

**DEPARTMENT OF COMMERCE**  
**National Telecommunications and Information Administration**

**DEPARTMENT OF AGRICULTURE**  
**Rural Utilities Service**

**FEDERAL COMMUNICATIONS COMMISSION**

**Joint request for information:**  
**American Recovery and**  
**Reinvestment Act of 2009**  
**Broadband Initiatives**

**NTIA Docket No. 090309298-9299-01**  
**FCC GN Docket No. 09-40**

**COMMENTS OF THE PUBLIC INTEREST SPECTRUM COALITION ON**  
**GRANT CRITERIA**

April 7, 2009

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## Executive Summary

The NTIA has been presented with an extraordinary opportunity to improve access to, encourage competition among and increase the speed, affordability and openness of broadband services. Recognizing the transformative effect that broadband services can have in communities and the potential for such services to promote economic activity, civic discourse and innovation, Congress crafted a set of broadband initiatives that would promote the use of broadband while ensuring, through a set of public interest conditions, that taxpayers would receive a long-term return on their investment. PISC urges the NTIA to ensure that these conditions are met and enforced and to utilize the funds allocated by the Stimulus Act to make a meaningful impact in the lives of Americans in unserved and underserved areas. As such, PISC proposes the following:

- That the role of states in the grant and loan selection process be limited, so as to preserve transparency and reduce delay in the grant allocation process.
- That the grant selection criteria echo the guiding principles of the BTOP program, by prioritizing projects that hold the greatest potential to meaningfully affect the impact of broadband in unserved and underserved communities, projects that promote the deployment of infrastructure that will remain viable in the long-term and projects proposed by entities that serve the public interest.
- That the NTIA establish a \$25 million "small entities" fund to provide small entities with grants and loans for programs that are consistent with the goals of BTOP and should reach out to these entities so as to encourage their participation.
- That investments in broadband mapping promote a more sophisticated and nuanced understanding of the state, current deployment and potential of broadband services in the United States, by collecting and displaying data regarding the speed, price and availability of wired and wireless broadband services, as well as information about the availability and use of public spectrum and broadband infrastructure and the success and impact of the BTOP broadband initiatives.
- That the NTIA enforce conditions that require grantees to operate networks that are open, interconnected and nondiscriminatory, so as to ensure the long-term viability of taxpayer-funded networks.
- That the NTIA or the FCC consider invoking a rulemaking to pre-empt non-physical impediments (State laws, acceptable use policies, contracts, local agreements, etc.) that may preclude entities from applying for grants and loans in order to provide a service consistent with the purposes of BTOP.

By following the above suggestions, the NTIA can ensure that taxpayer money is wisely spent, that the public interest is well served and that broadband connectivity has a meaningful, positive impact in the lives of Americans.

## Introduction

The CUWiN Foundation, Common Cause, Consumer Federation of America, Consumers Union, Free Press, Media Access Project, New America Foundation, Public Knowledge, the Open Source Wireless Coalition and U.S. PIRG (collectively referred to here as the “Public Interest Spectrum Coalition” or “PISC”), file these comments in response to the National Telecommunications and Information Administration (NTIA) and the Broadband Technology Opportunities Program's (BTOP) joint request for information regarding the American Recovery and Reinvestment Act of 2009 Broadband Technology Opportunities Program.

The American Recovery and Reinvestment Act grants the NTIA and the Rural Utilities Service (RUS) the authority to administer grants and loans for the deployment and construction of broadband systems that are open, interconnected and which respect principles of nondiscrimination. In establishing these requirements, Congress asserted that open networks hold the greatest potential to realize the core goals of the stimulus act: job creation, economic empowerment and the fostering of innovation.

PISC commends Congress for writing these requirements into the act and urges both the NTIA and the BTOP to strictly enforce these principles as it implements the broadband initiatives prescribed by the stimulus act. In exchange for the grants and loans administered by the NTIA and the RUS, grantees should be required to demonstrate that their networks provide taxpayers with concrete benefits and a long-term return on investment. Furthermore, the NTIA and BTOP should seize this opportunity to encourage competition among service providers, increase the affordability of broadband services and provide the public with meaningful information and training, so as to maximize the benefits of connectivity for the American public. With this in mind, PISC makes the following recommendations to the NTIA and the BTOP:

### **I. States Should Play a Limited Role so as to Preserve Transparency and Reduce Delay**

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

With regard to the role of the States in the grant and loan evaluation process, the NTIA should not delegate authority to the States and should not allow States to rank projects for consideration, as doing so would induce delay and confusion and would move part of the decision-making process outside of the clear boundaries of transparency established by the American Recovery and Reinvestment Act of 2009<sup>1</sup>, Title VI (heretofore referred to as "the Statute").

Recognizing that the NTIA has already met the statutory requirements regarding

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<sup>1</sup> [http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111\\_cong\\_bills&docid=f:h1enr.pdf](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&docid=f:h1enr.pdf)

the consultation of the States and that, furthermore, the Statute does not require that the NTIA undertake a formal consultation process with the States, the States should play a limited role in the process of selecting and evaluating projects.

Instead of inviting the States to submit ranked lists of projects for consideration, the NTIA might choose to seek input from the States on definitional issues as well as the criteria on which the awarding of grants and loans will be based, pursuant to S. 6001 of the Statute. The NTIA might also choose to have State Governors detail personnel to the NTIA to assist the Administration in this matter.

Finally, the NTIA should formulate a strategy for addressing projects that supersede State boundaries, that affect non-State entities or that serve multiple States. The NTIA should consider that the condition in the Statute that all 50 States are granted funds could be fulfilled by a project or projects that affect the deployment of broadband in multiple States.

## **II. The Grant Selection Criteria Should Echo and Reinforce the Aims of the BTOP Program**

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

As was detailed in the testimony of Ben Scott before the NTIA (3/23/09)<sup>2</sup>, proposals should be judged, in part, based on their long-term business feasibility and the network's scalability, so as to ensure that taxpayers receive a long-term return on their investment. Projects should be prioritized based on their ability to meaningfully affect the impact of broadband in underserved and unserved communities. Criteria that should be considered include a service's affordability and openness and a project's potential impact on competition in local markets.

As was stated in the testimony of Gigi Sohn before the NTIA (3/23/09, page 1)<sup>3</sup>, grantees will receive an "extraordinary government benefit" as a result of the BTOP program. As such, the NTIA should prioritize those entities detailed in S. 6001 (e)(1)(A) and (e)(1)(B). In the event that the applicant is a private entity, the NTIA should consider if the applicant is involved in a partnership with an entity of the type described in S. 6001 (e)(1)(A) and (e)(1)(B). If the applicant is not involved in such a partnership, the applicant should be required to affirmatively demonstrate a commitment to furthering the public interest, pursuant to S. 6001 (e)(1)(C). Compliance with this requirement should be evaluated based on a service's affordability and openness as well as its potential impact on competition.

Additionally, it should be noted that the terms "unserved" and "underserved" appear only in S. 6001 (b)(1) and S. 6001 (b)(2), in reference to "consumers residing" in

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<sup>2</sup> <http://www.freepress.net/node/49070>

<sup>3</sup> <http://www.publicknowledge.org/pdf/gbsohn-statement-20090323.pdf>

unserved and underserved areas. As such, the terms "unserved" and "underserved" should not be applied to the entities listed in S. 6001 (b)(3) through S. 6001 (b)(5), which include "schools, libraries, healthcare providers, community colleges, and other institutions of higher education, and other community support organizations and entities," as well as public safety agencies, job-creating strategic facilities located within a State-designated economic zone and organizations that aim to facilitate greater use of broadband service by vulnerable populations. Recognizing the importance of connectivity to these entities and the value that these entities produce in their communities, it was Congress' intent that applications from these entities not be limited by the terms "unserved" and "underserved". As such, applications from all entities listed under S. 6001 (b)(3) through S. 6001 (b)(5) should be considered on their merits, exclusive of the applicability of the terms "unserved" and "underserved," which are meant to regulate applications pertaining to residential services.

Finally, S.6002(h)(3) requires the NTIA to consider whether a grant applicant is an "economically disadvantaged small business concern as defined under section 8(a) of the Small Business Act (15 U.S.C. § 637)." In addition, the act stresses the need to place projects within communities and economic development zones, and to provide opportunities for non-profits to apply (S.6001(b)(3)). All of these point to a desire by Congress to ensure that small entities have a meaningful opportunity to participate in the BTOP program. At the same time, however, Congress mandated that the NTIA implement the program expeditiously, ensure that the money is spent wisely and require rigorous tracking and reporting requirements.

PISC recommends that the NTIA set aside \$25 million for a designated "small entities" fund. Using this approach, the NTIA could provide numerous small grants on a rolling basis for any of the purposes permitted by BTOP. In addition, consistent with the OMB Guidance of February 18, 2009, the NTIA should allocate a portion of the funds authorized for administration of the BTOP program to meaningful outreach and training for small entities that would be eligible for grants and loans provided by this fund. In structuring the fund, the NTIA should consider how it can streamline both the application process and the subsequent accountability process.

### **III. Broadband Mapping Should Provide a Roadmap for the BTOP as Well as Data Regarding the Success of BTOP Initiatives**

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

The fundamental purpose of the broadband map described by S. 6001 (l) should be to outline and inform the Broadband Technology Opportunities Program (BTOP), the aim of which is to provide all Americans with meaningful access to broadband Internet connectivity. As such, the map should not simply illustrate the location of last-mile infrastructure but rather, should further a more sophisticated

understanding of the distribution, use and effect of broadband services throughout the nation, pursuant to the goals of the BTOP.

As is described by S. 6001 (l) of the Statute, the primary goal of the map should be to depict the availability of broadband services and highlight areas where there is a need for the increased deployment of broadband services. The map could also serve to help monitor the progress of broadband deployment projects funded by taxpayer money and enforce the conditions of those grants and loans, allow federal agencies to produce statistics regarding the availability and adoption of broadband services and provide the public with an easily-accessible, searchable, user-friendly database of information regarding the availability, price and speed of broadband services on a national scale.

With regard to infrastructure, the map should detail the location of both commercial and residential services, as well as the larger network infrastructure (backbone, middle-mile transport, etc.). In so doing, the map will facilitate and assist in the sharing of facilities by network operators, which would, in turn, increase both competition among providers and the affordability of broadband services. The map should also highlight areas where physical infrastructure is available but where increased deployment and competition are constrained by non-physical limitations (local or State laws or agreements, acceptable use policies, etc.).

Finally, the NTIA should fund programs that develop and implement qualitative metrics that measure the impact that the availability of broadband services has on individuals and communities. In developing such metrics, these programs might collect data regarding the affordability, speed and uptake of broadband services and the availability of training and tools to facilitate the use of the Internet the creation of content. Metrics could include the number of people in a local community who telecommute or use the Internet for educational purposes, fluctuations in online economic activity or increases in computer ownership, voter registration and civic involvement.

*8. b. 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)?*

The map should contain data regarding the availability, speed and price of all wired and wireless broadband services available in all communities throughout the nation. As was detailed in the testimony of Art Brodsky before the NTIA (3/23/09, page 1)<sup>4</sup>, the map should also take into account the backbone and middle-mile transport and should fit into existing mapping data sharing standards and protocols. Furthermore, the NTIA should fund studies to determine what additional data is required in order to design broadband programs that further the aims of the BTOP.

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<sup>4</sup> <http://www.publicknowledge.org/pdf/abrodsky-statement-20090323.pdf>

As the creation and maintenance of this map will be a taxpayer-funded activity, consumers should have full access to all of the information contained in the database, in the interest of ensuring transparency and accountability.

*8.c. At what level of geographic or other granularity should the broadband map provide information on broadband service?*

As wired broadband services are typically deployed on a block-by-block basis, the map should provide information on at least a block-by-block level, if not a residence-by-residence level. The more granular the data, the greater the benefit will be to citizens wishing to research the availability, price and speed of services in their area.

*8. d. What other factors should NTIA take into consideration in fulfilling the requirements of the Broadband Data Improvement Act, Public Law 110-385 (2008)?*

As was detailed in the testimony of Art Brodsky before the NTIA (3/23/09, page 2)<sup>5</sup>, the collection and mapping of broadband data should be done by a public agency, on behalf of the public interest, by a neutral body with no industry conflicts of interest, using uniform standards and should produce a comprehensive map containing transparent and verifiable data.

*8. i. What information, other than statewide inventory information, should populate the comprehensive nationwide map?*

Broadband service providers should be required to provide the NTIA with accurate, verifiable and appropriately granular data regarding the geographic availability, adoption, price and speed (advertised and actual speed as well as bandwidth/speed limitations) of services already deployed. In the interest of transparency, the use of this data should not be restricted by nondisclosure agreements.

In addition, PISC recommends that the NTIA, in a joint effort with the FCC, compile and make public online an inventory of the public airwaves that maps how public spectrum resources are being utilized or underutilized in various bands. Just as fiber is the essential conduit for advanced wired connectivity, spectrum is the publicly owned conduit for wireless broadband. The American Recovery and Reinvestment Act authorizes funds for developing and maintaining “a comprehensive nationwide inventory map of *existing broadband service capability* [emphasis added].”<sup>6</sup> Spectrum is at the core of wireless broadband service

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<sup>5</sup> <http://www.publicknowledge.org/pdf/abrodsky-statement-20090323.pdf>

<sup>6</sup> See Sec. 6001, The American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115 (2009).

capability and we believe it would be in the public interest to have a clear and transparent mapping of those capabilities between 30 MHz and at least 6 GHz.

Providing such a map of the airwaves would greatly facilitate expanded wireless broadband access, speeds and innovation, as the NTIA and the FCC, as well as Congress, affected industries and the public would have a more complete, comprehensive inventory of what frequencies are *actually* in use, for what purpose, with what technology and at what locations, frequencies and times. Both government and private sector assignments and uses should be included in the map, with the NTIA and the entire administration an active partner in this effort. With ARRA or other funding, actual spectrum use measurements in a large and regionally diverse sampling of markets should be part of the Commission's broadband mapping exercise. As Dale Hatfield, former NTIA director and chairman of the President's Spectrum Advisory Commission, has often observed, "the government cannot efficiently manage a resource it doesn't measure."

Wireless remains the most cost-effective and rapid means by which to bring broadband access to rural residents in particular. Already, thousands of locally-grown Wireless Internet Service Providers (WISPs), Rural ILECs, public utilities, NGOs and local governments are utilizing wireless technology in conjunction with unlicensed spectrum to bring wireless broadband to unserved and underserved rural areas across the country. A substantial obstacle these small and local providers face in attempting to expand and scale-up their networks is access to additional spectrum.

While rural provider access to licensed spectrum is scarce, unused spectrum capacity in rural and most other areas is abundant. At any given time and in any given location, the vast majority of our nation's radio frequency spectrum is unused or substantially underutilized, particularly in rural areas. Recent spectrum occupancy studies by the Shared Spectrum Company and funded by the National Science Foundation, have demonstrated in a mix of urban, suburban and exurban areas that large swaths of valuable spectrum are vacant or unused for the majority of the time.<sup>7</sup> For example, the average spectrum use in rural Limestone, Maine was just 1.7 percent.<sup>8</sup> The highest occupancy rate on the prime beachfront spectrum below 3 GHz was just 13 percent in New York City, while the average across

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<sup>7</sup> See "Spectrum Occupancy Measurements," Shared Spectrum Company, available at <http://www.sharedspectrum.com/measurements/>

<sup>8</sup> See Tugba Erpek, Mark Lofquist, and Ken Patton, "Spectrum Occupancy Measurements Loring Commerce Centre Limestone, Maine September 18-20, 2007" Shared Spectrum Company (2006), available at [http://www.sharedspectrum.com/measurements/download/Loring\\_Spectrum\\_Occupancy\\_Measurements\\_v2\\_3.pdf](http://www.sharedspectrum.com/measurements/download/Loring_Spectrum_Occupancy_Measurements_v2_3.pdf)

locations studied was just 6 percent<sup>9</sup>. Across the country, this underutilized spectrum represents an enormous untapped capacity for rural broadband.

Mapping our nation's spectrum capabilities would help facilitate wireless broadband deployments in at least three ways:

- First, more complete and transparent frequency-by-location data available online will improve the functioning of secondary markets for spectrum license transfers and leasing.
- Second, it will provide information on what will be required to fully clear some heavily underutilized bands, so that they can be reassigned for commercial use.
- Third, it will reveal the far greater number of frequency bands that could be made available for opportunistic access in discrete geographic areas, at certain times of day or year, or at certain altitudes or directions of arrival (azimuth, elevation).

We believe that unserved and underserved rural areas will be the greatest and most immediate beneficiaries of a mapping of U.S. spectrum capabilities. It will quickly become clear that particular frequency bands are either completely unused or grossly underutilized in certain rural markets. This could provide the Commission or Congress with the information that it needs to reallocate or at least to open these frequencies for non-interfering use by rural broadband providers. One promising mechanism for this will be the TV Bands Database, which the Commission's Office of Engineering and Technology will certify as reliable as a geo-location lookup service, allowing devices on the vacant TV channels to do real-time checks of channel availability in discrete geographic locations. Additional frequency bands could be added over time to the database, enriching the spectrum infrastructure for rural broadband providers and consumers alike.

Finally, rural broadband deployment, competition and affordability would also benefit enormously from a mapping of the public sector fiber networks used by federal, state and local public agencies nationwide. Dark fiber and/or excess capacity in public sector fiber networks is broadband capability that is owned by the public and should be mapped along with other broadband service capabilities as provided in the Stimulus Act.<sup>10</sup> The lack of middle-mile infrastructure is a considerable problem for existing rural ISPs and a formidable obstacle to building sustainable rural broadband networks. The typical rural ISP is 91 miles from its primary backbone Internet connection and faces considerable costs to transport

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<sup>9</sup> *See id.*

<sup>10</sup> *See* "Ex Parte Comments of New America Foundation," GN Docket No. 09-29, Federal Communications Commission, March 25, 2009, available at [http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6520203629](http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520203629)

traffic to and from the backbone.<sup>11</sup> Dark fiber and/or excess capacity on the public sector's own fiber line infrastructure, opened for wholesale access to any provider-commercial or non-commercial--including non-vertically-integrated cell phone carriers, ISPs, Rural LECs and municipal or community WiFi networks, could help to substantially increase middle-mile options.

#### **IV. Grantees Should be Required to Operate Networks That Are Open, Interconnected and Nondiscriminatory, so as to Ensure The Long-Term Viability of Taxpayer-Funded Networks**

*13. (5) c. How should the BTOP define the nondiscrimination and network interconnection obligations that will be contractual conditions of grants awarded under Section 6001?*

Pursuant to the statutory requirement that grantees serve the public interest (S. 6001 (e)(1)(C)), any network funded under the BTOP must be open and nondiscriminatory and must interconnect with other networks, in order to ensure that the goals of BTOP are being met. Furthermore, open networks will prove more viable in the long-term than closed networks based on proprietary technology, thereby ensuring a greater return on investment for taxpayers. Most importantly, only open, nondiscriminatory networks will ensure that free speech, the creation of content and full participation in civic society and the economy will remain unhindered.

As was recommended in the testimony of Gigi Sohn (3/23/09, page 1)<sup>12</sup> and Ben Scott (3/23/09)<sup>13</sup> before the NTIA, recipients of the grants and loans must not degrade, prioritize or discriminate against any lawful content, application or service transmitted over the recipients' network or service, subject to a rule of reasonable network management, must allow users to attach any device or application to the network, so long as that device or application does not harm the network and must provide interconnection at any technically feasible point within the network on a reasonable, non-discriminatory basis.

*13. (5) c. (1) In defining nondiscrimination obligations, what elements of network management techniques to be used by grantees, if any, should be described and permitted as a condition of any grant?*

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<sup>11</sup> See "Encouraging Broadband Deployment," National Telecommunication Cooperative Association, available at [http://www.ntca.org/images/stories/Documents/Advocacy/PositionPapers/encouragingbroadbanddeployment\\_ntca2008.pdf](http://www.ntca.org/images/stories/Documents/Advocacy/PositionPapers/encouragingbroadbanddeployment_ntca2008.pdf).

<sup>12</sup> <http://www.publicknowledge.org/pdf/gbsohn-statement-20090323.pdf>

<sup>13</sup> <http://www.freepress.net/node/49070>

Given that the FCC's four principles have proven insufficient in ensuring that networks operate on a non-discriminatory basis (the principles do not explicitly address cases where a network provider prioritizes or favors certain content, applications and services over others), grantees must publicly disclose in full any and all practices used for the purposes of network management and PISC urges the NTIA to pre-approve these practices before a grant or loan is awarded. In the event that a grantee wishes to modify these practices after a grant or loan has been awarded, NTIA pre-approval should again be required and all impacted parties should be notified and have the opportunity to comment or object. Additionally, service providers that offer residential or enterprise services should be required to provide their customers with meaningful notification of the terms of service and network management practices in use, as a precondition for receiving a grant or loan from the NTIA.

*13. (5) c. (2) Should the network interconnection obligation be based on existing statutory schemes? If not, what should the interconnection obligation be?*

As was recommended in the testimony of Gigi Sohn before the NTIA (3/23/09, page 2)<sup>14</sup>, the NTIA should craft a requirement that is consistent with Section 251(c) of the Communications Act. Such a requirement would require a grantee to provide interconnection at any technically feasible point within the requesting provider's network that is at least equal in quality to that provided to any party, on non-discriminatory rates, terms and conditions. Additionally, the grantee should be required to either provide unbundled access to the network or permit line sharing for competitors. Finally, the NTIA should grant priority to multi-use networks, so as to maximize the impact of the funds granted.

*13. (5) c. (3) Should there be different nondiscrimination and network interconnection standards for different technology platforms?*

Wireline and wireless networks should be required to meet the same openness and interconnection requirements. Additionally, wireless service providers should be required to provide competitors with roaming rights at commercially reasonable rates.

*13. (5) c. (4) Should failure to abide by whatever obligations are established result in de-obligation of fund awards?*

*13. (5) c. (5) In the case of infrastructure paid for in whole or part by grant funds, should the obligations extend beyond the life of the grant and attach for the useable life of the infrastructure?*

To ensure the long-term viability of the network infrastructure that it invests in, the NTIA should revoke grants or loans made to any grantees that fail to abide by the

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<sup>14</sup> <http://www.publicknowledge.org/pdf/gbsohn-statement-20090323.pdf>

conditions outlined by the Administration. Additionally, to ensure a lasting return on investment for taxpayers, the NTIA should condition the grants and loans such that network operators are required to abide by the conditions for the lifetime of any infrastructure built using taxpayer money.

**V. The NTIA Should Convene Rulemakings in Order to Preempt Non-Physical Impediments to BTOP Requirements**

Pursuant to its authority under S. 6001 (m) of the Statute, the NTIA should convene a rulemaking or a series of rulemakings, in order to preempt any non-physical impediments that may preclude entities from applying for grants and loans in order to provide a service consistent with the purposes of BTOP. To the extent that such non-physical impediments (State laws, acceptable use policies, contracts, local agreements, etc.) prevent entities from applying for grants and loans, the NTIA should consider initiating a rulemaking to ensure that all entities enjoy an equal opportunity during the applications process. Alternately, the Federal Communications Commission (FCC) might choose to undertake a similar rulemaking pursuant to its own authority.

**Conclusion**

The NTIA and BTOP have been presented with an extraordinary opportunity to promote the deployment and use of broadband services nationwide and to subsequently encourage job growth, education, economic advancement, access to knowledge and civic participation. In so doing, the NTIA and the BTOP should ensure that the public interest is served, that taxpayers receive a long-term return on their investment and that underserved and unserved areas receive the greatest possible benefit from these services.

Respectfully submitted,

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