Xcel Energy, Inc.

Statement in Support of Experimental License Application

Pursuant to Section 5.63(c)(1) of the Rules of the Federal Communications Commission ("FCC" or "Commission"), Xcel Energy, Inc. ("Xcel Energy") hereby provides this narrative statement in support of its application for an experimental license to conduct technical trials using spectrum in the 896-901/935-940 MHz band from specified locations in Minnesota in accordance with the technical and operating parameters described in the accompanying FCC Form 442. Xcel Energy requests a license term of two (2) years from grant of this application.

BACKGROUND:

Xcel Energy, an electric and natural gas utility holding company based in Minneapolis, Minnesota, provides a comprehensive portfolio of energy-related products and services through its public utility operating company subsidiaries to approximately 3.6 million electricity customers and approximately 2 million natural gas customers in eight states – Colorado, Michigan, Minnesota, New Mexico, North Dakota, South Dakota, Texas and Wisconsin. Xcel Energy leads the nation as a premier renewable energy provider, supplying approximately 6,700 MW of wind and 1000 MW of solar energy through its operating companies Northern States Power Company – Minnesota, Northern States Power Company – Wisconsin, Public Service Company of Colorado, and Southwestern Public Service Company. Xcel Energy currently operates portions of its Field Area Network (FAN) leveraging WIMAX in the 3.65G range. These backhaul facilities provide critical communications in support of its affiliated operating companies, which include fixed point-to-point services as well as fixed-point-to-multipoint services that support safe, reliable, and efficient delivery of essential electric utility services such as load management, telemetry for protective relays, and supervisory control and data acquisition ("SCADA") systems. Reliable, uninterrupted operation of these transport facilities are crucial to maintaining efficient, safe operations.

II. OVERVIEW

Xcel Energy is exploring the use of 900 MHz LTE networks for various applications in support of its affiliates' electric and gas utility operations. These applications include Advanced Meter Infrastructure ("AMI") backhaul, SCADA, Distribution Automation ("DA"), and LMR to LTE Mission Critical Push-to-Talk ("MCPTT") convergence.

Historically, the 900 MHz band has been configured in 20 blocks of 10 contiguous 12.5 kHz channels (125 kHz) that cover entire Metropolitan Trading Areas ("MTAs"), with each block separated by 10-channel allocations of site-specific Business/Industrial/Land

Transportation ("B/ILT") frequencies. Since the minimum channel size for an LTE carrier is currently 1.4 MHz, that 900 MHz band configuration prevented the deployment of these services.

On May 13. 2020 the Commission adopted the *Report and Order, Order of Proposed Modification, and Orders* in WT Docket No. 17-200, FCC 20-67 creating a 3 MHz X 3 MHz allocation to facilitate broadband deployment for business enterprise entities, including those classified as Critical Infrastructure Industry. Anterix, through its licensing company PDV Spectrum Holding Company ("PDV"), is the presumptive broadband licensee in counties in which the affiliates of Xcel Energy operate.

In order to evaluate the technical viability and capability of Anterix's proposed 3X3 MHz allocation in the 900 MHz band, as well as to evaluate potential interference to systems operating on adjacent bands, Xcel Energy seeks an experimental license to conduct testing as proposed in this application in Hennepin and Ramsey Counties in Minnesota.

III. REQUEST FOR CONVENTIONAL EXPERIMENTAL RADIO LICENSE

A. Purpose of Test

Xcel Energy requests a conventional experimental radio license to test LTE equipment on spectrum in the 900 MHz band for the purpose of conducting technical EnodeB and User Equipment (UE) Private LTE research. In particular, this testing is intended to confirm whether a broadband service initially of 1.4 MHz and eventually of up to 3 MHz can be deployed on 900 MHz band spectrum using LTE-Band Class 8 equipment to provide the necessary data speeds, capacity, latency, and interference mitigation for various applications and use cases in support of electric and gas utility operations, including, but not limited to, AMI backhaul, SCADA, DA, LMR to LTE MCPTT convergence, and the co-existence of LMR to PLTE in the 900 MHz BC8 spectrum..

The testing will be conducted on 900 MHz channels currently licensed to PDV on an MTA basis and on interleaved B/ILT channels. The testing will comply with Section 5.84 of the Commission's Rules and will not cause interference to either co-channel or adjacent channel licensees authorized pursuant to the current 900 MHz band plan.

B. Technical Parameters of Test

The testing will involve wireless connectivity to fixed locations and mobility within the listed radii of each transmitter site. Details on the Motorola transmitting equipment are provided in the technical sections of this application. It should be noted that this equipment is experimental only to the extent that it has not yet been certified for use on adopted Part 27 spectrum. Xcel Energy plans to deploy two directional 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 locations. While most of the monitored testing would take

place during normal business hours (8:00 AM – 5:00 PM local time), Xcel Energy anticipates that data transmissions will occur throughout the 24-hour day. Consistent with the requirements of Section 5.107 of the Commission's Rules, system management and monitoring will be handled remotely from Xcel Energy's offices at Minneapolis, Minnesota, except for installation, setup, and any equipment adjustments that will be conducted by qualified personnel on site. Xcel Energy requests a 24-month term for the experimental license for a valid equipment evaluation and product development trial and to make adjustments to the testing as needed.