Request for Proposals
Cullowhee Valley Broadband Access Project

A. Background and Statement of Need

Cullowhee Valley (CV) is a section of Jackson County in Western North Carolina surrounding Western Carolina University (WCU). Western Carolina University (operating as Western Carolina Power) serves as the electric service provider for approximate 3,350+ customers in the area. Customer base is primarily residential with approximately 230 commercial and university accounts.

History of Western Carolina Power (WCP):

- Started providing electricity to campus circa 1918, when electricity was produced in conjunction with an old flour milling operation, the Cullowhee Milling Company, on the Tuckasegee River. It produced about 25KW output capacity.
- In 1925, took over all interest in Cullowhee Milling Company.
- In 1928, due to the old log dam continuously washing out, discussions were held whether to build a new concrete dam and plant or purchase electricity (from Harris Clay Co of Dillsboro or Cox and Sons of Cullowhee). It was decided to build new and the power plant/turbine was moved to the current side of the river and provided power to WCU's Joyner, Davies, and Madison buildings and the surrounding community. Cost was approximately $25,000. WCU understood that electricity would be a key infrastructure component for the development of the area, recruitment of personnel, and growth for the university.
- In 1940, wooden dam and plant damaged by flood.

- In 1941, new concrete dam (with wooden flashboards) and refurbished machinery/plant placed back in operation. It produced about 104KW output capacity.
- In the late 1950's to early 1960's, WCP decided it would be better to purchase electric power and stopped generating hydroelectric power. WCP began purchasing power from Nantahala Power & Light (NP&L)
- 1988 – Duke Energy purchased NP&L

WCU still owns and maintains the dam as a water intake source. The WCP purchases electricity from a wholesale provider and resales it to the distribution area in Cullowhee Valley. Although WCP is not a public utility, the rates are established by the NC Utilities Commission.

About WCP:

- Service area: Approximately 64 square miles
- Overhead electric distribution: Approximately 105 miles
- Underground electric distribution: Approximately 20 miles
- 2,126 poles
- (2) Bucket trucks, (1) Auger Truck, (1) Chipper truck with chipper, (6) service trucks
- Employ linemen and administrative staff to operate the distribution network and maintain the assets necessary to do so

The Need:

Broadband (minimum 25Mbps down / 3Mbps up) is similar to the need for electricity many years ago, it is essential for businesses to function and grow. It is vital to Cullowhee Valley

residents for their education endeavors (K-12 children, college students who live in apartments near WCU, faculty teaching electronically from their home) – and for accessing and using the digital/electronic resources and services that everyone is increasingly dependent upon. These needs are irrespective of whether you reside in an urban or more rural setting. In recent years, it has become evident that access to adequate internet speeds has become a major element in the decision-making process for faculty, staff, students, business developers, entrepreneurs, retirees, and others in search of a home or business location.

WCU's executive leadership and officials realize that additional and increased access to broadband services will provide benefits and opportunities for economic development, improvement in local services, education enhancements, access to tele-healthcare and telework and increased services to senior citizens and disabled persons. In a recent 2015 Jackson county-wide resident survey, broadband was a top need, only narrowly exceeded in priority by "job creation". In addition, the Cullowhee Valley is a growing community; currently the fastest growing area in Jackson County. Per the latest census data, the Cullowhee area population grew over 36% from 2000 to 2010. The University continues to expand and grow, with record enrollments recorded in 5 of the last 6 years. Fall 2017 enrollment reached 11,034 and is projected to increase by at least 300 students per year over the next decade.

B. Project Overview

The availability and affordability of broadband access is vital to the progress of any community, and especially in a vibrant and growing university community located in a more rural setting. WCP, initially for its power service area in the Cullowhee Valley, seeks to receive proposals

from interested broadband providers that maximize the availability of broadband by increasing bandwidth to areas currently served, underserved, or not served. WCP is willing to partner with / incentivize a provider that can do this to the greatest extent.

The most apparent way that WCP can accomplish this is by offering access to the assets of the program (poles, buildings, use of property, etc.). One possible way of doing this is to allow access to the poles at a variable cost rather than a fixed cost. For example, the variable cost could be at a "per-customer" basis with a cap if the service reaches the provider's desired level.

The goal is to make a significant difference in broadband speed, quality and coverage in the Cullowhee Valley. Multiple proposals are encouraged that suggest alternative incentives or provisions that achieve that goal.

C. Scope of Work

Required:

- Internet connectivity available to the proposed service area that surpasses the options currently available in terms of speed, reliability, customer satisfaction, and cost.
- Work would begin within 90 days of award.

Preferred and desired:

- Desired minimum bandwidth 25Mbps down / 3Mbps up
- Highly desired ability to offer 1Gbps down / 1Gbps up

- Bandwidth service guarantee 70% of purchased speed
- Service availability 99%
- Customer satisfaction 85%

- Work would begin within 90 days of award
- Connectivity may be built out in follow-on phases per provider specified model, with the entire service area having access available in no more than 3 years

The University itself receives internet service as part of the UNC system via MCNC. As a result, no WCU business is in scope. There are many apartment complexes in close proximity to the campus that could potentially serve as an "anchor" customer to begin service to the service area.

D. Selection Procedures

Selection of a partner to provide described services will be based upon the following criteria;

1. Creativity and extent to which improved coverage/service will be provided
2. Quality and responsiveness of proposal.
3. Comprehensiveness of proposal.
4. Knowledge, experience and capacity to carry out scope of work.
5. Timeliness of proposed implementation of services.
6. Reasonableness of pricing structure for broadband services to customers.
7. Reasonableness of the expectations with respect to WCP assets and incentives.
8. Historic validation of network reliability and customer satisfaction.
9. Demonstration of existing customer base.

E. Proposed Timeline

December, 2017	Request for Proposals Released by WCP
January 26, 2018	Site visit (not mandatory, but highly recommended)
February 9, 2018	Written questions due
February 23, 2018	Responses to written questions
March 9, 2018	Proposals due to WCP
March, 2018	Begin review, recommendations, contract negotiations
June 1, 2018	Projected Date for Grant Award Notification

F. Proposal Content

The proposal must describe in detail how the proposed project will bring broadband services to the entire WCP service area, including currently unserved households, and beyond if applicable.

The proposal could include staged phases based on certain parameters being met, however if phased in this manner the proposal must describe what requirements (revenue, commitment rates, time, etc.) have to be met before the next phase begins.

In addition, the proposal must provide the following information:

- Description of the service being proposed to address this Request for Proposals.
- The plan to provide last mile services to the Cullowhee Valley, including potential use of WIFI or other radio frequency technologies.
- Inclusion of a coverage map that identifies equipment placement and coverage. The proposal should also describe the coverage area and the customer base, showing the proposed area of high-speed internet / broadband expansion to include an estimate of the potential new customers in the expansion area and the associated time-frame for implementation.
- Describe any required changes or modifications to existing electric distribution system (such as pole change-outs to provide more height to meet required utility clearances, additional poles, etc.).
- Explain the plan for maintenance of this new service including an explanation of how customer service and support will be provided. This must include an explanation of how the service availability and customer satisfaction goals will be met.
- Provide a description of the future growth capacity of their proposed broadband solution and its ability to adapt to new broadband applications, requirements, and technologies.
- Describe in detail the type of technology that is being proposed including speed and the service delivery method. Additional information should also be provided on the technical capabilities of the broadband system being proposed. This service must meet the minimum speed stated in the above paragraph in this section.
- Describe the commitment to delivering the full scope of work and potential incentives and disincentives for delivering above or below the full scope of work in Section C.
- Describe all services that will be provided as part of the high-speed internet / broadband network being installed, examples being internet services, phone, television, home security, etc.
- Provide available information on pricing for individual services that will be available on the high-speed internet / broadband network.

- Include an executive summary (not to exceed two pages) that describes the project and funding that is being proposed.
- Describe any enhanced features and network functionality that may add value to the high-speed internet / broadband network being provided.
- If desired, bidder may describe any business or teaming relationships with other providers that might positively affect the capability / services provided by the proposed high-speed internet / broadband network.
- Comment on how your company's selection might have a positive indirect impact on the local community beyond the actual advantages resulting from the expansion of high-speed internet / broadband connectivity.
- Elaborate on the process that your company will use to determine where the high-speed internet / broadband expansion will be installed first and then the additional areas that will be added and their timeframe. If factors (such as customer demand, revenue, etc.) are the driver for future implementations past the first installation area, please describe how these factors will be assessed.
- Description of Providers Internet supply chain. This must include:
    - How the Provider will provision their backhaul internet service
    - Anticipated bandwidth per user
    - How the Provider will increase their backhaul capacity and how this increase will be determined

Response format. To ensure quick and accurate evaluation all responses must be formatted using the following outline:

1. Executive summary
    - Not to exceed 2 pages
2. Technical description
    - Describe the proposed solution including descriptions, diagrams, and maps
3. Proposed Pricing
    - Proposed customer pricing
4. Timeline
    - Proposed timeline for implementation including time to start initial build, target date for initial service availability, and timeline for follow-on phases. Describe factors used to determine timing of follow-on phases here.

G. Proposal Submission

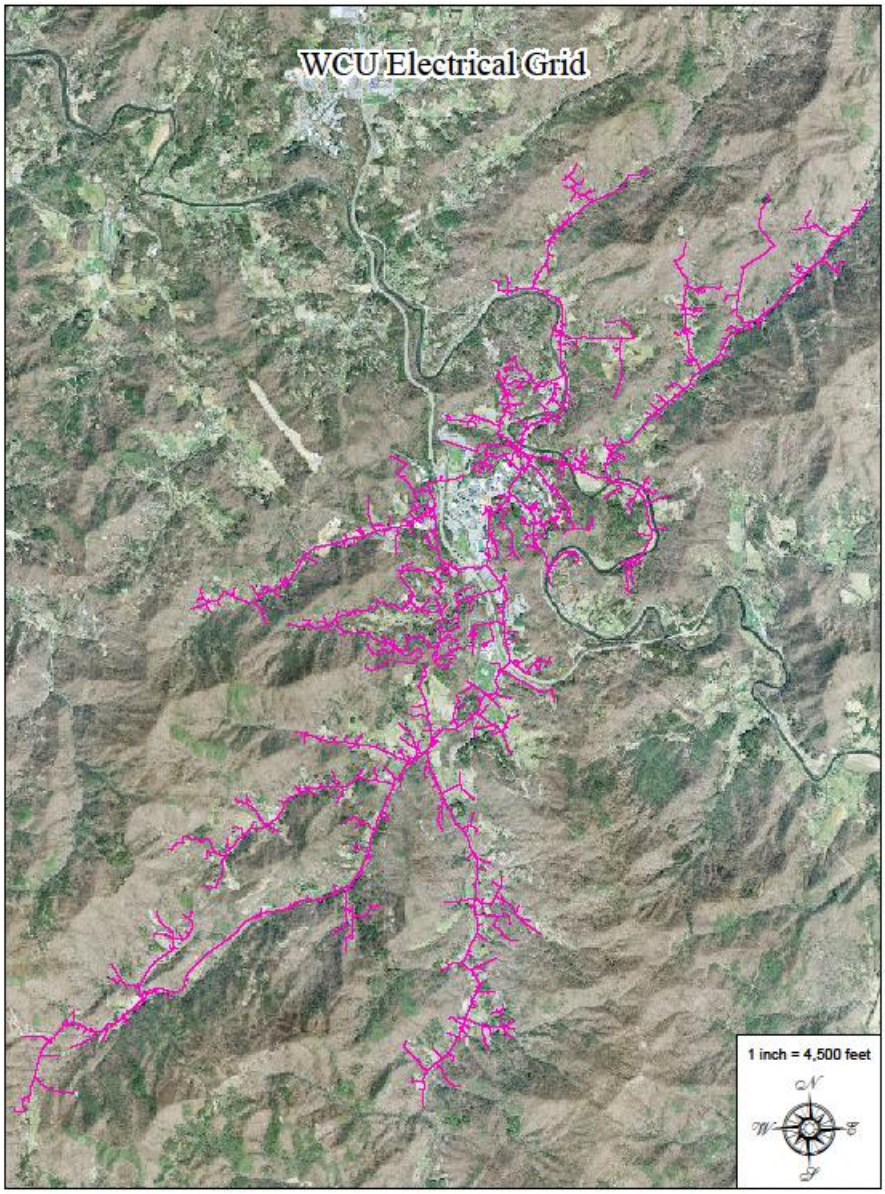
Questions concerning this RFP must be submitted in writing by email prior to 5:00 pm on February 9, 2018 to Joe Walker at jwalker@wcu.edu.

One electronic copy of the proposal and all relevant materials must be received by 5:00 PM on March 9, 2018. Faxes are not acceptable. The electronic copy should be submitted by e-mail to jwalker@wcu.edu.

When submitting materials by e-mail, you must have a reply from Joe Walker acknowledging receipt of materials.

Appendix A --- Maps of WCP distribution network

These maps are also attached in electronic format.


WCU Electrical Grid
1 inch = 4,500 feet
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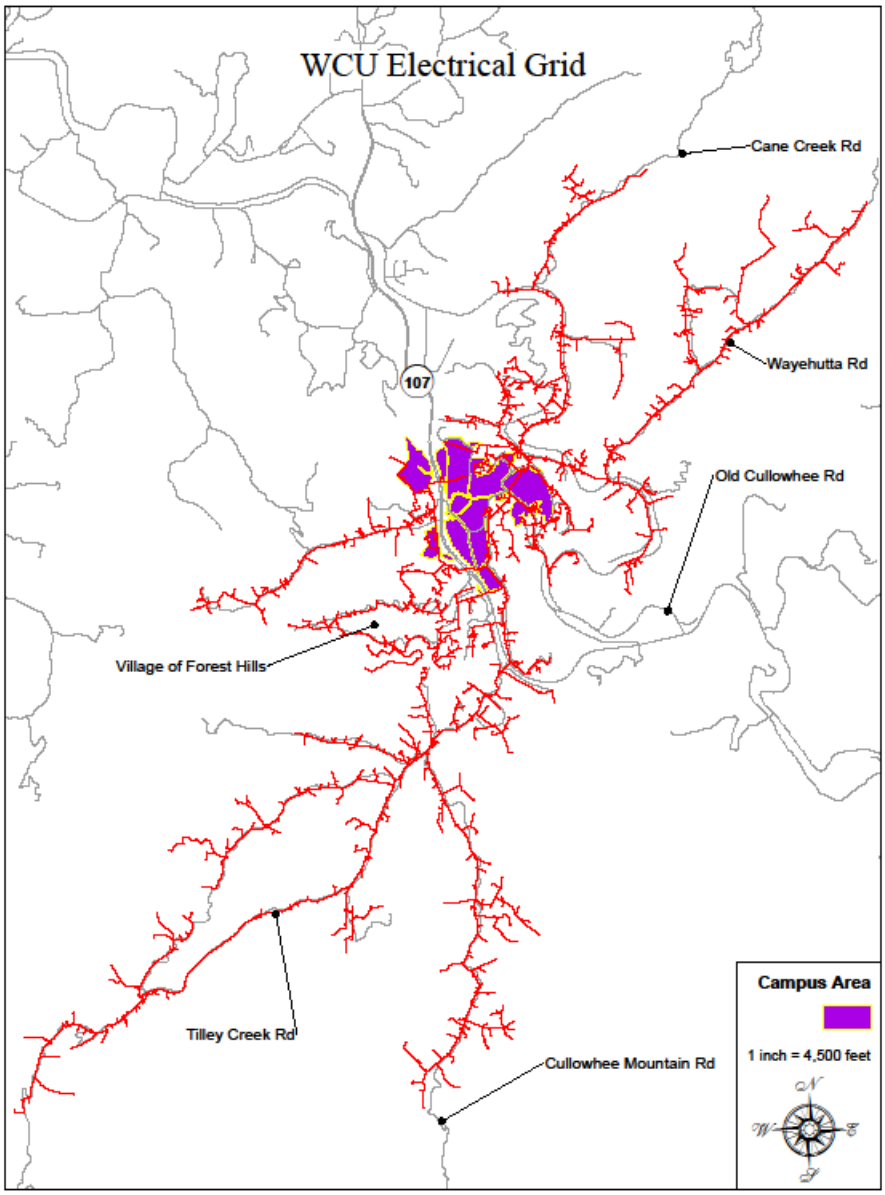
WCU Electrical Grid
Cane Creek Rd
Wayehutta Rd
107
Old Cullowhee Rd
Village of Forest Hills
Tilley Creek Rd
Cullowhee Mountain Rd
Campus Area
1 inch = 4,500 feet
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