

ANS Advanced Network Services, LLC
Application for Two-Year Experimental License:
Citizens Broadband Radio Service (“CBRS”) Testing and Market Trial

Pursuant to Sections 5.54(a)(1) and 5.63(c)¹ of the rules of the Federal Communication Commission (the “Commission”),¹ ANS (Advanced Network Services) respectfully requests a two-year experimental radio license, to test and trial commercial viability of products and services in Citizens Broadband Radio Service (“CBRS”) spectrum from 3550-3700 MHz. Grant of this experimental license will serve the public interest by allowing ANS Advanced Network Services to demonstrate opportunities made available by the innovative CBRS spectrum sharing framework in real-world conditions. Grant of this application will also allow ANS Advanced Network Services to be more readily prepared to provide commercial services on a Priority Access License (“PAL”) or General Authorized Access (“GAA”) basis after coordination from an authorized Spectrum Access System (“SAS”) and an Environmental Sensing Capability (“ESC”).

I. Background

ANS Advanced Network Services, LLC supports wireless carriers, enterprises, and government entities nationwide with their connectivity needs since the line of business was founded in 1991. The services we provide include in-building wireless services, tower services, network infrastructure services, and DC power services.

Our in-Building Wireless Services support DAS, small cell, Wi-Fi, and public safety applications. Projects are handled turnkey, or we can individually address benchmarking, design, deployment, commissioning, monitoring, and maintenance with our in-house teams.

We support Tower Services including antenna modifications and service upgrades, troubleshooting and maintenance, new site builds for all wireless applications on towers, buildings, water tanks, and stealth applications, as well as structural modifications utilizing in-house certified welding teams.

In terms of Network Infrastructure Services, ANS supports has Verizon covered from the data center to the cell site. We complete data center, switch, and cell site equipment installation and cabling, as well as equipment removals. Our teams have designed and built the superstructure and ladder racking systems in switches and data centers nationwide.

ANS’ DC Power Services address primary and secondary power design and installation from small systems to 10,000 amp power plants. We offer rectifier and battery backup design, installation, and maintenance.

II. Proposed Market Trial

¹ 47 C.F.R. §§ 5.54(a)(1) & 5.63(c)(1).

In this market trial, ANS-Advanced Network Services proposes to test up to 20 Category A CBSDs, as well as mobile terminals and other end user devices, at one indoor location in Menands, NY. The market trial will allow ANS-Advanced Network Services to analyze the benefits, challenges and costs associated with CBRS deployment in distinct indoor environments (i.e., hospitality, multiple dwelling unit and office space). During testing, ANS-Advanced Network Services will transmit at the lowest possible power levels (a maximum EIRP of 30 dBm/10 MHz) to meet performance objectives.

ANS-Advanced Network Services has reviewed the status of incumbent operations in the 3550-3700 MHz band² and has concluded that its indoor low-power trial operations will comply with existing limits.

- For operations in the 3550-3650 MHz band, the trial meets the specifications of Category A antennas set out in Section 96.41(c). Accordingly, ESC is not a requirement to protect shipborne or ground-based radar facilities in this spectrum range.³
- For operations in the 3650-3700 MHz band, consent from commercial Fixed-Satellite Service earth stations is not required because the test operations will not exceed the power levels for mobile and portable stations set out in Section 90.1321(c).
- ANS-Advanced Network Services understand that its operations are secondary to any authorized Part 90 commercial operations in the 3650-3700 MHz band.

Given the low EIRP levels of the CBSDs and the enclosed trial environments, ANS-Advanced Network Services anticipates no harmful interference to existing incumbent users operating in the 3550-3700 GHz band. ANS-Advanced Network Services has full access to the transmit locations and has personnel nearby to monitor construction and operation to ensure that there will be no harmful interference to incumbent users and to remedy harmful interference in the unlikely event it occurs. In any event, ANS-Advanced Network Services agrees to accept interference from incumbent users and will immediately terminate its operations in the event it receives reports documenting harmful interference to other authorized spectrum users in the band.

ANS-Advanced Network Services acknowledges that there is presently no certified SAS and ESC, and the technical specifications for the SAS and ESC are still under development. Accordingly, as noted, prior to the certification of a SAS and ESC, ANS-Advanced Network

² Incumbent users include federal entities authorized to operate on a primary basis in accordance with the table of frequency allocations, fixed satellite service operator, or Grandfathered Wireless Broadband Licensee authorized to operate on a primary basis on frequencies designated. See 47 C.F.R. § 96.3.

³ ANS-Advanced Network Services also notes that the closest ground-based military radar facility is more than 3 km from the test location. ANS-Advanced Network Services also notes that, unless there is a radar facility located at the Watervliet Arsenal in Watervliet, NY, the closest ground-based military radar facility is more than 3 km from the test location. See Letter from Paige R. Atkins, NTIA, to Julius P. Knapp, FCC, GN Docket No. 12-354 (dated March 24, 2015), at 6.

Services will comply with the power levels in Section 96.41 of the Commission's Rules. At the conclusion of the experimental license term, ANS-Advanced Network Services will either transition to Part 96 GAA if the equipment is certified and authorized under GAA rules, or will cease operations in 3550-3700 MHz band. Assuming the trial is successful and the equipment has been certified, ANS-Advanced Network Services expects to utilize a combination of PAL and GAA spectrum across the entire 150 megahertz from 3550-3700 MHz

Consistent with the market trial requirements of Section 5.602(d), ANS-Advanced Network Services will own the equipment and will not transfer ownership to trial participants. As required by Section 5.602(e) of the Commission's rules, all end users will be advised at the commencement of the trial that service is being provided on a trial basis, that any non-approved devices are for testing only and that all equipment must be returned at the end of the trial period. ANS-Advanced Network Services acknowledges that it will need to retrieve the devices from the users at the end of the trial. Users will be notified that the service they will be receiving is being provided pursuant to an experimental authority and, as a condition of the experimental license, ANS-Advanced Network Services may be required at any time,