

Description of Experimental Program

In its 6 GHz Report & Order, the Commission designated additional spectrum for unlicensed operations, envisioning its use for “new innovative technologies and services that will advance the Commission's goal of making broadband connectivity available to all Americans, especially those in rural and underserved areas.” Unlicensed Use of the 6 GHz Band, 35 FCC Rcd 3852, 3853 (2020). Through this application for experimental license, NETEO, Inc. (“NETEO”) seeks to advance these goals through testing of available equipment across the UNII-5 and UNII-7 bands to collect additional data on the use of these bands for delivery of enhanced fixed wireless broadband services on a shared basis with incumbent users.

The experimental operations will involve field deployment and testing of Cambium Networks 6 GHz radio technology from three towers in rural areas in Jefferson and Arapahoe Counties, CO. Two of the towers will deploy a single directional antenna and one tower will transmit on two sectors. and will provide service to an average of 50 customers per sector. This will represent only a small amount, approximately twenty percent, of the existing customers within the covered area. These operations will evaluate the greater throughput capabilities available in these bands using 80 MHz and 160 MHz channels. The program will also evaluate Cambium CPE units deployed at existing customer locations within 8 km of the access point

Although the trial will involve deployment at customer locations, the deployment will involve existing customers, with equipment located side-by-side with existing equipment and will therefore permit evaluation of the performance of different equipment, spectrum and bandwidth. New customers may be added to the trial as needed to maintain a consistent level of CPE deployment, in the event of customer cancellations, but in no case will use of the 6 GHz band be marketed to customers as a new or augmented service offering. Except for the need to install new equipment at customer sites, the use of the test equipment will be seamless and transparent to customers. All equipment deployed to customer sites will be retrieved at the conclusion of the experimental testing program.

The trial will involve real-world loading in order to evaluate the equipment performance. Using 80 MHz and 160 MHz channels, fifty units per AP sector should allow NETEO to fully utilize the spectrum and evaluate equipment performance under such conditions. NETEO will additionally evaluate the impact of transmitting multiple frequencies from a single tower

EV's data collection program will operate without causing harmful interference to incumbent users. NETEO will work with any nearby licensed incumbents that it identifies, based on information provided in the FCC's databases, to ensure that its operations will avoid any harmful impact on such existing users.

The ePMP 4600 (Access Point), sector antennas will provide 18 dBi gain, which when connected to 63mW output power will result in 2.43 W ERP.

The ePMP 4600C CPE antennas will provide 24 dBi gain, which when connected to 15.8 mW output power will result in 2.43 W ERP.