

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
)
Wireless Telecommunications Bureau Seeks) WT Docket No. 15-125
Comment on the State of Mobile Wireless)
Competition)

COMMENTS OF PCIA – THE WIRELESS INFRASTRUCTURE ASSOCIATION

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I. INTRODUCTION AND SUMMARY

PCIA – The Wireless Infrastructure Association (“PCIA”)¹ respectfully submits these comments in response to the Federal Communications Commission’s (“FCC” or “Commission”) Public Notice seeking comment on the state of competition in the mobile wireless industry.²

PCIA is pleased to have the opportunity to provide the Commission with information relating to the infrastructure segment of the wireless industry.

Intense competition across the wireless industry has powered investment in new infrastructure to increase capacity and expand coverage to meet consumer expectations and demands for mobile wireless broadband.³ The third-party, neutral-host infrastructure model fuels infrastructure investment and drives competition among carriers due to the efficiencies and lower

¹ PCIA – The Wireless Infrastructure Association is the principal organization representing the companies that build, design, own and manage telecommunications facilities throughout the world. Its over 220 members include carriers, infrastructure providers, and professional services firms.

² Wireless Telecommunications Bureau Seeks Comment on the State of Mobile Wireless Competition, *Public Notice*, WT Docket No. 15-125, DA 15-647 (WTB rel. May 29, 2015) (“*Public Notice*”).

³ PCIA supports the Commission’s use of varied data sets to determine wireless coverage metrics, including information gathered from Form 477 as well as independent providers of data, such as Mosaik. *See Public Notice* at III.A.

barriers to entry afforded by collocation.⁴ Opportunities remain for innovative new market entrants to provide additional network design elements.⁵ Providers continue to invest in equipment upgrades to accommodate 4G Long Term Evolution (“LTE”) technologies and densify networks.⁶ As a result, consumers and businesses alike have reaped the benefits of this investment, enjoying better broadband service in the form of faster networks with far-reaching coverage. Over the near and long term this capital investment will be sustained—in the near term with the rollout of LTE-Advanced,⁷ and in the longer term with the expected deployment of 5G networks beginning in 2020.⁸

Moreover, investment in wireless infrastructure yields dividends for the United States economy as a whole, spurring jobs and economic growth and enabling innovation in burgeoning sectors, like the application economy, and the technology sector as a whole. A PCIA-commissioned study indicates projected wireless infrastructure investment of \$34 to 36 billion per year through 2017 would yield \$1.2 trillion in economic development and 1.3 million net

⁴ See Jonathan Spalter, *The State of Wireless Competition*, MOBILE FUTURE (Dec. 12, 2014), <http://mobilefuture.org/the-state-of-wireless-competition/> (“[I]ntense competition is fueling unprecedented investment in U.S. wireless infrastructure.”).

⁵ Matt Hamblen, *Google Launches Project Fi, Its Combo Cellular and Wi-Fi Network*, COMPUTERWORLD (Apr. 22, 2015, 11:27 AM), <http://www.computerworld.com/article/2913371/wireless-networking/google-launches-project-fi-its-combo-cellular-and-wi-fi-network.html> (previewing Google’s wireless network Project Fi, which operates both using existing available Wi-Fi hotspots as well as on Sprint and T-Mobile’s networks as a mobile virtual network operator).

⁶ See Mike Dano, *Verizon CFO Promises to Increase Wireless Capex, Margins*, FIERCEWIRELESS (Dec. 9, 2014), <http://www.fiercewireless.com/story/verizon-cfo-promises-increase-wireless-capex-margins/2014-12-09> (quoting Verizon Chief Financial Officer Fran Shammo, who explained that “The reason wireless [capital expenditure] isn’t declining is because with an LTE network . . . you have to continue to invest in that network.”)

⁷ See Tammy Parker, *5G Is Coming But Don’t Forget LTE-Advanced, Says 4G Americas*, FIERCEWIRELESSTECH (Sept. 9, 2014) <http://www.fiercewireless.com/tech/story/5g-coming-dont-forget-lte-advanced-says-4g-americas/2014-09-09>.

⁸ See Andy Boxall, *The Plan for Making 5G Mobile Connections a Reality by 2020 Is Coming Together*, DIGITAL TRENDS (Jun. 23, 2015), <http://www.digitaltrends.com/mobile/itu-imt-2020-5g-connections-news>.

new jobs.⁹ Another analyst report estimates that mobile’s contribution to United States gross domestic product will reach 5% by 2020.¹⁰ Investment in wireless infrastructure powers not only numerous direct effects—better, faster wireless service and additional telecommunications jobs—but also propels other positive, indirect effects, such as improving efficiency and enhancing productivity of existing businesses and enabling new businesses to provide novel, innovative services.¹¹

The Commission took several important steps to expedite broadband deployment over the past year, including crafting rules for Section 6409(a) of the Spectrum Act, updating tower marking and lighting requirements, facilitating the deployment of temporary towers, and streamlining historic and environmental compliance obligations for small wireless facilities. However, federal, state, and local obstacles still remain to wireless infrastructure deployment; as detailed below, the Commission should continue to examine its regulations to facilitate the rollout of wireless broadband and advise other agencies on key steps to success, especially for facilities deployed on federal lands.

II. INVESTMENT IN WIRELESS INFRASTRUCTURE CONTRIBUTES SUBSTANTIALLY TO ROBUST COMPETITION WITHIN THE WIRELESS INDUSTRY.

Investment in infrastructure and competition among providers has powered a shift from landline communications to mobile platforms. Consumers increasingly rely on wireless service

⁹ ALAN PEARCE ET AL., *WIRELESS BROADBAND INFRASTRUCTURE: A CATALYST FOR GDP AND JOB GROWTH 2013-2017* (Sept. 2013), *available at* http://www.pcia.com/images/IAE_Infrastructure_and_Economy2.PDF (“PEARCE STUDY”).

¹⁰ JULIO BEZERRA ET AL., *THE MOBILE REVOLUTION: HOW MOBILE TECHNOLOGIES DRIVE A TRILLION-DOLLAR IMPACT* CH. 3 (BCG PERSPECTIVES 2015), *available at* https://www.bcgperspectives.com/content/articles/telecommunications_technology_business_transformation_mobile_revolution/?chapter=3#chapter3_section2.

¹¹ *See* PEARCE STUDY at 2.

as their exclusive means of voice communication, with more than 45% of American homes relying solely on wireless during the second half of 2014, compared to just under 16% in 2006.¹² A competitive wireless marketplace has fueled this change; robust wireless infrastructure will continue to play an important role as consumers continue to “cut the cord” or, increasingly, grow up in households that never had a “cord” to begin with.¹³

Trends indicate that American consumers’ wireless data demands will only continue to increase, driving a need for additional wireless infrastructure investment. In 2013, U.S. mobile data usage grew 120%,¹⁴ and today, nearly two-thirds of Americans own bandwidth-hungry smartphones.¹⁵ Mobile video will continue to be a key driver of growth in data consumption. Mobile video traffic is expected to grow nearly nine-fold by 2019,¹⁶ with carriers investing heavily in new and innovative offerings.¹⁷ New spectrum, a necessary, but finite resource with

¹² *Compare Wireless Substitution: Early Release of Estimates from the National Health Interview Survey, July–December 2014*, CENTERS FOR DISEASE CONTROL NATIONAL HEALTH STATISTICS REPORTS 1 (Jun. 23, 2015), available at <http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201506.pdf>, with *Wireless Substitution: Early Release of Estimates from the National Health Interview Survey, July–December 2006*, CENTERS FOR DISEASE CONTROL NATIONAL HEALTH STATISTICS REPORTS 1 (May 14, 2007), available at <http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless200705.pdf>.

¹³ See, e.g., Ian King, *How ‘Cord Never’ Generation Poses Sales Drag for Pay TV*, BLOOMBERG BUSINESS (Sept. 13, 2013, 12:01 AM), <http://www.bloomberg.com/news/articles/2013-09-18/how-cord-never-generation-poses-sales-drag-for-pay-tv>.

¹⁴ CISCO VISUAL NETWORKING INDEX: GLOBAL MOBILE DATA TRAFFIC FORECAST UPDATE, 2014–2019 4 (2015), available at http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/white_paper_c11-520862.pdf.

¹⁵ PEW RESEARCH CENTER, U.S. SMARTPHONE USE 2015 2 (2015), available at http://www.pewinternet.org/files/2015/03/PI_Smartphones_0401151.pdf.

¹⁶ VNI Mobile Forecast Highlights, 2014 – 2019, CISCO, http://www.cisco.com/assets/sol/sp/vni/forecast_highlights_mobile/index.html (select “Filter by Country,” then select “United States”).

¹⁷ See, e.g., Mike Snider, *Verizon Completes AOL Acquisition, Readies Mobile Video Service*, (Jun. 23, 2015, 11:11 AM), <http://www.usatoday.com/story/tech/2015/06/23/verizon-completes-aol-acquisition/29151975/> (describing Verizon’s plans to launch a “mobile-first” video service).

extended lag time from purchase to deployment, cannot alone handle this surge in traffic; infrastructure providers and carriers must deploy new cell sites to deliver the increased capacity consumers demand.¹⁸

In addition to increased demands by consumers on smartphones, laptops, and tablets, the Internet of Things (“IoT”) will require an expanded wireless infrastructure footprint to power key machine-to-machine (“M2M”) connections. M2M traffic is predicted to grow 49-fold from 2014 to 2019¹⁹ and enable innovative applications like mobile health, industrial and agricultural automation, utility and environmental monitoring, and inventory tracking and logistics. M2M connections will also support more consumer-focused wearable technology—including watches, glasses, fitness trackers, and the like; analysts estimate wearable device shipments to reach 750 million units by 2020.²⁰ Access to cloud-based services, smart homes, and other IoT applications requires an always-on, always-present connection. As these devices come to market, wireless providers will continue to invest in expanding wireless capacity to support these additional connections.

Today’s wireless ecosystem is diverse with respect to both owner/operator category and facility type. Varied market participants own and operate wireless infrastructure, including federal, state, local, and Tribal governments; wireless carriers; wireless infrastructure companies

¹⁸ See Walter Piecyk, *Answering the Call for Capacity. Initiating Coverage on the Towers: AMT, CCI, SBAC*, BTIG (Jun. 17, 2015, 4:02 PM), <http://www.btigresearch.com/2015/06/17/answering-the-call-for-capacity-initiating-coverage-on-the-towers-amt-cci-sbac/> (“BTIG Report”) (“Spectrum alone will not be enough to handle the sustained growth of wireless data. There is a finite amount of spectrum [I]n general, wireless operators can deliver more capacity through additional cell sites.”).

¹⁹ VNI Mobile Forecast Highlights, 2014 – 2019, CISCO, http://www.cisco.com/assets/sol/sp/vni/forecast_highlights_mobile/index.html (select “Filter by Country,” select “United States,” then select “Potential M2M Connections”).

²⁰ Press Release, Tractica, Cumulative Wearable Device Shipments to Surpass 750 Million Units by 2020 (Jun. 22, 2015), *available at* <https://www.tractica.com/newsroom/press-releases/cumulative-wearable-device-shipments-to-surpass-750-million-units-by-2020>.

of varying size; utility companies; broadcasters; and railroads. Infrastructure deployments can include traditional tower sites, with monopole, guyed, or lattice support structures; rooftop sites and collocations on buildings, water towers, and other non-purpose-built structures; and small wireless facilities, including various types of small cells, distributed antenna systems (“DAS”), and even Wi-Fi. This diversity has encouraged new entrants into the wireless communications market, including those that rely heavily on unlicensed technologies.²¹

A. Wireless Providers Continue to Invest Large Sums of Private Capital into Facilities, Contributing to Growth and Competition in the Industry.

Both carriers and infrastructure providers continued investing heavily in wireless network buildout and upgrades. Wireless carriers continued upward trends in non-spectrum capital expenditures, spending \$34.4 billion in 2013 to upgrade wireless infrastructure, nearly \$110 per American citizen, while concurrently investing in new spectrum.²² Similarly, wireless infrastructure companies have ramped up capital expenditures, investing large sums of private capital in both building new sites and improving existing ones. In 2014, the three publicly-traded neutral host providers—American Tower, Crown Castle, and SBA Communications—alone invested a combined \$1.58 billion in building new sites and upgrading existing sites,²³ up from

²¹ See, e.g., Justin Diaz, *Republic Wireless Has Some Stiff Competition in Google’s Project Fi Service*, ANDROID HEADLINES (May 5, 2015), <http://www.androidheadlines.com/2015/05/republic-wireless-has-some-stiff-competition-in-googles-project-fi-service.html> (describing competition between Republic Wireless, a Wi-Fi-based carrier established in 2011 with over 300,000 existing subscribers, and Google’s new Project Fi).

²² See Roger Entner, *Every Way You Look at It: US Carriers Spend More In CAPEX than Their EU Peers*, RECON ANALYTICS (Jun. 9, 2014), <http://reconanalytics.com/2014/06/every-way-you-look-at-it-us-carriers-spend-more-in-capex-than-their-eu-peers>.

²³ See Am. Tower Corp., Annual Report (Form 10-K), at 47 (Feb. 24, 2015) (“ATC 2014 Report”); Crown Castle Int’l Corp., Annual Report (Form 10-K), at 30 (Feb. 19, 2015) (“CCI 2014 Report”); SBA Commc’ns, Inc., Annual Report (Form 10-K), at 35 (Mar. 2, 2015) (“SBA 2014 Report”) (excluding acquisitions of existing infrastructure to the extent possible).

\$1.17 billion in 2013.²⁴ While these capital expenditure figures represent only the publicly-traded infrastructure companies, independent small and mid-size infrastructure companies representing thousands of towers also remain vital to promoting industry investment and diverse ownership; these companies have shown similar upward capital expenditure trends in both new tower builds²⁵ and acquisition of existing assets.²⁶ Independent tower companies leverage their strong depth of knowledge of local markets, regions, and types of leasing and construction arrangements.

B. The Market for Macro Wireless Sites Remains Vibrant and is an Integral Part of Delivering the High-Speed Networks of Tomorrow to Meet Consumer Demand.

As an important foundation of network design, macro wireless infrastructure—antennas affixed to purpose-built communications support structures as well as antenna collocations on buildings, rooftops, water towers, electrical transmission towers, and other existing tall infrastructure—will continue to drive competition in the wireless marketplace. These deployments can provide coverage over broad areas, but can also be strategically leveraged to alleviate capacity constraints.

The macro wireless market is typified by third-party, neutral-host infrastructure providers that maintain the underlying support structure and land; these providers then lease vertical real estate space to wireless carriers for carrier-owned antennas and other equipment. In particular,

²⁴ See ATC 2014 Report at 48; CCI 2014 Report at 30; SBA 2014 Report at 35.

²⁵ See, e.g., *Bradenton Cell Tower Firm Rings up \$100M Investment*, BUSINESS OBSERVER (Apr. 30, 2015), <http://www.businessobserverfl.com/section/detail/bradenton-cell-tower-firm-rings-up-100m-investment/> (describing Tarpon Towers' \$100 million influx of outside funding to effectuate an “aggressive growth strategy”).

²⁶ See, e.g., Jarad Matula, *Cell Tower News: Vertical Bridge Buys Towers from U.S. Cellular, IHeartMedia*, RCR WIRELESS NEWS (Dec. 12, 2014), <http://www.rcrwireless.com/20141212/cell-tower-news/cell-tower-news-vertical-bridge-buys-towers-from-u-s-cellular-iheartmedia-tag8>.

these tower assets remain vital to macro site deployment and wireless deployment overall; publicly-traded infrastructure companies own or operate over 100,000 towers, comprising over one-third of all wireless sites.²⁷ This shared-infrastructure model eliminates the need for each tenant to construct its own towers, which reduces aesthetic impacts, allows carriers to rapidly and efficiently deploy and upgrade their facilities, and lowers barriers to entry for new carriers. Neutral-host infrastructure providers have the business incentive to provide space for as many carrier tenants as possible, thus facilitating a vibrant, competitive marketplace.

Over the next few years, infrastructure companies will build thousands of new macro sites to expand coverage and increase capacity.²⁸ One analyst estimates these sites currently host an average of 2.5 tenants per tower,²⁹ yet wireless towers can accommodate between five and six tenants on average.³⁰ Carriers continue to utilize macro sites as the key foundation of their network design, even as they add capacity and infill with smaller wireless solutions.³¹ PCIA expects that carriers will continue to deploy on existing, available facilities as they seek to densify their networks; alternatively, new market entrants may also utilize these existing, available facilities. Moreover, the Commission is working with industry to make available for collocation over 4,000 “Twilight Towers” stuck in regulatory limbo, which will provide additional opportunities for densification and competition.

²⁷ CTIA, ANNUAL WIRELESS INDUSTRY SURVEY (2015), <http://www.ctia.org/your-wireless-life/how-wireless-works/annual-wireless-industry-survey> (listing a total of 298,055 cell sites).

²⁸ See BTIG Report.

²⁹ See *id.*

³⁰ See Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless, Including Commercial Mobile Services, *Fifteenth Report*, 26 FCC Rcd 9664 ¶ 309 (2011).

³¹ Martha DeGrasse, *Sprint Reviews Bids for Network Upgrade*, RCR WIRELESS NEWS (May 28, 2015), <http://www.rcrwireless.com/20150528/network-infrastructure/sprint-reviews-contractor-bids-for-network-upgrade> (“One individual . . . expects [Sprint] to add 6,000 new macro sites,

C. Innovation Drives Competition in the Heterogeneous Network.

While macro wireless sites remain of vital importance to meeting the looming data crunch, alternative solutions will help build capacity where necessary. Increasingly, wireless providers are employing heterogeneous networks (“HetNets”), which utilize a variety of different components to improve wireless coverage and capacity in a way that is seamless for the consumer. Carriers and infrastructure providers alike continue to utilize these technologies—which can include DAS, remote radio heads, and various types of small cells—integrating them into their networks to provide spot coverage and increase capacity in large venues, like malls and stadiums, and other areas where radiofrequency propagation is poor, such as in dense urban environments. Analysts predict that this year will see continued investment in small wireless technology to add capacity,³² in certain cases to the tune of hundreds of millions per carrier.³³

Borrowing from the successful macro site model, infrastructure providers and carriers have embraced a similar neutral-host model for DAS.³⁴ Using this model, carriers share a common network backbone, including backhaul, power, and antennas, but provide their own, centrally-located head end equipment.³⁵ Neutral-host DAS systems provide many of the same

including new tower builds and co-locations on other carriers’ towers. In addition to new site builds, Sprint is expected to add capacity to thousands of its existing towers.”).

³² See, e.g., Martha DeGrasse, *Small Cells: Four Reasons the Outlook Is Changing*, RCR WIRELESS NEWS (Apr. 16, 2015), <http://www.rcrwireless.com/20150416/network-infrastructure/small-cells-4-reasons-the-outlook-has-changed>.

³³ See, e.g., Sarah Thomas, *Verizon Scales up Small Cells, AT&T Cuts Back*, LIGHTREADING (Mar. 10, 2015), <http://www.lightreading.com/mobile/small-cells/verizon-scales-up-small-cells-atandt-cuts-back/a/d-id/714303> (noting Verizon’s commitment to invest \$500 million in network densification, including with small cells).

³⁴ See Martha DeGrasse, *HetNet Expo: Carriers Deploy Neutral Host DAS*, RCR WIRELESS NEWS (Oct. 16, 2014), <http://www.rcrwireless.com/20141016/wireless/hetnet-expo-carriers-das>.

³⁵ See INFINIGY, AN INTRODUCTION TO NEUTRAL HOST DISTRIBUTED ANTENNA SYSTEMS 6, available at <http://www.infinigy.com/pdf/InfinigyNeutralHostWhitepaper.pdf>.

benefits and efficiencies of neutral-host macro sites, including lowered barriers to entry, cost savings, and increased deployment speed.³⁶

Diverse infrastructure solutions will promote additional competition among infrastructure providers, equipment manufacturers, and wireless carriers. Innovators are thinking beyond the current mix of device types to provide wireless service and may also begin employing alternative airborne technology—like balloons or drones—to augment existing commercial networks and bring coverage to remote areas.³⁷ Further, small wireless facilities may be able to harness higher frequency spectrum in novel ways, such as utilizing advanced sensing technology to avoid interference with government users or other incumbents in crowded spectrum bands; in this regard, PCIA commends the Commission for continuing to explore use of the 3.5 GHz and 5 GHz bands.

III. THE COMMISSION SHOULD BUILD UPON PAST PROGRESS TO FURTHER STREAMLINE THE PROCESS TO DEPLOY NECESSARY WIRELESS INFRASTRUCTURE, ESPECIALLY IN DIFFICULT-TO-SERVE AREAS.

In the past few years, the Commission has taken several important steps toward reducing and removing barriers to investment in wireless infrastructure; however, consumers and industry alike would benefit from additional streamlining to help deploy innovative facilities, especially in difficult-to-serve areas.

In 2014 alone, the Commission alleviated unnecessary regulatory burdens on deploying wireless infrastructure. On August 8, 2014, the Commission adopted a Report and Order to

³⁶ *See id.*

³⁷ *See, e.g.,* Martyn Williams, *Google's Project Loon Close to Launching Thousands of Balloons*, PCWORLD (Apr. 17, 2015, 3:51 PM), <http://www.pcworld.com/article/2911852/googles-project-loon-close-to-launching-thosands-of-balloons.html> (balloons); Jon Brodtkin, *Google Testing Drones That Could Provide Internet Access to Remote Lands*, ARS TECHNICA (Sept. 15, 2014, 4:28 PM), <http://arstechnica.com/information-technology/2014/09/google-testing-drones-that-could-provide-internet-access-to-remote-lands/> (drones).

streamline and eliminate provisions of the Part 17 Rules governing the construction, marking and lighting of antenna structures, thereby providing clarity and reducing the regulatory burden on tower owners and licensees.³⁸ On October 17, 2014, the Commission took a critical step in removing barriers to wireless infrastructure deployment in adopting the Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies Report and Order (“Wireless Infrastructure Order”).³⁹ The Wireless Infrastructure Order updates and tailors how the FCC evaluates the impact of smaller communications facility deployments on the environment and historic properties. It also adopts rules to clarify and implement statutory limitations on State and local government authority to review infrastructure siting applications—including a “deemed granted” remedy if a State or local government fails to act on an eligible facilities request to modify wireless facilities under Section 6409(a) of the Spectrum Act. Finally, it adopts an exemption from the environmental public notification process for “temporary towers” that are in place for short periods of time. These rules and clarifications by the Commission demonstrate the importance of wireless infrastructure in the increase deployment of wireless broadband.

Further, the FCC has teed up several additional steps to streamline wireless facilities siting this year. The Commission set in motion a new Program Alternative to alleviate regulatory review and encourage further deployment of small wireless facilities. PCIA and its members continue to offer expertise and support to the Commission in developing the Program

³⁸ 2004 and 2006 Biennial Regulatory Reviews - -Streamlining and Other Revisions of Parts 1 and 17 of the Commission’s Rules Governing Construction, Marking and Lighting of Antenna Structures, WT Docket No. 10-88, Amendments to Modernize and Clarify Part 17 of the Commission’s Rules Concerning Construction, Marking and Lighting of Antenna Structures, RM-11349, *Report and Order*, FCC 14-117 (rel. Aug. 8, 2014).

³⁹ Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies, *Report and Order*, 29 FCC Rcd 12865 (2014).

Alternative, particularly regarding members' experience deploying small cells and DAS in communities. Moreover, the Commission has continued to work with PCIA and other relevant stakeholders to develop a solution for clearing Twilight Towers—those towers not subject to historic preservation review prior to construction—to make them available for collocation, which will greatly expand wireless deployment opportunities.

While the Commission has made great strides in reducing and removing barriers to wireless facilities deployment generally, the Commission can also offer guidance for siting wireless facilities on lands and properties owned or controlled by the federal government. 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. This includes lands and properties under the jurisdiction of the Department of Agriculture, Department of the Interior, all branches of the military within the Department of Defense, and others. However, national and regional wireless and wireline 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. With its expertise in wireless infrastructure deployment, the FCC is in a unique position to offer guidance on siting wireless facilities of federal lands and property.

Congress and the White House have previously acted to streamline broadband deployment on federal lands.⁴⁰ In March of this year, the Obama administration continued its

⁴⁰ See Middle Class Tax Relief and Job Creation Act of 2012, 112 Pub. L. 96, § 6409(b)–(c), *codified at* 47 U.S.C. § 1455(b)–(c); Accelerating Broadband Infrastructure Deployment, Exec. Order No. 13616, 77 Fed. Reg. 36903 (Jun. 14, 2012); 41 C.F.R. §§ 102-79.70–.100; *see also*

efforts to expand broadband deployment through the Presidential Memorandum “Expanding Broadband Deployment and Adoption by Addressing Regulatory Barriers and Encouraging Investment and Training” establishing the Broadband Opportunity Council (“BOC”).⁴¹ The FCC should play a critical role in advising the BOC as it crafts recommendations for the President on how to address regulatory barriers to broadband deployment and adoption. The BOC’s composition of twenty-five executive departments and agencies provides an important opportunity to improve upon the coordination necessary to expand broadband deployment on federal lands; however, its efforts will not be complete without the guidance of the FCC.

Efforts are currently underway on Capitol Hill to alleviate certain of these regulatory burdens related to siting on federal lands. The Wireless Innovation Act of 2015, introduced by Senator Marco Rubio, will help improve the process to site wireless facilities on these difficult-to-reach areas by strengthening existing provisions of Sections 6409(b)-(c) of the Spectrum Act and implementing some of the above recommendations.⁴² The Act will alleviate delays to site on federal lands by standardizing fee schedules and allowing land-holding agencies to retain these fees, finalizing template contracts and applications, providing escalation points of contact within agencies and departments, automating lease renewals, and requiring ongoing progress reports to Congress.⁴³ These elements will streamline wireless facility application processing and approval,

President William J. Clinton, Memorandum on Facilitating Access to Federal Property for the Siting of Mobile Services Antennas, 31 WEEKLY COMP. PRES. DOC. 1424 (Aug. 10, 1995).

⁴¹ Memorandum for the Heads of Executive Departments and Agencies, Expanding Broadband Deployment and Adoption by Addressing Regulatory Barriers and Encouraging Investment and Training (Mar. 23, 2015), *available at* <https://www.whitehouse.gov/the-press-office/2015/03/23/presidential-memorandum-expanding-broadband-deployment-and-adoption-addr>.

⁴² Wireless Innovation Act of 2015, S. 1618, 114th Cong. (2015).

⁴³ *See id.*

helping increase broadband availability across the United States. PCIA continues to advocate for commonsense process reforms like these in Congress and at federal agencies.

Congress and the FCC have made wireless broadband access a national priority and have taken steps to streamline deployment of broadband facilities. Certain states, localities and Tribes, however, continue to erect barriers to deployment—and in some cases, contravene federal law. The Commission should encourage state and local governments to enact laws that complement federal policy and are favorable to granting access to right-of-way, conduits, and poles. State and local governments can also incentivize broadband in their communities by lowering pole attachment and conduit access fees, processing applications in a timely manner, and promoting clarity and removing uncertainty from their procedures. Access and lowered costs allow for the deployment of DAS and small cells to meet consumer demand for increased capacity and provide targeted coverage in difficult to reach areas. The FCC should also work with Tribal Nations to harmonize notification, consultation, fees, and review systems. By removing barriers to deployment, states, localities, and Tribes better position themselves for industry to invest in bringing broadband to their communities.

Taking these steps to reduce and remove obstacles to wireless infrastructure deployment further lowers barriers to entry to the industry's successful third-party, neutral-host infrastructure model, fueling increased infrastructure investment, driving competition among carriers and encouraging new market entrants.

IV. CONCLUSION

As consumers' demands for broadband data skyrocket, wireless providers continue to invest billions in the necessary infrastructure to bring more Americans fast, reliable broadband access. These large-scale capital investments in quality wireless networks are a boon for competition and consumers alike. To foster competition and speed deployment, PCIA requests that the Commission continue to examine and evaluate regulatory barriers to infrastructure deployment and, where possible, reduce or remove those barriers.

Respectfully submitted,

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