

JEA

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”), JEA 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 Florida in accordance with the technical and operating parameters described in the accompanying FCC Form 442. JEA requests a license term of two (2) years from grant of this application.

I. BACKGROUND:

JEA, an electric, water, and wastewater utility based in Jacksonville, Florida, provides a comprehensive portfolio of energy and water related products and proudly serves an estimated 514,000 electric, 391,000 water, 311,000 sewer and 25,000 reuse water customers. JEA’s service territory is located in Northeast Florida encompassing Nassau, Duval, and St. Johns counties. JEA owns and operates an Electric System with four generating plants, and all transmission and distribution facilities, including 744 circuit miles of transmission lines and 7,336 miles of distribution lines. JEA maintains a District Energy System comprising three chilled water plants that support a total capacity of 19,900 tons. JEA also purchases energy from eight solar photovoltaic sites located across our service territory. JEA’s Water System consists of 136 artesian wells that tap into the Floridan aquifer. Water is distributed through 38 water treatment plants and 5,079 miles of water lines. Our Sewer System comprises a four-county network of 4,367 miles of collection lines and 1,596 pump stations and includes 11 wastewater treatment facilities.

JEA currently operates portions of its Field Area Network (FAN) leveraging a broadband radio service (formerly known as MD) with both licensed and unlicensed radios in the 900 MHz range. This backhaul provides critical communications, 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 and water/wastewater utility services such as load management, telemetry for electric distribution, and electric and water/wastewater supervisory control and data acquisition (“SCADA”) systems. Reliable, uninterrupted operation of these transport facilities are crucial to maintaining efficient, safe operations.

II. OVERVIEW:

JEA is exploring the use of 900 MHz LTE networks for various applications in support of its electric and water/wastewater utility operations. These applications include Advanced Meter Infrastructure (“AMI”) backhaul, SCADA, Distribution Automation (“DA”), Carrier to Private LTE, IoT, 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 JEA operates.

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, JEA seeks an experimental license to conduct testing as proposed in this application in Duval County in Florida.

III. REQUEST FOR CONVENTIONAL EXPERIMENTAL RADIO LICENSE

A. Purpose of Test

JEA 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 water/wastewater utility operations, including, but not limited to, AMI backhaul, SCADA, DA, Carrier LTE to Private LTE, IoT, LMR to LTE MCPTT convergence, and the coexistence 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 Ericsson base station equipment and mobile user equipment are provided in the technical sections of this application. It should be noted that both certified and experimental equipment will be used. JEA 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), JEA 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 JEA’s offices at Jacksonville, Florida, except for installation, setup, and any equipment adjustments that will be conducted by qualified personnel on site. In addition to monitoring, JEA will also coordinate operations with Florida Power & Light to ensure their complex system is not subject to interference. JEA requests a 24-month term for the experimental license for a valid equipment evaluation and product development trial and to adjust the testing as needed.