March 13, 2017

VIA EMAIL

National Telecommunications and Information Administration

U.S. Department of Commerce

1401 Constitution Avenue NW, Room 4725

Washington, DC 20230

Re: **Request for Comment on the Benefits, Challenges, and Potential Roles for the Government in Fostering the Advancement of the Internet of Things (IOT RFC 2017)**

The Wireless Infrastructure Association ("WIA")[1], commends National Telecommunications and Information Administration's ("NTIA") issuance of its green paper "Fostering the Advancement of the Internet of Things,"[2] ("IoT Green Paper") which outlines an approach and areas of engagement for possible future work the Department of Commerce will undertake on the Internet of Things ("IoT").[3] WIA is encouraged that as part of the Department's Digital Economy Agenda, NTIA continues to engage stakeholders on the benefits, challenges, and potential roles for the government in fostering the advancement of the Internet of Things by seeking comment

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[1] The Wireless Infrastructure Association is the principal organization representing the companies that build, design, own and manage telecommunications facilities throughout the world. Its over 230 members include carriers, infrastructure providers, and professional services firms.

[2] National Telecommunications and Information Administration, Fostering the Advancement of the Internet of Things (Jan. 12, 2017), https://www.ntia.doc.gov/files/ntia/publications/iot_green_paper_01122017.pdf ("IoT Green Paper").

[3] Benefits, Challenges, and Potential Roles for the Government in Fostering the Advancement of the Internet of Things, Notice, Request for Public Comment, NTIA Docket No. 170105023–7023–01 (rel. Jan. 12, 2017) ("IoT RFC 2017").

on the issues and proposed approach, current initiatives, and next steps laid out in the IoT Green Paper.[4]

I. INCREASED BROADBAND INFRASTRUCTURE DEPLOYMENT IS ESSENTIAL TO IOT GROWTH

WIA is pleased that the first of "four broad areas of engagement" that NTIA outlines in its IoT Green Paper is "**Enabling Infrastructure Availability and Access**: Fostering the physical and spectrum-related assets needed to support IoT growth and advancement."[5] As WIA highlighted in its original comments, wireless infrastructure plays an important role in enabling IoT.[6] Without robust underlying network infrastructure, the hyper-connectivity IoT promises cannot be realized. WIA also supports NTIA's second broad area of engagement "**Crafting Balanced Policy and Building Coalitions**: Removing barriers and encouraging coordination and collaboration; influencing, analyzing, devising, and promoting norms and practices that will protect IoT users while encouraging growth, advancement, and applicability of IoT technologies."[7]

Removing barriers to broadband deployment will help ensure individuals and businesses realize the benefits afforded by greater connectivity. We are encouraged that NTIA is working with the relevant stakeholders beyond the release of its IoT Green Paper to implement the policies and practices that will streamline infrastructure deployment and develop a robust IoT ecosystem.

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[4] IoT RFC 2017 at 4313.

[5] IoT Green Paper at 3, 15-17, Appendix A: Proposed Next Steps.

[6] Wireless Infrastructure Association Comments at 1-5, 6-7.

[7] IoT Green Paper at 3, 15, 24, Appendix A: Proposed Next Steps.

As the paper rightfully notes, IoT is different from other technological advancements in scope, scale, and stakes.[8] With new types of connected systems and devices, rapid growth in the number of these devices, and the important services provided through IoT, it is imperative that our local, state, and federal policies support expanded connectivity through responsible wireless infrastructure deployment.

WIA agrees with other commenters and the paper's assertion that "any future national strategy, if created, should strive toward global consistency and predictability and be based upon robust interagency coordination, public-private collaboration, and international engagement."[9] Regulatory certainty drives innovation, and for certainty to exist where infrastructure deployment is concerned, every agency involved in broadband deployment issues must consistently develop policies that streamline infrastructure siting processes. The paper highlights that the U.S. government is involved in international dialogues about digital economy issues such as "cross-border data flows, technical standards, privacy, cybersecurity, spectrum allocation, IPv6, and cloud computing."[10] With IoT issues entering these international discussions, WIA encourages the U.S. government to highlight the need for streamlined infrastructure deployment policies for the development of the robust networks IoT will require.

II.   THE U.S. GOVERNMENT MUST ENGAGE THE WIRELESS INFRASTRUCTURE INDUSTRY AS IT ADDRESSES BROADBAND DEPLOYMENT ISSUES AND DEVELOPS ITS IOT AGENDA

WIA supports the Department of Commerce's multi-stakeholder approach to coordinate across the four areas of infrastructure, policy, standards/technology, and emerging

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[8] Id. at 3-4.

[9] Id. at 10-11.

[10] Id. at 13.

markets.[11] As NTIA recognizes, "engagement with all stakeholders at the local, tribal, state, federal, and international levels" is necessary to achieve the full potential of IoT.[12]

WIA and its members stand ready to coordinate as private sector experts in the area of wireless infrastructure deployment. As the IoT Green Paper explains, "the need for seamless connectivity will require deployment of robust broadband infrastructure for interconnecting devices."[13] Increased internet traffic necessitates increased network capacity. WIA is pleased that the paper highlights concerns we, and other commenters, raised about hurdles to deploying infrastructure, specifically the "difficulties in siting of wireless towers and antennas, and access to necessary poles, conduits, and rights-of-way."[14] Also of concern is the nation's spectrum crunch.[15] Current and future 5th generation IoT technology will rely on innovative infrastructure and spectrum configurations.

Consequently, the Department of Commerce logically concludes that:

> infrastructure needs to be deployed, developed, and maintained to ensure that IoT reaches its full potential. This will require a continued focus on the deployment of, and investment, in wireline and wireless connectivity, spectrum availability, and standards development. The push for infrastructure deployment and development should be private-sector led, with the support of the Department to assess spectrum requirements, promote and foster broadband deployment, and ensure that access is made available to all communities. IoT

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[11] Id. at 14.

[12] Id. at 3.

[13] Id. at 15 (citations omitted).

[14] Id. at 16-17 (citing Wireless Infrastructure Association Comment at 2; Mobile Future Comment at 16; IoT Policy Network Comment at 8).

[15] Id. at 17-18.

infrastructure development will also require international engagement to address issues of interoperability, access, and inclusiveness.[16]

WIA is pleased that as a proposed next step, the Department of Commerce plans to "coordinate with the private sector, as well as federal, state, and local government partners to ensure the infrastructure to support IoT continues to expand."[17] As the IoT Green Paper notes, NTIA is playing a role through the Broadband Opportunity Council ("BOC") by "empowering communities to become smart cities" and exploring "additional steps that can be taken to remove barriers to broadband deployment and adoption."[18] WIA encourages to Department of Commerce to actively include the wireless infrastructure industry as it is working to deliver on the BOC's action items. Specifically, NTIA should intentionally include the wireless infrastructure industry in its continued development of a toolkit for local communities seeking to become smart cities.[19] It is critical that cities understand the correlation between broadband infrastructure siting process and their success in connecting more people and devices in their communities. WIA and its members have resources that communities participating in NTIA's Communities Connectivity Initiative can utilize to streamline their wireless infrastructure permitting processes, which will expedite broadband deployment to their residents.

As the Department of Commerce seeks to engage the private sector to develop approaches to address IoT issues, WIA encourages the Department to execute a system for industry engagement that can be applied across all of its action items. For instance, the Federal Communications Commission recently announced the formation of a

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[16] Id. at 20-21.

[17] Id. at 23.

[18] Id. at 21.

[19] Id. See NTIA, Community Connectivity Initiative, http://www2.ntia.doc.gov/CCI (last visited Mar. 13, 2017).

Broadband Deployment Advisory Committee, which will be a multi-stakeholder group that will "provide advice and recommendations to the Commission on how to accelerate the deployment of high-speed Internet access."[20] Such a committee facilitates engagement across various interested parties to efficiently reach policy objectives.

Additionally, the BOC's January 2017 Progress Report ("BOC Progress Report") indicates that NTIA is continuing efforts on a one-stop portal on its website to provide federal resources to communities as they expand broadband access and to provide status updates on the progress agencies have made toward action items in the BOC's report.[21] NTIA should engage the private sector as it updates the portal. Such a portal would serve as a great resource not only for communities, but also for wireless infrastructure and service providers as they navigate deployment on federal lands and property. WIA and its members can work with NTIA to ensure that the one-stop portal also includes the types of information that industry could use to faster deploy broadband infrastructure.

WIA is pleased that federal agencies started the process of "creat[ing] accessible open data inventory of infrastructure assets that can support broadband."[22] As a co-chair of the BOC, NTIA should work with federal landholding agencies to ensure the completion of this asset inventory action item and efforts to streamline federal lands siting applications. The federal government owns or administers nearly thirty percent of all land in the United States, including thousands of buildings, and funds state and local transportation infrastructure. However, national and regional wireless and wireline

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[20] See Federal Communications Commission, Broadband Deployment Advisory Committee, https://www.fcc.gov/broadband-deployment-advisory-committee (last visited Mar. 13, 2017).

[21] BROADBAND OPPORTUNITY COUNCIL, BROADBAND OPPORTUNITY COUNCIL AGENCIES' PROGRESS REPORT (Jan. 2017),
https://www.ntia.doc.gov/files/ntia/publications/broadband_opportunity_council_agencies_progress_report_jan2017.pdf.

[22] Id. at 16.

broadband providers currently face significant challenges when working to secure leases, easements or other access to federal rights-of-way and buildings to deploy broadband infrastructure. Predictability and consistency are vital to network planning and investment in any arena, but this need is amplified when deploying broadband on federal property, which can require interagency review and coordination.

Additionally, WIA supports the efforts of the BOC Section 106 Working Group to "explore strategies to create efficiency and consistency in Section 106 review for broadband projects."[23] We look forward to continued work with the Advisory Council on Historic Preservation ("ACHP") as they develop their Program Comment to establish streamlined practices for "telecommunications infrastructure activities, such as collocation on existing wireless towers. . . ."[24] NTIA should encourage ACHP to expediently finalize this Program Comment action item as it would increase the deployment of infrastructure that typically does not result in adverse effects on historic properties. Likewise, NTIA should further emphasize private sector involvement with the Department of Homeland Security and other agencies in the Accelerating Broadband Infrastructure Deployment Working Group as they move into a new workstream focusing on federal broadband permitting issues. WIA and its members stand ready to advise the working group on how they can best attain their goals of "ensuring a coordinated and consistent approach in streamlining and implementing agency procedures, requirements, and policies related to access to federal lands, buildings, rights of way, federally-assisted highways, and tribal lands."[25]

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[23] Id. at 20.

[24] Id. at 21.

[25] Id. at 24.

We appreciate your consideration of these comments and look forward to working together to foster the deployment of necessary IoT infrastructure.

Sincerely,

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