DATE: February 26, 2014
FROM: Mille Lacs Energy Cooperative
TO: Federal Communications Commission (FCC) Staff
SUBJECT: Expression of Interest – Rural Trials
Docket No. 10-90

Background
MLEC is headquartered in Aitkin, Minnesota. MLEC is a member-owned rural electric distribution cooperative, which currently provides electric service to over 13,000 members in parts of Aitkin, Crow Wing and Mille Lacs counties. The MLEC service area is located in north central Minnesota, approximately 100 miles north of the Minneapolis/St. Paul and approximately 80 miles southwest of Duluth. The area is very rural and sparsely populated, with trees and many lakes covering much of the landscape. Over one-half of the homes we serve are seasonal customers and not full time residents of the area.

As a diversified service offering to the cooperative membership, MLEC provides Internet service to over 480 rural subscribers through the means of satellite and fixed wireless facilities. MLEC started offering high speed Internet because there were no other providers in the area. Fixed wireless is available in pockets of our service area, but due to a limited amount of capital to invest in this service we were not able to reach everyone that needed the service. Small improvements have been made to the system and allowing a few areas the ability for a 3MB download connection. With that said we understand the current technology is not sufficient to meet the growing broadband needs of our rural area.

MLEC at this time does not have an ETC license, but if funding were to be provided we would meet the requirements set forth by the FCC.

Geographic Territory
MLEC is proposing to serve the portions of a three county area with Fixed Wireless Internet. This will include a majority of Aitkin County, a small portion of Crow Wing County, and a small portion of Mille Lacs County.

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This will provide coverage to over 19,000 potential customers covering 700 square miles. Our population density averages 2.9 homes per mile.

**List of Anchor Institutions**

- Schools covered in the proposed area include: Aitkin High School, Rippleside Elementary, Onamia Public Schools, and Nay Ah Shing School
- Libraries include: East Central Regional Library – Aitkin, Onamia Area Library
- Government Centers include: Mille Lacs Band of Ojibwe Government Center, Aitkin County Government
- Health Centers/Hospitals include: Riverwood Healthcare Center – Aitkin and Garrison, Mille Lacs Health Systems – Onamia and Garrison

**Proposed technology**

With the low 2.9 homes per mile, MLEC feels a fixed wireless solution would provide the best coverage of the area. We are planning to offer broadband with Super Wi-Fi that is powered by the TV white space spectrum. Fiber would be used for the backbone of the service and also allow MLEC to offer fiber services with speeds up to 100 Mbps to The Mille Lacs Band of Ojibwe, local hospitals and schools. For residential and small businesses our initial offerings will include just broadband services, with the possibility of adding voice once the system is in place. The initial speed offerings will start at 3 Mbps, 5 Mbps and 10 Mbps. The service offerings will be priced by tiers and on a monthly basis starting at $29.95 (3 Mbps), $39.95 (5 Mbps) and $59.95 (10 Mbps). As this spectrum is further developed we believe we will be able to add even faster speeds in the future. This technology will allow rural residents and small businesses an option to receive broadband connections that have never been offered before in their areas. We understand the Super Wi-Fi technology may not meet all the needs of every anchor institution, but it will provide the people working for these institutions remote access to the services they provide.

As part of this new service we would plan to plow or hang fiber between our main communications tower and the MLEC office that holds the head end equipment. Fiber would also be plowed in phases to all of the cooperatives existing substations, creating solid connectivity from each substation and access point. Currently three of the substations are access point locations and these would each be upgraded with new towers and equipment. Towers to broadcast the Super Wi-fi would also be added to three other substations located in remote areas with an additional 6 towers to cover the selected census blocks. With the addition of fiber MLEC would be able to offer fiber Internet connectivity to the Mille Lacs Band of Ojibwe, two rural hospital systems and three schools as the fiber would pass on long these institutions and back to the MLEC main office.

**State and/or Local or Tribal Government Participation in and/or Support for Project**

We are currently not receiving any type of funding for providing broadband services. Aitkin County Government supports us in our endeavors to provide broadband Internet to the residents of Aitkin County.
**Existing Providers**
In some of the proposed areas there is DSL service available, but the coverage and speeds offered to customers is variable and dependent upon the location. Not all areas are able to receive even 1 Mbps download and many areas have no access at all. This is insufficient for today’s needs and future applications.

**Project Timeline**
MLEC will be completing a trial of the Super Wi-Fi Internet service along with an engineering and financial feasibility study and will be shovel ready within the next 4 months.

**Scalability**
MLEC has mapped out plans to deploy broadband in four phases that breaks the proposed census tracts into for geographic areas. The process of securing land if needed, building towers or leasing tower space, installing fiber and then deploying the service within each phase area.

**Total Utility Investment**
MLEC would invest $1 million towards the project

**One Time Capital Infrastructure Investment Needed**
MLEC is asking for funding of $9 million to be dispersed over a period of three years.

**Total Project Cost**
$10 million