

**Testimony of**

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**“Removing Barrier to Wireless Broadband Deployment”**

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Chairman Thune, Ranking Member Nelson, members of the Committee, thank you for this opportunity to testify on behalf of the National Telecommunications and Information Administration (NTIA) regarding removing barriers to wireless broadband deployment. As President Obama has declared, access to high-speed broadband is no longer a luxury; it is a necessity for American families, businesses, and consumers and critical to U.S. economic growth and competitiveness. NTIA contributed to advancing broadband availability throughout the nation by financing roughly 230 projects across the country that have built critical network infrastructure, opened or upgraded public computer centers and established broadband adoption and digital inclusion programs from \$4 billion from the 2009 Recovery Act. NTIA’s State Broadband Initiative Program invested another \$300 million to help states collect broadband data for the National Broadband Map and expand their statewide broadband capacity.

Six years ago, when Congress funded this program, we made a promise to communities across the country that would benefit from this funding: the Obama Administration’s investment in broadband would create jobs, stimulate economic development, spur private-sector investment, and open up new opportunities in employment, education and healthcare. Most important, it would improve lives. Today, I am proud to say we delivered on those pledges. Our broadband grantees deployed more than 114,000 miles of new or upgraded network miles, connected nearly 26,000 community anchor institutions such as schools and hospitals and installed or upgraded more than 47,000 personal computers in public access centers. And our grantees enrolled hundreds of thousands of people as subscribers to broadband services.

These projects have already had a significant impact on economic development. We commissioned an independent study from ASR Analytics looking at the social and economic impact of our broadband grant program and released that report earlier this year. The report showed that on average, in only two years, communities that received our broadband grant funds

experienced an estimated 2 percent greater growth in broadband availability than non-grant communities. The report also concluded that the additional broadband infrastructure built by our grantees could be expected to create more than 22,000 long-term jobs and generate more than \$1 billion in additional household income each year. The report also showed that community anchor institutions, like schools and libraries, served by our broadband infrastructure grantees experienced significantly increased speeds and lower costs. As an example, the median price paid by libraries in the sample was \$233 per megabit per month before the grant program, at a median speed of 3 mbps. As a result of the grant program, the median price dropped to \$15 per megabit per month and median speed increased to 20 mbps.

With our infrastructure projects, one of our major goals was to prime the pump for private-sector investment by supplying critical middle-mile infrastructure that local providers can use to deliver affordable broadband to more homes and businesses. That is why all networks built with Recovery Act dollars are subject to open-access rules that let all other carriers interconnect with these networks on fair and non-discriminatory terms. Open access middle-mile fiber can also be used for wireless tower backhaul. We also encouraged our grantees to connect directly to the key anchor institutions in these communities due to the higher bandwidth needs of schools, libraries and other institutions.

In Massachusetts, there is a great example of a public-private partnership that laid the foundation for broadband expansion throughout the state. The \$45.4 million grant to the Massachusetts Technology Park (MassTech) delivered affordable, high-speed Internet to 123 communities in rural western Massachusetts. The project was completed in January, 2014 and built 949 miles of new fiber and connected 1,233 community anchor institutions. For this project and the Open Cape project, the State of Massachusetts provided the project matching funds. In building on the success of the Recovery Act projects, the state is making funding available to 45 communities to support their community broadband projects.

Another Recovery Act success story is South Dakota Network, LLC (SDN), a partnership of 27 independent telecom companies covering most of South Dakota. SDN used its \$20.6 million grant to add 397 miles of new middle-mile spurs that connected 512 community anchor institutions, including schools, hospitals, libraries, clinics, public safety agencies, courthouses, government buildings, and National Guard facilities, to high-speed broadband. The new and improved broadband access helped these institutions provide services that were previously unavailable due to lack of access or slow connections speeds. Healthcare providers can now offer telemedicine services and public schools and libraries now provide distance learning opportunities.

To foster wireless broadband deployment, NTIA awarded a \$9.5 million Recovery Act grant to Pine Telephone Company to deliver affordable wireless broadband service to the underserved tribal lands of the Choctaw Nation and its ten counties in rural southeastern Oklahoma. Through its grant, Pine Telephone leveraged the power of broadband to create economic growth and jobs and to enhance education and public safety. Upon completion in June 2013, Pine Telephone had constructed a new high-speed 344-mile network that used 3G universal mobile telecommunications systems (UMTS) technology. In addition, Pine Telephone constructed a last-mile wireless network that included 42 new wireless links, 37 new towers, and 6

new/upgraded interconnection points. Pine Telephone connected 22 community anchor institutions (CAIs), including six K-12 schools and 16 public safety entities, and provided last-mile broadband services to 497 residential subscribers and 33 businesses. It also donated space on the new towers for placement of emergency responder radio systems, which will help to improve critical public safety communications during emergencies.

NTIA also awarded \$32.2 million to the Navajo Tribal Utility Authority (NTUA) to build out telecommunications infrastructure throughout the Navajo Nation in northern Arizona, northwestern New Mexico, and southeastern Utah. Completed in 2013, NTUA constructed over 1,345 miles, including 570 miles of aerial fiber and 775 wireless miles. It also built 32 new towers to expand its existing microwave network and provide broadband access over 15,120 square miles of the Navajo Nation's 27,000 square mile area. It directly connected 50 chapter houses, which are the heart of each community and serve as municipal buildings and central community meeting places. In addition, NTUA's subrecipient, NTUA Wireless (dba Choice Wireless), provides last-mile services via a 4G Long Term Evolution (LTE) network. Through this LTE network, NTUA provides high speed broadband access to both fixed and mobile customers to include 30,000 households (approximately 135,000 people) and 1,000 businesses in 15 of the largest communities on the Navajo Nation, including Window Rock, Shiprock, Kayenta, Chinle, and Tuba City.

In addition to the goal of economic development, NTIA also focused on inclusion issues – how to make broadband available to all Americans. We cannot lose sight of the importance of adoption. Once the facilities are built, we need for people to subscribe to use the service. Today, only 74 percent of Americans overall subscribe to broadband service. Through our adoption programs, we have learned important lessons about what works and what does not. An important takeaway is that digital literacy is fundamental to sustainable broadband adoption. Our grantees around the country have demonstrated that successful digital literacy training must be tailored to the specific needs of the community and the individual. Based on our grants, we now have developed a portfolio of innovative approaches to offering this training. Sustainable broadband adoption projects are reaching people who may never have even turned on a computer – a group that includes a disproportionate number of lower income Americans, senior citizens, and members of minority groups – and teaching them how to navigate the Internet, set up an email account, write a resume, and even apply for jobs over the Internet.

Through the Recovery Act, NTIA funded \$250 million of sustainable broadband adoption grants. A program called TechGoesHome provides an illustration of one of these grants. The City of Boston's Department of Information Technology partnered with a nonprofit called Open Air Boston to provide digital literacy training, subsidized netbooks or mobile devices and low-cost Internet access to low-income middle and high school students and their families. TechGoesHome served 62 middle and high schools and 35 community sites, and it equipped Boston teenagers with valuable digital literacy skills that will help them compete in a job market that takes these skills for granted.

As we move beyond these projects, we recognize that more work needs to be done to ensure that no one is left behind in this digital revolution. When we started the Recovery Act grants program in 2009, the Federal Communications Commission (FCC) still defined broadband at a

speed less than 1 Mbps. Today the FCC recommends download speeds of 25 Mbps. At that rate, nearly 51 million Americans still do not have access to a wired broadband connection. And we can expect the need for speed to continue to increase.

Even though the Recovery Act grant program is substantially complete, President Obama has continued to emphasize the importance of broadband. Over the past several months, he has outlined a series of initiatives aimed at closing the digital divide and fostering investment in our nation's broadband infrastructure.

In 2013, the President launched ConnectEd, a public private partnership to connect 99 percent of America's students to the Internet through high-speed broadband within 5 years. Since the President's announcement, the public and private sectors have committed more than \$10 billion of total funding and in-kind commitments as part of this five-year effort.

Earlier this year, the President announced ConnectHome, a new initiative with communities, the private sector, and federal government to expand high speed broadband to more families across the country. The pilot program is launching in 27 cities and one tribal nation and will initially reach over 275,000 low-income households. Through the program, internet service providers, non-profits and the private sector will offer broadband access, technical training, digital literacy programs, and devices for residents in assisted housing units.

Last March, the President created the Broadband Opportunity Council, made up of over twenty federal agencies, and directed it to determine what actions the Federal government could take to eliminate regulatory barriers to broadband deployment and to encourage investment in broadband networks and services. On September 21, the White House released the Council's report, which describes concrete steps that 25 federal agencies will take over the next 18 months to eliminate barriers and promote broadband investment and adoption.

Many of the agencies involved had never considered broadband to be part of their core mission. So an initial part of the task was for each agency to look internally at policies and programs to explore whether there was flexibility to do more.

The Council also solicited stakeholder input on ways that the federal government can incentivize broadband investment, drive competition and remove regulatory and policy barriers at the community level. We heard from more than 200 parties, including community groups, trade associations, broadband experts, state and local governments, private entities and individuals. Their feedback was important to shaping the report.

Four key themes framed the recommendations and action items.

- 1 - Modernize federal programs to expand program support for broadband investments.
- 2 - Empower communities with tools and resources to attract broadband investment and promote meaningful use.

3 - Promote increased broadband deployment and competition through expanded access to Federal assets.

4 - Improve data collection, analysis and research on broadband.

Once implemented, we believe that the recommendations will make a meaningful difference to communities seeking to expand and enhance their broadband capacity. For example, more funds will be available to support broadband projects, and local governments will have new tools and resources at their fingertips to bring broadband to their communities.

The first set of recommendations targets modernizing federal programs to expand program support for broadband investments.

Not all federal programs fully reflect the changing conditions that reflect the need for broadband. In some cases, programs that can support broadband deployment and adoption lack specific guidelines to promote its use. We asked agencies to clarify whether their programs supported broadband investment. As a result, agencies have committed to 13 actions which clarify or open up additional options for federal funding for broadband in programs totaling \$10 billion. Examples include the Department of Housing and Urban Development's Community Development Block Grant and the Department of Commerce's Economic Development Assistance Programs.

The second set of recommendations relates to empowering communities with tools and resources to attract broadband investment and promote meaningful use. While federal leadership is essential, many decisions about broadband investment are local. They are made by local governments in partnership with industry and guided by state law. To address the gaps, the Council recognized the need for federal agencies to provide communities with targeted, easily accessible resources that share best practices from their peers around the country.

NTIA's BroadbandUSA effort has been working with communities across the country and we have heard time and again the challenges facing these communities to identify sources of funding for broadband, and to know where to turn to within the federal government for answers to their questions. One key action, which NTIA will spearhead, will be to create a portal for information on federal broadband funding and loan programs to help communities easily identify resources as they seek to expand access to broadband. This will help communities find broadband-related policy guidance, key agency points-of-contact and best practices. Last week, NTIA announced the release of our Broadband Funding Guide, which provides a roadmap on how to access federal funding to support broadband planning, public access, digital literacy, adoption, and deployment.

The third set of Council recommendations relates to expanding access to Federal assets. Specific actions here include a commitment from the Department of Transportation to issue policy guidance to leverage highway rights of way for broadband. The White House's Office of Science and Technology Policy and National Economic Council will also lead the creation of an online open data inventory of federal assets that can help support faster and more economical broadband deployments, both wireline and wireless to remote areas of the country. Additionally, NTIA will assist the Department of the Interior (DOI) in developing an initiative to leverage over

4,000 towers and other assets on DOI-managed property to support wireless broadband deployments. This effort could reduce barriers to entry, increase competition, and improve service over 500 million square acres of land in unserved and underserved communities.

The fourth set of recommendations revolves around improving data collection, analysis, and research on broadband. Research on broadband deployment, competition and adoption has not kept pace with the massive digital changes that permeate our economy and society. To address this issue, the Council, led by the National Science Foundation and NTIA, will develop a comprehensive broadband research and data collection agenda. This will allow federal and private funders to coordinate and prioritize future research plans to support American competitiveness.

The recommendations of the Broadband Opportunity Council represent an important next step in the Administration's ongoing campaign to expand broadband access and adoption, but what matters now is that agencies implement the recommendations and continue to identify additional steps that can be taken and barriers that can be tackled. We welcome continued dialogue with all stakeholders in this effort.

At NTIA, we will play an ongoing role in ensuring that the Council's important work is carried out. NTIA's BroadbandUSA initiative will continue to work closely with communities seeking to expand their broadband capacity. NTIA has learned a lot over the past six years overseeing this broad portfolio of broadband infrastructure and adoption grants. NTIA has learned that there's no one-size-fits-all approach that works. Every community has unique needs and challenges. Through our BroadbandUSA initiative, we are now leveraging that knowledge and expertise to help communities in their broadband expansion efforts. We are offering them the technical assistance and support they need to overcome their unique challenges through publication of products, workshops, and technical assistance.

Thank you again for the opportunity to participate in today's hearing.