



## **US Ignite Response to NTIA Request for Public Comment on New Broadband Programs Created by the Infrastructure Investment and Jobs Act**

This comment is being submitted on behalf of US Ignite, a nonprofit that convenes stakeholders across the networking and equipment industries to advance wireless networking, fiber-based broadband deployment, and “smart community” technologies across the United States, in response to the NTIA Request for Public Comment (NTIA-2021-0002-0001) on policy and program considerations associated with new broadband grant programs authorized and funded by the *Infrastructure Investment and Jobs Act*. In this response, US Ignite is addressing questions 1, 7, 12, and 31 in the request for public comment.

### **RPC Question 1. What are the most important steps NTIA can take to ensure that the Bipartisan Infrastructure Law’s broadband programs meet their goals with respect to access, adoption, affordability, digital equity, and digital inclusion?**

Without in-depth technical assistance for [State Broadband Offices](#) (SBOs), combined with rapid local government support, this new Federal grant program will remain out of reach for too many underserved communities. To meet their goals outlined above, NTIA must collaborate with nonprofit coordinating bodies, like US Ignite, to support SBOs in their efforts to reach these underserved communities, ensuring that state and local governments have an aligned vision for the Federal funding. We propose a series of support activities for Federal, state, and local governments, including easy-to-use mapping tools, best-practice playbooks, webinars, and working groups with engineering, data, and economic experts.

Over the last two years as the COVID-19 pandemic unfolded, many were forced to work, learn, and seek other basic services from their home. This shift to online activities exposed the extreme gap between those connected to the internet and those left unserved across the U.S. and directed government leaders’ attention to closing the digital divide. The *Infrastructure Investment and Jobs Act’s* (IIJA) investment in broadband creates an opportunity for NTIA to deploy broadband at a historic scale, but it must do so equitably and affordably, prioritizing the many rural, tribal, and in some cases urban communities that have been left behind in previous broadband build outs. To create resilient and flexible infrastructure for unserved areas, US Ignite encourages NTIA to continue pursuing long-term solutions like future-proofing fiber networks to ensure resiliency, while simultaneously capitalizing on [quick wins](#) with new and existing wireless technologies. Some ways NTIA can achieve Quick Wins and equitable broadband adoption for unserved communities while longer-term solutions are being deployed include:

- a. Utilizing a type certification and spectrum access system approaches for millimeter-wave spectrum and other advanced wireless technologies as has been used for CBRS.
- b. Encouraging neutral-host infrastructure-sharing solutions to promote competition.
- c. Leveraging the higher education and federal networking communities that have advanced networking capabilities that could be shared to provide broadband to unserved areas.
- d. Collaborating with the FCC to provide unlicensed or license-by-rule spectrum in the 20-30 GHz and 60-100 GHz bands. This spectrum could be used for longer-term backhaul and mid-haul roles in connecting the unconnected and underserved. This spectrum is not as sought-after as the longer-range mid-band spectrum and should be set aside now.

- e. In addition, there may be owned but unused spectrum which could be borrowed for a few years to provide Quick Win wireless access while neutral-host fiber is being installed. This could include government-controlled (NTIA) and commercial (FCC) spectrum.

**RPC Question 7: NTIA views the participation of a variety of provider types as important to achieving the overall goals of the Bipartisan Infrastructure Law broadband programs. How can NTIA ensure that all potential subrecipients, including small and medium providers, cooperatives, non-profits, municipalities, electric utilities, and larger for-profit companies alike have meaningful and robust opportunities to partner and compete for funding under the programs?**

Communities across the U.S. are comprised of varying populations, topographies, and local resources, therefore demanding different and innovative broadband models to meet their needs. To ensure that all potential subrecipients have real opportunities to partner and compete for the broadband programs, NTIA must support projects that reflect diverse broadband models. A one-size fits all approach inhibits municipalities from developing plans that fit their capital, infrastructure, and partner options. A municipality's business model is also often contingent upon its involvement in broadband delivery. US Ignite recommends that NTIA encourage municipalities to choose the model that best suits their needs. Five [primary models](#) should be investigated:

- Full Municipal Broadband: The most prevalent public model where a city can use local utility or other public entities to build, own and/or run the network.
- Publicly-owned, Privately-serviced: The popular model promotes the operation of infrastructure by a city, a service provider, or both and the allows one or more service providers to be the service customer -- thereby removing the operational risk.
- Hybrid Ownership: The model splits assets between private and public parties.
- Private Developer Open Access: This model is more common in Europe, but of increasing interest in the U.S. In this model, a public entity would own the utility infrastructure, but a public developer would own and operate the middle-mile and last-mile infrastructure.
- Full Private Broadband: This model that only lightly engages with municipalities, enabling a private party to build out the network and provide service.

**RPC Question 12: What steps, if any, should NTIA take to ensure maximum use of American-made network components and that supply shortages are addressed in ways that create high quality jobs for all Americans? What impact, if any, will application of the "Buy American" requirements in the Bipartisan Infrastructure Law have on supply chain and workforce challenges and on the speed with which the nation can reach the goal of 100% broadband connectivity?**

In order to ensure maximum use of American-made network components and address supply chain shortages in a way that creates high quality jobs, the United States should plan to utilize complementary, longer-term wireless solutions like Open RAN while deploying fiber. As you know, the United States has fallen behind its global competitors when it comes to domestic telecommunications production. To support our domestic telecommunications industry, US Ignite recommends that the federal government should invest \$1.5 to \$2.5 billion over five years for a Department of Defense (DoD) 5G Rapid Deployment Consortium. The consortium, in partnership with U.S. companies and organizations, would advance applied research and development (R&D), manufacturing support, and other efforts to develop a U.S. based wireless telecommunications equipment manufacturing ecosystem



to support the advancement of 5G and Open RAN technologies in the United States, which would address some of the supply shortages mentioned above and create jobs through growing the domestic telecommunications industry. As a key federal stakeholder in the development of advanced wireless technologies, NTIA would have an important role to play in the consortium.

The 5G Rapid Deployment Consortium would support the creation of a domestic 5G industry and the widespread utilization of Open RAN technologies, which would reduce wireless costs for the federal government and the private sector, develop new domestic alternatives for Huawei and other international competitors, and strengthen U.S. national security and global competitiveness. With more domestic Open RAN providers, supply chain shortages can be more effectively mitigated. Additionally, given the rapid anticipated growth in 5G technologies over the next ten years, investments made in Open RAN and the domestic telecommunications industry through the consortium will create jobs and provide strong return on investment. Per an estimate done by the World Economic Forum, nearly \$1 trillion dollars will be devoted to 5G buildouts of various types. By US Ignite's own analysis, an investment by the federal government into 5G and Open RAN technologies now could return at least \$270 billion annually in recaptured value to U.S. companies by 2027. Additional details on US Ignite's proposed 5G Rapid Deployment Group, and its implications for Open RAN technologies and other network components, is available [here](#).

**RPC Question 31. The Bipartisan Infrastructure Law also requires states and territories to coordinate with local governments and other political subdivisions in developing State Digital Equity Plans. What steps should states take to fulfill this mandate? How should NTIA assess whether a state has engaged in adequate coordination with its political subdivisions?**

The *Infrastructure Investment and Jobs Act* made historic investments in broadband deployment, including by supporting nationwide deployment through State Broadband Offices (SBOs). Due to the scale of the investment from the federal government and the urgent need to reach universal broadband connectivity in the United States, it is imperative that states have the tools and information they need to efficiently and effectively invest the money distributed to their SBOs. US Ignite recommends the following best practices for states, which will help fulfil the *Infrastructure Investment and Jobs Act's* mandate to coordinate with local governments and other political subdivisions and will ensure effective utilization of the federal government's investment in broadband deployment.

- SBOs should have access to broadband data that ensure they are investing in the areas that are most underserved in each state. SBOs should collect the data on broadband availability, adoption rates, affordability, and potential economic impact from their localities to ensure a robust picture of broadband access in their states.
- SBOs should create a single vision for broadband deployment to develop broadband projects with design and implementation plans. Statewide goals and key performance indicators should be tailored to underserved communities most in need.
- SBOs should conduct a technology assessment that assesses networking options by target area for fixed, wireless, and satellite technologies best suited across the state to increase connectivity goals.
- SBOs should seek out best-practice benchmarks from each other, especially in regard to state and local collaboration on broadband deployment. When possible, SBOs should engage with state leaders in coaching to focus on network deployment outcomes, with a focus on boosting economic and social development.



US Ignite is uniquely positioned to support SBOs in their efforts to reach these underserved communities to ensure that state and local governments are aligned in their vision for how to spend federal broadband deployment dollars most effectively and would be happy to serve as a resource to NTIA. Additional information on US Ignite’s recommendations for SBOs is available [here](#).

**Background on US Ignite:** US Ignite is a 501(c)(3) research organization accelerating the smart cities movement with public-private partnerships that address the most difficult challenges facing underserved communities. For over ten years, US Ignite has worked closely with many Federal agencies, including the NSF- and Schmidt Futures-supported the \$2.7M [Project OVERCOME](#) broadband access program, DoD [Fort Carson Transportation Testbed](#) with its CBRS network and the NSF-funded \$100M [Platforms for Advanced Wireless Research](#) testbed. The map below features these projects and our technical assistance network of [Smart Gigabit Communities](#). In 2020, US Ignite co-authored [a comprehensive study of municipally enabled broadband deployments](#) aimed to help many of the estimated underserved communities evaluate their options broadband networks.

