

**FEDERAL ENERGY REGULATORY COMMISSION
RELIABILITY TECHNICAL CONFERENCE
Docket No. AD19-13-000
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Panel III: Managing Changes in Communications Technologies on the New Grid

**Written Testimony
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I. INTRODUCTION.

On behalf of its member companies throughout the wireless industry, CTIA¹ appreciates the opportunity to appear before the Federal Energy Regulatory Commission (Commission) to discuss the promise of 5G, the next generation of wireless technology, and 5G's impact on the energy sector. As the Commission observes, "5G communication systems are poised to become the next major development in how information and data is exchanged."²

Spectrum, network deployment and resiliency, and security are key elements of 5G. The discussion that follows will cover the growing demand for spectrum and the need for the Federal Communications Commission (FCC) to allocate additional spectrum to support 5G, including through the reallocation of existing bands; the wireless industry's ongoing commitment to enhance network resiliency and our interest in expanding coordination with utilities before,

¹ CTIA – The Wireless Association® (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 Supplemental Notice of Technical Conference, Docket No. AD19-13-000 (May 10, 2019).

during, and in the aftermath of natural disasters and emergencies; and the importance of securing the wireless technology supply chain.

We are optimistic about the 5G future, and we look forward to enhanced collaboration between the wireless industry and energy sector. Further, CTIA welcomes the Commission's engagement with the FCC and the wireless industry on the important topics raised in this panel and encourages Commission involvement in facilitating conversations between the wireless and energy sectors to enhance network resiliency.

II. 5G WILL BE REVOLUTIONARY IN ITS IMPACT – NOT ONLY FOR CONSUMERS, BUT ALSO FOR INDUSTRY, INCLUDING THE ENERGY SECTOR.

Today, wireless plays a pivotal role in how Americans live, work, and spend their free time, and in driving the U.S. economy, contributing \$475 billion annually.³ 5G will prove to have an even bigger impact for the American economy and consumers. U.S. wireless providers launched initial 5G commercial deployments last year, and wireless companies are expected to invest \$275 billion to build out their 5G networks over the next several years, creating three million new jobs and adding \$500 billion to the economy.⁴

5G offers many advantages over 4G – including higher capacity, lower latency, high reliability, and better security.⁵ 5G will support 100 times more devices, will be up to 100 times faster, and will be five times more responsive. These features enhance use cases and create

³ *How the Wireless Industry Powers the U.S. Economy*, ACCENTURE STRATEGY, at 2-3 (2018), <https://api.ctia.org/wp-content/uploads/2018/04/Accenture-Strategy-Wireless-Industry-Powers-US-Economy-2018-POV.pdf>.

⁴ *The Race to 5G*, CTIA, <https://www.ctia.org/the-wireless-industry/the-race-to-5g> (last visited June 13, 2019).

⁵ *The State of Wireless 2018*, CTIA, at 2, 10, https://api.ctia.org/wp-content/uploads/2018/07/CTIA_State-of-Wireless-2018_0710.pdf (The State of Wireless).

entirely new uses for consumers and for industry, including connected things, telemedicine, smart cities, smart manufacturing, autonomous vehicles, and more.

Of particular relevance to the Commission is how 5G will benefit the energy sector. 5G will improve the efficiency, reliability, and security of the nation's power delivery grid.⁶ Accenture estimates that across the United States, smart grid benefits could be as high as \$2 trillion dollars over 20 years.⁷

5G will change the way energy utilities generate, transmit, and distribute energy. New 5G technologies will enable sensors to measure the level of energy output and report outages and will improve worker safety. With the rise of the Internet of Things, powered by 5G, millions of devices will connect to the grid, allowing energy utilities to adjust to changes in demand/supply in real time, better forecast energy needs, and more quickly restore power when outages occur.⁸ As consumers adopt smart homes, utilities will have access to real-time usage data, providing granular information for more efficient loading, opportunities for dynamic pricing, and lower costs to collect information via meter readings.⁹ This change is occurring rapidly – the number of consumers with connected homes nearly doubled from 2015 to 2017.¹⁰

⁶ We note that today's networks can already support many functionalities used in the energy sector, such as meter reading; therefore, as the energy sector examines its communications needs going forward, current 4G technologies may have the necessary capabilities and coverage.

⁷ *Smart Cities: How 5G Can Help Municipalities Become Vibrant Smart Cities*, ACCENTURE STRATEGY, at 7 (2017), <https://api.ctia.org/wp-content/uploads/2017/02/how-5g-can-help-municipalities-become-vibrant-smart-cities-accenture.pdf>.

⁸ *Id.*

⁹ *Wireless Connectivity Fuels Industry Growth and Innovation in Energy, Health, Public Safety, and Transportation*, DELOITTE, at 5-6 (Jan. 2017), https://api.ctia.org/docs/default-source/default-document-library/deloitte_2017011987f8479664c467a6bc70ff0000ed09a9.pdf.

¹⁰ See Kabir Ahuja and Mark Patel, *There's No Place Like [a Connected] Home*, MCKINSEY & COMPANY, https://www.mckinsey.com/spContent/connected_homes/index.html (stating that the U.S. market saw an increase in the number of connected homes from 17 million in 2015 to 29 million in 2017).

5G will also power drone deployment on a larger scale. With reduced latency, drone operations will deliver faster and more reliable wireless network control links and can be deployed more broadly. Drone inspections are expected to save energy sites and oil rigs 80 percent over traditional inspections.¹¹

III. AS DEMAND FOR SPECTRUM CONTINUES TO SURGE, THE FCC AND FEDERAL AGENCIES SHOULD CONTINUE TO RELY ON SUCCESSFUL FLEXIBLE-USE POLICIES.

A. Demand for Wireless Spectrum Continues to Grow.

Spectrum is the lifeblood of wireless service, enabling the bandwidth necessary to deliver data for the bit-hungry applications and use cases expected for 5G, increasingly with faster speeds and greater capacity. Current demand projections for wireless broadband usage demonstrate the need for additional flexible-use spectrum for 5G.¹² For example, Cisco projects that in North America, mobile data traffic will increase nearly fivefold between 2017 and 2022, at a compound annual growth rate of 36 percent, reaching 5.8 exabytes per month by 2022.¹³ Meanwhile, the number of data-only devices in the United States grew 147 percent between 2013 and 2017,¹⁴ and Ericsson projects that cellular IoT connections will reach 1.5 billion globally by 2022, accounting for more than 30 percent of all cellular connections.¹⁵

¹¹ *Commercial Wireless Networks: The Essential Foundation of the Drone Industry*, CTIA (2017), https://api.ctia.org/docs/default-source/default-document-library/drone_whitepaper_final_approved.pdf.

¹² Comments of CTIA, NTIA Docket No. 181130999-8999-01 (filed Jan. 22, 2019), <https://api.ctia.org/wp-content/uploads/2019/01/190122-CTIA-Comments-to-NTIA-on-National-Spectrum-Strategy.pdf>.

¹³ Cisco Visual Networking Index: Forecast and Trends, 2017–2022, CISCO (Nov. 26, 2018), <https://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/whitepaper-c11-741490.html>.

¹⁴ The State of Wireless at 10.

¹⁵ *Internet of Things Forecast*, Ericsson, <https://www.ericsson.com/en/mobility-report/internet-of-thingsforecast> (last visited June 12, 2019).

As the wireless industry moves from connecting everyone to connecting everything, substantially more spectrum is needed to meet this growing demand.¹⁶

B. Flexible-Use Spectrum Supports 5G Use Cases and Allows Innovators to Deliver the Promise of 5G to Consumers and Industry Alike.

Exclusive-use, flexible rights licensing policies have long been the cornerstone of the United States’ successful wireless strategy, fostering hundreds of billions of dollars in investment and innovation.¹⁷ Congress, the Administration, and the FCC all recognize the value of flexible-use licenses and are working to allocate additional bands for flexible-use. The U.S. needs an all-inclusive spectrum strategy for 5G: low-band spectrum for coverage, high-band spectrum for massive throughput, and mid-band “goldilocks” spectrum for a combination of both.

U.S. policymakers have made significant progress on the spectrum front, but more work is needed. For example, the FCC has opened up 5.55 gigahertz of high-band (above 24 GHz) spectrum for flexible use,¹⁸ and it has proposed to open up 6.55 gigahertz more.¹⁹ In mid-band,

¹⁶ CTIA notes that, in addition to additional spectrum, in some rural and high-cost areas federal support remains crucial to expanding access to high-quality wireless services. CTIA supports the FCC’s efforts to provide support for unserved and underserved areas. Wireless providers are committed to continuing to improve the scope of their coverage and support services addressing the needs of rural America – including deploying next-generation technologies in rural areas. See *Communications Marketplace Report*, Report, 33 FCC Rcd 12558, Appendix Z ¶ 46, Fig. A-32 (2018), <https://docs.fcc.gov/public/attachments/FCC-18-181A1.pdf>.

¹⁷ See Comments of CTIA Comments, FCC GN Docket No. 18-122, at 20-21 (filed Oct. 29, 2018).

¹⁸ See *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, et al.*, Notice of Proposed Rulemaking, 30 FCC Rcd 11878 (2015); *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, et al.*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 8014 (2016) (Above 24 GHz R&O and FNPRM); *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, et al.*, Second Report and Order, Second Further Notice of Proposed Rulemaking, Order on Reconsideration, and Memorandum Opinion and Order, 32 FCC Rcd 10988 (2017); *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, et al.*, Third Report and Order, Memorandum Opinion and Order, and Third Further Notice of Proposed Rulemaking, 33 FCC Rcd 5576 (2018) (Third Further Notice); *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, et al.*, Fourth Further Notice of Proposed Rulemaking, 33 FCC Rcd 7674 (2018).

¹⁹ See Above 24 GHz R&O and FNPRM ¶¶ 389, 420 (proposing allocation of 3.8 gigahertz in the 31.8-33.4 GHz and 50.4-52.6 GHz bands); Third Further Notice ¶¶ 52, 76 (proposing allocation of 2.75 gigahertz in the 25.25-27.5 GHz and 42-42.5 GHz bands); see also *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, et al.*,

the FCC is working to free up spectrum for flexible use in the 3.5 GHz band and the 3.7-4.2 GHz band, among others.²⁰ And in low-band, the FCC repurposed spectrum for flexible use as part of the broadcast incentive auction,²¹ and policymakers are investigating the potential to repurpose spectrum in the 1.3 GHz and 1.7 GHz bands.

To unlock the promise of 5G, policymakers should focus on allocating spectrum for commercial wireless with the following key characteristics:

- Licensed;
- Exclusive-use (entitled to protection from harmful interference);
- Flexible-use (allowing licenses to freely innovate with new technologies and new services);
- Priority for cleared spectrum (as opposed to shared spectrum);
- Wide channels to enable very high speeds, efficient performance, and multiple antenna technology; and
- Globally harmonized bands where possible.²²

Moreover, new technologies such as network slicing will create efficient spectrum deployments without reliance on dedicated spectrum that can only be used for one purpose.²³

The FCC's Technology Advisory Council explains that a "network slice" is "a logical (virtual)

Fifth Report and Order, FCC 19-30 (2019) (declining to adopt rules for new terrestrial licenses at 50.4-51.4 GHz at this time, but noting that such rules remain under consideration).

²⁰ See, e.g., *Promoting Investment in the 3550-3700 MHz Band*, Report and Order, 33 FCC Rcd 10598 (2018); *Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, Notice of Proposed Rulemaking, 33 FCC Rcd 10496 (2018).

²¹ See *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd 6567 (2014).

²² *Spectrum Considerations for 5G*, CTIA, at 2 (Mar. 2018), <https://api.ctia.org/wp-content/uploads/2019/03/Spectrum-Considerations-for-5G.pdf>.

²³ David Abecassis, Chris Nickerson, and Janette Stewart, *Global Race to 5G – Spectrum and Infrastructure Plans and Priorities*, ANALYSYS MASON, at 15 (Apr. 2018), https://api.ctia.org/wp-content/uploads/2018/04/Analysys-Mason-Global-Race-To-5G_2018.pdf.

network customized to serve a defined business purpose or customer, consisting of an end-to-end composition of all the varied network resources required to satisfy the specific performance and economic needs of that particular service class or customer application.”²⁴

With 5G and the innovation of network slicing, multiple logical networks can be created on the top of a common shared physical infrastructure. As such, network slicing “provides greater insight into network resource utilization,”²⁵ and can deliver “a tailored virtual slice of the network from end-to-end” to support ultra-reliable low-latency communications for critical infrastructure applications.²⁶ Importantly, network slicing allows the network to ensure requirements – such as performance guarantees for critical infrastructure – are met while reducing overall costs and enhancing spectrum efficiency and utility.²⁷ Therefore, utilities will be able to take advantage of network slicing to have a secure virtual network that can meet their performance requirements.

C. The FCC’s 6 GHz Proceeding Must Ensure that Existing Users are Adequately Protected.

The FCC is currently examining the 6 GHz band to determine whether it is possible for new unlicensed users to share the band with existing incumbents, which include point-to-point microwave links that support many services including control of natural gas and oil pipelines,

²⁴ Kevin Sparks, et al., *5G Network Slicing*, FCC Technology Advisory Council: 5G IoT Working Group, at 2 (2018), <https://www.fcc.gov/bureaus/oet/tac/tacdocs/reports/2018/5G-Network-Slicing-Whitepaper-Finalv80.pdf> (5G Network Slicing).

²⁵ *Network Slicing*, Ericsson (last visited June 12, 2019), https://www.ericsson.com/en/digital-services/trending/network-slicing?gclid=EAIaIQobChMIudGglMfj4gIVj42zCh2gUgCTEAAAYAiAAEgIC8_D_BwE.

²⁶ 5G Network Slicing at 2.

²⁷ *Id.* at 25 (explaining that slicing will enable ultra-low latency localized hosting of enterprise/industrial applications and that it will involve different performance-related service level agreements).

management of electric grids, and backhaul for commercial wireless providers.²⁸ As incumbents in the band, the energy sector and the wireless industry are aligned in seeking to ensure that any developments in the 6 GHz band protect existing services and licensees from harmful interference or disruption.

CTIA supports the introduction of new unlicensed offerings on a shared basis in the lower portion of the 6 GHz band, *provided the FCC implements a rigorous interference protection framework that safeguards incumbent licensed service operations.*²⁹ Contrary to some, we do not support the introduction of unmanaged, unlicensed itinerant devices operating in the same band as critical incumbent operations. CTIA has urged the FCC to require that any unlicensed operations (whether outdoor or indoor) introduced in the 6 GHz band be under the control of an automated frequency control system – which should be used to coordinate unlicensed devices so that they do not interfere with incumbents.³⁰

CTIA has also called on the FCC to consider licensing the upper portion of the 6 GHz band for licensed, flexible use operations as a further means of advancing 5G. Our plan proposes that the FCC and NTIA evaluate adjacent spectrum, just above 7.125 GHz, as one range of frequencies with the potential to accommodate existing fixed service operations that are relocated out of 6 GHz. That spectrum is currently used by the federal government for the same point-to-point fixed operations, and coordination among like services (federal and non-federal) is readily achievable.³¹ Because propagation characteristics are similar between the 6 GHz and 7

²⁸ *Unlicensed Use of the 6 GHz Band Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, Notice of Proposed Rulemaking, 33 FCC Rcd 10496 (2018).

²⁹ See Comments of CTIA, FCC GN Docket 17-183, ET Docket No. 18-295 (filed Feb. 15, 2019), <https://ecfsapi.fcc.gov/file/10215711624047/190215%20FINAL%20CTIA%20Comments%20on%206%20GHz%20NPRM.pdf>.

³⁰ *Id.* at 17.

³¹ *Id.* at 7-13.

GHz frequency bands, the engineering design of the links would not change and links in the new band should be able to operate from the same tower locations, minimizing any disruption.

Importantly, any plan to move incumbent operations from the upper portion of the 6 GHz band necessarily must ensure that incumbent licensees are made whole.

IV. CTIA AND ITS MEMBERS SUPPORT ONGOING EFFORTS TO IMPROVE DISASTER AND EMERGENCY PREPAREDNESS AND RESTORATION.

The wireless industry and energy sector play critical and connected roles when natural disasters strike – communications networks need power and utilities need to be able to communicate in disaster-stricken areas to facilitate the restoration of service. Just as the energy sector seeks to prepare for disasters and maintain service during and in the aftermath of such events, so too do wireless providers.

CTIA and its member companies share a significant and ongoing commitment to strong and robust wireless network resiliency and recovery efforts. We know that in the face of disasters and emergencies, consumers and industry depend on mobile wireless services more than ever. CTIA's member companies thus remain focused on building increasingly resilient wireless networks and accelerating the timeline for restoration of service in any areas impacted by a disaster or emergency.

The wireless industry's actions to advance network resiliency represent an ongoing endeavor and include network investments, enhanced coordination, and the regular assessment of disaster experiences and execution of new lessons learned – actions that occur today and will continue tomorrow. The wireless industry's ongoing efforts to improve wireless resiliency are focused on two flexible and voluntary initiatives that have proven successful in recent years. First, wireless providers are continually identifying lessons learned from storms and developing practices to prepare for future storms. These steps, which date back to Hurricane Katrina, have

already yielded substantial investments by the wireless industry to help strengthen and harden wireless networks and improve network resiliency planning and practices. And second, the development and ongoing implementation of the Wireless Resiliency Framework, a voluntary initiative developed by industry in collaboration with Congressional leaders and the FCC, is building on these investments.

Following recent hurricanes, the FCC collected information about the effect of the hurricanes on communications platforms and released reports with recommendations for future improvements. The Atlantic Hurricane Report and Hurricane Michael Report provide valuable insight into both where the wireless industry's ongoing restoration activities are enabling service continuity and where more work is needed.³² In particular, the FCC identified areas for further work including increased interagency engagement to address cross-sector dependencies. The FCC also recommended enhanced coordination between stakeholders in the wireless industry, on one hand, and the power sector, on the other.³³

The FCC found that a lack of coordination between power sector stakeholders and wireless industry stakeholders resulted in damage to the aerial and underground cabling networks used to provide backhaul service to wireless cell sites. For example, the FCC found reports of “numerous cases in which a wireless provider had restored service to customers only to have that service brought down as third-party crews damaged communications assets while clearing trash

³² See, e.g., *Report on the 2017 Atlantic Hurricane Season's Impact on Communications*, FCC PS Docket No. 17-344 (Aug. 2018), <https://docs.fcc.gov/public/attachments/DOC-353805A1.pdf> (Atlantic Hurricane Report); *Report and Recommendations on October 2018 Hurricane Michael's Impact on Communications: Preparation, Effect, and Recovery*, FCC PS Docket No. 18-339 (rel. May 9, 2019), <https://docs.fcc.gov/public/attachments/DOC-357387A1.pdf> (Hurricane Michael Report).

³³ Atlantic Hurricane Report ¶¶ 57, 62; Hurricane Michael Report ¶ 5.

or restoring power lines and utility poles.”³⁴ The FCC highlights one example where an operator that provides backhaul services in Florida experienced at least 33 separate fiber cuts during the Hurricane Michael recovery effort.³⁵

To improve restoration activities in the future, CTIA welcomes an FCC recommendation that the FCC and the Commission engage in additional coordination. CTIA notes that the Commission may be a helpful partner in convening a dialogue between the energy and communications sectors, especially when engaging with state colleagues.

Separately, the wireless industry is also pursuing a host of actions to enhance coordination with power companies. For example, wireless industry representatives are actively leading efforts within the FCC’s Broadband Deployment Advisory Committee’s Disaster and Recovery Working Group to develop a set of recommendations to improve coordination with power companies. Moreover, these coordination issues can be explored by the FCC’s Communications Security, Reliability, and Interoperability Council (CSRIC), which recently was re-chartered for another two-year term. In addition to government-led initiatives, CTIA and wireless providers welcome continued dialogue with utilities to explore how the wireless industry and utility stakeholders can better coordinate in the future.

³⁴ Hurricane Michael Report ¶ 5; *see also id.* ¶ 24 (“For example, there were situations in which, as soon as telecommunications was restored, debris clearance crews unintentionally ripped down newly-installed aerial fibers, or utility companies, in the process of putting up several thousand new utility poles, inadvertently damaged existing underground fiber nearby.”); *see also id.* ¶ 27 (noting that “[u]tility repair crews and debris removal teams clearing roads and municipal areas frequently inflicted” damage to the networks used to provide backhaul service to wireless cell sites).

³⁵ *Id.* ¶ 31.

V. THE WIRELESS INDUSTRY IS FOCUSED ON WORKING WITH GOVERNMENT AND OTHER STAKEHOLDERS TO SECURE 5G.

America's wireless industry builds our wireless networks with security at top of mind and works diligently to continually update and build on our security capabilities with every generation of wireless.³⁶ Today's 4G networks offer the most advanced security features to date, and 5G networks will further improve upon them.

With regard to the supply chain, U.S. wireless providers use our global wireless leadership and strong market position to require the best possible security features – from standards-based encryption algorithms to new and advanced authentication mechanisms to customized security updates for different devices – in the networks, infrastructure, and devices.³⁷

5G wireless networks will incorporate existing network protections as well as new ones and leverage lessons learned from the IT industry, such as the importance of mutual authentication techniques and multiple layers of security throughout a system. And, today's mobile devices have a number of security mechanisms that protect devices from cyber threats.³⁸

CTIA is engaged on security issues in standards bodies, and has partnered with the government to lead the way in developing important security standards that can continue to evolve and improve over time.³⁹ The key to strong network security is continued collaboration

³⁶ See *Protecting America's Next-Generation Networks*, CTIA, at 2 (July 2, 2018), <https://www.ctia.org/news/protecting-americas-next-generation-networks> (Protecting America's Next-Generation Networks).

³⁷ U.S. wireless providers primarily use trusted equipment manufacturers from Europe and South Korea that make network infrastructure components that offer security, reliability, and quality in a competitive market.

³⁸ *Protecting America's Next-Generation Networks* at 3-4.

³⁹ CTIA assisted in the development of CSRIC's in-depth Report on "Best Practices and Recommendations to Mitigate Security Risks to Emerging 5G Wireless Networks," and CTIA and its members have also worked closely with the Department of Commerce's National Institute of Standards and Technology to develop the Cybersecurity Framework. See Communications Security, Reliability and Interoperability Council VI, Working Group 3, Network Reliability and Security Risk Reduction, Final Report – Report on Best Practices and Recommendations to Mitigate Security Risks to Emerging 5G Wireless Networks v14.0 (Sept. 2018), <https://www.fcc.gov/file/14500/download>; NIST, Cybersecurity Framework, <https://www.nist.gov/cyberframework> (last visited June 12, 2019).

among industry stakeholders and between industry and government – led by the Department of Homeland Security. U.S. policymakers have an important role to play in supporting the wireless industry’s efforts to secure our 5G networks and devices and encourage our allies to do the same.

Policymakers can:

- Support the Department of Homeland Security’s ICT Supply Chain Risk Management (SCRM) Task Force and their efforts to develop sustainable principles for evaluating supply chain partners, practices, and potential threats;
- Leverage industry standards for secure supply chain management that can be scaled and adopted by other nations; and
- Encourage fair market business practices, as well as 5G-ready policies – like the allocation of more spectrum – that will help the U.S. continue its global wireless leadership and support our nation’s trusted partners.

Late last year, the FCC’s CSRIC released a report on “Best Practices and Recommendations to Mitigate Security Risks to Emerging 5G Wireless Networks.”⁴⁰ The report examines security issues in the 5G supply chain – including for emerging IoT – and recommended among other things that the FCC, other government agencies, and legislators “allow the current public/private partnerships assessing SCRM to complete their assessments so they [] can inform the future discussion of potential regulatory actions.”⁴¹ The Commission should also take note of CSRIC’s recommendations and allow these assessments to run their course before taking any specific actions.

⁴⁰ *Final Report – Report on Best Practices and Recommendations to Mitigate Security Risks to Emerging 5G Wireless Networks*, Communications Security Reliability and Interoperability Council Working Group 3 (Sept. 2018), <https://www.fcc.gov/files/csric6wg3sept18report5gdocx-0>.

⁴¹ *Addendum to Final Report – Report on Best Practices and Recommendations to Mitigate Security Risks to Emerging 5G Wireless Networks*, Communications Security Reliability and Interoperability Council Working Group 3 (Sept. 2018), <https://www.fcc.gov/file/14855/download>.

VI. CONCLUSION.

5G is poised to bring dramatic benefits to consumers and industries. CTIA looks forward to continued engagement with the Commission and utility stakeholders where utility and wireless policy questions intersect.

Respectfully submitted,

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