Before the
UNITED STATES DEPARTMENT OF COMMERCE
NATIONAL TELECOMMUNICATIONS AND INFORMATION AGENCY
NATIONAL SCIENCE FOUNDATION
Washington, DC 20230

In the Matter of:	)	
	)	
National Broadband Research Agenda	)	Docket No: 160831803-6803-01
	)	RIN 0660-XC031

COMMENTS OF CTIA

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CTIA[1] welcomes this opportunity to provide comments that will be used to develop a National Broadband Research Agenda ("Agenda").[2] CTIA actively participated in the proceeding that led to issuance of the Broadband Opportunity Council ("BOC") Report in 2015, of which the creation of the Agenda was one of many recommendations.[3] Although the *Notice* seeks comment on 19 specific questions, CTIA's comments are focused on those questions seeking information that can be used to analyze the economic and societal benefits of eliminating barriers to broadband deployment.

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[1] CTIA® (www.ctia.org) represents the U.S. wireless communications industry and the companies throughout the mobile ecosystem that enable Americans to lead a 21st century connected life. The association's members include wireless carriers, device manufacturers, suppliers as well as apps and content companies. CTIA vigorously advocates at all levels of government for policies that foster continued wireless innovation and investment. The association also coordinates the industry's voluntary best practices, hosts educational events that promote the wireless industry and co-produces the industry's leading wireless tradeshow. CTIA was founded in 1984 and is based in Washington, D.C.

[2] National Broadband Research Agenda, Request for Comments, 81 Fed. Reg. 62479 (Sept. 9, 2016) ("*Notice*").

[3] *See Broadband Opportunity Council Report and Recommendations*, U.S. Department of Agriculture and U.S. Department of Commerce (Aug. 20, 2015), https://www.whitehouse.gov/sites/default/files/broadband_opportunity_council_report_final.pdf ("*BOC Report*"); *see also* Comments of CTIA – The Wireless Association, Docket No. 150414365-5365-01 (filed June 10, 2015), http://www.ntia.doc.gov/files/ntia/ctia-the_wireless_association_boc.pdf.

I. INTRODUCTION.

Wireless broadband service affords Americans numerous and ever-increasing ways to communicate with loved ones and streamline daily activities. Yet service providers face numerous hurdles in attempting to deploy the infrastructure necessary to deliver these services. Deploying today's 4G LTE networks and tomorrow's next-generation 5G services will require navigating a web of federal, Tribal, state, and local requirements that are generally aimed at promoting legitimate zoning concerns in a variety of contexts, but that in this context too often stand as potential barriers to timely and cost-effective deployment of vital wireless broadband equipment. For example:

- Localities may not permit access to, or deployment of distributed antenna system ("DAS") and small cells in, rights of way ("ROWs") and may charge exorbitant fees for wireless ROW access when compared to prior ROW deployments by utilities;
- Federal agencies and localities may not act within reasonable timeframes on wireless siting applications subject to their jurisdiction; and
- Tribes may request consultation prior to construction, which can significantly delay and increase the costs associated with deployment.

CTIA supports efforts to identify and collect information regarding the socioeconomic benefits of streamlined infrastructure policies that may promote the ability of wireless providers to rapidly and efficiently deploy wireless services to consumers, including next-generation 5G technologies. This data could be utilized to evaluate and identify the distinctions in investment outcomes depending on the nature and scope of regulatory obstacles to deployment. CTIA also supports further research into steps taken by (i) state and local officials and (ii) federal agencies that have opened up additional property for wireless broadband deployment or reduced the processing time associated with wireless siting applications so that more Americans in more areas can have access to critical wireless broadband connectivity.

The *BOC Report* recognized the important role that streamlined infrastructure siting policies can play in promoting broadband deployment and competition.[4] Thus, the information collection efforts proposed here can and should proceed in tandem with ongoing wireless broadband deployment efforts; they must not be viewed as a condition precedent to wireless broadband deployment. Federal, state, local, or Tribal entities should not be permitted to "hit the pause button" and delay action on a siting request because they are awaiting the results of this information collection and issuance of the Agenda. In addition, any data collection requests should not seek to collect proprietary information or otherwise place burdensome reporting obligations on wireless providers that should otherwise be investing their time and resources into ensuring that consumers have the high-speed mobile connectivity they want and deserve.

II. NTIA SHOULD COLLECT DATA REGARDING THE SOCIETAL AND ECONOMIC BENEFITS OF REDUCING BARRIERS TO WIRELESS BROADBAND DEPLOYMENT.

Wireless broadband services today are an increasingly important way for Americans to stay connected with friends and loved ones, search for jobs, conduct financial transactions, and complete myriad day-to-day tasks more efficiently than ever before.[5] And 5G services hold the promise of unlocking the even greater potential of a fully-connected, mobile broadband society.[6]

Infrastructure is a key input of that reality. In order to bring the next generation of wireless technology to consumers, the wireless industry will need to deploy additional infrastructure—specifically, ultra-dense networks of smaller deployments like DAS and small

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[4] *See BOC Report* § 4.3.

[5] *See* Comments of CTIA, FCC Docket No. 16-137 (filed May 31, 2016), https://ecfsapi.fcc.gov/file/60002088016.pdf.

[6] *Id.*; *see also* Thomas K. Sawanobori, The Next Generation of Wireless: 5G Leadership in the U.S., CTIA White Paper at 6 (Feb. 9, 2016) ("CTIA 5G White Paper"), http://www.ctia.org/docs/default-source/default-document-library/5g_white-paper-web.pdf.

cells.[7] As a result, providers' access to infrastructure like utility poles will be a critical component of satisfying 5G demands.[8] However, legacy regulation of such infrastructure has the potential to frustrate twenty-first century engineering marvels and technological breakthroughs due to decades-old bureaucratic roadblocks.[9]

CTIA encourages NTIA to explore research into the benefits of eliminating any regulatory obstacles, including those discussed below, that may hinder Americans from having

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[7] *See* CTIA 5G White Paper at 12; *see also* Opening Remarks of Chairman Tom Wheeler, FCC Distributed Antenna Systems and Small Cell Workshop (May 3, 2016), https://www.fcc.gov/news-events/events/2016/05/distributed-antenna-systems-and-small-cell-workshop ("There's a lot of focus in this agency and in the industry on spectrum. But the reality is that antenna siting is equal in importance . . . And it's going to be made even more crucial and even more challenging as a result of 5G."); Mignon L. Clyburn, Commissioner, FCC, Testimony Before the House Subcommittee on Communications & Technology, "Oversight of the Federal Communications Commission" at 2 (Mar. 22, 2016), https://apps.fcc.gov/edocs_public/attachmatch/DOC-338509A1.pdf ("This vision of promise of 5G is clear, but to get there, we need to ensure that commercial wireless companies have . . . the necessary infrastructure . . . to deploy that spectrum."); Jessica Rosenworcel, Commissioner, FCC, Remarks at the Leadership Forum on 5G: The Next Generation of Wireless, *Five Ideas for the Road to 5G*, at 3 (Feb. 9, 2016), https://apps.fcc.gov/edocs_public/attachmatch/DOC-337655A1.pdf ("[T]he unsung hero of the wireless revolution is infrastructure. Because no amount of spectrum will lead to better wireless service without good infrastructure. So if we want a big and bold future for our airwaves, we need policies that support our efforts on the ground."); Ajit Pai, Commissioner, FCC, Remarks at 4G Americas' Technology Symposium: *The Future of Mobile Broadband in the Americas LTE to 5G Network Innovation*, at 3 (Nov. 5, 2015), https://apps.fcc.gov/edocs_public/attachmatch/DOC-336219A1.pdf ("To support 5G, providers will have to densify their networks. And to help them do that, we need to expedite the siting of wireless infrastructure."); Michael O'Rielly, Commissioner, FCC, Remarks at the Distributed Antenna Systems (DAS) and Small Cell Solutions Workshop at 1 (May 3, 2016), https://apps.fcc.gov/edocs_public/attachmatch/DOC-339166A1.pdf ("… Americans now seek access to communications services everywhere at any time. To meet these demands, small cells will need to be ubiquitous – especially in high density areas – to promote spectrum reuse and meet the demand for these wireless services. We no longer live in a world – certainly in very urban markets – where network deployments can be based on macro towers alone.").

[8] *Enabling the Wireless Networks of Tomorrow: Rules of the Road for Pole Attachments in States Across America*, CTIA White Paper at 2-4 (Apr. 2016), http://www.ctia.org/docs/default-source/default-document-library/enabling-the-wireless-networks-of-tomorrow.pdf.

[9] *See id*. at 5.

access to mobile broadband services and the attendant societal benefits that adoption of such services can afford. Across each of these areas, NTIA should explore the benefits of streamlined siting policies to consumers, businesses, and communities.

A. State and Local Barriers to Wireless Broadband Deployment.

Timely action on wireless siting requests is essential to broadband deployment. Recognizing this, Congress has taken several important actions designed to remove barriers to broadband deployment caused by local zoning and permitting processes. First, in the Telecommunications Act of 1996,[10] Congress adopted amendments to Section 332 of the Communications Act to cabin the role of state and local zoning authorities in the tower siting process in order to reduce delays in the review process.[11] Second, Congress enacted Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012 ("Spectrum Act")[12] to facilitate wireless broadband deployment. Section 6409(a) provides for the grant within a specified timeframe of siting applications seeking approval to collocate wireless facilities on wireless towers or base stations, provided such collocations do not substantially increase the size of the existing tower or base station.[13]

Despite these actions, many state and local laws and policies prevent or delay the deployment of the facilities necessary to deliver wireless broadband services. This reality has been recognized recently by numerous officials at the Federal Communications Commission ("FCC"). Just last month, for example, FCC Chairman Tom Wheeler said:

> [T]he nature of [5G] technology makes the review and approval by community siting authorities, and the associated costs and fees, all

[10] Pub. L. No. 104-104, 110 Stat. 153 ("1996 Act").

[11] *See* 47 U.S.C. § 332(c)(7).

[12] *See* Pub. L. No. 112-96 § 6409(a), 126 Stat. 156 (2012) ("Spectrum Act").

[13] *Id*.

> the more critical. . . . If siting for a small cell takes as long and costs as much as siting for a cell tower, few communities will ever have the benefits of 5G. Make no mistake, localities play a vital role in the siting process, and they have important and legitimate rights, but those rights don't extend to blocking a national communications pathway. Given the importance of ubiquitous expansion of 4G and the rollout of 5G to our economic future, it's not reasonable for localities to view cell site deployment as a potential new revenue stream, which is something we've seen. It's not reasonable for cities to "franchise" their siting to a third party, who acts as a gatekeeper.[14]

FCC Commissioners Ajit Pai and Michael O'Rielly similarly stressed the importance of removing state and local barriers to wireless broadband deployment. Commissioner Pai recently stated:

> The cost to deploy broadband is already staggering. . . . So there's no reason why ISPs should have to navigate a dizzying array of federal, state, and municipal obstacles before the shovels even hit the dirt. After all, each month spent negotiating with a municipality for access to local rights of way is another month that consumers must wait for faster service and another month that work crews must sit idle. Every dollar spent complying with unnecessary regulations is a dollar that could have been better spent deploying next-generation technologies.
>
> And now that we are moving towards 5G wireless service, these problems could get much worse. Future 5G technologies will require "densification" of wireless networks. That means providers are going to deploy hundreds of thousands of new antennas and cell sites, and they are going to deploy many more miles of fiber to carry all of this traffic. Without a paradigm shift in our nation's approach to wireless siting and broadband deployment, our creaky regulatory approach is going to be the bottleneck that holds American consumers and businesses back …."[15]

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[14] Tom Wheeler, Chairman, FCC, Remarks at the CCA Seattle, Washington Show (Sept. 20, 2016); *accord* Tom Wheeler, Chairman, FCC, Remarks at the National Association of Telecommunications Officers and Advisors ("NATOA") Annual Conference (Oct. 1, 2014); *see* Tom Wheeler, Chairman, FCC, Remarks at the National Press Club (June 20, 2016); Tom Wheeler, Chairman, FCC, Remarks at the DAS and Small Cell Workshop (May 3, 2016).

[15] Ajit Pai, Commissioner, FCC, Remarks at The Brandery, Cincinnati, Ohio, "A Digital Empowerment Agenda" (Sept. 13, 2016), http://transition.fcc.gov/Daily_Releases/Daily_Business/2016/db0913/DOC-341210A1.pdf.

Similarly, in recent testimony before the Senate Commerce Committee, Commissioner O'Rielly stated:

> All of this infrastructure can't be sited without approval of decision makers, including private land owners and municipal managers. Standing in the way of progress, however, are some localities, Tribal governments and states seeking to extract enormous fees from providers and operating siting review processes that are not conducive to a quick and successful deployment schedule.[16]

Given the importance of infrastructure to wireless broadband deployment efforts and the potential impediments at the state and local level identified by the FCC Chairman and Commissioners, NTIA should collect data regarding the impact of state and local siting policies on broadband deployment and access across the country. In so doing, it would be informative for NTIA to survey state and local policies, including:

- A representative sampling of localities that do and do not grant wireless providers access to ROWs;
- A representative sampling of localities that permit or prohibit the deployment of DAS and small cell facilities in ROWs;
- A representative sampling of localities that permit or prohibit DAS and small cell deployments on light poles or utility poles;
- A representative sampling of localities that permit or prohibit DAS and small cell deployments on municipal facilities, including municipally-owned light poles and utility poles;
- Whether wireless carriers and infrastructure providers are charged the same fees for access as utilities that previously obtained access to the ROWs, light poles, and utility poles (including pole tops) in the representative sampling of localities; and
- The average length of time it takes to review and act on siting requests in the representative sampling of localities, broken down into three categories: (i) requests involving a new tower or major modification, (ii) requests seeking collocation on existing structures, and (iii) requests involving DAS and small cell deployments.

[16] *Oversight of the Federal Communications Commission before the Senate Committee on Commerce, Science, and Transportation*, 114th Cong. 2 (2016) (statement of Michael O'Rielly, Commissioner, FCC).

This data could be used generally to evaluate the economic and societal benefits flowing from different state and local siting policies and identify particular areas where barriers should be reduced or eliminated in order to foster deployment and enable consumers to enjoy the benefits associated with access to wireless broadband services. NTIA has previous experience quantifying the socioeconomic benefits of infrastructure investment and buildout,[17] and doing so here, with a particular emphasis on the benefits of streamlined deployment policies, could prove equally informative.

B. Federal Barriers to Wireless Broadband Deployment.

Roughly one third of the land in the United States is owned by the federal government,[18] which means that wireless service providers often face barriers and/or delays at the federal level

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[17] *See* Press Release, NTIA, *Research Study Shows NTIA Broadband Grants Provided Billions in Economic Benefits* (Jan. 14, 2015), http://www.ntia.doc.gov/press-release/2015/research-study-shows-ntia-broadband-grants-provided-billions-economic-benefits (announcing the release of a study that found NTIA's broadband grants program resulted in higher levels of employment and increased economic output of as much as $21 billion annually); *see also* NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, BROADBAND TECHNOLOGY OPPORTUNITIES PROGRAM EVALUATION STUDY, FINAL REPORT: SOCIAL AND ECONOMIC IMPACTS OF THE BROADBAND TECHNOLOGY OPPORTUNITIES PROGRAM, ASR ANALYTICS (Sept. 15, 2014), http://www.ntia.doc.gov/files/ntia/publications/asr_final_report.pdf (providing a quantitative and qualitative assessment of the social and economic impact of Broadband Technology Opportunities Program ("BTOP") grants and finding, among other things, that the social and economic impacts of BTOP grants included increased economic output, long-term increased levels of employment, reduced prices and improved service, and improved broadband availability for seniors and rural and low-income Americans). As part of the BTOP grant application process, applicants were required to describe their involvement and partnerships with local governments and communities in developing their proposals, which—similar to local infrastructure policies—could be used to demonstrate the importance of industry and communities working together to ensure that deployment plans and policies will be beneficial for the affected communities and consumers. *See Broadband Technology Opportunities Program*, Notice of Funds Availability and Solicitation of Applications, 75 Fed. Reg. 3791, 3804 (Jan. 22, 2010), http://www.ntia.doc.gov/files/ntia/publications/fr_btopnofa_100115_0.pdf.

[18] *See* FCC, Connecting America: The National Broadband Plan (2010), Ch. 6, p. 115, http://download.broadband.gov/plan/national-broadband-plan-chapter-6-infrastructure.pdf.

when attempting to deploy wireless infrastructure on lands administered by federal agencies. The inability to obtain timely access to federal lands for wireless broadband deployments thus can impact the ability of consumers—particularly those in rural and remote areas—to reap the benefits of broadband connectivity.

Congress attempted to spur wireless broadband deployment on federal lands through enactment of Sections 6409(b) and (c) of the Spectrum Act, which directed the Administrator of the General Services Administration to establish master contracts and forms for wireless siting.[19] Despite these requirements and the eventual adoption of common contracts and forms, the federal wireless siting process generally is very prolonged. Although states and localities are subject to wireless siting shot clocks, federal agencies are not subject to similar processing requirements. As a result, it may take years to obtain access to federal lands. For example, CTIA's members report that leases to place new wireless sites on lands subject to the jurisdiction of the Bureau of Land Management and the National Park Service can take two to three years to negotiate.

To better evaluate the scope and impact of federal agency siting practices on wireless broadband access and adoption, NTIA should collect data regarding:

- The number of wireless siting requests seeking access to federal property that are pending before each federal agency;
- Federal agencies that permit the construction of new equipment sheds as part of a collocation, and those agencies that require collocations to use existing equipment sheds; and
- The average length of time it takes each federal agency to review and act on such siting requests, broken down as follows:
    - The average time for requests involving new towers or major modifications to existing towers; and

[19] Spectrum Act §§ 6409(b) & (c).

- The average time for requests seeking to collocate on existing towers, including the time for requests involving new equipment sheds and those utilizing existing equipment sheds.

NTIA also should ask federal agencies with jurisdiction over federal property to identify steps taken to expedite the processing of wireless siting applications so that wireless service providers can more rapidly and efficiently deploy services to more Americans. In particular, federal agencies should discuss how these actions have reduced the average processing time for wireless siting applications.

C. Tribal Barriers to Wireless Broadband Deployment.

Providers have seen a significant increase in requests for review of wireless broadband deployments under Section 106 of the National Historic Preservation Act, which results in delay and higher deployment costs that could lead to the reduction or elimination of service for some customers. Although the wireless industry is committed to ensuring that infrastructure deployment does not adversely affect Tribal, historic, or cultural sites, in many cases, these deployments should not raise any Tribal concerns because the locations are in urban areas that have already been developed and are outside of Tribal lands. Nevertheless, because Tribes express interest in these facilities, the projects are delayed during the consultation process, which in turn delays access to the resultant wireless broadband connectivity.

CTIA's members report that the cost of the Tribal review process has increased exponentially within the past few years. Based on data collected to date, these costs have increased more than tenfold since 2012, with the typical Tribal review fees growing from hundreds of dollars per site to thousands of dollars per site.

NTIA should collect data on the impact Tribal review practices are having on wireless broadband access and adoption. To better understand whether and how Tribal consultation is

affecting the ability of consumers to take advantage of the economic and social benefits of broadband access, data should be collected regarding:

- The number of wireless broadband deployments that are currently undergoing the Tribal consultation process;
- The average time it takes to complete the Tribal review process (including the average time for Tribal review of new construction and collocation proposals);
- The average number of Tribes requesting consultation regarding a single wireless broadband deployment proposal;
- The fees charged by Tribes to complete the consultation process;
- The percentage of wireless broadband deployment proposals that trigger a request for Tribal monitoring (including for both new construction and collocations); and
- The average cost for Tribal monitoring at a single site.

Although this information could be obtained from Tribes, NTIA also should seek this data from the Bureau of Indian Affairs, the National Park Service, and the FCC. Information obtained from these agencies may reduce the amount of information needed from Tribes, thus reducing their administrative burdens.

III. NTIA SHOULD NOT SEEK TO COLLECT COMMERCIALLY SENSITIVE INFORMATION OR REQUIRE BURDENSOME COLLECTIONS FROM THE WIRELESS INDUSTRY.

The *Notice* seeks comment on whether there are opportunities to collect new broadband-related data or expand current data sets within federal programs that fund and/or produce research, as well as what data—whether public, commercial, or proprietary—could facilitate broadband related-research.[20] In establishing any such data collection, NTIA should refrain from imposing onerous data collection requirements on wireless providers. Such requirements divert time and resources away from the ability of wireless companies to improve their networks and offerings for the benefit of consumers. Wireless providers are already subject

[20] *Notice*, 81 Fed. Reg. at 62480-81.

to numerous reporting requirements every year[21] and should not be encumbered with additional onerous reporting obligations.

NTIA also should avoid requesting data or information that could reveal proprietary or sensitive information about wireless providers' operations. The collection of proprietary data from carriers is inherently burdensome[22] and creates the need to develop mechanisms to protect such information from disclosure. To avoid these issues, NTIA should focus its research efforts on the socioeconomic benefits of good siting policies across federal, state, local, and Tribal areas, which may help expedite, rather than delay, broadband access to consumers.

IV. CONCLUSION.

CTIA supports the Administration's efforts to spur broadband deployment, including through the establishment of a National Broadband Research Agenda. In establishing the framework for the Agenda, NTIA should collect data regarding the societal and economic benefits of reducing barriers to wireless broadband deployment. This data collection should focus on information regarding state, local, federal, and Tribal barriers to such deployment. NTIA should not, however, seek to collect commercially sensitive information from wireless broadband providers or impose burdensome information collections on such providers. Wireless broadband providers already are subject to numerous reporting requirements and additional

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[21] *See, e.g.*, FCC Form 477. The filing requirements specifically related to broadband services are described at https://transition.fcc.gov/form477/WhoMustFileForm477.pdf.

[22] *Connect America Fund, High-Cost Universal Service Support*, Report and Order, 29 FCC Rcd 3964, 4016 ¶ 119 n. 356 (2014) (designing the workings of an entire regulatory mechanism in part to avoid the "burden of having to collect proprietary data from carriers"); *see also Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers, Equal Access and Interconnection Obligations Pertaining to Commercial Mobile Radio Service Providers*, Notice of Proposed Rulemaking, 11 FCC Rcd 5020, 5062 ¶ 91 (1996) (acknowledging, in discussion of LECs' and CMRS providers' proprietary data, the burden imposed by required disclosures).

onerous reporting obligations will divert time and resources away from their ability to improve their networks and service offerings.

Respectfully submitted,

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