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Subject: Broadband Opportunity Council - Response to Request for Comments by the ACLP at New York Law School - Docket No. 1540414365-5365-01
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Dear Assistant Secretary Strickling & Under Secretary Mensah,

The Advanced Communications Law & Policy Institute (ACLP) at New York Law School respectfully submits the following filing in response to the request for comment issued by the Broadband Opportunity Council. Should you have any questions, please do not hesitate to contact us.

Respectfully submitted,

Charles M. Davidson, Director
Michael J. Santorelli, Director
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**NEW YORK
LAW SCHOOL**

June 10, 2015

The Honorable Lawrence Strickling
Assistant Secretary for Communications & Information
Administrator, National Telecommunications & Information Administration
U.S. Department of Commerce
1401 Constitution Avenue NW, Room 4626
Washington, DC 20230

The Honorable Lisa Mensah
Under Secretary for Rural Development
U.S. Department of Agriculture
1400 Independence Ave., SW
Washington, DC 20250

**Re: Docket No. 1540414365-5365-01 – Response to Request for Comment
by the Broadband Opportunity Council**

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Respectfully submitted,

/s/ Charles M. Davidson
CHARLES M. DAVIDSON, DIRECTOR

/s/ Michael J. Santorelli
MICHAEL J. SANTORELLI, DIRECTOR

To: Assistant Secretary for Communications & Information Lawrence Strickling &
Under Secretary for Rural Development Lisa Mensah

From: Charles M. Davidson & Michael J. Santorelli, ACLP at New York Law School

Re: Guiding Principles for Use by the Broadband Opportunity Council in Bolstering
Broadband Connectivity in the United States

Date: June 10, 2015

The Broadband Opportunity Council (BOC) has a unique opportunity to collaborate with counterparts in state and local government, as well as with stakeholders in the private and nonprofit sectors, to enhance broadband connectivity across the United States. As the President rightly noted in his memorandum creating the BOC, “broadband is critical to U.S. economic growth and competitiveness.”¹ High-speed Internet access is also increasingly vital to basic communication, social inclusion, civic engagement, and a range of other everyday activities. Consequently, it is imperative that every American has the opportunity to access and use broadband in a meaningful way. For the vast majority of Americans, these opportunities are already present in the form of readily accessible Internet connections, but for an array of reasons they choose not to go online. For a much smaller (and steadily shrinking) percentage of citizens, broadband remains unavailable, depriving them of the opportunity to make a decision of whether or not to adopt. For these reasons, the BOC must act in a targeted and coordinated manner to enhance broadband from both the supply-side – so every individual and business has ready access to a connection that meets their needs – and the equally important, though often overlooked, demand-side – so every user possesses the skills needed to put their connections to productive and meaningful uses.

However, as discussed at length in these comments, the BOC (or any entity for that matter) is not able to address every issue – real or perceived – facing the U.S. broadband sector. On the contrary, the efforts of the BOC and its member agencies represent only a small, but important, component of a much larger mosaic of activity that is already occurring in every state across the country. Indeed, a growing number of states and their political subdivisions are experimenting with policies and programs aimed at closing digital divides, furthering social justice, and harnessing the transformative power of broadband to bolster their citizenry and their economies. As such, we respectfully suggest that the BOC avoid undermining or discouraging the progress being made in the states and should, instead, focus on engaging in activities that support continued forward progress toward improving broadband connectivity in every part of the country.

To these ends, we respectfully submit the following set of foundational principles that we hope will inform the BOC’s efforts. These principles focus on three sets of issues: general

¹ See Presidential Memorandum, *Expanding Broadband Deployment and Adoption by Addressing Regulatory Barriers and Encouraging Investment and Training*, The White House, March 23, 2015, <https://www.whitehouse.gov/the-press-office/2015/03/23/presidential-memorandum-expanding-broadband-deployment-and-adoption-addr> (“*Expanding Broadband Deployment and Adoption*”).

policy parameters to help in shaping the contours of whatever efforts grow out of the BOC; recommendations for targeted supply-side actions; and ideas for supporting and bolstering the myriad of efforts focused on addressing complex demand-side issues. More specifically, the principles include:

GENERAL GUIDING PRINCIPLES

1. The primary focus of the BOC should be on ensuring that the federal government maximizes its own resources – i.e., spectrum and access to federal lands – when attempting to enhance broadband deployment. (p. 3)
2. Respect core notions of constitutional federalism by avoiding activities that encroach upon the ability of the states to experiment with programs and policies aimed at improving broadband connectivity. (p. 6)
3. With regard to identifying and addressing barriers to more robust broadband connectivity, the BOC should use the FCC’s National Broadband Plan as a starting point. (p. 8)
4. Coordination among and across federal agencies, departments, and branches must be a priority in order to assure impactful outcomes and avoid inefficient duplication of efforts. (p. 10)

GUIDING PRINCIPLES FOR IMPROVING BROADBAND ON THE SUPPLY-SIDE

5. The priority of any broadband deployment program that emerges from the BOC should be facilitating build out to unserved areas. (p. 11)
6. The BOC should engage in supply-side activities that favor private investment in and deployment of broadband networks. (p. 13)
7. Based on its own successes in facilitating broadband deployment on federal lands and in other contexts under the purview of the Council, the BOC should develop and disseminate model policies aimed at furthering network deployment and fostering a rational regulatory environment that is conducive to continued private investment, innovation, and competition. (p. 14)

GUIDING PRINCIPLES FOR IMPROVING BROADBAND ON THE DEMAND-SIDE

8. Demand-side issues are the most important, pressing, and overlooked in the broadband policy arena. The BOC should work to draw more attention to these issues and facilitate additional progress toward addressing them. (p. 15)
9. The BOC should encourage the states to work more closely with municipalities and other local stakeholders to bolster broadband connectivity from the demand-side. (p. 17)
10. Instead of promoting municipal broadband deployment, the BOC should engage in activities that underscore the importance and value of facilitating demand-side efforts by communities. (p. 18)

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GENERAL GUIDING PRINCIPLES

PRINCIPLE #1

The primary focus of the BOC should be on ensuring that the federal government maximizes its own resources – i.e., spectrum and access to federal lands – when attempting to enhance broadband deployment.

The BOC should focus first and foremost on leading by example when it comes to facilitating broadband deployment by prioritizing actions over which it has the most influence. In particular, it should leverage its broad jurisdictional mandate – i.e., coordinating efforts across more than two dozen federal agencies – to make much needed progress on two broadband-related issues that have been pending at the federal level for many years: (1) freeing up government-owned spectrum for use in building out next-generation mobile broadband networks, and (2) streamlining the processes for gaining access to and using federal lands to support private broadband deployment.

Spectrum. The need for additional spectrum that can support mobile broadband deployment has been well documented, as has the need for rationalizing and making available the large amount of unused and under-used spectrum held by various parts of the federal government.² A dearth of licensed spectrum capable of supporting mobile broadband services threatens to slow efforts to improve upon America’s world-leading wireless networks.³ Fortunately, there has been little hesitancy by the White House, FCC, and NTIA to acknowledge that a significant portion of the responsibility for this problem rests on the collective shoulders of the federal government, which has been slow to actually make available these vital resources for private use.⁴ Some progress has been made in repurposing and auctioning off swaths of the airwaves that were previously allocated for other uses – by one estimate, the FCC has facilitated a net increase in spectrum available for

² See, e.g., Charles M. Davidson & Michael J. Santorelli, *Seizing the Mobile Moment: Spectrum Allocation Policy for the Wireless Broadband Century*, 19 CommLaw Conspectus 1 (2010), <http://scholarship.law.edu/cgi/viewcontent.cgi?article=1516&context=commlaw>; *Connecting America: The National Broadband Plan*, at Ch. 5, Federal Communications Commission (2010), <https://transition.fcc.gov/national-broadband-plan/national-broadband-plan.pdf> (“National Broadband Plan”).

³ See, e.g., *id.* See also *Prepared Remarks of FCC Chairman Tom Wheeler, 2014 CTIA Show*, FCC Sept. 9, 2014, https://apps.fcc.gov/edocs_public/attachmatch/DOC-329271A1.pdf.

⁴ See, e.g., *National Broadband Plan* (calling for an additional 500 MHz of spectrum to be made available); Presidential Memorandum, *Unleashing the Wireless Broadband Revolution*, The White House, June 28, 2010, <https://www.whitehouse.gov/the-press-office/presidential-memorandum-unleashing-wireless-broadband-revolution> (same); Presidential Memorandum, *Expanding America’s Leadership in Wireless Innovation*, The White House, June 14, 2013, <https://www.whitehouse.gov/the-press-office/2013/06/14/presidential-memorandum-expanding-americas-leadership-wireless-innovatio> (establishing a spectrum policy team and directing it to study opportunities for sharing spectrum); *Plan and Timetable to Make Available 500 Megahertz of Spectrum for Wireless Broadband*, U.S. Dept. of Commerce (Oct. 2010), http://www.ntia.doc.gov/files/ntia/publications/tenyearplan_11152010.pdf (“NTIA Timetable”).

mobile broadband of about 98.5 MHz since 2010.⁵ These new resources included several blocks of spectrum previously held by the federal government.⁶ Though impressive, this amount is over 400 MHz short of meeting the President's and the FCC's shared goal of freeing up and allocating 500 MHz of additional spectrum over the next few years.

A major source of this additional spectrum should come from the holdings of the federal government. Indeed, NTIA has identified well over 300 MHz of spectrum that could be cleared and reallocated for these purposes.⁷ However, reallocating these portions of the airwaves has proven to be extremely time consuming and politically fraught endeavors.⁸ Moreover, in the absence of firmer and clearer policies around repurposing this spectrum, some entities might delay or simply refuse to clear certain bands. In recent years, many federal agencies, like the Department of Defense, have acquiesced to calls for using underutilized spectrum assets for wireless broadband.⁹ This represents significant progress, provided, of course, that these entities hasten the manner in which they vacate spectrum bands or otherwise prepare to share them with service providers.¹⁰ Given the cross-agency remit of the BOC, the Council should dedicate significant resources to accelerating the processes by which spectrum held by the federal government – especially those resources that sit unused – is repurposed for use in deploying new mobile broadband services.

Access to Federal Lands. Similarly, the BOC should work with its constituent agencies to streamline access to federal lands by private service providers for the purposes of building out broadband networks. This particular issue was the subject of an Executive Order issued

⁵ See Coleman Bazelon & Giulia McHenry, *Mobile Broadband Spectrum: A Vital Resource for the U.S. Economy*, at 8, The Brattle Group (May 2015), http://www.ctia.org/docs/default-source/default-document-library/brattle_spectrum_051115.pdf.

⁶ See *Promoting Spectrum Sharing in the Wireless Broadband Era*, Jan. 9, 2015, NTIA, <http://www.ntia.doc.gov/blog/2015/promoting-spectrum-sharing-wireless-broadband-era>.

⁷ *NTIA Timetable*.

⁸ *Seizing the Mobile Moment* at p. 55-56. See also *National Broadband Plan* at p. 79.

⁹ See *An Assessment of the Viability of Accommodating Wireless Broadband in the 1755-1850 MHz Band*, National Telecommunications & Information Administration, U.S. Department of Commerce (March 2012), available at http://www.ntia.doc.gov/files/ntia/publications/ntia_1755_1850_mhz_report_march2012.pdf.

¹⁰ See, e.g., *Realizing the Full Potential of Government-Held Spectrum to Spur Economic Growth*, Report to the President, President's Council of Advisors on Science and Technology (July 2012), available at http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast_spectrum_report_final_july_20_2012.pdf ("PCAST finds that clearing and reallocation of Federal spectrum is not a sustainable basis for spectrum policy due to the high cost, lengthy time to implement, and disruption to the Federal mission. Further, although some have proclaimed that clearing and reallocation will result in significant net revenue to the government, we do not anticipate that will be the case for Federal spectrum." *Id.* at p. vi); cf. Larry Downes, *Feds to Mobile Users: Drop Dead*, July 30, 2012, CNET, available at http://news.cnet.com/8301-1035_3-57481929-94/feds-to-mobile-users-drop-dead/?tag=rtcol:FD.posts (arguing that "The federal government is slinking away from a promise by President Obama to free up badly-needed radio spectrum for mobile users and the already over-taxed networks that serve them.").

by the President in June 2012.¹¹ In that order, the President highlighted the pressing need for a “coordinated and consistent approach in implementing agency procedures, requirements, and policies related to access to Federal lands, buildings, and rights of way, federally assisted highways, and tribal lands to advance broadband deployment.”¹² A few months prior, Congress enacted the Middle Class Tax Relief and Job Creation Act of 2012,¹³ a law that included several provisions related to streamlining federal “agencies’ processes for the deployment of wireless broadband facilities on Federal property, including requirements for [General Services Administration] to develop common application forms, master contracts, and fees for such access.”¹⁴

Although some progress has been made towards these ends – e.g., encouraging “dig once” requirements for laying conduit in existing federal transportation projects¹⁵ – realizing Congress’s and the President’s vision for leveraging federal lands for broadband deployment remains a distant goal.¹⁶ That many of these same discussions have been had in the past but to little avail is equally disconcerting, suggesting that real progress might be impossible.¹⁷ However, the BOC, a first-in-kind effort to coordinate across agencies for the express purpose of bolstering broadband connectivity, could succeed where others have failed if it dedicates itself to moving the needle on this very complex set of issues. Given the complexities of working across multiple agencies, the BOC should thus focus on creating new processes for engaging counterparts in relevant parts of the federal government on

¹¹ See Executive Order 13616, *Accelerating Broadband Infrastructure Deployment*, The White House, June 14, 2012, <https://www.whitehouse.gov/the-press-office/2012/06/14/executive-order-accelerating-broadband-infrastructure-deployment>.

¹² *Id.*

¹³ *Middle Class Tax Relief and Job Creation Act of 2012*, Pub. L. No. 112-96, H.R. 3630, 126 Stat. 156 (enacted Feb. 22, 2012).

¹⁴ See *Implementing Executive Order 13616: Progress on Accelerating Broadband Infrastructure Deployment*, at 5, Progress Report to the Steering Committee on Federal Infrastructure Permitting and Review Process Improvement by the Broadband Deployment on Federal Property Working Group (Aug. 2013), https://www.whitehouse.gov/sites/default/files/microsites/ostp/broadband_eo_implementation.pdf (citing to section 6409 of the *Middle Class Tax Relief and Job Creation Act of 2012*).

¹⁵ See *In the Matter of Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, 2015 Broadband Progress Report and Notice of Inquiry on Immediate Action to Accelerate Deployment, at ¶18, FCC, GN Docket No. 14-126 (Feb. 4, 2015), https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-10A1.pdf (“2015 Broadband Progress Report”).

¹⁶ See, e.g., Press Release, *Adelstein: More Progress Needed to Site Wireless Facilities on Federal Property*, Oct. 16, 2014, PCIA, <http://www.pcia.com/pcia-press-releases/675-adelstein-more-progress-needed-to-site-wireless-facilities-on-federal-property>.

¹⁷ See, e.g., NTIA, *Federal Rights-of-Way For Telecommunications Projects*, <http://www.ntia.doc.gov/legacy/FROWsite/index.html> (detailing similar efforts launched by President Bush in 2002 and 2004); *Improving Rights-of-Way Management Across Federal Lands: A Roadmap to Greater Broadband Deployment*, Report by the Federal Rights-of-Way Working Group (April 2004), http://www.ntia.doc.gov/files/ntia/publications/frowreport_4-23-2004.pdf.

these kinds of issues in order to create a framework for resolving issues that can be applied in this context and others related to broadband deployment.

PRINCIPLE #2

Respect core notions of constitutional federalism by avoiding activities that encroach upon the ability of the states to experiment with programs and policies aimed at improving broadband connectivity.

A core goal of the BOC, as detailed in its founding documents – i.e., the Presidential Memorandum establishing it and the request for comment issued by the Council in April 2015 – is to “understand the ways the [federal] government can better support the needs of communities seeking to expand broadband access and adoption.”¹⁸ This focus on community broadband – aka municipal broadband and government-owned broadband (GONs) – can be traced back to the President’s embrace of this deployment strategy in January 2015, when he announced his support for federal preemption of state laws that “limit the range of options available to communities to spur expanded local broadband infrastructure, including ownership of networks.”¹⁹ At that time, the administration also released a report touting the benefits of GONs²⁰ and launched a federal initiative – BroadbandUSA – to support communities interested in exploring municipal broadband solutions.²¹ Shortly thereafter, the Federal Communications Commission acted to preempt two state laws – one in North Carolina, one in Tennessee – that it felt were impediments to broadband investment and competition.²²

*Such a focus on direct federal-community coordination in bolstering broadband connectivity, which appears to be central to the BOC’s mandate, threatens to alienate a critical set of partners from these efforts: **the states**.* Indeed, by circumventing the states, via formal action (e.g., FCC preemption) and informal action (e.g., BroadbandUSA), the federal government has articulated a bold new understanding of and approach to federalism in the context of broadband deployment. This new approach hinges on an interpretation of

¹⁸ See *Broadband Opportunity Council Notice and Request for Comment*, 80 Fed. Reg. 23,785 (April 29, 2015), http://www.ntia.doc.gov/files/ntia/publications/fr_boc_notice_and_rfc_4-29-15.pdf (“BOC Request”).

¹⁹ See Fact Sheet, *Broadband That Works: Promoting Competition & Local Choice In Next-Generation Connectivity*, The White House, Jan. 13, 2015, <https://www.whitehouse.gov/the-press-office/2015/01/13/fact-sheet-broadband-works-promoting-competition-local-choice-next-gener>.

²⁰ See *Community-Based Broadband Solutions: The Benefits of Competition and Choice for Community Development and High Speed Internet Access*, The Executive Office of the President (Jan. 2015), https://www.whitehouse.gov/sites/default/files/docs/community-based_broadband_report_by_executive_office_of_the_president.pdf.

²¹ See NTIA, BroadbandUSA, http://www2.ntia.doc.gov/new_BroadbandUSA.

²² See *In the Matter of City of Wilson, North Carolina Petition for Preemption of North Carolina General Statute Sections 160A-340 et seq.*, Memorandum Opinion and Order, WC Docket No. 14-115 (March 12, 2015). This order has been challenged in court by North Carolina and Tennessee. See, e.g., Sean Buckley, *North Carolina Sues FCC Over Ability to Limit Municipal Broadband Growth*, May 20, 2015, Fierce Telecom, <http://www.fiercetelecom.com/story/north-carolina-sues-fcc-over-ability-limit-municipal-broadband-growth/2015-05-20>.

federalism that is at odds with substantial legal precedent regarding the relationship between states and their subdivisions,²³ as well as with the realities of a paradigm of federal-state and state-local coordination that has proven to be enormously successful in improving broadband connectivity.²⁴

This is a sensitive set of issues for states because, at a very practical level, municipal broadband networks are expensive and risky undertakings.²⁵ Indeed, there is a long history of failed GONs in the United States.²⁶ Not every system fails, but few survive and prosper over the long term. In many instances, local governments have acted to bail out failed and failing networks – e.g., by redirecting tax dollars to prop up a dying system or by assuming even more debt – often to no avail.²⁷ When these networks fail, the damage is rarely contained – for example, many towns with failed or failing systems see their credit ratings downgraded.²⁸ And even when these networks survive, the enormous costs of building the system rarely outweigh the benefits arising from it.²⁹

These are worrying dynamics for state governments, which bear ultimate responsibility for the activities of their political subdivisions.³⁰ Indeed, the relationship between a state and its municipalities is an essential aspect of the ordering of government in the United States. In other words, it is a sacred relationship that has long been preserved by the courts in cases stretching back well over a century.³¹ It is thus rare for the federal government to attempt to insert itself between a state and its subdivisions; its authority to do so must be

²³ See Charles M. Davidson & Michael J. Santorelli, *Understanding the Debate Over Government-Owned Broadband Networks: Context, Lessons Learned, and a Way Forward for Policy Makers*, ACLP at New York Law School (June 2014), <http://www.nyls.edu/advanced-communications-law-and-policy-institute/wp-content/uploads/sites/169/2013/08/ACLP-Government-Owned-Broadband-Networks-FINAL-June-2014.pdf> (“ACLP GONs Report”).

²⁴ *Id.* at 109-138 (highlighting effective roles for policymakers and other stakeholders at the federal, state, and local levels vis-à-vis enhancing broadband connectivity). Specific ideas for state and local activities in furtherance of broadband connectivity are discussed *infra*.

²⁵ See generally *id.*

²⁶ For examples, see *id.*; *Parsing the Debate Over Government-Owned Broadband Networks*, ACLP at New York Law School (April 2013), <http://www.nyls.edu/advanced-communications-law-and-policy-institute/wp-content/uploads/sites/169/2013/08/ALCP-GONs-Overview-April-2013.FINAL.pdf>; Charles M. Davidson & Michael J. Santorelli, *Evaluating the Rationales for Government-Owned Broadband Networks*, ACLP at New York Law School (March 2013), <http://www.nyls.edu/advanced-communications-law-and-policy-institute/wp-content/uploads/sites/169/2013/08/Davidson-Santorelli-Evaluating-the-Rationales-for-GONs-March-2013.pdf>; Michael J. Santorelli, *Rationalizing the Debate Over Municipal Broadband*, 3 I/S Journal 43 (2007), <http://moritzlaw.osu.edu/students/groups/is/files/2012/02/Santorelli-formatted.pdf>.

²⁷ See, e.g., *ACLP GONs Report* at 47-91 (providing examples).

²⁸ *Id.*

²⁹ *Id.*

³⁰ See, e.g., Grant Gross, *States Threaten Lawsuit Over Obama’s Municipal Broadband Plan*, Jan. 26, 2015, *Computer World*, <http://www.computerworld.com/article/2875613/states-threaten-lawsuit-over-obamas-municipal-broadband-plan.html>.

³¹ *ACLP GONs Report* at 105-106.

clearly expressed by Congress, and even then there is usually some hesitancy by the courts to upset the delicate balance of U.S. federalism.³² For these reasons, neither the BOC nor the federal government generally should coordinate directly with communities on broadband matters without robust consultation and coordination with the states. Otherwise, the federal government risks creating an acrimonious relationship with 50 critical partners, all of whom are increasingly interested and active in addressing discrete broadband issues arising within their borders.

PRINCIPLE #3

With regard to identifying and addressing barriers to more robust broadband connectivity, the BOC should use the FCC's National Broadband Plan as a starting point.

When seeking to “identify regulatory barriers unduly impeding broadband deployment, adoption, or competition” and thinking about how to “take all necessary actions to remove these barriers,”³³ the BOC should use the FCC’s National Broadband Plan as a starting point. Indeed, rather than start from scratch in an attempt to amass a new list of barriers and develop strategies for overcoming them, the BOC would be well served by looking to the FCC’s Plan, which succeeded in identifying dozens of barriers impeding more robust broadband connectivity and making over 200 recommendations for addressing them.³⁴ Equally as important for the purposes of removing these barriers, many of the recommendations articulated in the Plan “were directed to the FCC, to Congress, to the Executive Branch (both to individual agencies and to Administration as a whole),”³⁵ providing the BOC with numerous opportunities for making immediate progress in furtherance of its mandate.

A key feature of the Plan was its focus on highlighting the importance of high-speed Internet connectivity to achieving certain “national purposes,” including using broadband-enabled services to transform key sectors of the economy like education, energy, and healthcare.³⁶ The rationale underlying this focus was simple: enhancing broadband use in these sectors would not only help to improve service offerings, bolster innovation, and streamline certain processes – it would also assist in increasing the relevance of broadband to consumers, especially those in under-adopting communities. However, the Plan also observed that merely enhancing broadband use in these sectors would not be enough to achieve these goals. On the contrary, a broad range of additional legal, regulatory, and

³² See, e.g., Lawrence J. Spiwak, *The FCC's New Municipal Broadband Preemption Order is Too Clever by Half*, BloombergBNA Telecommunications Law Resource Center, April 10, 2015, <http://www.phoenix-center.org/oped/BloombergBNATennesseePreemptionOrder10April2015.pdf>.

³³ *BOC Request* at 23,785.

³⁴ See, e.g., Lennard G. Kruger, *The National Broadband Plan Goals: Where Do We Stand?*, Congressional Research Service, Report to Congress R43016 (March 2013), <https://www.fas.org/sgp/crs/misc/R43016.pdf>.

³⁵ *Id.*

³⁶ *National Broadband Plan* at 193.

public policy adjustments were necessary to unlock and facilitate new uses. Accordingly, the Plan, along with other reports issued in conjunction with it,³⁷ identified dozens of areas where non-FCC and non-Congressional action was required. It is in these areas that the BOC should focus its attention.

A cursory review of the Plan's recommendations, related documents examining barriers, and information regarding the progress made in implementing these proposals reveals a range of areas ripe for BOC action. For example, in the healthcare space, progress has been made on numerous fronts in unlocking the full potential of broadband in U.S. healthcare: electronic healthcare records are more widely used now than they were prior to release of the Plan;³⁸ health insurers increasingly reimburse for telemedicine services;³⁹ and numerous discussions about the need for rationalizing key licensure and credentialing processes have been had at the federal and state levels.⁴⁰ However, review of the Plan's recommendations and supporting analyses highlight areas where additional federal action by agencies other than the FCC would help in removing remaining barriers.⁴¹ A similar dynamic is evident in the education and energy sectors, where important forward progress has been made,⁴² but numerous barriers remain unaddressed at the federal level.⁴³

³⁷ See, e.g., *Barriers to Broadband Adoption: A Report to the FCC*, ACLP at New York Law School (Oct. 2009), <http://www.nyls.edu/advanced-communications-law-and-policy-institute/wp-content/uploads/sites/169/2013/08/ACLP-Report-to-the-FCC-Barriers-to-BB-Adoption.pdf>.

³⁸ See, e.g., Press Release, *More Physicians and Hospitals Are Using EHRs Than Before*, Aug. 7, 2014, U.S. Dept. of Health & Human Services, <http://www.hhs.gov/news/press/2014pres/08/20140807a.html>.

³⁹ See, e.g., Latoya Thomas & Gary Capistrant, *State Telemedicine Gaps Analysis: Coverage and Reimbursement*, American Telemedicine Association (May 2015), <http://www.americantelemed.org/docs/default-source/policy/50-state-telemedicine-gaps-analysis---coverage-and-reimbursement.pdf?sfvrsn=10>.

⁴⁰ See, e.g., Latoya Thomas & Gary Capistrant, *State Telemedicine Gaps Analysis: Physician Practice Standards and Licensure*, American Telemedicine Association (May 2015), <http://www.americantelemed.org/docs/default-source/policy/50-state-telemedicine-gaps-analysis--physician-practice-standards-licensure.pdf?sfvrsn=14>.

⁴¹ *National Broadband Plan* at 199-217.

⁴² In the energy space, for example, the federal government has worked closely with the states to facilitate deployment of "smart grid" technologies and services, including smart meters and other aspects of a more intelligent and responsive energy system. See, e.g., *2014 Smart Grid System Report*, Report to Congress, U.S. Dept. of Energy (Aug. 2014), <http://energy.gov/sites/prod/files/2014/08/f18/SmartGrid-SystemReport2014.pdf>. In the education space, the U.S. Department of Education launched several initiatives in the wake of the National Broadband Plan in an effort to bolster availability and use of advanced educational technology tools. See, e.g., *National Education Technology Plan*, U.S. Department of Education (Nov. 2010), <https://www.ed.gov/sites/default/files/netp2010.pdf>. However, the focus in recent years has been almost entirely on enhancing broadband speeds in schools, an undertaking that has been led primarily by the FCC via an array of reforms to the federal E-Rate program. For an overview of recent FCC-led efforts on this issue, see FCC, *Modernizing E-Rate*, <https://www.fcc.gov/e-rate-update>. Other pressing issues, like equipping teachers with the skills needed to harness broadband for educational purposes, have been acknowledged via programs like ConnectED, which was launched by the White House in 2013. See U.S. Dept. of Education, *ConnectED*, <http://www.ed.gov/connected>.

⁴³ *National Broadband Plan* at 223-234 & 245-262 (detailing recommendations for overcoming barriers in the education and energy sectors, respectively).

In order to make further progress on these and others issues in as efficient and effective a manner as possible, the BOC should first review the National Broadband Plan and, in partnership with the FCC, develop a comprehensive inventory of whether and to what extent specific barriers and recommendations have been addressed. Thereafter, the BOC should work to update those barriers and recommendations that require some measure of action by federal agencies within the purview of the Council. At that point, the BOC should begin developing a process for facilitating collaboration across relevant agencies in order to begin addressing these new and lingering impediments.

PRINCIPLE #4

Coordination among and across federal agencies, departments, and branches must be a priority in order to assure impactful outcomes and avoid inefficient duplication of efforts.

Coordination of efforts and resources will be essential to the success of any initiative or program that evolves out of the BOC. With over two dozen federal agencies involved, coupled with new and emerging policy efforts at the FCC, in Congress, and elsewhere across the federal government, there is a significant risk that, in the absence of careful planning, a particular action by the BOC might be redundant with an existing program, inefficient, unduly costly, or otherwise in tension with other federal activities. As such, it is incumbent upon the co-chairs of the BOC – the Departments of Agriculture and Commerce – to adhere to a basic framework when launching a new program or forging a new partnership to address a particular broadband issue: first, do no harm (to existing programs), and second, do not be wasteful (in terms of unnecessarily replicating efforts that have already succeeded or failed).

The primary cause for concern in this context is the potential for BOC activities that might mimic or somehow undermine the impact of programs already under way at the FCC. Such an outcome would result in the waste of taxpayer resources and could slow or derail much-needed reforms being spearheaded by the Commission. The BOC mandate requires the Council to “consult...with the [FCC] as appropriate,”⁴⁴ but the BOC has no authority to force independent agencies like the FCC to comply with or accede to new policy imperatives or programs that might grow out of its activities.⁴⁵ For these reasons, close coordination between the BOC and the Commission will be essential to preventing unnecessarily redundant or costly initiatives.

Equally as important, close coordination will be vital to accurately calibrating and targeting the BOC’s efforts. The FCC already oversees the collection and allocation of billions of dollars a year in support of: broadband deployment in schools and libraries via E-Rate; broadband deployment in high-costs parts of the country via its Connect America Fund;

⁴⁴ *Expanding Broadband Deployment and Adoption.*

⁴⁵ *BOC Request* at 23,786.

and telemedicine use and deployment in rural areas via its Healthcare Connect Fund.⁴⁶ It is also currently attempting to restructure Lifeline so that it can help to subsidize broadband connections for non-adopters.⁴⁷ Several other federal agencies, including NTIA and RUS, also already administer broadband-related programs. As such, after studying and understanding the array of resources and reach of these existing programs, the scope of potential BOC activity might be much narrower than initially envisioned.

GUIDING PRINCIPLES FOR IMPROVING BROADBAND ON THE SUPPLY-SIDE

PRINCIPLE #5

The priority of any broadband deployment program that emerges from the BOC should be facilitating build out to unserved areas.

Despite enormous and sustained progress in deploying next-generation broadband networks across the United States, some areas of the country remain without high-speed access to the Internet. The reasons for these unfortunate outcomes are many and reflect an array of challenges facing policymakers and service providers – some areas are geographically remote; others face significant topographical challenges; many are sparsely populated. As a result, these areas are usually considered “uneconomic” to serve without some measure of government assistance.⁴⁸ The primary response to these problems to date has involved the transition of the federal universal service fund (USF) to support deployment of connections of at least 10 Mbps, an initiative that will likely take many years to fully unfold.⁴⁹ As such, some remote areas are likely to remain without access for the foreseeable future. For these reasons, the priority of any broadband deployment program that emerges from the BOC should be helping to facilitate build out to unserved areas.

Included in the details of whatever broadband deployment strategies, best practices, and/or programs that evolve out the BOC process should be an embrace of an all-of-the-above approach to plugging gaps in availability. *Unfortunately for those living in truly unserved parts of the country, the FCC has rejected such a platform-neutral perspective by adopting a speed benchmark for broadband (25 Mbps) that excludes all but a few delivery technologies from qualifying.*⁵⁰ This change further compounds what has become a

⁴⁶ For an overview of recent expenditures, see *2014 Annual Report*, Universal Service Administrative Company, <http://www.usac.org/res/documents/about/pdf/annual-reports/usac-annual-report-2014.pdf>.

⁴⁷ See, e.g., FCC Chairman Tom Wheeler, *A Lifeline for Low-Income Americans*, May 28, 2015, FCC Blog, <https://www.fcc.gov/blog/lifeline-low-income-americans>.

⁴⁸ See, e.g., *In the Matter of Connect America Fund*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 17663, 17961 (Nov. 18, 2011).

⁴⁹ *In the Matter of Connect America Fund*, Report and Order, at ¶ 4, WC Docket No. 10-90, FCC 14-190 (rel. Dec. 18, 2014). Stimulus funding allocated via the BTOP and BIP programs also addressed these issues, but only obliquely – most funded projects focused on bolstering middle-mile networks, not building out last-mile connections. See, e.g., *Broadband Technology Opportunities Program Evaluation Study*, ASR Analytics (Sept. 2014), http://www.ntia.doc.gov/files/ntia/publications/asr_final_report.pdf (“BTOP Evaluation Study”).

⁵⁰ *2015 Broadband Progress Report* at ¶3.

perplexing approach by the FCC to measuring broadband availability. For example, according to the FCC's new standard for broadband, between 15 percent⁵¹ and 17 percent⁵² of the population does not have access to a wireline broadband connection that meets the new benchmark, but 93 percent of the population does have access to wireline connections of at least 10 Mbps.⁵³ These numbers are even more lopsided when it comes to mobile broadband: 86 percent of the population lacks access to mobile connections that meet the FCC's new definition of broadband, while 98 percent has ready access to multiple wireless connections of at least 10 Mbps.⁵⁴ Moreover, while the FCC does not include wireless (fixed or mobile) or satellite broadband in its official tabulations of broadband availability,⁵⁵ it does subsidize deployment of wireless broadband at speeds well below 10 Mbps via its newly created Mobility Fund.⁵⁶

In short, there is an opportunity for the BOC to articulate a preference for bringing some level of broadband connectivity to truly unserved areas as a meaningful first step and as a more expedient alternative to the FCC's long-term initiative. Doing so would convey several advantages over the FCC's speed-focused approach. First and foremost, it will hasten the process of connecting these areas to broadband. Whether a person gets online for the first time via a cable, satellite, WISP, or mobile connection should not matter – connection by any means should be the priority. Second and related, an approach that yields additional new connections in the near-term will help to generate useful data about actual consumer demand for and usage of broadband in these hard-to-serve areas. Such real-world data will be essential to signaling to other private firms that there is sufficient demand in a given area and to calibrating any additional government responses (e.g., FCC subsidies) that might be warranted.

Finally, this approach will help to prevent inefficient overbuild in areas that are deemed “under-served” by the FCC's subjective speed benchmark. By focusing only on unserved areas, which should be identified in close consultation with relevant state authorities (i.e., those tasked with collecting and analyzing broadband connectivity data), the BOC can avoid having to navigate the FCC's byzantine approach to measuring broadband and instead ensure that resources are allocated in as efficient and impactful a manner as possible. However, the BOC would have to coordinate closely with the FCC and the states to ensure that whatever emerges from the Council for the purposes of bringing broadband to unserved areas does not duplicate or undermine other programs or resources dedicated to the same task. In short, funding and other resources provided by government should be optimized and precisely targeted for these purposes.

⁵¹ See National Broadband Map, Analyze – Summarize – Nationwide, <http://www.broadbandmap.gov/summarize/nationwide> (“National Broadband Map – National Data”).

⁵² 2015 Broadband Progress Report at ¶4.

⁵³ National Broadband Map – National Data.

⁵⁴ *Id.*

⁵⁵ 2015 Broadband Progress Report at ¶9.

⁵⁶ See, e.g., USAC, Mobility Fund, <http://www.usac.org/hc/caf/mobility/default.aspx>.

PRINCIPLE #6

The BOC should engage in supply-side activities that favor private investment in and deployment of broadband networks.

In keeping with Principle #2 above, the BOC – and the federal government generally – should not seek to disenfranchise the states vis-à-vis evaluating the appropriateness of municipal broadband deployment and other public investments in broadband networks. On the contrary, decisions about permitting, prohibiting, or mediating the extent to which municipalities are allowed to build their own networks are best left to the individual states.⁵⁷ Instead, the BOC should focus its supply-side efforts exclusively on supporting private investment in and facilitating private deployment of broadband infrastructure.

In addition to undermining core notions of federalism and otherwise promoting risky financial behavior by entities that are ultimately responsible to their state, having the BOC position municipal broadband as both a viable and a preferred approach to improving broadband connectivity would negatively impact states, consumers, and the private broadband market in several ways. First, prioritizing GONs as a “solution” to perceived broadband needs risks conveying legitimacy and credibility to a deployment strategy that has not proven to be sustainable over the long term.⁵⁸ Second, many GONs, especially those deployed via municipally-owned utilities, have built in advantages over private networks, a dynamic that could unintentionally tilt the playing field against private providers.⁵⁹ Third, communities that are focused on making their own networks work could deprioritize other reforms and initiatives (e.g., changes to rights-of-way management, local franchising, and siting rules) aimed at encouraging additional private investment.

Promoting GONs also exposes broadband to the poor track record of infrastructure maintenance by the public sector at every level. Considerable data by organizations like the American Society of Civil Engineers make clear that government has done a terrible job investing in and engaging in basic upkeep of core infrastructure like roads, bridges, and dams.⁶⁰ Subjecting a dynamic service to the vagaries of public administration would thus undermine that which has made broadband thrive in the United States – i.e., the competitive pressures exerted on it by a marketplace composed of private providers. Moreover, at a time when public resources remain scarce and volatile at every level, the BOC should not prioritize, facilitate, or otherwise endorse a broadband deployment strategy that would result in the diversion of such resources away from more pressing needs, unless a state explicitly endorses such an approach.⁶¹

⁵⁷ *ACLP GONs Report*.

⁵⁸ *See, e.g., id.* at section 2 (providing a history of GONs in the U.S, including many examples of failed municipal efforts) and section 4 (evaluating 10 major GONs that have been deployed in recent years).

⁵⁹ *Id.* at 94-96.

⁶⁰ *See generally* ASCE, Infrastructure Report Card 2013, <http://www.infrastructurereportcard.org/>. *See also* *ACLP GONs Report* at 40-45 (for additional data and analysis).

⁶¹ *See, e.g., ACLP GONs Report* at 34-40.

In sum, the BOC should focus only on actions that support private investment and private broadband deployment. These activities could range from the development and dissemination of best practices related to key processes like rights-of-way management and siting approvals, as well as the promotion of critical policy reforms at the federal and state levels (see next section). For example, the BOC could highlight the need for certain adjustments to tax policies in order to free up more private investment for broadband.

PRINCIPLE #7

Based on its own successes in facilitating broadband deployment on federal lands and in other contexts under the purview of the Council, the BOC should develop and disseminate model policies aimed at furthering network deployment and fostering a rational regulatory environment that is conducive to continued private investment, innovation, and competition.

As the BOC makes advances in broadband deployment via activities described in several of the previous Principles, it should seek to distill best practices from these efforts and disseminate them to counterparts in state government in order to facilitate further gains. While the BOC is not in a position to impose these best practices on the states or engage in federal preemption of inconsistent state-level policies, the Council should position itself as an additional resource for state policymakers, especially those in agencies and divisions that mirror those of the BOC's members, who might be interested in learning more about how they can participate in their state's broadband plans.⁶²

For example, as discussed in Principle #1, a core focus of the BOC should be on maximizing federal resources to bolster broadband deployment. Several of the areas that are particularly ripe for reform at every level of government fall nicely into the Council's purview: updating how government administers access to rights-of-way, approves siting request for towers and other structures, and considers possible environmental impacts of new broadband builds. Discussions about these kinds of issues have been had for many years, spanning the last few presidencies and yielding a range of proposals that appear to have broad support – promoting “dig once” policies; establishing more uniform rates and application procedures to streamline review and approval processes; rationalizing and reforming environmental impact criteria.⁶³ To date, the federal government has made some progress on these fronts (as discussed in Principle #1). Similarly, a small but growing number of states have embraced some aspects of these proposals.⁶⁴ However, much work remains to be done.

⁶² This would be in keeping with one of the core purposes of the BOC as per the Presidential Memorandum establishing it. *Expanding Broadband Deployment and Adoption*.

⁶³ See, e.g., *National Broadband Plan* at ch. 6.

⁶⁴ See, e.g., William Petroski and Brianne Pfannenstiel, *Iowa Lawmakers OK Broadband Expansion Plan*, June 4, 2015, Des Moines Register, <http://www.desmoinesregister.com/story/news/politics/2015/06/04/iowa-broadband-expansion-bill/28506153/> (reporting on broadband legislation that, among other things, includes language to “create a uniform process for locating new cellphone towers, modifications of existing cell towers,

To the extent the BOC makes progress in acting on these and other proposals for improving access to federal lands via reforms to rights-of-way and siting processes, the Council should inform state counterparts of what worked and what did not in this context. Such consultation, either directly with individual states or via national organizations representing the states' interests, could help to build momentum in favor of much-needed regulatory adjustment at the state level. Indeed, federal best practices regarding optimal rights-of-way management, siting, environmental review, application procedures, and related aspects of network deployment could nudge state legislatures and agencies to engage in similar reforms. From the perspective of encouraging additional private investment in broadband, coordination along these lines could yield some measure of uniformity vis-à-vis access to critical inputs to infrastructure construction. Consistency in the structure and implementation of such rules and regulations would certainly be a boon to private companies looking to deploy broadband networks.

GUIDING PRINCIPLES FOR IMPROVING BROADBAND ON THE DEMAND-SIDE

PRINCIPLE #8

Demand-side issues are the most important, pressing, and overlooked in the broadband policy arena. The BOC should work to draw more attention to these issues and facilitate additional progress toward addressing them.

A focus on demand-side issues appears to be among the core functions of the BOC.⁶⁵ As such, the Council is well positioned to draw additional attention to a set of issues that has been overlooked for too long by policymakers. Indeed, much of the debate over broadband in the United States has revolved around the supply of high-speed Internet access. Even as broadband and intermodal competition diffused across nearly every part of the United States over the last decade, the policy focus has remained almost exclusively on supply, notwithstanding the more systemic issue of disparities in adoption rates across a range of user communities. Implicit in many supply-side arguments is an assumption that demand-side issues will resolve themselves once there is ample supply of cheap and ultra-fast broadband. Though appealing, this reductive cause-and-effect has been questioned by social scientists, researchers, practitioners, and others who have worked to identify and better understand the complex mechanics associated with broadband adoption across key demographics and in key sectors.⁶⁶

and co-location of cell towers and the rights and responsibilities of local governments/authorities when approving these applications.”).

⁶⁵ See, e.g., *Expanding Broadband Deployment and Adoption* (noting that a mandate for the BOC is to “promote the adoption and meaningful use of broadband technology).

⁶⁶ The literature on broadband adoption is vast, and continues to grow. For a comprehensive discussion of the importance of demand-side issues, as well as the many factors influencing adoption decisions by non-users, see, e.g., *Barriers to Broadband Adoption*; *ACLP GONs Report* at 28-34; Charles M. Davidson, Michael J. Santorelli & Thomas Kamber, *Broadband Adoption: Why it Matters & How it Works*, 19 Media L. & Pol’y 14 (2009), http://www.nyls.edu/advanced-communications-law-and-policy-institute/wp-content/uploads/sites/169/2013/08/Davidson_Santorelli_Kamber-BB-Adoption-Article-MLP-19.1.pdf;

Understanding the complexities of broadband adoption and the factors influencing the extent to which users put connections to meaningful uses should be high on the list of BOC priorities. Even though the vast majority of these factors and influences arise almost exclusively at the hyper-local level⁶⁷ – in discrete user communities and neighborhoods that are scattered across towns and cities in every state – there is room for substantially more federal leadership to more precisely define the contours of and trends associated with broadband adoption. To this end, the BOC could serve as a forum for facilitating additional research into these kinds of connectivity issues. The BOC itself could sponsor or co-sponsor research projects aimed at delving into the dynamics of demand-side issues of particular under-adopting communities. Similarly, individual BOC members could sponsor research into specific aspects of broadband adoption and use arising within their jurisdiction. For example:

- The Department of Health and Human Services, in partnership with relevant counterparts at the state level, could support research into the effectiveness of tying telemedicine training to increasing broadband adoption among seniors or people with disabilities.
- The Department of Housing and Urban Development could partner with the Small Business Administration and state housing authorities to investigate the extent to which workforce development efforts that include digital literacy training impact adoption decisions among low-income households.
- The Department of Education could partner with state officials and local administrators to develop best practices for enhancing professional development and otherwise equipping teachers with the knowledge needed to impart important digital literacy skills to students of all ages.

In short, the range of research opportunities facilitated by the BOC is potentially very broad. The Council should pursue these with an eye toward supporting further development of a robust body of literature around broadband adoption. Doing so will help to demonstrate to policymakers and other stakeholders at every level of government that these issues deserve more attention if broadband connectivity is to increase across every demographic group.

Charles M. Davidson, Michael J. Santorelli & Thomas Kamber, *Toward an Inclusive Measure of Broadband Adoption*, 6 Int'l J. of Comm. 2555-2575 (2012), <http://www.nyls.edu/advanced-communications-law-and-policy-institute/wp-content/uploads/sites/169/2013/08/Davidson-Santorelli-Kamber-Toward-an-Inclusive-Measure-of-Broadband-Adoption-IJOC-2012.pdf> (“*Toward an Inclusive Measure*”).

⁶⁷ For additional discussion, see, e.g., *Toward an Inclusive Measure*.

PRINCIPLE #9

The BOC should encourage the states to work more closely with municipalities and other local stakeholders to bolster broadband connectivity from the demand-side.

While the BOC is well positioned to serve as a champion for broadband adoption and digital literacy, the Council itself should not attempt to engage in actual demand-side stimulation activities. Instead, the BOC should direct any support for such demand-side activities to the states and encourage them to collaborate with municipalities when developing and implementing adoption-related strategies.

The federal government has a spotty record when it comes to engaging in successful and sustainable demand-side activities. Over the last few years, several federal agencies and programs have attempted to address these issues: the BTOP program allocated a substantial amount of money in support of sustainable adoption programs across the country, while the FCC launched a pilot program to study the impact of using Lifeline subsidies for broadband. Each initiative proved moderately successful in boosting broadband adoption.⁶⁸ However, a recent report by the GAO concluded that there has been little effort by the agencies to develop and implement a cohesive long-term strategy for addressing barriers to broadband adoption in under-adopting communities.⁶⁹ This criticism echoes other concerns about the ability of these agencies to effectively structure, implement, and evaluate demand-side programs in a manner that yields lasting, impactful outcomes.⁷⁰

Proposed reforms to the Lifeline program could certainly help address affordability issues for some non-users, but the array of other barriers that influence adoption decisions will remain unaddressed. The BOC could work to supplement the FCC's narrow demand-side efforts by highlighting the importance of close coordination between state and local stakeholders. As a general matter, state and local governments are well-positioned to help spur broadband connectivity in a number of ways (some of these are discussed in the next section). These efforts tend to be the most impactful because they are tailored to the

⁶⁸ See *BTOP Evaluation Study; Low-Income Broadband Pilot Program: Staff Report*, Wireline Competition Bureau, FCC (May 2015), http://transition.fcc.gov/Daily_Releases/Daily_Business/2015/db0522/DA-15-624A1.pdf.

⁶⁹ See *Intended Outcomes and Effectiveness of Efforts to Address Adoption Barriers are Unclear*, GAO-15-473 (June 2015), <http://www.gao.gov/assets/680/670588.pdf>.

⁷⁰ See, e.g., *FCC Should Evaluate the Efficiency and Effectiveness of the Lifeline Program*, GAO-15-335 (March 2015), <http://www.gao.gov/assets/670/669209.pdf> (criticizing the FCC for failing to evaluate the efficacy of its Lifeline program); James Prieger & Janice A. Hauge, *Evaluating the Impact of the American Recovery and Reinvestment Act's BTOP Program on Broadband Adoption*, Pepperdine University, School of Public Policy Working Papers – Paper 55 (April 2015), <http://digitalcommons.pepperdine.edu/cgi/viewcontent.cgi?article=1054&context=sppworkingpapers> (concluding that “the impact of the stimulus spending on broadband adoption is highly uncertain” and noting that there is a lack of “clear evidence supporting the position that BTOP led to beneficial outcomes of increased adoption.”).

specific needs of communities. Since one size rarely fits all in the broadband adoption context, the BOC should demonstrate a willingness to support community-specific efforts in every state across the country.

PRINCIPLE #10

Instead of promoting municipal broadband deployment, the BOC should engage in activities that underscore the importance and value of facilitating demand-side efforts by communities.

In an effort to maximize the impact of the BOC on broadband connectivity, the Council should eschew its focus on promoting municipal broadband (as discussed in Principle #1 and Principle #6) and instead dedicate resources to making a persuasive case as to why municipalities should channel resources into addressing critical demand-side issues. There is growing evidence that a more robust focus by communities on increasing broadband adoption, delivering training services, and improving digital literacy skills yield significant and lasting economic and social gains.⁷¹ Because broadband adoption issues are best addressed at the hyper-local level, municipalities are in the best position to work with local stakeholders on these issues – a simple but powerful fact that the BOC should endorse rather than work to undermine such activities by encouraging communities to focus only on building their own networks.

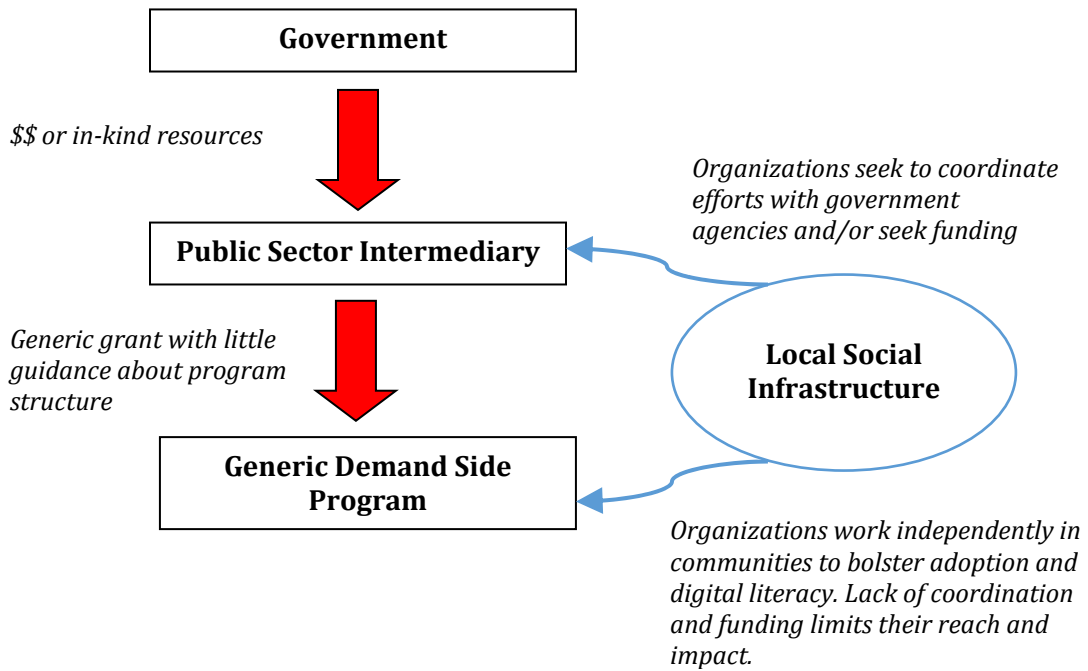
In response to these challenges, a variety of public-private partnerships has been deployed at the state and local levels to spur broadband adoption and assure productive uses of these tools. While programs vary greatly, two general frameworks – a “Top-Down” Model and a “Collaborative” Model – capture the broad structural components of each approach.⁷²

The *Top-Down Model*, which is illustrated in the figure below, positions government, particularly policymakers at the local and state levels, as the primary drivers of broadband connectivity on the demand side. This approach assumes public sector entities possess the expertise needed to successfully address demand side challenges hindering broadband adoption and utilization. In practice, however, this kind of approach tends to fail because it marginalizes key partners, especially those in local social infrastructures. A preference for purely public action in this context tends to foreclose a broader array of PPPs. As such, the Top-Down Model should be seen as a cautionary tale for the BOC.

⁷¹ See, e.g., *National Broadband Plan*; *ACLP GONs Report*; *Barriers to Broadband Adoption*;

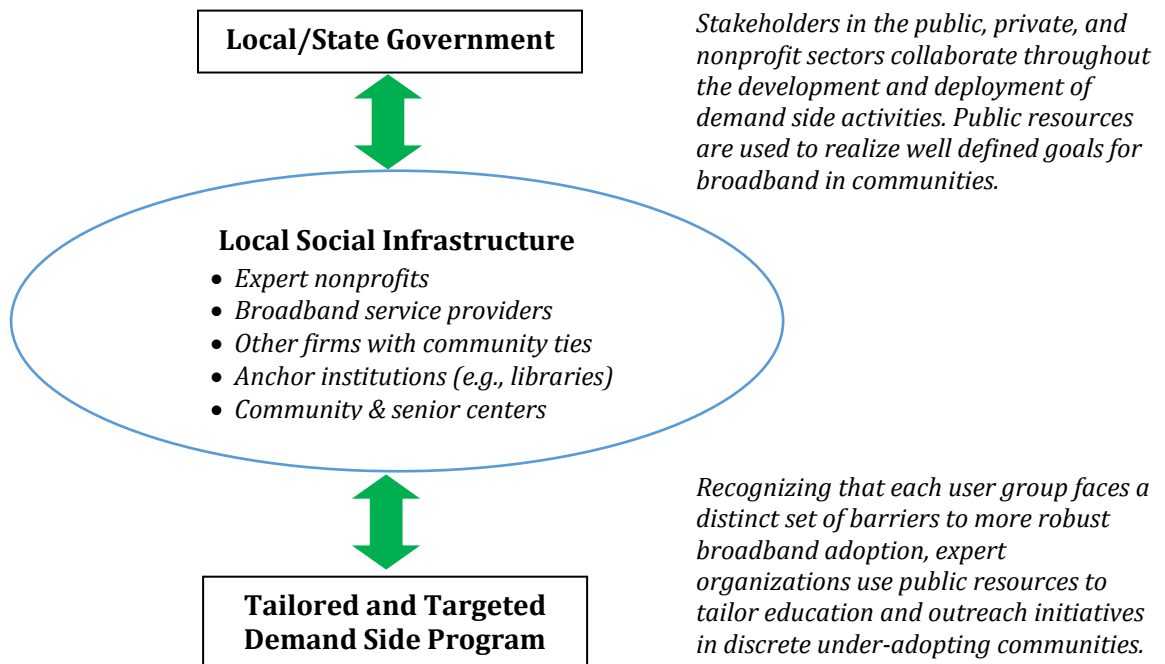
⁷² For further discussion and specific examples of successful demand-side projects being pursued at the state and local levels, see *ACLP GONs Report* at section 6.

Top-Down Model



The alternative approach, the *Collaborative Model*, is depicted below. It is an approach that is reflected in many effective demand side PPPs currently in operation across the country. This model reveals that local and state governments have important *supporting* roles to play in boosting broadband adoption and enhancing digital literacy. This is the kind of model that the BOC should support.

Collaborative Model for Addressing Demand-Side Issues



As these models make clear, the most effective approaches to addressing lingering demand-side challenges tend to be structured as public-private partnerships (PPPs) between state/local government and entities in the local social infrastructure. This prevailing structure is based on a recognition by public sector entities of the wide range of resources and expertise already available in the private and nonprofit sectors. PPPs developed to address broadband adoption and digital literacy issues also tend to thrive in areas where a strong social infrastructure is already in place. In the broadband context, there is wide agreement that the institutions and organizations at the heart of these social infrastructures – e.g., community centers, libraries, schools, senior centers, churches, and companies like ISPs, with roots in the municipality – are ideal conduits for channeling education, outreach, and training programs because they have succeeded in engendering high levels of trust with residents and have demonstrated an ability to deliver community-specific services. Accordingly, the BOC should encourage municipalities to explore and harness these resources, collaborate with state counterparts, and otherwise work to develop the right approach to addressing complex demand-side issues in their communities.