competitive transmission process in August of 2014. In October of 2017 it awarded its first project. Its second project has yet to be awarded, almost four years after NYISO began its efforts.
- The Southwest Power Pool has opened one solicitation, resulting in an $8 million project that was ultimately determined not to be needed and the incurrence of approximately $5 million in administrative costs to run the bidding process.
- The Mid-Continent ISO has opened two bidding opportunities. One resulted in the award of a $46 million project after a year-long process. The other is ongoing at the present time.
- The California ISO has not opened a competitive solicitation since 2016. Moreover, in 2015, the California ISO awarded a competitive project to a partnership between a foreign developer and another entity, and the developer subsequently went bankrupt.

Former FERC Commissioner Tony Clark, my fellow panelist, recently stated, "{F]or all its good intentions, [Order 1000] is today a rule that has largely fallen short of accomplishing its goals. Unfortunately, the failure of it to fulfill its potential has not come without costs. … [N]ow is a good time for the Commission to consider an Order No. 1000 reassessment."

I'd like to take this sentiment a bit further and suggest that it should just be repealed. Order 1000 has been on the books for almost 7 years. Its problems can no longer be called growing pains. I would suggest that at a minimum and right away, FERC should "hit the pause button" on Order 1000 until and unless the planning regions can demonstrate significant benefits flowing from the Order. There should be no further Order 1000 activity in the form of open solicitations or windows until such a demonstration has been made.

Conclusion

In conclusion, PSE&G wholeheartedly supports the bipartisan goal of investing in this nation's infrastructure, including our transmission grid. We are deploying considerable capital today to this end, and we stand ready to work with Congress, FERC and many others on policies that will ensure we can do so in a way that delivers the most long-term value, and facilitates the most resilient and most efficient electric system possible for our customers. We need to take a hard look right away at how Order 1000 is impeding these goals.

Thank you and I look forward to taking your questions.