

April 10, 2009

***VIA Electronic Delivery***

Broadband Technology Opportunities Program  
U.S. Department of Commerce  
Room 4812, 1401 Constitution Avenue, N.W.  
Washington, DC 20230

Re: National Telecommunications and Information Administration  
and

Rural Utilities Service  
Joint Request for Information  
American Recovery and Reinvestment Act of 2009 Broadband  
Initiatives

To whom It May Concern:

The American Recovery and Reinvestment Act of 2009 (“Recovery Act”) requires the National Telecommunications and Information Administration (“NTIA”) to establish a Broadband Technology Opportunities Program (“BTOP”). The five purposes of the grant program are to 1) provide access to broadband service to consumers residing in unserved areas of the United States, (2) provide improved access to broadband service to consumers residing in underserved areas of the United States, (3) provide broadband education, awareness, training, access, equipment, and support to (a) schools, libraries, medical and healthcare providers, community colleges, and other institutions of higher education, and other community support organizations and entities to facilitate greater use of broadband service by or through these organizations, (b) organizations and agencies that provide outreach, access, equipment, and support services to facilitate greater use of broadband service by low-income, unemployed, aged, and otherwise vulnerable populations, and (c) job-creating strategic facilities located within a State- designated economic zone, Economic Development District designated by the Department of Commerce, Renewal Community or Empowerment Zone designated by the Department of Housing and Urban Development, or Enterprise Community designated by the Department of Agriculture, (4) improve access to, and use, of broadband service by public safety agencies; and (5) stimulate the demand for broadband, economic growth, and job creation.

In addition the Recovery Act also establishes authority for the Rural Utilities Service (“RUS”) to make grants and loans for the construction and development of broadband systems with the purpose of improving broadband access

When assessing the needs of Rural America, no rural broadband development program should be considered without including two-way satellite broadband. Satellite is now both economically feasible and the one platform that is immediately available to the rural community. Successful business models presently exist in both the commercial and residential sectors. Commercial networks are in operation for large companies such as Lowes, Home Depot, Wal-Mart, CVS, Chevron-Texaco, BP, Mobil, Walgreens, McDonalds, Pizza Hut and many more.

Job creation is an important part of the BTOP. The continued development of next generation satellite system infrastructure will allow small rural retailers to better compete creating more jobs. Companies who desire a rural setting will find it easier to attract and hold employees allowing them to easier grow creating more jobs. Affordable, personal broadband is a personal necessity which workers desire that in turn betters employee’s rural standard of living. Rural health providers will be better able to serve populations. Rural companies will be able to expand positively impacting rural commerce and create new jobs as they better compete with other companies. Job creation will be less per square mile of coverage because of satellite’s CONUS footprint, but many more on an overall nationwide basis.

Satellite broadband has long been realized as the ideal delivery platform for service to unserved/underserved Rural America. Both cable and telephone companies are reluctant to build-out the necessary infrastructure because of distance and population economics. Satellite is scalable, reliable, cost effective and distance insensitive. Capex costs per subscriber are less than \$1200 and continue to decrease. The scalability of the network allows for growth based on direct need of the user and because there is not extensive terrestrial infrastructure, the upgrading and replacing of outdated infrastructure is much more cost effective. The most important factor is that satellite broadband can be deployed immediately and does not require a long build-out period.

Without extensive build-out costs and an extremely large footprint, satellite broadband has long been recognized as the ideal solution for “last mile” connectivity. In the past, satellite broadband was plagued by high costs, slow speeds and inconvenient, bulky systems, but within the past few years technological advances have remedied those concerns. Those advances

now allow for low cost terminals which in turn lower the entry point for a user, simplified installation processes reducing the need for costly, time-consuming professional installation, greater satellite efficiencies and most importantly great technological strides have been made in compression, pre-fetching and modulation processes vastly improving user speeds. These speeds now exceed present DSL speeds and offer consumers a vastly improved experience compared to past use.

Satellite broadband can now offer speeds of up to 200 mbps, but like other providers the actual user speeds are generally less. The cost of satellite bandwidth combined with general user requirements dictates the speeds a provider allows. This policy is no different than other wired or wireless options. One must be cautious to not confuse theoretical maximum speeds that a particular platform could provide and the actual speeds that users truly experience. Carriers offer speeds that they economically can justify. In addition, true end-user speeds will also rely on infrastructure strength, POP proximity and modem capabilities.

Satellite does have its limitations. While latency does not effect most user applications, satellite is not acceptable for multi-player Internet gaming. On a rare occasion access can be slow due to very poor weather conditions, but in general new generation satellite is very reliable. The independent nature of the network makes it ideal for the “last mile” service and is also the reason satellite is preferred for disaster data retrieval and disaster communications. Under most circumstances advancements in technology have rendered the latency issue a non-factor and is not perceptible to the consumer. These technology advancements make it possible for the military to remotely pilot an Unmanned Aerial Vehicle in Iraq from a base in the U.S.

Satellite because of its low cost and scalability is the perfect solution for remote telemedicine facilities, distant learning facilities and low population areas that lack the necessary density to sustain profitable private enterprise solutions. It can provide specific and customized bandwidth that better satisfies the particular end user needs. If a remote medical provider needs 50 mbps speeds, satellite can scale to their needs. If a rancher wants a lower cost 1 mbps service satellite can provide it.

In the future, satellite technology will continue to improve its performance. Experimental communication satellites have provided broadband speeds in excess of 1.2 gbps. Lower cost Consumer Premises Equipment (CPE) is constantly being developed, more efficient bandwidth management tools continually increase performance, simpler, more user-

friendly systems are being refined and satellite operations consistently become more and more efficient.

In recent months, the U.S. position in broadband status has been challenged and the new administration has vowed to improve broadband access, making it available and affordable to all. Studies have highlighted the effectiveness of the Japanese government ability to provide average broadband speeds in excess of 60 mbps, but in Japan there, too, exists a geographic “ Digital Divide.” Over 3 million Japanese households are located in geographically challenged areas and have no broadband available to them. When determining how they could best solve this problem the Japanese chose satellite to provide broadband to those areas.

New companies with fresh, state-of-art technology should not be discriminated against and be included in the bold Broadband Initiative being launch. The future economic benefits of broadband usage rest in the introduction of new and innovative technologies that allow greater exploitation of broadband.

Satellite is a technology that is specifically well suited for rural areas and business models support it as a viable, sustainable enterprise that can effectively stand alone with proper infrastructure. By nature with its wireless approach satellite is easily upgraded as technology continues to evolve.

If America’s geographic “Digital Divide” is to be bridged, satellite broadband needs to be part of its broadband development program. There is not a rural platform that can efficiently meet the growing demand for broadband as quickly and efficiently as satellite.

We offer the following responses to the NTIA/RUS request for information:

**NTIA**

1a. Should a certain percentage of grant funds be apportioned to each category?

***No, funds should be allocated by the agencies on an individual need basis and how best the respective project will efficiently address the need of the end-user. Priority should be placed on providing broadband to the unserved.***

1b. Should applicants be encouraged to address more than one purpose?

***Applicants should neither be encouraged nor discouraged to address more than one purpose, but those systems that address multiple purposes should receive highest priority.***

1c. How should the BTOP leverage or respond to the other broadband-related portions of the Recovery Act, including the United States Department of Agriculture (USDA) grants and loans program as well as the portions of the Recovery Act that address smart grids, health information technology, education, and transportation infrastructure?

***Other broadband-related portions of the Recovery Act should be considered and systematically evaluated, but priority should remain consistent with the purposes of the BTOP.***

2a. How should the grant program consider State priorities in awarding grants?

2b. What is the appropriate role for States in selecting projects for funding?

2c. How should NTIA resolve differences among groups or constituencies within a State in establishing priorities for funding?

2d. How should NTIA ensure that projects proposed by States are well-executed and produce worthwhile and measurable results?

***States should assist in identifying and evaluating local projects so as to best determine their merit, but federal agencies should control awards and coordinate the administration of the program so that a consistent national policy is maintained. A separate national evaluation and funding system should be established for projects that are national or multi-state in nature.***

3. What standard should NTIA apply to determine whether it is in the public interest that entities other than those described in Section 6001(e)(1)(A) and (B) should be eligible for grant awards?

***The NTIA should evaluate each application for grant awards and if that project application meets the statutory requirements of the Recovery Act the entity should be considered eligible for consideration. In other words, if the project is in the best public interest consider the application.***

4a. What factors should NTIA consider in establishing selection criteria for grant awards? How can NTIA determine that a Federal funding need exists and that private investment is not displaced? How should the long-term feasibility of the investment be judged?

***Grant awards should be based on the project's ability to successfully achieve the purposes mandated by the BTOP. In establishing the program the Recovery Act established its purpose; criteria should be based upon those guidelines. For the most part, the direct cause for the "digital divide" is that providing economically practical solutions has been cost prohibitive, the build-out cost do not justify the return on investment. A specific need analysis of the project should specify target needs and the most efficient solution should be considered. Unfortunately there is no one-size-fits-all solution for broadband needs. In order to qualify for grant awards it will be necessary to assure that the enterprise is financially sustainable for the long term.***

4b. What should the weighting of these criteria be in determining consideration for grant and loan awards?

***No weighting of the specific solutions is necessary. In most instances the general purposes will be met in multiple ways by providing broadband. However the cost of deployment and number of potential users should be weighted so the agency can get "the most bang for its buck."***

4c. How should the BTOP prioritize proposals that serve underserved or unserved areas? Should the BTOP consider USDA broadband grant awards and loans in establishing these priorities?

***Proposals to unserved areas should receive priority as to accelerate broadband deployment and availability to the most persons, but that does***

***not mean that underserved areas should be ignored. Both unserved and underserved proposals should be considered on specific merits of purpose.***

4d. Should priority be given to proposals that leverage other Recovery Act projects?

***Yes, priority should be given to those that leverage, but as not to compromise the intent of the BTOP.***

4e. Should priority be given to proposals that address several purposes, serve several of the populations identified in the Recovery Act, or provide service to different types of areas?

***Agencies should give no priority.***

4f. What factors should be given priority in determining whether proposals will encourage sustainable adoption of broadband service?

4h. What role, if any, should retail price play in the grant program?

***A number of factors should be given priority as to encourage sustainable broadband adoption. Affordability, number of potential users, footprints, broadband awareness programs, speed of deployment, cost of implementation, sustainability of proposal and specific end-user broadband needs should all be factors considered in the program.***

4g. Should the fact that different technologies can provide different service characteristics, such as speed and use of dedicated or shared links, be considered given the statute's direction that, to the extent practicable, the purposes of the statute should be promoted in a technologically neutral fashion?

***Yes, the different service characteristics should be considered. Each technology has its advantages and disadvantages. It will be the agency's task to determine what the specific characteristics of the population are, and then determine the best solution to meet the specific needs. Technical neutrality is necessary so that the best solutions for providing broadband are achieved.***

8a. What uses should such a map be capable of serving?

8b. What specific information should the broadband map contain, and should the map provide different types of information to different users (e.g., consumers versus governmental entities)?

***Broadband maps should accurately identify the total number of households, the total number of households with broadband available***

***(availability should be tiered based on both technology available and speeds available). BTOP funded project areas should also be mapped. Broadband mapping should correlate with census tracts.***

9a. What factors should an applicant show to establish the "financial need" necessary to receive more than 80 percent of a project's cost in grant funds?

9b. What factors should the NTIA apply in deciding that a particular proposal should receive less than an 80 percent Federal share?

9c. What showing should be necessary to demonstrate that the proposal would not have been implemented without Federal assistance?

***It will be very difficult to determine the need, more or less than 80%. Once a standard is set private investment will determine economic feasibility. To vary federal participation percentages will only complicate the review process. The fact that the BTOP was implemented demonstrates there is a problem implementing programs without federal assistance. An 80% funding standard should be set and, if and only if extenuating circumstances are found to exist after funding, should a program be eligible to receive more than 80% federal funding.***

10. Timely Completion of Proposals: The Recovery Act states that NTIA shall establish the BTOP as expeditiously as practicable, ensure that all awards are made before the end of fiscal year 2010, and seek assurances from grantees that projects supported by the programs will be substantially completed within two (2) years following an award.

a. What is the most efficient, effective, and fair way to carry out the requirement that the BTOP be established expeditiously and that awards be made before the end of fiscal year 2010?

b. What elements should be included in the application to ensure the projects can be completed within two (2) years (e.g., timelines, milestones, letters of agreement with partners)?

***In order to ensure "substantial completion", projects will need to pre-establish timelines before awards should be made. Substantial completion is a term that needs to be better defined taking into consideration the applicable technology. Technology neutrality means that all forms of technology should be considered. Technology that requires lengthy build-outs that may better serve the consumer in the long term should not be discriminated against because by nature it takes longer to implement. A prudent review system of end-user needs that takes in to***

*account realistic build-out schedule of a particular technology is recommended.*

13a. For purposes of the BTOP, how should NTIA, in consultation with the FCC, define the terms ``unserved area" and ``underserved area?"

*Theoretically, with satellite broadband technology there are no unserved areas, but in reality the necessary satellite infrastructure to support total coverage does not exist yet. The "one-size-fits-all" mind set must be replaced. For the sake of determining demand an "unserved area" should be an area where no broadband service other than satellite is available. The "underserved area" should be areas that receive traditional terrestrial/ wireless broadband speeds less than the FCC's definition of broadband.*

13b. How should the BTOP define ``broadband service?"

*Broadband service should be recognized as the sufficient amount of bandwidth and speeds necessary for a user to perform the desired broadband function. Scalability and customized access are the keys to success. One size does not fit all. Uniformity among agencies is necessary. Individual technologies lend themselves to different broadband speeds. The BTOP and FCC need to determine end user needs. It is the desire of the Congress to get "as much bang for the buck". Threshold speeds tend to be hypothetical maximum speeds that carriers display for marketing purposes. The grant process will need to analyze realistic speed needs for consumers and balance them with the cost of those programs. It would be a wonderful thing if one technology could efficiently bridge the digital divide, but no one exists. The challenge of the BTOP is recognizing that a balance of all technologies is needed as to deliver the desired "bang."*

13b(4) Should the threshold speeds be symmetrical or asymmetrical?

*Asymmetrical systems are more cost effective which in turn will allow for more users because costs are lower. In addition, studies show that a majority of end users do not require symmetric networks.*

## RUS

1. What are the most effective ways RUS could offer broadband funds to ensure that rural residents that lack access to broadband will receive it?

*The RUS program should be consistent with the process implemented by the NTIA. Emphasis should be placed on providing service to rural areas and on a technology neutral basis. In the past, RUS program parameters have disqualified national or multi-state platforms because no more than one project in a geographic could be funded and in theory a person located in an urban/suburban market could use the network.*

*It would be in the interest of providing broadband access to rural areas to permit competitive services that reach the far areas of the country. The very nature of universal coverage that satellite offers, making it an ideal platform for Rural America, should not exclude its deployment. The RUS should recognize that satellite broadband is a viable and necessary option for bridging the digital divide. It should be included in eligible technologies.*