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**Comments filed with the National Telecommunications and Information
Administration on “Infrastructure Investment and Jobs Act Implementation”**

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In Re:
Infrastructure Investment and
Jobs Act Implementation

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Comments of

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Executive Summary

The Bipartisan Infrastructure Law creates a unique opportunity to make significant strides in closing digital divides. We offer these comments to help increase the chances that funds are distributed and used efficiently and that we learn more about what types of programs are effective and which are not.

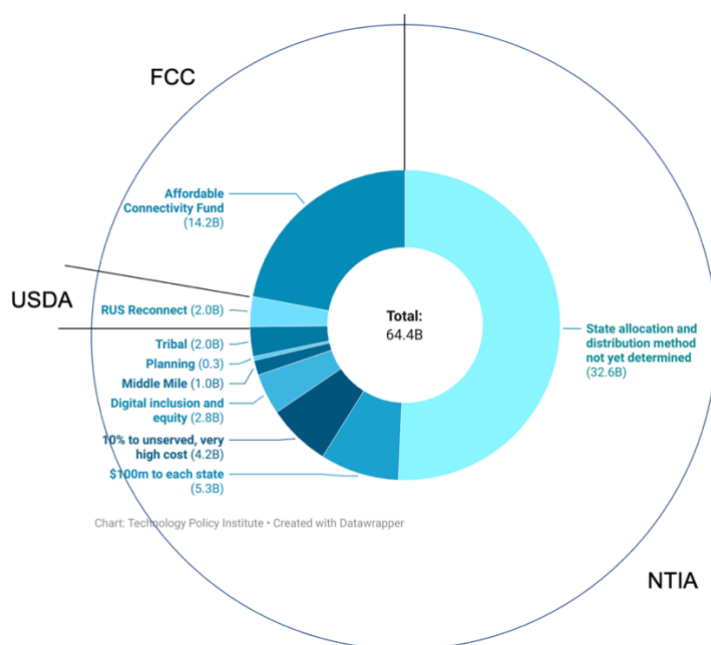
We recommend that NTIA:

- Offer a platform that states could choose to use off-the-shelf to distribute funds. Using it would create a safe harbor for states by coming pre-approved and would let them avoid the costs involved in designing their own programs from scratch.
- Require states to make public all information on applications—both funded and unfunded.
- Conduct monthly progress reports based on objective measures that allow cross-state comparisons.
- In conjunction with state broadband offices, design experiments to learn more about how different types of programs affect low-income broadband adoption and use. The lessons from these experiments should allow NTIA to effectively spend money from the digital inclusion and equity fund.
- Serve as an intermediary to reduce transaction costs given the large increase in demand for workers, equipment, poles, and other inputs.

I. Introduction

The Infrastructure Investment and Jobs Act (IIJA), or Bipartisan Infrastructure Law (BIL), requires the National Telecommunications and Information Administration (NTIA) to oversee the distribution of \$48 billion of the \$65 billion total allocated for broadband buildout and adoption. Of that, \$42.45 billion will go for infrastructure investments through the Broadband Equity, Access, and Development (BEAD) program, \$2.75 billion for programs targeted at digital equity and inclusion, \$2 billion for investments in tribal nations, and \$1 billion for middle mile investments. Figure 1 shows how the law allocates BIL broadband funds as described in NTIA’s January 10 notice.¹

Figure 1: Distribution of BIL Broadband Funds²



NTIA asks several questions related to how the money should be spent, summed up in its opening question: “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?”³

¹ Infrastructure Investment and Jobs Act Implementation, 87 Fed. Reg. 1122, Jan. 10, 2021, <https://www.ntia.doc.gov/files/ntia/publications/fr-iiija-broadband-rfc.pdf>.

² The figure shows the \$100 million guaranteed to each state and the 10% in each state “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” as separate from the rest of the money states will distribute. *See* 87 Fed. Reg. 1122, at 1125, Section III.17. The states presumably will not necessarily treat these as separate pots of money, meaning that it may not be strictly correct to show them separately in the figure. We show it this way to highlight how the law treats the funds.

³ 87 Fed. Reg. 1122, at 1123, Section III.1.

Experience and substantial research show that the infrastructure funds should be distributed based on clear, quantifiable, and coherently comparable criteria to maximize the program's benefits.

While the BIL is new, and many states do not have much experience in allocating such large amounts of money for broadband, every state has extensive experience with procuring other goods and services. Broadband looms large in policy and popular discussion as it should, given its importance to so many aspects of our daily lives. But that does not make it special from a procurement point of view. While the details of the states' plans will matter, as a foundational principle, well-established procurement standards should apply to broadband just as to any other government purchase.

Some object to a competitive bidding approach for BIL funds, pointing to perceived problems with the Federal Communications Commission's (FCC's) recent Rural Development Opportunity Fund (RDOF) auction. Those problems had to do with eligibility requirements, inaccurate data on unserved areas, and the government absorbing too much of the failure risk—all of which are unrelated to competitive bidding. They must be addressed no matter how the money is distributed, whether through grant review or procurement requests.

To determine the effectiveness of BIL funds and to improve future funding programs, NTIA should require transparency on all aspects of the procurement process and subsequent reporting. To do this, NTIA should require states to make all applications—not just funded applications—public and comparable across the states. NTIA should release regular progress reports that track and compare buildout across the states. To better identify the effects of the subsidies, NTIA should also track broadband in unfunded areas to have a baseline for comparing program effectiveness.

NTIA should encourage the experimentation that state initiatives can enable. This experimentation should extend to affordability and the digital inclusion and equity portion of the BIL. It can evaluate the effectiveness of different programs by designing experiments that enable policymakers to identify which interventions are effective and which are not.

NTIA should offer a one-stop shop to the states which consists of a basic procurement structure to distribute funds. The agency can design and offer a simple selection mechanism that states can use as a “safe harbor” that would allow the funding process to begin without needing individualized review by NTIA staff or large process expenditures by each state.

Finally, NTIA should provide assistance to state offices and providers to try to reduce the transaction costs that are likely to arise with billions of dollars of deployment.

II. Structure BEAD Grants as Competitive Procurements

State governments use bidding methods in nearly every kind of procurement besides broadband. These processes have clear guidelines on how to select the entity that will provide whatever good or service the state is buying. The National Association of State Procurement Officials, for example, “supports implementing the American Bar Association (ABA) Model Procurement

Code...⁴ The ABA model code advocates competitive sealed bidding as the default method of public procurement.⁵ The ABA report even describes criteria necessary for a fair and rigorous competitive sealed bidding process.⁶

Competitive procurements have been used around the world for decades to provide universal service in telecommunications.⁷ In the United States, the FCC has used competitive procurements to award broadband subsidies (under both Democratic and Republican administrations).

Furthermore, recent history has shown that subjective evaluation through traditional grant applications and reviewer evaluations is not particularly effective. In 2009, the American Recovery and Reinvestment Act [allocated \\$7 billion for broadband](#) through the Broadband Technology Opportunities Program (BTOP).⁸ A [group of 71 economists](#), including Nobel prize winners (and two-thirds of us),⁹ suggested competitive bidding as the best tool to allocate

⁴ 2020 Survey of State Procurement Practices, National Association of State Procurement Officials, https://www.naspo.org/wp-content/uploads/2021/02/Final_2020_State_Practices_Survey_Report-1.pdf.

⁵ American Bar Association, 2007 Model Code for Public Infrastructure Procurement (MC PIP), Aug. 2007, https://www.americanbar.org/content/dam/aba/administrative/public_contract_law/pcl-model-01-2007-code-public-infrastructure-procurement.pdf. The report notes that procurement officials should have flexibility to choose other methods when necessary, but broadband infrastructure does not appear to meet the conditions for choosing something other than competitive bidding. Specifically, the guidelines allow for flexibility for small purchases, where the cost of running a competitive bidding process would not justify the benefits, and for instances where only one supplier exists. The definition of “small purchase” varies by state, but it is likely to be less than the cost of any broadband build. The State of California, for example, defines a small purchase as one not more than \$100,000, while the State of Mississippi defines a small purchase as one up to \$50,000. See New Uniform Guidance Procurement Standards For Federal Research and Grant Purchases, https://financial.ucsc.edu/Pages/PS_Uniform_Guidance.aspx#:~:text=Small%20purchase%3A%20Includes%20purchases%20up,%24100%2C000%20per%20UCOP%20BUS%2D43, citing Office of Management and Budget, Memorandum for Chief Financial Officers and Heads of Small Executive Agencies, M-18-18, June 20, 2018, <https://www.whitehouse.gov/wp-content/uploads/2018/06/M-18-18.pdf> (explaining statutory changes in the NDAA 2018), and State of Mississippi, Mississippi Procurement Manual, Office of Purchasing, Travel and Fleet Management, <https://www.dfa.ms.gov/media/3990/procurementmanual.pdf>.

⁶ The sealed bid process is one possible objective method that is commonly used in procurement of construction projects. Other objective methods could be used, such as multiple round reverse auctions.

⁷ Scott Wallsten, “Reverse Auctions and Universal Telecommunications Service: Lessons from Global Experience,” *Federal Communications Law Journal* 61, no. 2 (Mar. 2009).

⁸ Government Accountability Office, “Recovery Act: Further Opportunities Exist to Strengthen Oversight of Broadband Stimulus Programs,” GAO-10-823, Aug. 4, 2010, <https://www.gao.gov/products/gao-10-823>.

⁹ Baker, Jonathan ; Baumol, William; Arrow, Kenneth; Athey, Susan; Bazelon, Coleman; Brennan, Timothy; Bresnahan, Timothy; Bulow, Jeremy; Che, Yeon-Koo; Cramton, Peter; Akerberg, Daniel; Alleman, James; Crawford, Gregory; DeMarzo, Peter; Faulhaber, Gerald; Fox, Jeremy; Gale, Ian; Goeree, Jacob; Goldfarb, Brent; Greenstein, Shane; Hahn, Robert; Hall, Robert; Hanson, Ward; Harris, Barry; Harris, Robert; Hauge, Janice; Hausman, Jerry; Hazlett, Thomas; Hendricks, Kenneth; Hudson, Heather; Jamison, Mark; Kagel, John; Kahn, Alfred; Kremer, Ilan; Krishna, Vijay; Lehr, William; Lenard, Thomas; Levin, Jonathan; Lien, Yuanchuan; Mayo, John; McAdams, David; Milgrom, Paul; Noll, Roger; Owen, Bruce; Plott, Charles; Porter, Robert; Reny, Philip; Riordan, Michael; Salant, David; Savage, Scott; Samuelson, William; Schmalensee, Richard; Schwartz, Marius; Skrzypacz, Andrzej; Smith, Vernon; Vincent, Daniel; Waldfogel, Joel; Wallsten, Scott; Weber, Robert; Wimmer, Bradley; Woroch, Glenn; Ye, Lixin; Hayes, John; and Rosston, Gregory, “Comments of 71 Concerned Economists: Using Procurement Auctions to Allocate Broadband Stimulus Grants” (2009). *Congressional and Other Testimony*, 16, https://digitalcommons.wcl.american.edu/pub_disc_cong/16.

subsidies, just like a state gets bids for a project or a homeowner might get competitive bids to repair a roof.¹⁰

Unfortunately, the NTIA ignored that advice and instead asked for grant submissions, each of which were [hand-reviewed](#) by ad-hoc assignments of volunteer experts.¹¹ The grant applications consisted of hundreds of pages of narrative, the scoring criteria was qualitative, and de minimis attention was given to price comparisons of potential suppliers. The result was an incoherent set of criteria applied inconsistently across proposals, with no rigorous way of comparing one proposal to another. [One recent study](#) found that the grant review method was barely better than random selection.¹²

a. Concerns with the RDOF Auction are Unrelated to Competitive Bidding

While very few question the success of auctions as a way for the government to allocate spectrum, there have been complaints about the outcome of the FCC's recent RDOF auction. Dissatisfaction with the RDOF auction has raised the possibility that NTIA could backtrack to a more subjective approach of qualitative selection of broadband grants, rather than implementing competitive bidding for the BIL funds. Yet economists and advocates of universal service subsidies know that subjective reviews are likely to yield incoherent and arbitrary results.

The FCC's RDOF problems had nothing to do with the reverse auction process. The mistakes that worry people had more to do with eligibility criteria and the quality of broadband data used to determine unserved areas. Concerns with RDOF were that the auction allowed subsidies to go to areas that already had broadband, along with poor bidder screening of providers who entered the auction. Any subsidy program, not just reverse auctions, is vulnerable to these concerns.

Ensuring that *any* grant distribution program or procurement process does not suffer from these problems requires two fixes.

First, states need comprehensive, complete, and accurate knowledge of which areas do not have service. Achieving this objective requires detailed data and careful analysis. The BIL relies upon the FCC's new broadband data for its planned distribution of subsidy money. However, even the FCC's new data will inevitably contain errors. All datasets do. While waiting for better data, we

¹⁰ Competitive bidding for telecommunications services has been a major contributor to massive gains in consumer well-being. The FCC has run nearly 100 spectrum auctions and [raised \\$200 billion for the Treasury](#) and the Nobel Prize committee awarded the [2020 Prize in Economics to Paul Milgrom and Robert Wilson](#) in part for their work in helping to design and refine the auctions. We should not dismiss this vast experience and proven success. See FCC Auctions Summary, Completed Spectrum Auctions, <https://www.fcc.gov/auctions-summary>; Royal Swedish Academy of Sciences, Press Release: The Prize in Economic Sciences 2020, Oct. 12, 2020, <https://www.nobelprize.org/prizes/economic-sciences/2020/press-release/>.

¹¹ Gregory Rosston and Scott Wallsten, "The Broadband Stimulus, A Rural Boondoggle and Missed Opportunity," Nov. 2013, *I/S: A Journal of Law and Policy for the Information Society*, Vol. 9, No. 3 (2014), 453-470, https://kb.osu.edu/bitstream/handle/1811/73343/ISJLP_V9N3_453.pdf.

¹² Sarah Oh, "Using Reverse Auctions to Stretch Broadband Subsidy Dollars: Lessons from the Recovery Act of 2009," Jan. 2021, *Ohio State Technology Law Journal* (forthcoming 2022) <https://techpolicyinstitute.org/wp-content/uploads/2021/03/Oh-Reverse-Auctions-Lessons-from-BTOP-Jan-2021.pdf>.

encourage states to use insights that can come from combining multiple datasets to help overcome errors with any single dataset.¹³

Second, it is crucial to increase the chances that subsidy recipients can and will provide the service they promise. One way to do that, as [we argued in comments to the FCC](#),¹⁴ is for internet service providers (ISPs) to bear more of the risk of their proposals since they have the most knowledge and control of performance. When bidders compete for a subsidy, they should bear the risk of missing milestones, not taxpayers. For example, the government could provide the promised subsidy only after the ISP actually provides the service and face a penalty for failing to deliver. This setup creates a market test and screening process. Any provider that can provide the service it promises and wins a subsidy should be able to find financing given the guarantee of the subsidy payment when the system is turned on.

Shifting the risk in this way has many benefits aside from reducing the chances that the government pays but gets nothing, or much less than expected, in return. Most importantly, it allows states to more easily dismiss the self-serving arguments made by incumbents to disqualify competitors and reduce competition. Shifting the risk of non-performance to the service provider, who has both more information and also more ability to affect performance, allows a state to be more technology-neutral in its grant process. A firm that uses a new technology to deliver service could participate, but would get its subsidy only if it delivers the service that it claims it can provide.

In short, let new technologies and new firms compete for contracts to serve unserved areas, but include provisions that weed out fly-by-night operations. Put more of the risk involved in building and operating a network on the new providers than on taxpayers.

b. Use Weights for Broadband Characteristics to Compare Proposals

NTIA asks how it can take into account “network reliability and availability, cybersecurity, resiliency, latency, or other service quality features and metrics.... ensure that projects will provide sustainable service, ...best serve unserved and underserved communities, ...provide accessible and affordable broadband in historically disconnected communities, and ... benefit from ongoing investment from the network provider over time?”¹⁵

¹³ We recognize that on this point we are not entirely objective, as the Technology Policy Institute has its own mapping tool at <https://tpibroadband.com>. See <https://broadband.tools> for more information on broadband datasets that power TPI’s Broadband Map. The combination of datasets with statistical methods can mitigate the weaknesses of missing data from any particular data source. For more on the benefits of combining datasets, see Scott Wallsten, “TPI’s Broadband Connectivity Index,” Sept. 16, 2021,

<https://techpolicyinstitute.org/publications/broadband/map/broadband-connectivity-index/>, and Scott Wallsten, “Using An Index to Target Broadband Subsidies: A Florida Example,” Oct. 3, 2021, <https://techpolicyinstitute.org/publications/broadband/map/florida-connectivity-index/>.

¹⁴ *In the Matter of Rural Digital Opportunity Fund Auction (Auction 904), Rural Digital Opportunity Fund, Connect America Fund*, Reply Comments of Gregory Rosston and Scott Wallsten, Apr. 10, 2020,

<https://techpolicyinstitute.org/wp-content/uploads/2020/04/Rosston-Wallsten-WC-Docket-No.-19-126.pdf>.

¹⁵ 87 Fed. Reg. 1122, at 1124, Section III.13.

These criteria are probably best thought of as an aspirational wish list since choosing among competing projects inevitably means making tradeoffs among criteria that are not entirely consistent with each other. For example, the most reliable and secure network possible would be more costly than a slightly less reliable network and therefore unable to cover as many households. A network that can be made available in a few months may be preferable to one that takes five years to build even if the longer timeline would result in a network with better service. In its recent auctions, the FCC assigned specific weights several criteria. Figure 2 shows the weights the FCC used.

Figure 2: FCC RDOF Weights¹⁶

Performance Tier	Speed	Monthly Usage Allowance	Weight
Minimum	≥ 25/3 Mbps	≥ 250 GB or U.S. average, whichever is higher	50
Baseline	≥ 50/5 Mbps	≥ 250 GB or U.S. average, whichever is higher	35
Above Baseline	≥ 100/20 Mbps	≥ 2 TB	20
Gigabit	≥ 1 Gbps/500 Mbps	≥ 2 TB	0

Latency	Requirement	Weight
Low Latency	≤ 100 ms	0
High Latency	≤ 750 ms & MOS ≥ 4	40

A key question is how to derive the relevant weights or scores. States may be tempted to use qualitative scoring methods that are ultimately based on reviewers’ subjective personal opinions about a proposal rather than objective metrics that reflect overall policy goals. They should avoid that temptation. Because everyone derives their opinions differently—in this example, reviewers are unlikely to have the same definition of what constitutes a superior grant proposal—and thinks about relative numbers differently, such scores will be almost meaningless. Instead, pre-determined weights should be used and overall scores based on standard, measurable criteria.

Those weights should be structured in a way that reflects how much consumers value one priority relative to another and policy goals. Weights should include time discounting because broadband service available tomorrow is worth more than broadband service provided five years from now. Projects that can provide service sooner should receive higher weights, all else equal.

Weights should also allow the states to implement policy priorities of say, subsidizing service in unserved areas rather than overbuild projects in underserved areas.

¹⁶ FCC Fact Sheet, Rural Digital Opportunity Fund, Jan. 9, 2020, <https://docs.fcc.gov/public/attachments/DOC-361785A1.pdf>, ¶ 39.

In short, states will need a coherent method of making tradeoffs based on consumer preferences. Assigning specific weights to each performance factor in advance of the evaluations can allow the grant-maker to make objective decisions about which project to fund. Avoiding this exercise—that is, not explicitly assigning weights to quantifiable factors—would make the selection process inherently and irreparably arbitrary.

c. Program Evaluation Via Accountability, Transparency, and Interstate Comparisons

One advantage of the states implementing their own plans is that comparisons of different approaches become possible. That is, as long as NTIA collects the right data, we will be able to see which approaches are working and which are not. Evaluation requires transparency not just of grant recipients, but also of the grantors. NTIA should require states to release to the public the application materials of all proposals, not just funded proposals. By publishing the data of only winning bids, the states would be missing valuable information on the bids that did not get awarded. No evaluation of selection mechanisms will be fully valid if data is available only for funded projects.

Data collection and public release of buildout proposals should be mandated from the beginning. In studies of the 2009 BTOP program, we found that if NTIA had collected better metrics from the proposed grants, we would have gleaned a much better understanding of the supply of broadband.¹⁷ NTIA could have better organized its data and released it, rather than a data dump of documents with large amounts of redacted and missing data.¹⁸ NTIA should require the states to publish spreadsheets with standard metrics on prices, quantities, and dimensions of broadband networks as proposed by suppliers and set forth in the scoring metrics.

NTIA should also reaffirm the responsibility of ISPs to submit deployment data to the FCC after buildout. Municipally run networks, in particular, tend to flout those requirements, making evaluation difficult. One study found that only 71 out of 528 municipal broadband networks reported required data to the FCC on Form 477.¹⁹ As far as we know, these networks are not in compliance with the data collection rules set by the FCC, leading to incomplete picture of broadband connectivity that further exacerbates efforts to subsidize more infrastructure where it is needed the most.

III. Affordability

The BIL includes significant funds to subsidize low-income broadband subscriptions through the Affordable Connectivity Program (ACP, née Emergency Broadband Benefit), which provides \$30/month plus a one-time subsidy for equipment. The ACP builds upon the pre-existing Lifeline program in the Universal Service Fund which provides \$9.25/month, which also serves

¹⁷ Gregory Rosston and Scott Wallsten, “The Broadband Stimulus, A Rural Boondoggle and Missed Opportunity,” Nov. 2013, *I/S: A Journal of Law and Policy for the Information Society*, Vol. 9, No. 3 (2014), 453-470, at 455, https://kb.osu.edu/bitstream/handle/1811/73343/ISJLP_V9N3_453.pdf.

¹⁸ Redactions should be rare in order to provide transparency in broadband deployment and buildout proposals.

¹⁹ Sarah Oh, “What Are the Economic Effects of Municipal Broadband?,” *TPRC47: The 47th Research Conference on Communication, Information and Internet Policy*, July 26, 2019, <https://ssrn.com/abstract=3426247> or <http://dx.doi.org/10.2139/ssrn.3426247>.

effectively as a voucher program that provides eligible households with discounts on broadband.²⁰ A household can receive both ACP and Lifeline benefits simultaneously, meaning eligible households can receive almost \$40/month for broadband.²¹ The co-existence of programs offered by service providers targeted at low-income households from \$10 to \$20/month means that broadband has become effectively free for large numbers of American households (Figure 3).

Figure 3: Monthly Price of Low-Income Broadband Plans Offered by ISPs and Available Subsidies²²

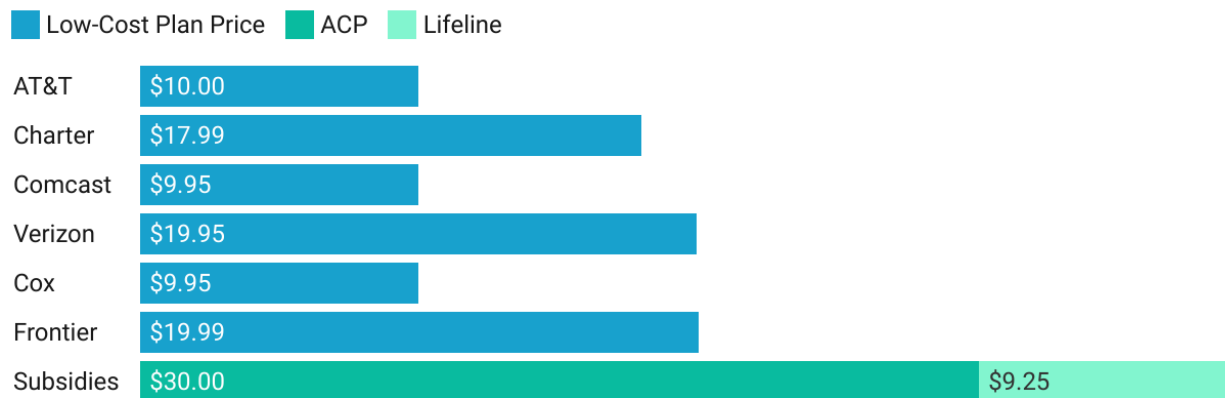


Chart: Technology Policy Institute • Source: Company websites; see footnote. • Created with Datawrapper

Even at a price of zero, many households do not subscribe, and we do not have a good understanding of why.²³ NTIA asks many questions related to low-income adoption whose answers we do not know empirically because the necessary research has not been done. NTIA asks,²⁴ for example,

- “What are the best practices NTIA should require of states in building Digital Equity Plans?”
- “What are the most effective digital equity and adoption interventions states should include in their digital equity plans and what evidence of outcomes exists for those solutions?”

²⁰ Current benefits include \$30/month for ACP (\$75/month on tribal lands) and \$9.25/month for Lifeline, while ACP also provides a one-time discount on equipment, <https://acpbenefit.org/>.

²¹ Digital Beat, “Introducing the Affordable Connectivity Program,” Jan. 21, 2022, Benton Foundation, <https://www.benton.org/blog/introducing-affordable-connectivity-program> (“Eligible households can participate in both the Lifeline program and Affordable Connectivity Program for the same or different services.”).

²² AT&T offers a \$10/month plan, <https://www.att.com/internet/access/>; Charter’s Internet Assist plan is \$17.99/month, <https://www.spectrum.com/policies/spectrum-broadband-disclosure>; Comcast’s Internet Essentials is \$9.95/month, <https://www.xfinity.com/support/articles/comcast-broadband-opportunity-program>; Frontier’s Fundamental Internet is \$19.99/month, <https://frontier.com/fundamental-internet>; Verizon offers \$20 off its plans for qualifying households, making one FiOS plan \$19.95/month, <https://www.verizon.com/info/low-income-internet/>; Cox offers a \$9.95/month plan, <https://www.cox.com/residential/internet/connect2compete.html>.

²³ We expect that the pandemic has increased demand for broadband, leaving a smaller number in this group than prior to the pandemic.

²⁴ 87 Fed. Reg. 1122, at 1125, Section III.25; *id.* at 1126, Section III.27; *id.* at 1125, Section III.22.

- “How can NTIA ensure that State Digital Equity Plans and the plans created by states and territories for the BEAD program are complementary, sequenced and integrated appropriately to address the goal of universal broadband access and adoption?”
- “[W]hat factors should qualify an individual or household for low-cost broadband option?”

Even these seemingly simple questions do not have robust studies providing answers. For example, we have little evidence on the effectiveness of different types of digital literacy classes.

NTIA could use the “digital inclusion and equity” funds to help states to set up experiments that could begin to answer some of these questions.

We recommend that NTIA require states to solicit proposals for experiments. The expertise burden would be shifted to bidders to design experiments as well as generate a larger number of options to explore. Well-designed experiments implemented by the states would yield a wealth of information about how best to help low-income people who do not subscribe.

Some may argue that such efforts could introduce time delay or that state broadband offices are not equipped to assess experiments. Yet, what other opportunity will arise for policymakers to set ambitious goals for learning about, discovering, and studying what works and what doesn’t work in broadband affordability programs? In addition, such experiments need not be expensive relative to the overall cost of the grant programs.

NTIA would end up creating a treasure trove of insights that would benefit policymakers concerned about the digital divide which would then, in turn, shape the design of future efforts to substantially solve the digital divide.

IV. Proposals to Help States Run Efficient Broadband Programs

Most states have never needed the institutions or capacity to distribute this much money for broadband. While they are in the process of gathering the necessary resources and experts to write and submit their state broadband plans for review by the NTIA, NTIA, in turn, should be focusing on ways to help the states increase the effectiveness of their efforts.

Three NTIA initiatives could help states navigate the Infrastructure Investment and Jobs Act (IIJA) process and lead to more cost-effective solutions.

First, it could develop and offer a simple procurement process that states could use without requiring any further NTIA approval. Second, it could facilitate interactions and collaborations between the states and between states and federal agencies to reduce duplication of efforts and promote institutional learning. Finally, NTIA should proactively identify and help solve potential bottlenecks related to the sheer scale of the effort. For example, ISPs will likely need access to more poles and rights-of-way than they ever have at a single point in time, creating opportunities for hold-ups and honest delays caused by the lack of resources necessary to process so many requests.

We discuss each of these below.

a. A One-Stop Shop and Safe Harbor: A Simple BEAD Procurement Platform

NTIA Administrator Alan Davidson [said that](#) he would like NTIA to be a “one-stop shop” for applicants who need help applying for funds.²⁵ A one-stop shop for the states to manage grant applicants could also be useful. Specifically, an off-the-shelf grant selection process designed by NTIA could save each state the cumbersome process of designing an appropriate one of its own from scratch. The details of a simple BEAD procurement platform would matter, so these comments should be considered a starting point, not a plan.

NTIA could design (and run, if it has the authority to do that) a standard competitive bidding process that states could use to award funds that has simplicity as its primary criterion. Indeed, many states lack experience distributing broadband subsidies. While most broadband providers may already be certified as eligible telecommunications carriers in the Universal Service Fund, some smaller providers may not. For providers new to USF and USAC requirements, NTIA could offer a streamlined process for eligibility certification—one that improves on the much-criticized approach the FCC used in the RDOF auction.

The starting point for a simple BEAD procurement platform would follow recommendations regarding competitive bids and weights as discussed above. NTIA could assign weights to certain objective criteria already developed by the FCC in the RDOF auction.²⁶

Auction design can become complicated when customized to avoid specific inefficiencies and a simple platform will need to consider ways of handling some of those issues. For example, winners of a simplified BEAD procurement process could be left with inefficient “swiss-cheese” territories—winning the right to subsidies in non-neighboring regions. One possible solution to this problem might be to allow providers to buy and sell the rights to provide service through secondary trading of subsidies and coverage responsibilities.²⁷

Although finalizing the details of NTIA’s standardized auction subsidy platform would require expert and public input, it could serve as a safe harbor for the states. If states chose to use the platform, states and NTIA would save on time and labor—many months of effort and staffing to monitor and review the intricacies of each state’s different broadband programs.

b. Facilitate Inter-State, State-NTIA, and State-FCC Collaborations

As discussed, many states have not had to manage broadband grant programs of this size before. It is likely to be inefficient for every state to build its own capacity to administer broadband-

²⁵ Jimm Phillips, “NTIA ‘One-Stop Shop’ for Help on IJJA Grants: Davidson,” Jan. 24, 2022, *Communications Daily*, <https://communicationsdaily.com/news/2022/01/24/NTIA-OneStop-Shop-for-Help-on-IJJA-Grants-Davidson-2201210083>.

²⁶ We would encourage the addition of time-to-service as an additional criterion.

²⁷ The FCC addressed this issue to some extent in the RDOF Auction with limited package bidding. *See* “Rural Digital Opportunity Fund Phase I Auction Scheduled for October 29, 2020; Notice and Filing Requirements and Other Procedures For Auction 904,” 35 FCC Rcd 6077 (7).

specific grant offices. NTIA could encourage states to collaborate with other states to combine efforts in designing broadband programs, helping to avoid waste and duplicative overhead efforts.

NTIA can facilitate efforts by the states to learn from the FCC, which has institutional knowledge and experience in distributing broadband subsidies. States should be allowed and encouraged to seek assistance from the Universal Service Administrative Company to use forms and audit checklists.

c. Help States Manage a Surge in Demand for Local Buildout Permits

Along with supply chain and labor constraints, we expect that there may be bottlenecks as providers attempt to get local buildout permits, rights-of-way, and pole attachment agreements.²⁸ Some of those bottlenecks will be due to the sheer scale of permitting and pole attachment requests that may be made simultaneously. Very few entities are likely to have the capacity to handle the deluge of work. Other bottlenecks will come from intransigent pole owners who will see benefits from holding up the process.

NTIA could act as an intermediary and advocate to help builders address both of these potential slowdowns.

To help ameliorate problems with scale, NTIA could assist localities in processing permitting and zoning requests. It could facilitate technical training for temporary workers if that is necessary.

Addressing the potential hold-up problem is more difficult, particularly when the pole owner may be a broadband competitor. The issue of pole attachments has long been a contentious issue, with FCC and state regulatory dockets littered with complaints by providers who argue pole owners have ignored or delayed reviewing applications or asked for unreasonable compensation.

Even if NTIA does not have the authority to do anything directly about this issue, it could maintain a public database of pole attachment and rights-of-way requests. While contracts between pole owner and attacher are typically proprietary, the database could list applicant, owner, date of application, and status of application. Sunlight on the issue might encourage better behavior and allow better study of the issue.

V. Conclusion

NTIA has the historic opportunity to connect Americans to broadband infrastructure with more funding than ever before. Distributed efficiently, the tens of billions of dollars soon to flow to the states should make significant progress providing high-speed broadband where it doesn't currently exist.

²⁸ Diana Goovaerts, "Charter Walks 30,000 Miles to Prep Poles for RDOF Builds," *Fierce Telecom*, Jan. 25, 2022, <https://www.fiercetelecom.com/telecom/charter-walks-30000-miles-prep-poles-rdof-builds>.

NTIA can increase the chances of a positive outcome by encouraging grant selection models that rely on objective, quantitative data. It could even offer a one-stop shop with an off-the-shelf platform for states to use so that they do not have to create their own. It should also require states to make public all applications, both funded and unfunded, and ask for monthly reporting that allows cross-state comparisons. Finally, it should use some of its enormous digital inclusion and equity budget to help states design experiments that would provide empirical answers to the many questions the agency asks.

Appendix: Recent Relevant Studies, Op-Eds, Podcasts, and Panels by Lam, Rosston, or Wallsten

On Broadband Maps

TPI's "State of Broadband" Report, Jan. 5, 2022.

https://techpolicyinstitute.org/wp-content/uploads/2022/01/TPI_BroadbandStatesPacket.pdf
<https://techpolicyinstitute.org/publications/broadband/map/tpi-state-of-broadband-report/>

Broadband Availability Update: New FCC Data for December 2020, Nov. 3, 2021. Scott Wallsten.

<https://techpolicyinstitute.org/publications/broadband/map/broadband-availability-update-new-fcc-data-for-december-2020/>

Using an Index to Target Broadband Subsidies: A Florida Example, Oct. 3, 2021. Scott Wallsten.

https://techpolicyinstitute.org/publications/broadband/map/florida_connectivity_index/

TPI's Broadband Connectivity Index, Sept. 16, 2021. Scott Wallsten.

<https://techpolicyinstitute.org/publications/broadband/map/broadband-connectivity-index/>

KY, LA and Some Tribal Areas Lead Early Uptake of Emergency Broadband Benefit Program, Jul. 15, 2021. Scott Wallsten.

<https://techpolicyinstitute.org/publications/broadband/digital-divide/mapping-the-emergency-broadband-benefit-program/>

New Broadband Maps are Coming. They'll Be Useless Unless We Also Invest in Research and Analytical Capacity. Jul. 22, 2020. Sarah Oh and Scott Wallsten.

<https://morningconsult.com/opinions/new-broadband-maps-are-coming>

On Broadband Subsidies and the Digital Divide

How Not to Waste \$45 Billion in Broadband Subsidies. Aug. 7, 2021. Gregory Rosston and Scott Wallsten.

<https://thehill.com/opinion/finance/566772-how-not-to-waste-45-billion-in-broadband-subsidies>

Covid-19 is Narrowing the Digital Divide. Feb. 10, 2021. Scott Wallsten.

<https://techpolicyinstitute.org/publications/broadband/covid-19-is-narrowing-the-digital-divide/>

Defining Objectives and Measuring Outcomes in the Emergency Broadband Benefit Program, Jan. 26, 2021. Sarah Oh and Scott Wallsten.

<https://techpolicyinstitute.org/wp-content/uploads/2021/03/Oh-Wallsten-Comments-on-EBBP-1.pdf>

Using Reverse Auctions to Stretch Broadband Subsidy Dollars: Lessons from The Recovery Act of 2009, Jan. 25, 2021. Sarah Oh.

<https://techpolicyinstitute.org/publications/broadband/using-reverse-auctions-to-stretch-broadband-subsidy-dollars-lessons-from-the-recovery-act-of-2009/>

Increasing Low-Income Broadband Adoption Through Private Incentives. Oct. 2020. Gregory Rosston and Scott Wallsten.

<https://www.sciencedirect.com/science/article/abs/pii/S0308596120301129>

Comments filed with the FCC in the Matter of Establishing a 5G Fund for Rural America and Universal Service Reform – Mobility Fund: Proposal for a 5G USF Research Fund. Jun. 26, 2020. Sarah Oh.

<https://techpolicyinstitute.org/wp-content/uploads/2020/06/Oh-Comments-on-5G-Fund-Proposal-for-a-5G-USF-Research-Fund.pdf>

Comments to the FCC in The Matter of Restoring Internet Freedom, Bridging the Digital Divide for Low Income, and Lifeline and Link Up Reform and Modernization. Apr. 20, 2020. Scott Wallsten.

<https://techpolicyinstitute.org/wp-content/uploads/2020/04/Wallsten-Net-Neutrality-Comments.pdf>

Comments filed with the Federal Communications Commission in the Matter of Rural Digital Opportunity Fund Auction. Apr. 10, 2020. Gregory Rosston and Scott Wallsten.

<https://techpolicyinstitute.org/wp-content/uploads/2020/04/Rosston-Wallsten-WC-Docket-No.-19-126.pdf>

Comments filed with the Federal Communications Commission in the Matter of Universal Service Contribution Methodology. Jul. 29, 2019. Sarah Oh and Scott Wallsten.

https://techpolicyinstitute.org/wp-content/uploads/2019/07/Oh_Wallsten_USF072919.pdf

On Broadband

Does Competition Between Cable and Fiber Increase Adoption? Apr. 27, 2021. Scott Wallsten.

<https://techpolicyinstitute.org/wp-content/uploads/2021/05/Does-Competition-Between-Cable-and-Fiber-Increase-Adoption.pdf>

Surprise! The FCC Has Been Collecting Broadband Price Data for Years. Apr. 12, 2021. Scott Wallsten.

<https://techpolicyinstitute.org/publications/broadband/surprise-the-fcc-has-been-collecting-broadband-price-data-for-years/>

You've Been Served: Defining Broadband As 100/100 Is Not 🍷. Mar. 29, 2021. Scott Wallsten.

<https://techpolicyinstitute.org/publications/broadband/youve-been-served-defining-broadband-as-100-100-is-not-100/>

Municipal Broadband is a Bad Idea for Cash-Strapped Towns. Jan. 16, 2021. Sarah Oh.

<https://thehill.com/opinion/technology/534437-municipal-broadband-is-a-bad-idea-for-cash-strapped-towns>

Is Broadband a Public Utility? Let's Hope Not. May 21, 2020. Scott Wallsten.

<https://techpolicyinstitute.org/publications/broadband/is-broadband-a-public-utility-lets-hope-not/>

What are the Economic Effects of Municipal Broadband? Nov. 5, 2019. Sarah Oh.

<https://techpolicyinstitute.org/publications/broadband/what-are-the-economic-effects-of-municipal-broadband/>

Two Think Minimum Podcasts

Blair Levin and Gregory Rosston on Broadband Subsidies, Jan. 18, 2022.

<https://techpolicyinstitute.org/publications/broadband/blair-levin-gregory-rosston-on-broadband-subsidies/>

Gus Hurwitz on The Rural Digital Divide and Platforms, Feb. 8, 2021.

<https://techpolicyinstitute.org/publications/broadband/digital-divide/gus-hurwitz-on-the-rural-digital-divide-and-platforms/>

Stanford's Greg Rosston on The Future of Broadband Accessibility, Jan. 22, 2021.

<https://techpolicyinstitute.org/publications/broadband/stanfords-greg-rosston-on-the-future-of-broadband-accessibility/>

Building on What Works: An Analysis of U.S. Broadband Policy with Jonathan Nuechterlein and Howard Shelanski, Dec. 29, 2020.

<https://techpolicyinstitute.org/publications/broadband/building-on-what-works-an-analysis-of-us-broadband-policy-with-jonathan-nuechterlein-shelanski/>

Looking Back on Ten Years of the National Broadband Plan with Blair Levin. Mar. 24, 2020.

<https://techpolicyinstitute.org/publications/broadband/spectrum-and-wireless/looking-back-on-ten-years-of-the-national-broadband-plan-with-blair-levin-two-think-minimum/>

Mapping Analysis Tools

TPI's Broadband Map with Regression Tools and State-by-State Map Views. 2021-2022.

<https://tpibroadband.com>
<https://tpibroadband.com/state/>
<https://broadband.tools>

Where Are E-Rate Dollars Going? Introducing E-Rate Intelligence. Jun. 3, 2021.

<https://techpolicyinstitute.org/publications/broadband/where-are-e-rate-dollars-going-introducing-e-rate-intelligence/>

<https://tpireports.com>

TPI Aspen Forum Panels

How Should We Spend \$100 Billion on Broadband? 2021 TPI Aspen Forum. Aug. 16, 2021.
<https://www.youtube.com/watch?v=op5gWUTbfzI>

A Discussion with North American Telecom Regulators. 2021 TPI Aspen Forum. Aug. 17, 2021.
<https://www.youtube.com/watch?v=A-7vNTbqQfM>

The Digital Divide: Pandemic Lessons and Solutions from Around the World. 2019 TPI Virtual Aspen Forum. Nov. 5, 2020.
<https://www.youtube.com/watch?v=uLksOBperTE>

Broadband and the FCC: Successes and Challenges. 2019 TPI Virtual Aspen Forum. Nov. 5, 2020.
<https://www.youtube.com/watch?v=aWA50hlnAWc>

The Future of Connectivity: Where Is Broadband Investment Headed? TPI Panel. Jan. 24, 2019.
<https://www.youtube.com/watch?v=hxPIZ-I106I>

What Infrastructure Will Power the Digital Economy and How Will We Get There? 2018 TPI Aspen Forum. Aug. 21, 2018.
<https://www.youtube.com/watch?v=R0RhKduKVVI>