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September 13, 2019

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 - 12th Street, S.W.
Washington, D.C. 20554

Ex Parte

Re: Notice of Ex Parte Presentation, ET Docket No. 18-295

Dear Ms. Dortch:

The Utilities Technology Council (“UTC”) is providing the following ex parte notification in the above-referenced proceeding in accordance with Section 1.1206 of the Commission’s Rules. On September 10, 2019, representatives from Exelon Corporation, including Russ Ehrlich, Mike Kuberski, and Mike Forester, Doug McGinnis from RedRoseTelecom and the undersigned on behalf of UTC met with the staff of the Office of Engineering and Technology to discuss matters related to the above-referenced proceeding. The staff of the OET participating in the meeting included Michael Ha, Ira Keltz, Aspasia Paroutsas, Jamison Prime, Bahman Badipour, Syed Hasan, Navid Golshahi, Hugh VanTuyl, and Nicholas Oros. The purpose of the meeting was to conduct a tour of one of Exelon’s substations and describe how Exelon’s 6 GHz microwave communications system supports the safe, reliable and secure operation of the substation, and provide perspective of the size and critical function of the transmission system.

During the meeting, the representatives from Exelon described the substation, the 6 GHz microwave communications system it owns and operates, and the control functions. At the outset, they explained from a safety perspective the need for the FCC representatives to wear personal protective equipment (PPE) because of the danger of high voltage within the substation. They proceeded to describe how the substation functions to reduce the voltages from 230 Kilovolt (kV) transmission lines running from generation facilities to lower voltages (e.g. 69 kV or 13 kV) that can be distributed through transformers on poles to homes and businesses in the Washington, D.C. area. There are three major transmission corridors passing through the substation which provides approximately one quarter of the power for the Washington metro area.

The representatives from Exelon explained that the 6 GHz microwave system at the substation is used to communicate with a generation facility and that it supports interconnection and coordination of power with a neighboring utility. The microwave system supports Supervisory Control and Data Acquisition (SCADA) and teleprotection systems, tools used to monitor and control the balance of power through both the transmission and distribution systems, which must be constantly in equilibrium. The microwave system also isolates transmission-line faults to protect high-voltage transformers from overloads by tripping circuit breakers within milliseconds to prevent the fault from causing a widespread outage and/or causing a safety issue because of downed power lines. Downed power lines and overloads can spark fires or cause severe damage to transformer infrastructure.

While Exelon has a fiber network running to the substation, the licensed microwave network provides the primary communications link for teleprotection. Any fault on either the microwave or fiber network would place the teleprotection system into a single contingency scenario that represents a potential risk to operational reliability and safety of the grid if another problem occurs on the system. This is why licensed spectrum in the 6 GHz band is so important because it provides a certain level of protection and the ability to quickly correct occurrences of interference from other license holders because these parties are known to each other and can take swift action to resolve problems.

Additionally, Exelon explained that PEPCO's service territory is a relatively dense and confined area of 640 square miles. Its microwave links, therefore, are located in a highly populated, urban environment. Exelon representatives noted that other utilities have much larger service territories and significantly more microwave communications systems to support their operations. Exelon further explained that other utilities may depend entirely on their microwave communications systems and may not have alternative back-up communications systems supporting the teleprotection function.

In the event that there is harmful interference from unlicensed users to Exelon's 6 GHz system that prevents it or other utilities from effectively monitoring the health of transmission lines between substations, the utility may be required to take that transmission line out of service rather than to risk damage to transformer infrastructure and a threat to operational safety and reliability. If this occurs, depending on the conditions at the time that the line is taken out of service, this could lead to a power outage to thousands of customers that feed off the power from the substation.

During the tour, representatives from Exelon escorted the FCC representatives through a perimeter fenced facility, into the communications control rooms where the components of the various networks are located, and the substation control center where SCADA systems are monitored to control the power running to and from the substation. The Exelon representatives explained that communications reliability is essential and therefore requires 99.999 percent reliability of their 6 GHz system in order to safely and effectively monitor and control substation operations and to isolate faults from cascading. This system is dedicated for private internal communications with no third-party communications carried over these communications networks. That being said, the microwave tower on the substation is used to support wireless collocation by third-party communications service providers.

Thank you for your help in this matter. If there are any questions concerning this matter, please contact the undersigned.

Respectfully,



Brett Kilbourne
Vice President, Policy & General Counsel

Cc: FCC Participants