



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/20/2009 4:57:44 PM	<b>Easygrants ID:</b> 2946
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Reedsburg Utility Commission
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Scott E. Carroll

<b>Additional BTOP Factors Selected By Applicant</b> <ul style="list-style-type: none"><li>• <b>Conformity with Statutory Purposes</b></li><li>• <b>Cost Sharing/Matching</b></li><li>• <b>Reasonableness of Project Budget</b></li></ul>
The project advances at least one of the statutory purposes for BTOP
Applicant has provided documentation that the project would not have been implemented during the grant period without federal grant assistance.
Applicant has provided a budget that is appropriate to the proposed technical solution and only includes eligible costs.

- **Demonstration the Project Could not be Implemented But For Federal Grant Assistance**  
Applicant is providing matching funds of at least 20 percent towards the total eligible project costs?  
Yes

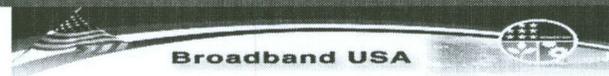
<b>7-k. Cost Sharing/Matching Fund Explanation</b>
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## C. Executive Summary

### Executive Summary of Project for BIP and BTOP:

#### 8. Infrastructure Projects Executive Summary

Reedsburg is a small rural community situated in Sauk County in south central Wisconsin. It lies approximately mid-way between Madison (58 miles to southeast) and La Crosse (70 miles to northwest). These are the two closest urban centers having populations in excess of 20,000. Reedsburg meets the "remote rural" criteria as defined in the 7/9/09 NOFA. The population of Reedsburg was 7827 in the 2000 census.



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The City of Reedsburg acting through Reedsburg Utility Commission has provided electric and water to its local residents and businesses since its establishment in 1894. In 2000, Reedsburg Utility Commission (RUC) embarked on the development of a Municipal Communication Utility (MCU). In January 2000, the Wisconsin Public Service Commission certified the RUC as a "Competitive Local Exchange Carrier" (CLEC) to provide the City with the level of communication service needed to remain competitive. Rural Reedsburg has been a victim of the broadband disparity which exists between rural and urban areas. After six years ██████████ ██████████ the RUC completed the build-out of the communication infrastructure at the end of 2006. Today, residents and businesses throughout the city of Reedsburg receive advanced broadband voice/video/data services over an all-fiber passive optical network (PON).

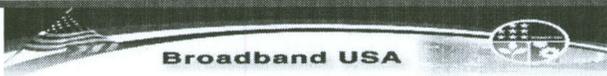
Much of the rural area surrounding Reedsburg is served by Verizon North, Inc. as the incumbent local telephone service provider. DSL service is currently not available in this area so residents are limited to dial-up internet service from Verizon or costly satellite data service from HughsNet and Wild Blue.

There has been some recent activity by at least one local wireless carrier to offer a faster alternative to dial-up, to portions of the Sauk County. However, the wooded hilly terrain and numerous valleys greatly limit area coverage and service reliability. Those residents who are fortunate enough to be within line of sight of a tower, must currently pay \$49.99/ mo. plus \$300 setup fee to get basic 256kbs/768 kbs internet service. This is an improvement over dial-up internet service but not a long-term broadband solution.

Other carriers are undoubtedly filing grant applications to provide wireless "broadband" to this unserved area of Sauk County. While area coverage circles radiating 5-7 miles out from existing tower sites make for a good design presentation, the reality is that the numerous wooded hills, bluffs, and river valleys in Sauk County present major problems for wireless systems thereby reducing the effectiveness and leaving a significant number of potential customers unserved.

Other shortcomings of wireless systems are:

- a) limited bandwidth due to radio spectrum constraints and susceptibility to interference.



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- b) less scalability – which will lead to frequent equipment upgrades to keep up with technology
- c) higher overall maintenance and shorter useful life of wireless equipment compared with fiber optic transmission systems on buried cable facilities.

Wireless certainly has its role as a supplemental service in today’s mobile society and as a stop-gap method of rolling out data services at moderate speeds in select areas where terrain and radio spectrum availability are not major issues.

The design included in this grant application extends the existing Reedsburg fiber-to-the-home (FTTH) network into the surrounding rural area to provide affordable broadband service. The

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\_\_\_\_\_ This area coverage design includes approximately 170 square miles of rural Sauk County and the proposed fiber build-out will pass 2275 homes and 310 businesses. Four community anchor institutions/critical organizations will part of this fiber build. \_\_\_\_\_

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Reedsburg.

The broadband service offering over this fiber network will include basic bundled voice/data service including 5 Mbps symmetrical (upstream/downstream) internet service. Cable TV/ HDTV video will also be available as additional offering. Extended broadband services of 45 Mbps and 100 Mbps will also be offered.

If approved, the construction will be carried out in phases starting immediately in 2010 with completion of all construction by 3rd quarter of 2012.

The fiber optic facilities proposed in this FTTH PON design offer the most secure, flexible, and future proof network solution for meeting the long term needs of this area for the next 25+ years.

**Description of BTOP Project Purpose (BTOP Applicants Only Next Three Questions)**