

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Inquiry Concerning Deployment of Advanced)	GN Docket No. 18-238
Telecommunications Capability to All Americans)	
in a Reasonable and Timely Fashion)	
)	

**Comments of
Communications Workers of America**

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The Communications Workers of America (CWA) submits these Comments in response to the Federal Communications Commission’s (FCC or Commission) *Fourteenth Broadband Deployment Report Notice of Inquiry* (NOI), which solicits comments to help the FCC determine “whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion.”¹ CWA represents 700,000 workers in private and public sector employment who work in telecommunications and information technology, the airline industry, news media, broadcast and cable television, education, health care and public service, law enforcement, manufacturing, and other fields. Since launching our Speed Matters program a decade ago, CWA has supported Commission policies that accelerate deployment of affordable, high-speed broadband to all Americans. Chairman Pai noted in his very first speech as Chairman: “[T]here is a digital divide in this country – between those who can use cutting-edge communications services and those who do not. I believe one of our core priorities going forward should be to close that divide... We must work to bring the benefits of the digital age to all Americans.”² CWA agrees. And an accurate assessment of the deployment and adoption of advanced telecommunications capability to all Americans is essential to craft policies to close the digital divide and promote digital equity for all Americans.

There is broad consensus that high-speed broadband is the essential infrastructure of the 21st century, providing the platform for economic development, jobs, education, health care, public safety, energy efficiency, civic participation, entertainment, and communications among friends and family. Given the importance of high-speed broadband, the Commission’s annual evaluation of whether advanced telecommunications services are being deployed in a reasonable

¹ Federal Communications Commission, *Fourteenth Broadband Deployment Report Notice of Inquiry*, GN Docket No. 18-238 (rel. Aug. 9, 2018): p. 1. (“NOI”)

² Remarks of Chairman Ajit Pai to FCC Staff, Jan. 24, 2017 (https://apps.fcc.gov/edocs_public/attachmatch/DOC-343184A1.pdf)

and timely fashion is of critical importance to the economic and social well-being of our nation. In this NOI, the Commission seeks comment on questions vital to ensure an accurate assessment of broadband deployment and to craft policies to close the digital divide. The Commission proposes maintaining its 25/3 Mbps broadband benchmark,³ and asks whether and to what extent fixed and mobile services of similar functionality are substitutes for each other.⁴ Below CWA offers its responses to these specific questions as well as general recommendations for analyzing the state of advanced telecommunications capability deployment.

Broadband is not being deployed in a reasonable and timely fashion, and the Commission was wrong to conclude so in its 2018 Broadband Report.⁵ As the Commission's report found, more than 24 million Americans still lack access to broadband services. Broadband use and adoption continues below optimal levels. According to the most recent census data, only two-thirds (67.3 percent) of people in the US have a wired broadband connection. For households earning \$20,000 a year or less, 43 percent do not have a wired broadband connection, and for households earning between \$20,000 and \$75,000 almost 20 percent lack access.⁶ Access for people of color is particularly low. According to Pew Research Center, 43 percent of African-Americans, 53 percent of Hispanics, and 55 percent of low-income households (annual earnings under \$30,000) do not subscribe to broadband at home, in many cases, because they cannot

³ NOI, p. 4

⁴ *Ibid.*, p. 5.

⁵ Federal Communications Commission, *2018 Broadband Deployment Report*, GN Docket No. 17-199 (rel. Feb. 2, 2018). ("2018 Broadband Report")

⁶ 2016 American Community Survey, 1-Year Estimates, Types of Computers and Internet Subscriptions, S2801, available at https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_16_1YR_S2801&prodType=table.

afford it.⁷ Based on these facts, it is clear that for a significant number of Americans broadband is not being deployed in a reasonable and timely fashion.

The Commission should raise its broadband benchmark to 100/10 Mbps. The United States is falling behind other nations in terms of broadband speeds. As of May 2017, the US ranks 10th in the world for average connection speed behind South Korea, Hong Kong, Switzerland, Japan, and every country on the Scandinavian Peninsula.⁸ On the peak speeds global ranking, the US does not break the top-10. Part of the problem is our current broadband benchmark, which is insufficiently audacious and falls short of the Commission's goals in the 2010 Broadband Plan.⁹ "The United States must lead the world in the number of homes and people with access to affordable, world-class broadband connections," the Broadband Plan reads. "As such, 100 million US homes should have affordable access to actual download speeds of at least 100 Mbps and actual upload speeds of at least 50 Mbps by 2020. This will create the world's most attractive market for broadband applications, devices and infrastructure."¹⁰ The Commission should raise its broadband benchmark to 100/10 Mbps to encourage high-speed broadband deployment that will ensure the United States leads the world in Internet speeds and deployment instead of struggling to keep up.

Mobile services are no substitute for fixed broadband. The Commission was correct to conclude in its 2018 Broadband Report that mobile services are not "currently full substitutes

⁷ Pew Research Center, "Internet/Broadband Fact Sheet" (Jan. 2018). Available at: <http://www.pewinternet.org/fact-sheet/internet-broadband/>

⁸ Akamai, "Akamai's State of the Internet Q1 2017 Report," (May 2017). Available at: <https://www.akamai.com/us/en/multimedia/documents/state-of-the-internet/q1-2017-state-of-the-internet-connectivity-report.pdf>

⁹ Federal Communications Commission, "Connecting America: The National Broadband Plan," (rel. Mar. 2010). Available at: <https://www.fcc.gov/general/national-broadband-plan> ("Broadband Plan")

¹⁰ Broadband Plan, p. 9.

for fixed service.”¹¹ Technology has not advanced so rapidly since February 2018 to warrant a departure from this conclusion in the Commission’s upcoming analysis. Much of the expert report CWA submitted less than a year ago remains true today.¹² CTC Technology & Energy is an independent communications and IT engineering consulting firm with more than 30 years of experience. The CTC report analyzed the current and emerging generation of mobile wireless technologies and compares those technologies to wireline technologies such as fiber-to-the-premises (FTTP), cable broadband, and copper DSL across a range of technical parameters, including reliability, resilience, scalability, capacity, and latency. The report also evaluated wireless carriers’ mobile pricing and usage structures – including so-called “unlimited” data plans – because those policies play a significant role in whether consumers can substitute mobile for wireline service. The CTC report concluded that “for both technical and business reasons, wireless technologies are not now, and will not be in the near to medium future, adequate alternatives or substitutes for wireline broadband.”¹³

According to the CTC Report, “modern wireline broadband services are superior to wireless services in terms of capacity, reliability, and scalability. While cutting-edge wireless technologies may surpass the theoretical bandwidth capabilities of some wireline products, FTTP networks easily surpass even the best of all planned or deployed wireless technologies. Even DSL networks can deliver a higher bandwidth and more reliable experience to consumers than can mobile so long as the DSL network is well-maintained and includes adequate investment in electronics.”¹⁴

¹¹ 2018 Broadband Report, p. 7.

¹² Reply Comments of Communications Workers of America, GN Docket No. 17-199 (Oct. 2017); CTC Technology & Energy, “Mobile Broadband Service Is Not an Adequate Substitute for Wireline,” (Oct. 2017). (“CTC Report”)

¹³ CTC Report, p. 1.

¹⁴ *Ibid.*, p. 11.

Mobile broadband cannot deliver performance as consistent as wireline services. The report explains that “even a well-engineered mobile broadband network cannot provide entirely consistent service within a service area.”¹⁵ Speeds degrade as one moves farther away from the antenna, and as distance increases, more obstructions block the antenna and the user. Wireless signals are degraded by natural features such as mountains, valleys, trees, and weather; buildings and other structures; and interference from other radio frequency (RF) signals in the area.

Moreover, the shift in mobile pricing models from data caps to so-called “unlimited” plans has not changed this outcome because, even though the product is not capped, users experience significant degradation of speeds via throttling after certain levels of use. Mobile providers dramatically limit customer usage and exert significant control over how applications run on their networks; these policies may have good technical or business justification but they have the impact of making the mobile service far inferior and less usable for consumers than wireline broadband service.¹⁶

The Commission should make Form 477 data available in a timely fashion. Finally, CWA believes the current Form 477 format contains a number of problems that the Commission must address, but one of the most important is the timeliness of the data.¹⁷ It is September 2018 and the most recent Form 477 data available is from December 2016. Without timely data, the public cannot monitor the progress of broadband deployment timely data and has less recent data to support its comments in response to the Commission’s requests.

Moreover, the Commission should refine its 477 methodology to provide more granular and accurate data about where broadband is actually deployed, with what technology, and at

¹⁵ *Ibid.*, p. 14.

¹⁶ *Ibid.*, p. 21.

¹⁷ Comments of Communications Workers of America, GN Docket No. 17-199 (Sept. 2017): p. 16-17.

what speeds. Form 477 asks fixed broadband carriers to report the maximum *advertised* speed available to at least *one household* in each census block. This distorts the results in two ways. First, it allows the carrier to report an advertised speed that may not be available to the majority of households in the census block. The Commission should require fixed broadband carriers to report the maximum advertised speed available to every household (or at least 90 percent of the households) in the census block. Second, the advertised speed often differs significantly from the actual speed of the broadband service. CWA-represented technicians report instances in which they are dispatched to install a broadband order at a specified speed profile that was advertised to and purchased by a customer, only to discover that the network cannot deliver that speed. The Commission should conduct targeted audits of locations in which the carrier reports significant changes in Form 477 data from one reporting period to the next.

In addition, the Commission should publish granular data on the progress of the CAF II program, including progress toward annual benchmarks, type of technology, as well as advertised and available speeds.

Conclusion. CWA has a longstanding commitment to the deployment of affordable, high-speed Internet for all because robust broadband deployment creates vital public benefits, including economic development, jobs, education, health care, public safety, civic participation, and others. As part of that commitment, CWA submits the above responses to the Commission's NOI. The Commission should raise its broadband benchmark to 100/10 Mbps, recognize – as it has in the past – that mobile services are no substitute for fixed broadband, and make Form 477 data available in a timely fashion. An accurate assessment of the deployment and adoption of advanced telecommunications capability is essential to craft policies to close the digital divide and promote digital equity for all Americans.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'B. Thorn', with a stylized, flowing script.

Brian Thorn
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