Experimental License Application Justification

Delmarva Power and Light Company ("Delmarva Power") is a subsidiary of Exelon Corporation ("Exelon"). Exelon's family of companies represents every stage of the energy value chain. Exelon's six utilities deliver electricity and natural gas to approximately 10 million customers in Delaware, the District of Columbia, Illinois, Maryland, New Jersey and Pennsylvania through its Atlantic City Electric, BGE, ComEd, Delmarva Power, PECO and Pepco subsidiaries. Exelon is one of the largest competitive U.S. power generators, with more than 32,000 megawatts of nuclear, gas, wind, solar and hydroelectric generating capacity comprising one of the nation's cleanest and lowest-cost power generation fleets. The company's Constellation business unit provides energy products and services to approximately 1.8 million residential, public sector and business customers, including more than two-thirds of the Fortune 100.

I BACKGROUND

Delmarva Power is exploring the use of a private LTE network in the 900 MHz band for electric distribution and gas system sensors and controls, substation backhaul, and monitoring, AMI or AMI backhaul and control of customer-owned distributed energy inverters. Applications at these sites may include distribution automation, SCADA, remote engineering access, WiFi, telephony, push-to-talk, and general workforce mobility applications.

Anterix (formerly pdvWireless) and the Enterprise Wireless Alliance ("EWA") submitted a Petition for Rulemaking to create a 3X3 MHz allocation to facilitate broadband deployment for business enterprise entities, including those classified as Critical Infrastructure Industry (RM-11738) within the 900MHz band. The FCC released a Notice of Proposed Rulemaking ("NPRM") on March 14, 2019 that would realign and modernize the 900 MHz band to allow for broadband service. Currently, the 900 MHz licenses are configured in 20 blocks of 10 contiguous 12.5 kHz channels (125 kHz) that cover entire Metropolitan Trading Areas ("MTAs"), each block is separated by 10-channel allocations of site-specific Business/Industrial/Land Transportation ("B/ILT") frequencies. Since the minimum channel size for a LTE carrier is currently 200KHz, the existing 900 MHz band configuration prevents the deployment of these services. Delmarva Power intends to use PDV's 900 MHz channels as proposed for its experimental evaluation of broadband 900 MHz operations.

II REQUEST FOR CONVENTIONAL EXPERIMENTAL RADIO LICENSE

A Purpose of Test

Delmarva Power requests a conventional experimental radio license to test LTE equipment on 900 MHz spectrum. The purpose of the testing is technical radio research: it is intended to confirm that up to 3 MHz broadband service can be deployed on 900 MHz spectrum using LTE-

certified Band Class 8 equipment to provide the necessary capacity and latency for the above listed use cases without causing interference to systems operating on spectrum adjacent to the proposed 900 MHz allocations in the license. The testing will comply with Rule Section 5.84 and will not cause interference to either co-channel or adjacent channel licensees authorized pursuant to the current 900 MHz band plan. It will be conducted on MTA channels held by PDV and interleaved B/ILT channels. The testing will also be a "proof of concept" opportunity to determine whether LTE data speeds and capacity can support the important fixed field-area functions and applications that are currently conducted on narrowband systems or on legacy copper-based circuits that may be de-constructed.

B Technical Parameters of Test

The testing will involve wireless connectivity to fixed locations within listed radii of each transmitter site. Details on the transmitting equipment are provided in the technical sections of this application. It should be noted that this is experimental equipment only to the extent that it has not yet been certified for use on Part 90 spectrum; the models Delmarva Power plans to test are LTE Band Class 8 equipment that have been deployed worldwide at 900 MHz. Delmarva Power plans to deploy 6 antennas at each site, the details of which also are provided in the technical section of this application.

As with standard field area network systems, the testing of the fixed wireless LTE equipment will be automated to transmit/receive intermittent information between the transmitters and the end-point (electrical assets) locations. While most of the monitored testing will take place during normal business hours (9AM-5PM), Delmarva Power anticipates that some data transmissions will occur throughout the 24-hour day. Consistent with the requirements of Rule Section 5.107, system management and monitoring will be handled remotely from Delmarva Power's Salisbury MD office location, except for setup and any equipment adjustments that will be conducted by qualified personnel on site.

Delmarva Power requests a 24-month term for the experimental license for a valid product development trial and to make adjustments to the testing as needed.