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Norwich, Connecticut

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Hearing on Weather Related Electrical Outages
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Good morning Senators, thank you for asking me to testify before you today. My name is John Bilda, and I am the General Manager of Norwich Public Utilities, a municipally owned utility located in Norwich, Connecticut. We are a four service utility company, providing natural gas, water, sewer, and electricity to the people of Norwich and the surrounding communities.

Norwich Public Utilities was established in 1904 by forward-thinking Norwich city leaders who believed that owning and operating a municipal utility company was in the best interest of the entire community. We are governed by a five member Board of Utility Commissioners who are appointed by the Norwich City Council. Our commissioners are responsible for ensuring the utility is consistently acting in the best interests of our customers and the community.

I am here today to discuss our experience with electric restoration efforts following disaster events, specifically, our response to Tropical Storm Irene in August of 2011. When Irene was making her way up the east coast, all of New England was preparing for the worst. However, we at Norwich Public Utilities had been preparing for this type of event for many years. Because we are a four service utility company, we regularly deal with diverse weather and non-weather related emergencies. We plan for circumstances that cause service interruptions to any or all of

the utility services we provide. It is our job and responsibility to ensure that when an event impacts our customers, we act immediately and do what is necessary to control the situation and restore services as soon as possible.

We have an aggressive system in place designed to maximize reliability. Preventative system maintenance, a key component in our operating budget, is designed to ensure operational reliability. We understand a small investment in preventative maintenance will help avoid larger expenses later during emergency situations. For example, our vegetation management program is constant. In addition to routine tree trimming throughout our service territory, through close community ties with our customers, we respond to individual requests to examine and remove trees and brush that interfere with power lines. We have a very comprehensive system inspection program in place that includes infrared inspections and pole integrity examinations. We invest in new technology to advance our ability to provide service. Over the last several years, we have been mapping our territory using advanced Geographic Information System (GIS) technology. This allows us to prioritize and respond to outages more efficiently.

Part of our planning also requires building relationships with various entities that are crucial in aiding us in our mission. These entities include employee bargaining units, other municipal departments, first responders, city and local officials, and industry peers. Most importantly, it is critical to build a solid relationship among employees. From these relationships come a wide variety of resources and a strong sense of collaboration.

We have worked with various city departments and emergency first responders to develop a process to maximize inter-departmental resources, improve communications, and operate efficiently by eliminating unnecessary redundancies and streamline processes. We were

instrumental in relocating and upgrading the City of Norwich's outdated Emergency Operations Center to our Utility Operations Center. By doing this, we centralized all major stakeholders involved in emergency response – fire, health, police, public works, etc. – and provided a state-of-the-art GIS and outage management system, equipment, and technical support needed to maintain the Operations Center during an emergency situation. Placing important stakeholders in one location ensured consistent and effective communication. Additionally, we developed plans with public works staff and first responders to work in cooperation with restoration crews. Rather than operating independently of each other, first responders work seamlessly with us to ensure safety while public works crews coordinate their efforts to open roads in support of our crews' need to restore service.

We also deploy 32 miles of high bandwidth fiber optic communication lines. These lines link the entire municipal communication network, including our ability to monitor and operate our substation connection with the transmission system. Since this is our asset, we do not need to rely on a third party telecommunications operator for this critical communication component.

Just as important as external relationships, we have developed a positive and constructive working relationship with our internal, unionized workforce. We currently have four crews of three electrical line workers who maintain all of the electric distribution lines in Norwich. Since we are a natural gas, water, and sewer company, we also have four underground construction crews. Twelve years ago, we negotiated with our construction unions to change the job descriptions of our underground crews and cross-trained them to work as support staff for our electric line crews. We can now effectively double our restoration capacity by pairing two electric line crews with two underground construction crew members in a supporting role, turning four, three person crews into eight four, person crews. We have regularly utilized this

cross training model that has enabled our crews to develop the capabilities and competencies necessary to work safely and proficiently. When a major disaster affects Norwich's electric distribution system, we are now able to expand our work force for recovery efforts before relying on outside mutual aid crews. Our employees are highly valued, dedicated, and very skilled. They live in our community and possess local and institutional knowledge of the system. They are aware of the needs of the citizens and businesses of Norwich. That dedication and local knowledge makes a marked difference in an emergency situation, just as it does in normal operations.

There are times, however, where we require mutual aid. Tropical Storm Irene was one of those instances. We are fortunate to be a part of the public power fraternity and members of the Northeast Public Power Association or NEPPA, which supports our requests for mutual aid. NEPPA is the regional association representing 79 not-for-profit, consumer-owned electric utilities in the six New England states of Massachusetts, New Hampshire, Vermont, Connecticut, Rhode Island and Maine. NEPPA has established a mutual aid system where public power systems throughout New England can support each other in times of need. The system divides New England into four regions each with a mutual aid coordinator. Each coordinator is responsible for organizing mutual aid within their region as well as organizing their individual member companies' response to other regions in need of assistance. During the Storm Irene event, NEPPA reached out to the abundant and similarly operated public power mutual aid programs in other regions and, within 24 hours, crews from North Carolina and Indiana were headed into northern New England. As the current President of NEPPA, I can tell you that even though this system works quite well, we are constantly looking at ways of improving our effectiveness. We are working on a project right now that will improve the system even more by leveraging technology to fulfill mutual aid requests more quickly and efficiently.

It is important to note that this public power mutual aid system works because of the good faith and mutual understanding created over the years amongst public power communities. I have a personal relationship with many of the general managers of the NEPPA member utilities. We have sent our crews all over New England and the east coast to respond in times of need. In short, all NEPPA members know they are no more than a few short hours away from the assistance they need to restore power to their community.

Even though Norwich Public Utilities does not own regional or “bulk” transmission lines, we are considered a part of the regional or bulk power system, subjecting us to Section 215 of the Federal Power Act. Section 215 created mandatory and enforceable federal reliability standards for the bulk power system. The bulk power system is comprised of transmission lines, power plants, and, in some cases, distribution utilities. The bulk power system is under the regulatory jurisdiction of the Federal Energy Regulatory Commission (“FERC.”) These standards do not prevent blackouts, as storms cannot be prevented, but rather they try to prevent *unnecessary* blackouts. They do this by empowering the North American Electric Reliability Corporation, or NERC, to set mandatory and enforceable standards for the bulk power system that can result in fines of up to \$1 million a day if they are not met. These standards are approved by FERC. As the concept of a bulk power system suggests, when regional electric transmission lines are damaged, restoring power is often outside our control.

There is one emergency where no amount of crews can help us restore power. That is when the regional electric transmission lines are damaged. As an electric distribution company, we receive our electricity through inter- and intra-state regional transmission lines that are not under our control; but that of the independent system operator and the transmission owners. In recent

years, we proactively initiated strategies to keep the lights on in Norwich, even when the transmission lines serving our city go down.

As part of a larger, more comprehensive and integrated “smart grid” strategy, our wholesale electric supplier, the Connecticut Municipal Electric Energy Cooperative or CMEEC, constructed 16 distributed generation assets designed to provide 2.5 megawatts of power each, based on our dispatch needs – which can be used during emergencies. Norwich Public Utilities also owns a 20-megawatt combustion turbine that is used to provide power during an emergency. Collectively, all of our self-owned distributed generators can supply a significant portion of normal load (*i.e.*, demand) should the need arise in an emergency (this is especially important considering the fact that water treatment and wastewater treatment assets in our municipalities cannot function without electricity.) With this effort, we have achieved much of the “micro grid” and “smart grid” visions as originally published in the Energy Independence and Security Act (“EISA”) of 2007, and as adopted by FERC.

We are seeking to expand this system, but we are facing regulatory hurdles at ISO-New England that are impacting our ability to bring new assets online and to preserve the existing ones. All power in New England is managed through ISO New England, which determines the terms, conditions, and costs of power and related services in documents called tariffs. The existing tariffs in place at ISO-New England are unclear about whether and when the use of such “micro grid” and “smart grid” designs are permitted. Distributed generation systems allow utilities to manage load on both a demand and supply basis, and thus, transmission costs on high-demand days, saving customers money when it is needed most. However, ISO-New England’s current policies limit or discourage such self-managed, vertically integrated designs, making it difficult and uncertain to realize the benefits for this investment.

We have requested FERC's Office of Enforcement to review our scenario and to issue their assessment to ensure consistent federal policies regarding the use of micro grids so that our system can operate with regulatory certainty. Until this issue is resolved, our strategic investment, made to actively manage customer load on a demand and supply side basis consistent with EISA and FERC, save our customers money, and ensure reliability in emergencies, will not be realized or expanded. We maintain an active and positive working relationship with the ISO-New England and FERC on these outstanding issues, and are hopeful we will receive a positive assessment.

In conclusion, we have proactively developed policies that enable us to rapidly expand our electric restoration crews employing our own resources first. We can further expand our workforce by utilizing a well-coordinated and effective mutual aid system through NEPPA and all public power utilities throughout New England. Additionally, we have taken steps to help protect our community from prolonged power outages due to situations outside of our control. As a public power system, we value our employees and have a successful business model that places our community's needs first.

Again, thank you for allowing me to speak with you today.