



**Comments of  
TechFreedom**

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**In the Matter of  
Infrastructure Investment and Jobs Act Implementation  
Before The  
National Telecommunications and Information Administration  
Docket No. NTIA-2021-0002  
RIN 0660-ZA33**

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# Table of Contents

I. Background .....	2
II. Introduction .....	2
III. Specific Responses to Key Questions .....	3
IV. Conclusion .....	21

## **I. Background**

TechFreedom files these comments in response to NTIA's Request for Comment related to the Bipartisan Infrastructure Act (BIL),<sup>2</sup> and NTIA's responsibility in distributing more than \$48 billion for broadband deployment and adoption programs.<sup>3</sup> In the Notice, NTIA asks 36 questions about how it should administer the various programs that will allocate the \$48 billion, including the \$42.45 billion available through the Broadband Equity, Access and Deployment (BEAD) program.

Founded in 2010, TechFreedom is a non-profit think tank dedicated to promoting the progress of technology that improves the human condition. To this end, we seek to advance public policy that makes experimentation, entrepreneurship, and investment possible, and thus unleashes the ultimate resource: human ingenuity. Wherever possible, we seek to empower users to make their own choices online and elsewhere.

TechFreedom, and the undersigned author, have actively participated in federal agency proceedings related to broadband deployment and regulation. We are therefore well-versed in issues related to these issues and welcome the opportunity to comment on these issues to NTIA.

## **II. Introduction**

The federal government is set to spend the largest-ever federal investment in broadband, with NTIA tasked with spending \$48 billion of that. That is on top of the billions spent in the past few years. Yet NTIA, as well as other government agencies, is ill-equipped to account for where the money will be spent. First, with multiple government programs all spending money to achieve the same goal, coordination among agencies is a must, yet appears to be sorely lacking. Second, there is no current map that accurately depicts where broadband exists, and where it is lacking. Before NTIA begins spending BIL funds, accurate maps must be created. The FCC maps have historically overstated broadband deployment, while the recent NTIA map severely understates deployment based on bad data. Mapping efforts must be the highest priority; otherwise, the \$42.45 billion BEAD money will be wasted, and in

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<sup>2</sup> Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, 135 Stat. 429 (2021) (BIL).

<sup>3</sup> The Request for Comment was published in the Federal Register on January 10, 2022, 87 Fed. Reg. 1122 (January 10, 2022), and called for comments to be filed by February 4, 2022. These Comments are timely filed.

many cases spent to overbuild and compete with existing commercial broadband networks, doing nothing to actually close the Digital Divide. At worse, the rules NTIA adopts may do little more than destroy the ability of commercial private networks to continue to receive private capital to build and operate, up against government funded government-owned networks, thus merely supplanting private networks for no net gain.

In general, we urge NTIA to keep in mind one central fact: the \$48 billion in taxpayer dollars it has been allocated amounts to just 60% of the \$79.4 billion invested by private companies in broadband in 2020 alone.<sup>4</sup> This may seem like a lot, but it is highly unlikely that future government spending will come anywhere near this figure, and it is just 2.5% of the staggering \$1.9 trillion private companies have invested in broadband since 1996,<sup>5</sup> making them by far the largest sources of capital investment (CAPEX) in the U.S. economy.<sup>6</sup> Investing taxpayer dollars may, indeed, help close the Digital Divide if it is a *supplement* to private investment — if it goes to areas that would not otherwise receive adequate private investment. But spending taxpayer dollars in areas that already receive private investment, or would do so absent the possibility of government investment, risks deterring that private investment going forward. After all, why should companies look (and pay) for private investment, if they think that the government will continue to pump money into this sector of the economy? Even small degrees of deterrence could very well result in less total investment in broadband overall, with the amount of taxpayer dollars spent this year and much smaller amounts spent in future years being smaller than the amount of private investment that would have occurred without the potential for competition from the government crowding out private investment.

### **III. Specific Responses to Key Questions**

In this section we address fifteen of the specific questions raised in the Request for Comment.

#### **Question 1: What are the most important steps NTIA can take to ensure that the Bipartisan Infrastructure Law’s broadband programs meet their**

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<sup>4</sup> Mike Saperstein, *2020: Broadband Providers Pump Another \$79.4 Billion Into America’s Connectivity Infrastructure*, USTELECOM (Sept. 22, 2021), <https://ustelecom.org/2020-broadband-providers-pump-another-79-4-billion-into-americas-connectivity-infrastructure/>.

<sup>5</sup> *Id.*

<sup>6</sup> *Id.*

**goals with respect to access, adoption, affordability, digital equity, and digital inclusion?**

The key issue surrounding how the BIL money will be spent boils down to a single word: Maps. The BIL allocates \$42.45 billion to states to be awarded by NTIA with the caveat that they give priority to projects that will provide service to unserved locations, then to underserved locations, and next to community anchor institutions.<sup>7</sup> Without proper maps, that will be impossible, and this misprioritization will result in costly overbuilds and a colossal waste of money. We already know that the broadband maps produced by NTIA are not even remotely accurate.<sup>8</sup> It is imperative, therefore, that both the FCC and NTIA accelerate efforts to complete accurate broadband maps. To the extent possible, NTIA should not approve any state spending until we have accurate broadband maps. This “Ready. Fire. Aim.” approach to government spending undoubtedly will result in a massive waste of taxpayer dollars.

**Question 3: Transparency and public accountability are critical to the success of the Bipartisan Infrastructure Law’s broadband programs. What types of data should NTIA require funding recipients to collect and maintain to facilitate assessment of the Bipartisan Infrastructure Law programs’ impact, evaluate targets, promote accountability, and/or coordinate with other federal and state programs? Are there existing data collection processes or templates that could be used as a model? How should this information be reported and analyzed, and what standards, if any, should NTIA, grant recipients, and/or sub-grantees**

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<sup>7</sup> BIL, § 60102(h)(1)(A).

<sup>8</sup> See Letter from Sen. Roger Wicker to NTIA (Jul. 19, 2021), <https://www.commerce.senate.gov/2021/7/wicker-asks-ntia-to-reassess-data-collection-processes> (“NTIA’s map suffers from several major flaws. First, the data used in the map is outdated. The map includes data from the Census Bureau’s American Community Survey, which the Census last compiled in 2019—two years ago. The state of broadband has changed significantly since then. Second, the map relies on the FCC’s census-block level availability data. This data vastly overstates broadband coverage, and the FCC is actively replacing it with more granular, accurate data. Finally, the map uses speed-test and usage data that can be affected by a number of variables, including the end-user’s equipment.”). See also John Eggerton, *NCTA: New NTIA Broadband Needs Map Is ‘Often Inaccurate’ Mashup*, BROADCASTING & CABLE (June 21, 2021), <https://www.nexttv.com/news/ncta-new-ntia-broadband-needs-map-is-often-inaccurate-mashup> (“Unfortunately NTIA has obscured, rather than clarified, the true state of broadband with this mashup of disparate, and often inaccurate, data sources. In particular, any suggestion that data from M-Lab or Microsoft accurately represents the speeds delivered by cable operators is demonstrably false.”).

**apply in determining whether funds are being used lawfully and effectively?**

There must be some metrics behind broadband deployment. We need to understand exactly what it costs to deliver broadband. In 2017, an FCC White Paper predicted the following:

We estimate that the total upfront capex required to deploy FTTP to the 14% of locations lacking access would be ~\$80b but, because of the shape of the cost curve, ~98% coverage could be attained for ~\$40b.<sup>9</sup>

Yet according to former FCC Chairman Tom Wheeler, in 2020 there were still 18 million people without access to any broadband network,<sup>10</sup> and the amount of people without access to broadband had only decreased by one million between 2012 and 2020.<sup>11</sup> Clearly, the cost to deploy broadband further into rural America is far greater than previously predicted. After all, according to a Government Accountability Office report from June 2020, the telecommunication industry itself spent \$795 billion and the federal government spent \$47.3 billion on broadband deployment between 2009 and 2017, for a total national investment of \$842.3 billion during that period.<sup>12</sup>

When we consider the over \$25 billion of government money committed and spent between 2017<sup>13</sup> and the current BIL's \$65 billion, we've now promised well more than the \$80 billion that the FCC predicted in 2017 would totally close the Digital Divide, and that doesn't include the nearly \$80 billion of private investment alone that went into broadband in 2020. Yet no one is now claiming that this new government money will provide broadband access to

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<sup>9</sup> FED. COMM'NS COMM'N, IMPROVING THE NATION'S DIGITAL INFRASTRUCTURE (2017), <https://www.fcc.gov/document/improving-nations-digital-infrastructure>.

<sup>10</sup> Tom Wheeler, *5 Steps to get the Internet to all Americans*, BROOKINGS (May 27, 2020), <https://www.brookings.edu/research/5-steps-to-get-the-internet-to-all-americans/>.

<sup>11</sup> See FED. COMM'NS COMM'N, FCC 12-90, EIGHTY BROADBAND PROGRESS REPORT (2012), <https://www.fcc.gov/reports-research/reports/broadband-progress-reports/eighth-broadband-progress-report>.

<sup>12</sup> U.S. GOV'T ACCOUNTABILITY OFF., GA-20-535, BROADBAND: OBSERVATIONS ON PAST AND ONGOING EFFORTS TO EXPAND ACCESS AND IMPROVE MAPPING DATA (2020), <https://www.gao.gov/assets/gao-20-535.pdf>.

<sup>13</sup> This includes: 1) \$20.4 billion in the FCC's Rural Digital Opportunity Fund, FCC, <https://www.fcc.gov/auction/904> (last visited Feb. 3, 2022); 2) \$1.49 billion in the FCC's 2018 CAF II Auction, FCC, <https://www.fcc.gov/auction/903> (last visited Feb. 3, 2022); 3) \$1.5 billion from the Consolidated Appropriation Act of 2021, FCC, <https://broadbandusa.ntia.doc.gov/resources/grant-programs> (last visited Feb. 3, 2022).

everyone, and there's a question as to whether this amount will even reach the 98% number that the FCC predicted, in 2017, could be served *with fiber to the home* with a \$40 billion investment.

Clearly the "shape of the cost curve," must be significantly different than the FCC thought just five years ago. In deploying BEAD funding, NTIA must track not only how much money is being spent, but how many new households are actually reached "when the dust settles." We predict that that number will be disappointing, possibly disastrously so.

The other metric NTIA should track is how much of the money is being spent on outside consultants. We're seeing literally marching armies of consultants lobbying for multimillion-dollar contracts to "assist" states in spending all this money. This ranges coast-to-coast, from Maine,<sup>14</sup> to Louisiana,<sup>15</sup> to Nevada.<sup>16</sup> Yes, sometimes consultants with particular expertise are necessary, but many of the current crop appear to know little about actually building a network, instead specializing in being able to fill out the necessary government paperwork to get the grant, skimming their fee off the top, and then leaving the grantee to fend for itself in actually figuring out how to build a network, especially in some of the difficult places that remain in rural America. NTIA should require all grant recipients to report how much is being spent on consultants and for what purposes, so it gets a better sense of how much taxpayer money is actually going into the ground as infrastructure, and how much is merely overhead on the project.

**Question 4. NTIA has an interest in ensuring that the Bipartisan Infrastructure Law is implemented in a way that promotes the efficient use of federal funds. How should NTIA and grant recipients verify that**

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<sup>14</sup> See *Consultants*, CONNECTMAINE, <https://www.maine.gov/connectme/communities-resources/consultants> (last visited Feb. 3, 2022).

<sup>15</sup> Ross Marchand, *TPA report finds taxpayer-funded broadband networks not worth the money*, THE LIVINGSTON PARISH NEWS (May 16, 2020), [https://www.livingstonparishnews.com/opinion/editorials/opinion-tpa-report-finds-taxpayer-funded-broadband-networks-not-worth-the-money/article\\_0756c804-9630-11ea-8be3-c73367546f43.html](https://www.livingstonparishnews.com/opinion/editorials/opinion-tpa-report-finds-taxpayer-funded-broadband-networks-not-worth-the-money/article_0756c804-9630-11ea-8be3-c73367546f43.html) ("The question is, then, why city planners continue to fall for these tax-and-spend traps. As TPA's report points out, broadband consultants hired by cities offer impossibly optimistic [government owned networks] predictions and readily ignore the sorry track record of previous projects. These nice looking, official sounding reports become the basis for ill-advised broadband projects, and taxpayers pay the price.").

<sup>16</sup> Jonathan Salet, *Broadband For America's Future: A Vision for the 2020s*, Benton Institute, [https://www.benton.org/sites/default/files/BBA\\_full\\_F5\\_10.30.pdf](https://www.benton.org/sites/default/files/BBA_full_F5_10.30.pdf) ("Stories throughout Nevada about the lack of local expertise have led the Governor's Office of Science, Innovation, and Technology (OSIT) to engage consultants.").

## **funding is used in a way that complements other federal and state broadband programs?**

More taxpayer dollars will be spent on broadband deployment in the next few years than has been spent in the history of this nation. Some are already questioning whether the federal government even knows where taxpayer monies are going, and whether that money is actually being spent on broadband deployment or adoption.<sup>17</sup> It is therefore paramount, in order to combat fraud, waste, and abuse, that NTIA coordinate with other federal and state governments to track where previous dollars have been spent, and where current dollars are being committed. Failure to do so will make the waste in the 2009 ARRA program look pale in comparison.<sup>18</sup> We are already hearing stories of contractors literally bumping into each other as they overlash utility poles with wires funded from separate programs overbuilding existing networks authorized through another program, and often times installed by contractors that don't know what they are doing. With so many different programs being used by the federal government to close the Digital Divide, a failure to coordinate will result in duplication, and possibly life-threatening situations.

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<sup>17</sup> See, e.g., Mark Buell & Katie Jordan, *Risks and Rewards of the U.S. Broadband Funding Boom*, INTERNET SOCIETY (May 6, 2021), <https://www.internetsociety.org/blog/2021/05/risks-and-rewards-of-the-u-s-broadband-funding-boom/> (“there is an equally great risk that these funds do more harm than good. This kind of investment is once in a generation for a reason and whatever happens next, it is unlikely we will see investment of this kind into broadband infrastructure and access again. With funding of this size, companies and individuals with malintent are going to come out of the woodwork. Large corporations could receive huge amounts of funding, but as we’ve seen for years, this doesn’t always trickle down to connecting communities. We also risk wasting funds by putting steep requirements on communities for spending. Small communities may receive an influx of cash and have to spend it too quickly to make sustainable investments.”). See also Rick Barret & Kelli Arseneau, *With poor data, deficient requirements and little oversight, massive public spending still hasn't solved the rural internet access problem*, MILWAUKEE JOURNAL SENTINEL (July 4, 2021), <https://www.jsonline.com/in-depth/news/2021/07/14/weve-spent-billions-provide-broadband-rural-areas-what-failed-wisconsin/7145014002/>.

<sup>18</sup> See, e.g., U.S. DEP’T AGRIC. OFF. INSPECTOR GEN., AUDIT REPORT 50703-0002-10, LESSONS LEARNED FROM THE RECOVERY ACT: AN OIG PERSPECTIVE (2014), <https://www.usda.gov/sites/default/files/50703-0002-10.pdf> (“Our investigations into Recovery Act-related fraud resulted in 84 convictions, 8 years of total supervised release/probation, 8 months of total home confinement ordered, total recoveries of \$11 million, and total forfeiture/seizures of \$1.5 million.”). But see, Gregory Korte, *Five years since stimulus: Many fraud cases, few losses*, USA TODAY (Feb. 16, 2014), <https://www.usatoday.com/story/news/politics/2014/02/16/recovery-act-stimulus-fraud-convictions/5400705/> (1,268 cases of fraud in the \$840 billion stimulus program, resulting in \$57 million in recovered funds).

In its recent *Notice of Inquiry* regarding its upcoming report to Congress on the state of the Universal Service Fund, the FCC noted the following programs, all designed to deploy broadband further into rural America:

In addition to funding the Commission’s Affordable Connectivity Program, the Act contains numerous programs to be implemented by NTIA, such as the BEAD Program, the State Digital Equity Capacity Grant Program and its federal counterpart, the Middle Mile Infrastructure Grant Program, and the Tribal Broadband Connectivity Program, as well as the State and Local Cybersecurity Grant Program to be implemented by the Department of Homeland Security and the RUS Distance Learning, Telemedicine, and Broadband Program. We invite commenters to identify any other provisions in the Act or any other recent legislation that constitute “legislation that addresses [the broadband universal service] goals” that we should consider in this proceeding. Please describe the relationships between these programs and our universal service programs.<sup>19</sup>

NTIA must coordinate with the FCC and other government agencies, but also ensure that it tracks *all* programs to guard against wasteful duplication and overbuilding.

**Question 6: The Bipartisan Infrastructure Law requires states and territories to competitively select subgrantees to deploy broadband, carry out digital equity programs, and accomplish other tasks. How should NTIA assess a particular state or territory’s subgrant award process? What criteria, if any, should NTIA apply to evaluate such processes? What process steps, if any, should NTIA require (e.g., Request for Proposal)? Are there specific types of competitive subgrant processes that should be presumed eligible (e.g., publicly released requests for proposals and reverse auctions)?**

Above we note some of the metrics that NTIA should consider in doling out this money. The key metric, in our view, is whether the money being spent will actually act to close the Digital Divide. Much can be learned from the missteps previously made in ARRA and other programs that dumped massive amounts of money into broadband programs that were, to put it mildly, not “shovel-ready.” One report summed it up best:

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<sup>19</sup> Report on the Future of the Universal Service Fund, Notice of Inquiry, FCC 21-127 ¶ 22 (Dec. 15, 2021) (footnotes omitted).

A POLITICO investigation has found that roughly half of the nearly 300 projects RUS approved as part of the 2009 Recovery Act have not yet drawn down the full amounts they were awarded. All RUS-funded infrastructure projects were supposed to have completed construction by the end of June, but the agency has declined to say whether these rural networks have been completed. More than 40 of the projects RUS initially approved never got started at all, raising questions about how RUS screened its applicants and made its decisions in the first place.<sup>20</sup>

RUS is not alone in having allocated money for questionable, or not quite ready, projects. In July of 2021 the FCC signaled its intention to “clean up” the RDOF program to eliminate grantees who had defaulted on their filing obligations, or where it appeared that the grants were for areas already served.<sup>21</sup>

Steps must be taken at the outset to vet both the projects and the applicants to make sure that the project is legitimate, not later to try and “clean up” a mess of granting funding for projects that can’t be built, or for areas that are already served. NTIA should require states to fully demonstrate how they will analyze applications to maximize the probability of projects actually coming to fruition and withhold funding from any state that does not adequately vet applicant and projects.

**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?**

While diversity of participants is a laudable goal, it cannot override the need to ensure that grantees are financially and technically qualified to carry out broadband deployment. Again, the goal *must* be actual broadband deployment to the unserved and underserved, not just

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<sup>20</sup> Tony Room, *Wired to Fail: How a little known agency mishandled several billion dollars of stimulus money trying to expand broadband coverage to rural communities*, POLITICO (July 28, 2015), <https://www.politico.com/story/2015/07/broadband-coverage-rural-area-fund-mishandled-120601>.

<sup>21</sup> See, Rural Digital Opportunity Fund Big Defaults Announced, Public Notice DA 21-910 (released July 26, 2021), <https://docs.fcc.gov/public/attachments/DA-21-910A1.pdf>. See also *First RDOF Default Public Notice*, FCC (July 26, 2021), <https://www.fcc.gov/document/first-rdof-default-public-notice> (list of entities defaulting on RDOF grants).

spending money. We are especially concerned about the efforts of some state and local governments to overbuild existing commercial networks and compete directly with them. The history of the near-complete failure of municipal broadband highlights the problem of rapidly building infrastructure without a plan, or the expertise, to build and maintain the network.<sup>22</sup>

**Question 13: NTIA is committed to ensuring that networks built using taxpayer funds are capable of meeting Americans’ evolving digital needs, including broadband speeds and other essential network features. What guidance or requirements, if any, should NTIA consider with respect to network reliability and availability, cybersecurity, resiliency, latency, or other service quality features and metrics? What criteria should NTIA establish to assess grant recipients’ plans to ensure that service providers maintain and/or exceed thresholds for reliability, quality of service, sustainability, upgradability and other required service characteristics?**

We are deeply concerned with the efforts of some to redefine broadband to either require much faster speeds or symmetrical speeds as a way of making more areas appear “underserved” such that municipalities can use federal dollars to compete with existing networks. The BEAD’s requirement of 100/20 Mbps is a goal that is achievable through a variety of technologies.<sup>23</sup> NTIA should resist suggestions that “broadband” should be redefined in such a way that it can only be achieved through the deployment of fiber to the home (FTTH). Similarly, it should reject insistence upon symmetrical speeds in future builds, which, again, virtually ensures that any area without FTTH will be deemed “unserved” or “underserved,” making it ripe for overbuilding. This may suit the ideological agenda of some

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<sup>22</sup> T. Randolph Beard, et al., *The Law and Economics of Municipal Broadband*, 73 FCBA J. 1, 18 (2020) (“Most of the gains attributed to municipal broadband systems are based on economic migration rather than economic development. Consider, for example, former FCC Chairman Tom Wheeler’s description of the economic gains attributed to the municipal network in Chattanooga-Tennessee: ‘Smaller businesses . . . relocated to the city, and Chattanooga is also emerging as an incubator for tech start-ups.’ Note the operative word here is “relocated.” For the most part, the economic development from municipal broadband systems appears to be based on stealing businesses from other cities.” (footnotes omitted)).

<sup>23</sup> BIL, § 60102(h)(4)(A)(i). Networks must also be reliable, with outages not exceeding, on average, 48 hours over any 365-day period. *Id.*

against commercial networks, but it will waste scarce resources, and thus Congress's goal of closing the Digital Divide.<sup>24</sup>

Having said that, NTIA should develop mechanisms that provide grants for building out broadband to the most difficult-to-serve areas of the country, which for now may not be able to support full 100/20 speeds. Entities that can provide a pathway to get to 100/20 within a reasonable period of time (say five years) should be eligible to receive grants for speeds of at least 25/3 today. Otherwise, some of the most rural areas of America may not be helped by BIL grants, may fall further and further behind, and ultimately may never receive broadband at all.

**Question 14. NTIA is committed to ensuring that networks constructed using taxpayer funds are designed to provide robust and sustainable service at affordable prices over the long term. What criteria should NTIA require states to consider to ensure that projects will provide sustainable service, will best serve unserved and underserved communities, will provide accessible and affordable broadband in historically disconnected communities, and will benefit from ongoing investment from the network provider over time?**

This question raises two distinct issues which NTIA needs to address. First, along with determining that an applicant is technically capable of building out a network and operating it from a "nuts and bolts" standpoint, the application process must include an assessment of whether the grantee will be able to afford to operate the network on a going-forward basis. Dumping of billions of taxpayer dollars into the broadband ecosystem to build more infrastructure exposes the key failure of this approach: there is no money for future operational costs (OPEX). The failure of virtually all government-owned networks (GONs) has been their inability to generate sufficient revenues to continue to operate the networks. Historically, the solution for OPEX relief was handled at the FCC through its USF High-Cost

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<sup>24</sup> See, e.g., Shane Tews, *Biden's broadband boondoggle*, AMERICAN ENTERPRISE INSTITUTE (Apr. 2, 2021), <https://www.aei.org/technology-and-innovation/bidens-broadband-boondoggle/> ("Swapping human judgment and financial accountability for large government-funded programs has considerable downsides: consequences of faulty strategic planning and a lack of measurable outcomes for communities on how and where to concentrate their spending priorities. A 2019 study by the Technology Policy Institute's Sarah Oh '[did] not find evidence that municipal broadband yields benefits in broadband subscription rates or employment growth.'").

program, yet in its recent *Notice of Inquiry* the FCC itself pointed out the disconnect of the BEAD’s program focus on CAPEX only, without ongoing OPEX support.

In general, the High-Cost program has supported both the initial construction and the ongoing operational expenses for supported networks. Support from the program goes to service providers over a certain term of years, and the support must be used to build and maintain voice and broadband capable networks meeting defined minimum speed and latency obligations. The Commission will disburse billions of dollars in support in the coming years for fixed network buildout and operations in unserved and underserved areas, through the various funds within the High-Cost program. The BEAD Program will focus on deploying new broadband infrastructure to unserved and underserved locations. Even after the networks supported by these programs are constructed, providers will incur ongoing operating expenses as well as some capital expenses.<sup>25</sup>

NTIA can’t just assume that USF High-Cost support will be available, since only a subset of grantees would be eligible for such support from the USF. A full assessment of how grantees will be able to afford to operate and maintain these new networks is vital and that analysis must focus on the experience of the applicant in running similar networks.

The second issue raised by this question is that of “affordable prices” for such services. We have consistently advocated against rate regulation as a means of providing “affordable prices,”<sup>26</sup> and even the FCC, at the height of Title II regulation of Broadband Internet Access

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<sup>25</sup> Report on the Future of the Universal Service Fund, Notice of Inquiry, FCC 21-476 ¶ 30 (Dec. 15, 2021) (footnotes omitted).

<sup>26</sup> See, e.g., *Senate’s BRIDGE Act: Another Expensive Bridge Across an Unmapped Digital Divide*, TECHFREEDOM (June 18, 2021), <https://techfreedom.org/senates-bridge-act-another-expensive-bridge-across-an-unmapped-digital-divide/> (“Worst of all, the BRIDGE Act would allow for broadband rate regulation, in the form of a requirement to provide an ‘affordable broadband service plan.’ This is a really bad idea, as we’ve seen play out time and again in industry after industry. As a court recently concluded in striking down New York’s broadband act, imposing rate regulation ‘contravenes the FCC’s determination that broadband internet ‘investment,’ ‘innovation,’ and ‘availab[ility]’ best obtains in a regulatory environment free of threat of common-carrier treatment, including its attendant rate regulation.’ Making providers ‘furnish broadband service at... a loss,’ on the contrary, would make serving new customers unprofitable.”); TechFreedom Comments on Restoring Internet Freedom at 46, Docket WC No. 17-108 (Apr. 20, 2020), <https://techfreedom.org/wp-content/uploads/2020/04/TechFreedom-Net-Neutrality-RIFO-Comments.pdf> (“In short, the 2015 Order framed the general conduct standard as protecting the openness of the Internet—not micromanaging the business practices of BIAS providers or setting their prices. Yet that is precisely what is proposed by those who insist the FCC could have enforced the “general conduct standard” against Verizon in the case of the SCFPD plan (if it had been a BIAS plan rather than an enterprise offering.”).

Service (BIAS), stated that it would not regulate broadband rates.<sup>27</sup> NTIA certainly has no statutory authority to dictate rates that can be charged for broadband service, and it is highly questionable whether states have the authority to regulate broadband rates, even if such regulation is limited to setting price caps.<sup>28</sup> Adopting any rules for BEAD funding that attempt to set rates would needlessly invite future litigation that NTIA would likely lose. At most, NTIA could tie BEAD grants to a requirement that providers offer at least one tier of service at a “comparable rate,” as the FCC does in its RDOF program.<sup>29</sup>

**Question 15. In its effort to ensure that BEAD-funded networks can scale to meet Americans’ evolving needs, and to ensure the public achieves the greatest benefit from the federal investment, NTIA seeks to understand reasonably foreseeable use cases for America’s broadband infrastructure over the next five, ten, and twenty years. What sort of speeds, throughput, latencies, or other metrics will be required to fully connect all Americans to meaningful use over the next five, ten, and twenty years? How can the BEAD program meet our nation’s broadband network connectivity needs in the future and what other benefits can Americans expect from this program and the networks it will help fund in other industries and across the economy? How can existing infrastructure be leveraged to facilitate and amplify these benefits? What are the best**

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<sup>27</sup> Protecting and Promoting the Open Internet, GN Docket No. 14-28, Report and Order on Remand, Declaratory Ruling, and Order, 30 FCC Rcd 5601, ¶ 441 (2015) (“However, particularly in light of the protections the open Internet rules provide and the ability to employ sections 201 and 202 in case-by-case adjudications, we are otherwise persuaded to forbear from applying sections 201 and 202 of the Act in a manner that would enable the adoption of *ex ante* rate regulation of broadband Internet access service in the future, as discussed below.”).

<sup>28</sup> See *New York State Telecomm. Assoc. v. James*, 2:21-cv-2389 at 19-20 (E.D.N.Y. 2021), *on appeal* (“To be clear, the [New York State Affordable Broadband Act] is rate regulation, and rate regulation is a form of common carrier treatment. In Defendant’s words, the ABA concerns ‘Plaintiffs’ pricing practices’ by creating a ‘price regime’ that ‘set[s] a price ceiling,’ which flatly contradicts her simultaneous assertion that ‘the ABA does not ‘rate regulate’ broadband services.’ ‘Price ceilings’ regulate rates.”) (citations omitted).

<sup>29</sup> See Rural Digital Opportunity Fund Phase I Auction Scheduled for October 29, 2020, Public Notice FCC-CIRC2006-01 ¶ 6 (released May 19, 2020) (“For broadband services, a support recipient will be required to certify that the pricing of a service that meets the required performance tier and latency performance requirements is no more than the applicable reasonably comparable rate benchmark, or that it is no more than the non-promotional price the support recipient charges for a comparable fixed wireline broadband service in urban areas in the state or U.S. territory where the eligible telecommunications carrier (ETC) receives support,” *citing* 47 CFR § 54.313(a)(3); Rural Digital Opportunity Fund Order, 35 FCC Rcd at 707 ¶ 42.

## **sources of evidence for these questions and for predicted future uses of broadband?**

Broadband speeds prove the maxim of “more isn’t always better”: Requiring faster speeds, lower latency, and even the concept of scalability, limits the technologies that can be used to deliver broadband. If FTTH or even fiber/coax are the only “future-proof” technologies that can be utilized, the cost of deploying broadband to the last two percent of the population might not be the \$40 billion estimated by the FCC in 2017, but possibly \$400 billion or higher. If the “cost” of layering on such requirements means that the last two percent of the population *never* gets broadband, then we should change those requirements.

Moreover, contrary to the arguments of some, as noted above, there is ample evidence that even at the height of the pandemic, the vast majority of users didn’t require anything close to the same upload speed as download speed. As one report noted:

Even multiple people in a household sharing an internet connection are unlikely to use 100/100. In principle, you could have ten kids pretending to do Zoom school but actually doing TikToks while you’re in the other room pretending to work but actually watching Netflix, and still not run out of bandwidth.<sup>30</sup>

NTIA should be circumspect, therefore, in promulgating any requirements beyond the statutory requirement of 100/20 Mbps. As with so many other issues, it is better to allow the market to dictate what consumers want (and are willing to pay for), rather than the government dictating what broadband providers should offer. For example, if one looks at the FCC Form 477 data, it is clear that many consumers do not sign up for the fastest broadband package available, simply because such ultra-high speed packages cost more than

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<sup>30</sup> *You’ve Been Served: Defining Broadband as 100/100 is not 100*, TECHNOLOGY POLICY INSTITUTE (Mar. 29, 2021), <https://techpolicyinstitute.medium.com/youve-been-served-defining-broadband-as-100-100-is-not-5eefcb50905a>. See also Deborah Collier, *The Asymmetrical Consequences of Symmetrical Speeds*, CITIZENS AGAINST GOVERNMENT WASTE (Mar. 25, 2021), <https://www.cagw.org/thewastewatcher/asymmetrical-consequences-symmetrical-speeds> (“If Congress or the Federal Communications Commission (FCC) were to arbitrarily and capriciously set a standard for data download and upload speeds to a symmetrical 100/100 Mbps, it would fly in the face of the way consumers now use the internet and create an even greater divide between those who have and those who do not have internet access. For example, service providers will be required to change their service to existing customers at the expense of those who remain without available service.”).

consumers are willing to pay. Is NTIA suggesting that we force consumers to pay for speeds that they might not choose otherwise because of cost? Again, the market should allow consumers to decide what speeds they are willing to pay for.<sup>31</sup>

**Question 16. Broadband deployment projects can take months or years to complete. As a result, there are numerous areas where an entity has made commitments to deploy service—using its own funding, government funding, or a combination of the two—but in which service has not yet been deployed. How should NTIA treat prior buildout commitments that are not reflected in the updated FCC maps because the projects themselves are not yet complete? What risks should be mitigated in considering these areas as “served” in the goal to connect all Americans to reliable, affordable, highspeed broadband?**

All areas for which federal funding already has been committed, or for which private carriers have already committed to deployment, should be considered “served” for purposes of allocating BEAD funding. This would include all RDOF areas. Moreover, NTIA should not allow any provider to “double dip” by participating in two programs simultaneously to deliver broadband to the same area. For example, one could imagine a reverse-auction system whereby a carrier, which had already received a commitment from a bank or investors to build out, would then be able to win with a very low bid, effectively “sweetening” its own pot by buying down the amount they would need to borrow for the construction. Applicants should be required to disclose not only any other government funding applicable to the areas covered by the application, but also any existing commitments from private lenders to build out an area. Having the government fund for free what private investors would already support through arms-length transactions simply wastes taxpayer money.

**Question 17. Ten percent of total BEAD funding is reserved for distribution based on how many unserved locations within a state or territory are also locations in which the cost to deploy service is higher than the nationwide average. The Bipartisan Infrastructure Law provides that, in calculating the cost of deployment, NTIA should consider factors such as the area’s remoteness, population density,**

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<sup>31</sup> *Industry Data*, NCTA, <https://www.ncta.com/industry-data/98-decrease-in-price-per-megabit#> (last visited Feb. 4, 2022).

**topography, poverty rate, or “any other factor identified by the Assistant Secretary, in consultation with the [FCC], that contributes to the higher cost of deploying broadband service in the area.” BIL § 60102(a)(2)(G). What additional factors, if any, should NTIA consider in determining what constitutes a “high-cost area”?**

One particular factor that significantly escalates deployment costs higher is whether the area on tribal lands. There is substantial evidence as to the additional costs necessary to deploy broadband on tribal lands for a variety of reasons, including the fact that tribes do not own their own lands, as well as the multi-layered approval process for rights-of-way and other regulatory approvals.<sup>32</sup>

There is also an “East Cost Bias” regarding topography. Those who have little time in the Mountain West have little appreciation for how difficult it is to traverse such lands, let alone try and deploy infrastructure in such places. Harsh winter conditions often preclude building for many months out of the year, and just getting construction equipment into many areas is exponentially more expensive than in low-lying and plains areas of the country. TechFreedom urges NTIA to take such challenges better into account in awarding funding. Indeed, the ten percent set-aside in the BIL appears to be totally inadequate, given that many of the two percent of Americans hardest to reach may reside in these topographically challenging places. NTIA should consider weighing this factor more heavily outside the ten percent set aside applications.

**Question 22. The Bipartisan Infrastructure Law requires that BEAD funding recipients offer at least one low-cost broadband option and directs NTIA to determine which subscribers are eligible for that low-cost option. BIL § 60102(h)(5)(A). How should NTIA define the term “eligible subscriber?” In other words, what factors should qualify an individual or household for a low-cost broadband option?**

**Question 23. Under the Bipartisan Infrastructure Law, states and territories are charged with developing low-cost broadband service**

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<sup>32</sup> See NATIVE NATIONS COMM’S TASK FORCE, IMPROVING AND INCREASING BROADBAND DEPLOYMENT ON TRIBAL LANDS (2019), [https://www.fcc.gov/sites/default/files/nnctf\\_tribal\\_broadband\\_report.pdf](https://www.fcc.gov/sites/default/files/nnctf_tribal_broadband_report.pdf) (“The Commission has noted that the remote and often isolated nature of these areas, often combined with challenging terrain and lower incomes, increases the costs of network deployment and entry and reduces the profitability of providing service respectively.”).

**options in consultation with NTIA and broadband providers interested in receiving funding within the state. BIL § 60102(h)(5)(B). What factors should NTIA consider in guiding the states in design of these programs to achieve this goal? Should NTIA define a baseline standard for the “low-cost broadband service option” to encourage states/ territories to adopt similar or identical definitions and to reduce the administrative costs associated with requiring providers to offer disparate plans in each state and territory? What are the benefits and risks, if any, of such an approach?**

We address these two questions together. There is no need to “reinvent the wheel.” The FCC’s Lifeline, EBB, and ACP programs already have mechanisms to determine eligibility for subsidies.<sup>33</sup> The BEAD program should not invent new systems for determining eligibility, but rather tap into the well-established mechanisms adopted by the FCC and implemented by USAC through the National Verifier program.<sup>34</sup> Establishing different criteria, or eligibility mechanism, will be the height of bureaucratic wastefulness.<sup>35</sup> Again, if the goal is to close the Digital Divide, and not just spend money spinning up new programs that create thousands of new government jobs, then existing eligibility metrics and tracking mechanisms should be leveraged.

**Question 24. Affordability is a key objective of the Bipartisan Infrastructure Law’s broadband programs. What factors should be**

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<sup>33</sup> See *Affordable Connectivity Program*, FCC 22-2 ¶ 22 (released January 21, 2022) (“Consistent with the EBB Program and the Consolidated Appropriations Act’s provision allowing us to use USAC’s systems and services to implement the Affordable Connectivity Program, we find that participating providers will be required to use certain USAC systems, such as the LCS, NLAD, and RAD, for program administration and will be permitted to use the National Verifier to determine household eligibility.”).

<sup>34</sup> See *National Verifier (NV)*, UNIVERSAL SERVICE ADMINISTRATIVE CO., <https://www.usac.org/lifeline/national-verifier/> (last visited Feb. 4, 2022).

<sup>35</sup> See Dylan Matthews, *Study: The U.S. government has way too many overlapping programs*, WASHINGTON POST (Dec. 10, 2012), <https://www.washingtonpost.com/news/wonk/wp/2012/12/10/study-the-government-has-way-too-many-overlapping-programs/> (discussing the dangers of layering on program after program and the “kludgeocracy” of confusion it creates. “It’s no secret that the federal government can be a complicated mess. For every given problem, there are often several, if not dozens, of programs intended to tackle it. There isn’t just one health care program -- there are Medicaid, Medicare, SCHIP the Affordable Care Act insurance subsidies, the employer insurance deduction, etc. There isn’t just one higher education subsidy -- there are the American Opportunity credit, Pell grants, Perkins loans, Stafford loans, etc. And that’s not even every federal program that serves those two sectors.”).

## **considered in the deployment of BEAD funds to help drive affordability beyond the low-cost option?**

We talked above about the cost of requiring faster speeds and “future proof” networks to be built. Those capabilities cost money in both CAPEX and OPEX funding to build and maintain. The more the government demands from providers in order to secure government grants, the more broadband costs. This equation is clearly evident today: the vast majority of consumers with access to gigabit service do not purchase this package, because it simply costs too much compared to the actual needs of consumers, who are pretty good at figuring out such things. For example, NTCA reported in 2020 that while 45.1 percent of customers to NTCA member networks had access to gigabit speed packages, only 7.9 percent actually subscribed.<sup>36</sup> Having the government step in and tinker the levers of normal markets inevitably fails. As the New York District Court Judge found in enjoining New York’s Affordable Broadband Act:

Plaintiffs’ declarants aver, and Defendant does not dispute, that many providers will furnish broadband service at ABA-mandated rates at a loss, meaning every “new customer” who takes advantage of the offer pushes a provider closer to (if not deeper in) the red.<sup>37</sup>

The real danger is that existing broadband providers with long histories of investing in broadband (\$1.9 trillion in the past 26 years), when faced with speed requirements matched with price caps in exchange for receiving federal funding, may well “do the math” and pass on bidding for the BEAD funds, leaving only inexperienced, or start-up companies with no track record of providing reliable broadband service to the public.<sup>38</sup> Consumers in these

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<sup>36</sup> *Broadband/Internet Availability Survey Report*, NTCA, the Rural Broadband Association, December 2020, <https://www.ntca.org/sites/default/files/documents/2020-12/2020%20Broadband%20Survey%20Report.pdf>.

<sup>37</sup> *New York State Telecomm. Assoc. v. James*, 2:21-cv-2389 at 12 (E.D.N.Y. 2021).

<sup>38</sup> One need look no further than the FCC’s RDOF auction, where the biggest winner was LTD Broadband LLC, a wireless internet service provider (WISP), which initially filed winning reverse-auction bids to receive \$1.3 billion to provide FTTH service to 528,000 locations across 15 states. A small rural provider, many questioned whether the company could pivot so quickly to build that much fiber in 15 states. “Notice that LTD only qualified to bid to build fiber at the gigabit tier. They do not have permission to substitute wireless, from what I (and everyone else I have talked to) understand. OK, so what? Assume that LTD will just build fiber. Cooperative Network Solutions has published a map of the winners. These are high cost areas that were bid so long ago that successful fiber network operators in the adjacent areas decided the subsidies were too low for them. Somehow LTD is going to get financing and the expertise to build these areas all out with lower

areas will lose out on broadband service they might have received and taxpayers everywhere will see their tax dollars wasted.

Rather, affordability needs to be addressed through programs such as Lifeline and the ACP program, which are already in place and designed to provide subsidies to qualified individuals who cannot afford the level of broadband service they need.

**Question 32. Middle-mile infrastructure is essential to American connectivity. Lack of affordable middle-mile access can have a substantial impact on the retail prices charged for broadband services. How should the Assistant Secretary ensure that middle-mile investments are appropriately targeted to areas where middle-mile service is non-existent or relatively expensive? To what extent should middle-mile grants be targeted to areas in which middle-mile facilities exist but cannot economically be utilized by providers that do not own them? Should NTIA target middle-mile funds to areas where interconnection and backhaul costs are impacted by a lack of competition or other high-cost factors?**

**Question 34. What requirements, if any, should NTIA impose on federally funded middle-mile projects with respect to the placement of splice points and access to those splice points? Should NTIA impose other requirements regarding the location or locations at which a middle-mile grantee must allow interconnection by other providers?**

We answer these two questions together. TechFreedom has long argued that the best use of government funding is for the middle-mile segment of broadband networks.<sup>39</sup> These long-

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subsidies than what local folks could do? Seems improbable.” Ann Treacy, *LTD Broadband is big winner in MN – that’s different*, BLANDIN ON BROADBAND (Dec. 11, 2020), <https://blandinonbroadband.org/2020/12/11/ltd-broadband-is-big-winner-in-mn-thats-different/>. LTD Broadband has since seen the FCC revoke its awards in two separate orders, first in California, Kansas and Oklahoma, see *The Rural Digital Opportunity Fund, Auction 904*, Order, DA 21-908 (released July 26, 2021), then in North Dakota, Nebraska, and Iowa, see *The Rural Digital Opportunity Fund, Auction 904*, Order, DA 21-1311 (released Oct. 20, 2021).

<sup>39</sup> See *‘Broadband Opportunity’ Report Misses Opportunity to Strengthen Smart Infrastructure Agenda*, TECHFREEDOM (Sept. 15, 2015), <https://techfreedom.org/broadband-opportunity-report-misses-opportunity/> (“Installing fiber-ready tubes could allow the Federal government to encourage private investment into ‘middle mile’ networks, making it cheaper to connect small towns and rural cell phone towers across America with high-speed fiber backbones. For a penny on the dollar of the cost of digging up a road anyway, Dig Once

haul backbones are a critical component to our overall network structure, yet are often the forgotten segment. While we rush to think about last-mile deployments, we must also consider that the data coming to and from the end-user connection has to go somewhere to be able to flow into the Internet, the “network of networks.” For decades we’ve relied on upgrades to the traditional telephone networks, and their traditional telephone routes (some dating back to 19<sup>th</sup> Century telegraph lines), to connect homes to the Internet. And there is a reason why 19<sup>th</sup> Century telegraph line builders put their wires where they did – ease of construction. Building middle-mile infrastructure in harder to reach and more topographically challenging areas is far more challenging when you consider that the middle-mile infrastructure requires high-capacity data transport that only certain technologies can reliably provide. Funding the middle-mile segment is at least as important as funding projects that deliver broadband to the home. Unfortunately, in the same way that end-user broadband deployment maps are inaccurate and incomplete, the true map of middle mile infrastructure is also lacking. The FCC efforts in this regard remain stymied by a number of factors, including private carriers not wishing to disclose the full extent of their middle-mile infrastructure for competitive reasons, and complex interconnection agreements and transport payments.<sup>40</sup> NTIA thus needs to work closely with the FCC to develop middle-mile maps that mirror the overall broadband deployment maps that have been so elusive. This must include an honest assessment of “dark fiber,” existing fiber that currently sits unused.<sup>41</sup>

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conduits could transform the economics of the broadband market.”); *FCC’s Pai Proposes ‘Gigabit Opportunity Zones’*, TECHFREEDOM (Sept. 13, 2016), <https://techfreedom.org/fccs-pai-proposes-gigabit-opportunity-zones/> (“Many low-income people live in small towns too remote to have a fiber connection between the town and the rest of the Internet. For them, the problem is the ‘middle mile,’ and bridging that divide means easing deployment across real-world bridges and highways. Chairman Wheeler’s fixation on gigabit service has distracted from these very real problems.”).

<sup>40</sup> See, e.g., FED. COMM’NS COMM’N, *THE BROADBAND AVAILABILITY GAP*, OBI TECHNICAL PAPER NO. 1 at 115 (2010), <https://transition.fcc.gov/national-broadband-plan/broadband-availability-gap-paper.pdf> (“Since the cost estimate is distance-dependent, calculating the cost requires making an assumption about the routing used to connect LEC offices as will be discussed below. This same approach—mapping known fiber locations and their logical hierarchy to calculate the distances and costs for providing middle-mile service—could apply equally well to cable headends, or CAP, or IXC POPs given thorough information on their locations. However, publically [sic] available information on exact locations of cable headends, private IXC fiber POPs and other entity fiber node locations is limited; thus, the focus exclusively on ILEC fiber suggests that this analysis will significantly underestimate the presence of fiber around the country.”).

<sup>41</sup> See Sean Buckley, *AT&T, Verizon and competitive providers remain divided on dark fiber, but interest is rising*, FIERCE TELECOM (Apr. 26, 2016), <https://www.fiercetelecom.com/special-report/at-t-verizon-and->

Funding should first go to bringing middle-mile infrastructure to areas where it does not exist, or where lack of capacity results in above-market rates. Building new government-funded middle-mile in areas where sufficient (yet expensive) middle-mile exists has two dangers. First, it siphons the limited funding available for middle-mile deployments away from areas that need it most and place it in the hands of groups which want to compete with existing backhaul carriers without expending the CAPEX necessary to build. Second, if a new middle-mile provider suddenly shows up and can undercut an existing carrier's prices because its CAPEX requirements have been taken care of by the government, the existing carrier may ultimately not be able to remain in business, resulting in nothing more than supplanting commercial infrastructure with taxpayer-funded infrastructure for no net gain.

The grant application for middle-mile funding, therefore, should require an assessment of existing middle-mile infrastructure availability as well as actual cost structures. The existence and availability of dark fiber should be considered, and every effort should be made to utilize existing infrastructure already in the ground.

Further, any grant recipient of middle-mile funding should commit to placing all facilities built with the money into service. It is possible, for instance that a grant recipient could spend the government money to build fiber conduit, use their own funding to fill it with dark fiber, and later sell or lease that fiber outside the rules adopted by NTIA. NTIA should prohibit such practices.

#### **IV. Conclusion**

The BIL and other federal funding projects represent a once-in-a-generation (if not lifetime) influx of money into the broadband ecosystem. If not administered properly, the country will find that, for all the money spent, little progress has been made in actually closing the Digital Divide and the most that has been accomplished is replacing private networks with those either run by the government or totally dependent on taxpayers. The amount of money already committed to broadband deployment should have already closed the Divide, yet the

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competitive-providers-remain-divided-dark-fiber-but-interest-rising (“Dark fiber may be remembered as a product of the .com age where competitive providers built out networks speculatively, but it's clearly back in telecom style. However, unlike the late 1990s build-it-and-they-will-come drive, dark fiber demand is today being driven by new service drivers – small cell backhaul, data center connectivity and the FCC's E-Rate program.”).

number of people without access to broadband has been reduced only slightly over the past half-decade. The key metric that NTIA cannot lose sight of is how many new Americans have gained access to broadband as a result of the BIL money. Any other metric is largely irrelevant and/or a waste of taxpayer money. As long as NTIA keeps its bureaucratic “eye” on this “prize,” then its programs can be judged a success. If, in another five years, there is still a significant Digital Divide, then NTIA has failed in its core mission, and all it has done is spend taxpayer money for the sake of spending money.

Respectfully submitted,  
\_\_\_\_\_/s/\_\_\_\_\_  
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