BEFORE THE
DEPARTMENT OF COMMERCE
National Telecommunications and Information Administration

In the Matter of	)	
	)	
The Benefits, Challenges, and Potential Roles for the Government in Fostering the Advancement of the Internet of Things	)	Docket No. 170105023-7023-01

COMMENTS OF THE AMERICAN CABLE ASSOCIATION

The American Cable Association ("ACA") hereby submits these comments in response to the Notice and Request for Comment[1] regarding the green paper, published by the Department of Commerce's ("Department") Internet Policy Task Force and Digital Economy Leadership Team, on "Fostering the Advancement of the Internet of Things"[2] ("Green Paper"). ACA's purpose in filing these comments is twofold: first, to describe the role that small and mid-sized Internet service providers ("ISPs") have played and will continue to play in deploying robust and reliable broadband networks that support the advancement of the Internet of Things

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[1] Notice and Request for Comment, *The Benefits, Challenges, and Potential Roles for the Government in Fostering the Advancement of the Internet of Things* 82 Fed. Reg. 4313 (Jan. 13, 2017).
[2] Department of Commerce Internet Task Force & Digital Economy Leadership Team, *Fostering the Advancement of the Internet of Things* (January 2017), *available at* https://www.ntia.doc.gov/files/ntia/publications/iot_green_paper_01122017.pdf ("Green Paper").

("IoT"); second, to describe how the Department can support the continued investment of small and mid-sized operators in their broadband infrastructure, as needed to fulfil the promises of IoT, including by embracing a voluntary, flexible approach to cybersecurity, as manifested in the National Institute of Standards and Technologies ("NIST") Cybersecurity Framework.

As the Green Paper observes, "[t]he benefits of IoT to personal convenience, public safety, efficiency, and the environment are clear."[3] If the Internet changed the way that we interact with one another, IoT is changing the way that we interact with the physical world itself, connecting appliances, automobiles, industrial machines, and even our own bodies to transmit information at the speed of light. These benefits can be particularly important in rural America. Delivering on the promise of IoT requires significant investment, not just on the part of device manufacturers and software developers, but on the part of broadband ISPs who provide the networks that support IoT innovation.

ACA represents approximately 700 small and mid-sized cable operators, incumbent telephone companies, and municipal utilities. ACA's members operate nationwide, in all 50 states, the District of Columbia, and in U.S. Territories, mostly in smaller communities and rural areas, and they utilize a diversity of network technologies, including coaxial cable, fiber, fixed wireless, and Wi-Fi. In aggregate, ACA's members offer video, broadband, and voice services to nearly 19 million homes – or 14% of total homes in the U.S – and roughly seven million of these homes subscribe to one or more of these services.

As the Green Paper recognizes, the advancement of IoT will require the continued deployment of robust and reliable infrastructure for interconnecting devices. Meeting the ever-increasing connectivity demands of the IoT environment "will require continued modernization of

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[3] Green Paper at 1.

legacy telecommunications infrastructure and buildout of additional broadband capable networks."[4] Although rural Americans have perhaps the most to gain from the promise of IoT,[5] the benefits of new IoT technologies are necessarily constrained by the availability of robust and reliable broadband infrastructure with sufficient coverage in these areas. While there is significant incentive for ISPs to provide service in densely populated urban areas, where the cost of deployment is relatively low and the potential return on investment is high, offering high-speed broadband in rural areas is more challenging.[6] Despite the high costs of building networks in sparsely populated areas, ACA members, who serve a disproportionate share of broadband customers in small cities and rural areas, [7] have met that challenge, investing hundreds of millions of dollars in aggregate, to bring advanced communications networks to millions of customers who would otherwise go without.[8]

ACA appreciates the Department's understanding that "infrastructure needs to be deployed, developed, and maintained to ensure that IoT reaches its full potential,"[9] and believes that its plan to "coordinate with the private sector, as well as federal, state, and local

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[4] *Id.* at 16.
[5] The Green paper correctly observes that, while rural and disadvantaged communities have much to gain from remote health and education services (Green Paper at 9), "a lack of access to the Internet, and thus many IoT applications, could also make things worse for underserved communities." Green Paper at 20. Thus, the advancement IoT intensifies the already urgent need to expand and improve the country's broadband architecture.
[6] The 2010 National Broadband Plan identified providing rural broadband as one of the great infrastructure challenges of the 21st century *Connecting America: The National Broadband Plan*, Federal Communications Commission (Mar. 17, 2010), *available at* https://transition.fcc.gov/national-broadband-plan/national-broadband-plan.pdf.
[7] While 28% of the US population lives in small cities and rural areas, 42% of the people that reside within ACA members' footprints live in these areas.
[8] In a 2014 research report, ACA found that based on the FCC's latest Connect America Fund cost model, ACA 's cable members pass approximately 1.6 million homes in areas deemed "high cost." Connecting Hometown America: How Small Operators Are Having a Big Impact, American Cable Association, Apr. 2, 2014, available at http://americancable.org/node/4728.
[9] Green Paper at 20.

government partners,"[10] to ensure the availability of robust, reliable infrastructure with sufficient coverage to support the expansion of IoT is the correct approach. At the same time, ACA encourages the Department to consider ways in which it can support the efforts of small providers that are already serving rural and low-income areas to upgrade and build out further. To that end, ACA recently submitted a letter to Federal Communications Commission ("FCC") Chairman Ajit Pai, outlining a variety of policy proposals that would promote the deployment and expansion of broadband networks throughout rural America.[11] While many of the policies outlined are specific to the FCC's jurisdiction, we urge the Department to work with the FCC and other federal agencies to develop and implement coherent policies that continue to encourage private investment in broadband infrastructure.

Of course, the advancement of IoT requires the Department to examine a wide variety of policy issues beyond how best to promote broadband deployment, and the Green Paper articulates the Department's view that the government's role in fostering the advancement of IoT is to encourage private sector leadership in technology and standards development, and use a multistakeholder approach to policy making.[12] This is certainly the approach the Department should use in evaluating and implementing policies related to IoT cybersecurity. The Green Paper summarizes a consensus view among commenters that cybersecurity solutions must be flexible, risk-based, and not overly prescriptive. ACA agrees with those commenters who referenced the NIST Cybersecurity Framework as "providing a model to think about

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[10] *Id.* at 23.
[11] Letter from Matthew M. Polka, President & CEO, American Cable Association, to Chairman Ajit Pai, Federal Communications Commission, GN Docket No. 14-28 (filed Mar. 7, 2017), *available at* https://ecfsapi.fcc.gov/file/10307863823223/170307%20Polka%20Letter%20to%20Pai%20v10%20(FINAL%20with%20Cover%20Letter).pdf.
[12] Green Paper at 2.

cybersecurity for IoT applications and devices."[13] As the Green Paper notes "[t]he NIST Framework highlights the limitations of a 'one-size-fits-all' solution and instead is a voluntary, flexible framework that can be scaled to organizations' different needs, allowing them to take into account their particular business models, assets ,and other variables."[14] This flexibility has been especially important for smaller ISPs, who have limited resources and therefore must act strategically in crafting their cybersecurity posture.

The NIST Cybersecurity Framework also provides a good model for the role of government in developing cybersecurity policies, as the Framework itself is the result of a highly collaborative effort between government and the private sector. While the government has a crucial role to play, it can be most helpful as a facilitator and convenor – bringing together a diverse network of stakeholders to develop solutions. As facilitator and convenor, the Department should take extra care to ensure that small businesses, especially small ISPs, are appropriately represented in every venue, and that the concerns of these entities are understood and adequately addressed. As discussed above, small ISPs play an outsized role in the advancement of IoT, and therefore must be an integral part of any policymaking process.

Respectfully submitted,

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[13] *Id.* at 27.
[14] *Id.*

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