

Broadband USA Applications Database

Applicant Name: French Broad Electric Membership Corporation

Project Title: French Broad Electric BPL Project

Project Type: Last Mile Remote

Executive Summary

a) Opportunities the proposed system seeks to address French Broad Electric Membership Corporation will deploy broadband infrastructure, predominantly last mile, to unserved areas in the heart of the rugged mountains of western North Carolina. The proposed funded service area consists of a portion of Madison County, North Carolina. Madison County is located deep in the Appalachian Mountains and much of the county's terrain is heavily forested and sparsely populated. The French Broad Electric Membership Corporation (EMC) serves over 37,000 members in Madison, Buncombe, Yancey and Mitchell counties, NC, and Unicoi and Cocke counties, TN. Several years ago, French Broad EMC first utilized fiber optic cable to connect its electric substations. In partnership with local governments and the Education and Research Consortium of the Western North Carolinas, Inc. (ERC) Broadband, French Broad Electric Membership Corporation then began offering broadband Internet service to school systems, businesses and other large organizations located within portions of French Broad EMC's Western North Carolina service area and near the fiber optic backbone. Initially, the broadband Internet service was only provided for government, organizations, and businesses requiring a minimum of 3Mbit of bandwidth. These early customers include Mars-Hill College, Madison High School, Madison County Public Library, and Madison County government administrative building. French Broad recently expanded the fiber optic backbone to reach Laurel Medical Center and Laurel Elementary School. Currently, French Broad EMC is able to offer residential broadband service to only 30 of its 37,000 members. The proposed project would enable French Broad EMC to provide broadband Internet service to 611 more homes.

b) A general description of the proposed funded service areas The proposed funded service area consists primarily of last mile service to the small communities of Spring Creek, Laurel, and Gabriels Creek and to the small towns of Marshall and Mars Hill. The proposed funded service area also includes a smaller middle mile service area from Weaverville to Mars Hill. The proposed funded service area lies in Madison County, North Carolina. Madison County is located deep in the Appalachian Mountains of western North Carolina, and much of the county's terrain is rugged, heavily forested, and sparsely populated. Over 70 percent of Madison County is forested. Agriculture is the traditional backbone of the local economy and reflects the heritage of the small family enterprise. More than 500 families are raising cattle in the county. Over 1,500 people grow tobacco. Christmas tree farmers, nursery owners, trout farmers, and other livestock growers also bring significant revenue and income into the county. Marshall is the county seat. Mars Hill is home to Mars Hill College, a private, four-year liberal-arts college, founded in 1856. The proposed funded service area is comprised of portions of Madison County, NC where at least 90 percent of the households lack access to facilities-based, terrestrial broadband service, either fixed or mobile, at the minimum broadband transmission speed of

at least 768 kilobits per second (kbps) downstream and at least 200 kbps upstream to end users. French Broad EMC currently provides broadband Internet service to a college, public schools, health clinics, businesses and other large organizations, and recently begun providing very limited residential service.

c) Number of households and businesses passed In the proposed funded service area, according to the 2000 U.S. Census, the number of households in the contiguous census blocks composing the Spring Creek community area is 594 households; in the Laurel area, 838 households; and in the Marshall – Mars Hill area, 305 households. Accordingly, the total number of households passed in the proposed funded service area is 1,737 households. Similarly, French Broad EMC provides electrical service to 1,746 active electric customers in the Spring Creek, Laurel, and Marshall-Mars Hill areas. There are 762 active electric customers in the Spring Creek area; 740 in the Laurel area, and 244 in the Marshall – Mars Hill area. There are at least 80 businesses in the proposed funded service area. Many of Madison County's estimated 250 businesses are located in the Marshall – Mars Hill area. Spring Creek businesses include Apple Creek Farms, Briar Rose Farms, Mountain Harvest Organic, Creek View Digital Photography Studio, Spring Creek Realty, and Wilderness Lodge.

d) Number of community anchor institutions, public safety entities, and critical community organizations passed and/or involved with project (e.g., health care, education, libraries) Critical community organizations in the proposed funded service area include Laurel Elementary School, Laurel Medical Center, Spring Creek Volunteer Fire Department, Spring Creek Community Center, Laurel Volunteer Fire Department, and Revere-Rice Cove Community Center. Support letters have been received from each of these community organizations.

e) Proposed services and applications for the proposed funded service areas and users French Broad EMC broadband services are provided via fiber optic from its main offices in Marshall and Burnsville. Currently, French Broad EMC offers Internet bandwidth in varying increments starting at 3Mb upstream/downstream. For \$49.95 per month, the project will provide residential Broadband over Power Lines at 1 Mbps downstream and 1 Mbps upstream. For \$129.95 per month, the project will provide broadband business broadband at 1 Mbps downstream and 1 Mbps upstream. Accordingly, the broadband Internet service will exceed the minimum threshold of broadband transmission speed of at least 768 kilobits per second (kbps) downstream and at least 200 kbps upstream to end users.

f) Approach to addressing the non-discrimination and interconnection obligations The proposed project will be consistent with the NOFA's non-discrimination and network interconnection obligations. Specifically, the applicant adheres to the principles contained in the FCC's Internet Policy Statement.

g) Type of broadband system that will be deployed (network type, technology standard). The broadband system that will be deployed utilizes wireline technology, providing fiber-optic cable Broadband over Power Line.

h) Qualifications of the applicant that demonstrate the ability to implement and operate a broadband infrastructure, and/or be a sustainable broadband services provider Formed in 1939, French Broad Electric Membership Corporation began giving service for the first time in 1941, energizing a line in the Little Pine section of Madison County, NC. French Broad EMC has grown into a modern-day cooperative, with 21 substations providing electricity to over 37,000 customers. French Broad EMC has modern system controls along with a data acquisition system, linked by fiber optic cable and wireless communication. French Broad Electric Membership Corporation currently operates a fiber optic backbone which crosses three counties: Madison, Yancey, and Mitchell. The fiber optic backbone runs through the towns of Marshall, Mars Hill, Burnsville and Bakersville. In the Marshall area the backbone runs from the main French Broad EMC office to the town of Marshall and then to US HWY 25-70 where it splits with one link spanning to

Walnut and the other link to Madison High School. In Mars Hill the backbone is near Mars Hill College. In Burnsville the fiber runs to the French Broad EMC office and continues to Micaville and then Bakersville.

i) Overall infrastructure cost of the broadband system The Spring Creek area infrastructure cost includes 15.89 units of fiber optic cable, 5 injection points, and 98 miles of line. The total Spring Creek area infrastructure cost is \$748,263. The Laurel area infrastructure cost includes 3.1 units of fiber optic cable, 5 injection points and 109 miles of line. The total Spring Creek area infrastructure cost is \$543,454. The Marshall-Mars Hill area infrastructure cost includes 2 injection points and 23 miles of line. The total Marshall-Mars Hill area infrastructure cost is \$137,444. The total Weaverville to Mars-Hill middle mile infrastructure cost is \$409,580. Accordingly, the total overall infrastructure cost of the proposed broadband system is \$1,838,741.

j) Overall expected subscriber projections for the project French Broad EMC projects a 35% take rate among its 1,746 active electric customers in the Spring Creek, Laurel, and Marshall-Mars Hill areas. The number of projected broadband customers is 267 in the Spring Creek area, 259 in the Laurel Area, and 85 in the Marshall-Mars Hill area. Accordingly, the overall expected subscriber projection for the project is 611 customers.

k) Number of jobs estimated to be created or saved as result of this project With broadband infrastructure deployment, the economic development potential in Madison County, NC is significant. On-going development and growth in the tourism sector, such as Spring Creek Preserve and Wolf Laurel Resort, are examples of the changing economy in rural western North Carolina.