

Justification for Experimental License Grant to NRTC LLC

Background.

NRTC is a non-profit cooperative association comprised of 682 rural electric cooperatives, 122 rural telephone cooperatives and 183 small independent telephone companies located throughout 48 states. NRTC's mission is to provide rural communities across the country with the same modern telecommunications services enjoyed in more populated urban areas. In an ongoing effort to realize this goal NRTC established a new entity – NRTC LLC – through which its various members could acquire and build out communications systems with various FCC licenses.

NRTC LLC currently holds three different types of 220 MHz licenses: (1) a 5 channel Phase I Nationwide license; (2) a 10 channel Phase II Nationwide license; and (3) six 7 channel Phase II Regional licenses covering the entire continental United States and one 15 channel Phase II Regional License in Region III. NRTC LLC's licenses effectively comprise a single, 22 channel, 220 MHz Nationwide Land Mobile Radio System designed to serve the telecommunications needs of rural America. Additionally, many of NRTC's members hold various 220 MHz EA licenses across the country.

Program

NRTC LLC requests Experimental Licenses for all non-government channels in the 220 MHz band, on a non-interfering basis nationwide in order to conduct various operational and equipment tests. The goal of these tests is to research technology and applications that will ensure that future systems – and their associated equipment – will adequately provide rural communities across the country with the most modern telecommunications services possible. NRTC needs authority to operate on all non-government 220 MHz channels in order to test a broad range of technologies and applications, including the testing of multi-channel compatibility. Such a grant will provide NRTC LLC with the flexibility to conduct field trials and radio tests throughout the United States with members from various regions using a variety of frequencies.

This testing will be conducted across wide and dissimilar spectrum distributions. The grant of this experimental license will allow testing across and between different spectrum blocks (e.g. Economic Areas, Regional Economic Area Groups and Nationwide). The proposed grant will help ensure the realistic testing of assorted equipment throughout different areas of the United States. This testing requirement is of fundamental importance since many NRTC member cooperatives have acquired rights to operate on both Phase 1 **Nationwide** frequencies as well as Phase 2 **Regional** frequencies as well as EA frequencies.

This testing will be done on both a synchronized and consecutive basis. For example, some testing will be conducted simultaneously on a regional or national basis to ensure compatibility of systems spread throughout various regions of the United States. Alternatively, systems will also be tested on a separate 'stand-alone' basis. Further, because nationwide channels tend to carry more traffic, field testing could be transferred between regional and nationwide channels.

Since the new technology may or may not be backward compatible, the initial testing would be best done on channels that are not in use by other users.

NRTC LLC is currently operating voice and mobile data systems and Supervisory Control and Data Acquisition (“SCADA”) systems in several states. Plans are also being developed to install and operate Automated Meter Reading (“AMR”) systems in several states. Although the voice and mobile data systems and the SCADA systems utilize type accepted radio equipment, significant problems exist. Many of the systems deployed by members simply are not interoperable with other systems or equipment, despite the fact that necessity dictates such capabilities. Such a capability is critical for any rural electric cooperative or public utility, especially when working in multiparty or joint efforts such as power line restoration after a natural disaster or other emergency. Further, a truly functional nationwide 220 MHz system does not currently exist.

In order to address such concerns, NRTC LLC seeks to develop new SCADA, AMR and voice and mobile data systems with expanded capabilities and enhanced interaction capabilities. In addition, new radio technology and products – digital radios for example – may be developed. In order to begin field trials and tests of the radio equipment, however, NRTC LLC will require the grant of the proposed Experimental License.

Promise of Contribution

The grant of the experimental license to NRTC LLC has a high promise of contribution to the development, extension and expansion of the radio art. For instance, it is critical that rural electric cooperatives across the country have the ability to conduct seamless communications during times of natural disasters and other emergencies. If a hurricane were to hit the service territory of an electric cooperative located in the State of North Carolina, rural electric cooperatives in Virginia may supply personnel and equipment to assist in responding to the crisis. Without access to compatible equipment and systems, the personnel and equipment from Virginia will be unable to communicate with the personnel and equipment from North Carolina. NRTC LLC’s experimental license seeks to address such critical problems that cut across regional and state lines.

Additionally, the development of such advanced technologies are currently lacking in rural America. In fact, a recent report issued by the Commission underscored this lack of advanced telecommunications services in rural areas. In the Second Report regarding the Deployment of Advanced Telecommunications Capability, the Commission reaches the troubling conclusion that “many rural customers are particularly vulnerable to not receiving timely access to advanced services.”¹ The Commission further states that it seeks to encourage business entities to consider actions that will “encourage investment in, and stimulate demand for, advanced services and reduce the cost of deployment.”²

¹ Deployment of Advanced Telecommunications Capability: Second Report, FCC 00-290, at paragraph 221.

² Id. at 10.

Grant of the proposed experimental license will clearly assist in meeting this standard. Development of such equipment and technology will help to ensure that rural Americans receive the same technological benefits that most Americans enjoy today. For the foregoing reasons NRTC LLC respectfully requests that the application for experimental authority be granted.

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