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

In the Matter of	)	
	)	
Restoring Internet Freedom	)	WC Docket No. 17-108
	)	

Comments of
Communications Workers of America and NAACP

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I. INTRODUCTION AND SUMMARY

The Communications Workers of America (CWA) and the NAACP support Commission action to adopt strong, legally enforceable rules to protect an open Internet. Preserving an open and free Internet consistent with the need to promote job-creating investment in high-speed networks and to close the digital divide is essential to safeguard our nation's economic, social, and democratic fabric and future.

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. Founded in 1909, the NAACP is our nation's oldest, largest and most widely-recognized grassroots-based civil rights organization, with over 500,000 members and more than 2,200 NAACP units in every state and on military bases in Italy, Germany, Japan, and Korea. CWA and the NAACP have long recognized that high-speed Internet is the essential communications infrastructure of the 21st century, providing a critical foundation for economic growth, job creation, and democratic communications. CWA and the NAACP have consistently emphasized the importance of an open Internet to ensure the free and unimpeded flow of information among all Internet users.[1]

[1] *See* Comments of Communications Workers of America and NAACP, *In the Matter of Protecting and Promoting the Open Internet*, GN Docket No. 14-28, July 15, 2014 ("CWA/NAACP 2014 Open Internet Comments"). *See also* CWA Press Release, "CWA: FCC Vote Moves U.S. Forward on Broadband," Dec. 21, 2010 (http://www.cwa-union.org/news/entry/fcc_vote_moves_u.s._forward_on_broadband); NAACP Statement ("As our nation's oldest and largest grassroots based civil rights organization, the NAACP is encouraged by FCC Chairman Genachowski's remarks concerning the proposal that reflect the FCC's desire to promote rules that safeguard the civil rights, free speech and economic opportunity for our nation's most vulnerable. We believe that the FCC's proposal will help foster equal access to affordable and sustainable broadband and stimulate job creation in all communities, including

The urgent need to upgrade our nation's communications networks to world-class standards and to close the digital divide demands that the Commission give the highest priority to investment and job creation in formulating open Internet principles and rules. The Commission must ensure that its Open Internet rules do not have the unintended consequence of dampening the private investment needed to build the next-generation networks that will bring our nation's broadband capability up to global standards and create and maintain good jobs. Broadband network providers create and maintain far more, and typically better-paying, jobs than the application and content sectors, particularly for people of color. Network companies provide the overwhelming majority of capital in the Internet ecosystem. The rules that the Commission adopts to ensure an open Internet must ensure that there is sufficient future investment and job creation to propel not only economic opportunity, but a permanent bridging of the digital divide. Building sufficient capacity to transport the video- and data-rich applications on the Internet is a key component to ensuring that people are not relegated to "slow lanes" or degraded service online.

CWA and the NAACP believe that Commission oversight is essential to protect the openness that is critical to the Internet's success. As the Commission for the third time in seven years opens a proceeding to consider the proper framework to protect an Open Internet,[2] CWA and the NAACP urge the Commission to adopt the following four bright-line rules applicable to fixed and wireless broadband Internet access service providers. These rules build on the 2005 Internet Freedom Policy Statement adopted unanimously by the Commission under Chairman

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underserved, rural, low-income, and racial and ethnic minority communities.")

[2] *In the Matter of Restoring Internet Freedom, Notice of Proposed Rulemaking,* WC Docket No. 17-108, May 23, 2017 (rel) ("*NPRM*").

Kevin Martin,[3] the Open Internet rules adopted in the *2010 Open Internet Order* under Chairman Julius Genachowski,[4] and the bright-line rules in the *2015 Open Internet Order* adopted under Chairman Tom Wheeler.[5] Taken together, these rules advance the goals of protecting a free and open Internet while at the same time encouraging the "virtuous cycle" of investment by broadband providers and application, content, and service providers ("edge providers").

1. **No blocking.** A person engaged in the provision of broadband Internet access services, insofar as such person is so engaged, shall not block lawful content, applications, services, or non-harmful devices, subject to reasonable network management.[6]

2. **No throttling.** A person engaged in the provision of broadband Internet access services, insofar as such person is so engaged, shall not impair or degrade lawful Internet traffic on the basis of Internet content, application, or service, or use of a non-harmful device, subject to reasonable network management.[7]

3. **No unreasonable discrimination.** A person engaged in the provision of fixed broadband Internet access service, insofar as such person is so engaged, shall not unreasonably discriminate in transmitting lawful network traffic over a consumer's broadband Internet access service. Reasonable network management shall not constitute unreasonable discrimination.[8] (This rule allows broadband providers to negotiate quality of service and other specialized services with edge providers, so long as the broadband providers make such contractual terms available to all edge providers on comparable terms.)

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[3] *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities et al*., GN Docket No. 00-185, CC Docket Nos. 02-33, 01-33, 98-10, 95-20, CS Docket No. 02-52, Policy Statement, Aug. 5, 2005 (affirming consumers' right to access the lawful content, applications, and services, and unharmful devices on the Internet) ("2005 Open Internet Policy Statement").

[4] *In the Matter of Preserving an Open Internet, Report and Order*, GN Docket No. 09-191, WC Docket No. 07-52, Dec. 23, 2010 (rel), p.1 ("*2010 Open Internet Order*") (establishing three rules: transparency, no blocking, no unreasonable discrimination, all subject to reasonable network management).

[5] *In the Matter of Protecting and Promoting the Open Internet, Report and Order on Remand, Declaratory Ruling, and Order*, GN Docket No. 14-28, March 12, 2015 (rel), para.15-18 ("*2015 Open Internet Order")* (establishing no blocking, no throttling, no paid prioritization, and enhanced transparency rules).

[6] This language is identical in the *2010 Open Internet O*rder at para. 15 and the *2015 Open Internet Order* at para. 1. The "no blocking" concept was also included in three Internet Freedom principles adopted in the *2005 Open Internet Policy Statement* at para 4.

[7] *2015 Open Internet Order*, para. 16 and 119-124.

[8] *2010 Open Internet Order*, para. 68-79.

4. **Enhanced transparency.** A person engaged in the provision of broadband Internet access service shall publicly disclose accurate information regarding the network management practices, performance, and commercial terms of its broadband Internet access services sufficient for consumers to make informed choices regarding use of such services and for content, application, service, and devices providers to develop, market, and maintain Internet offerings.[9]

Most important, CWA and the NAACP believe it is absolutely essential to establish a solid legal basis for Commission enforcement of the Open Internet rules. Classification of broadband Internet access service as a Title II telecommunications services represents one approach.[10] Another approach, originally proposed by Chairman Wheeler in the *2014 Open Internet Notice of Proposed Rulemaking*[11] and endorsed at that time by CWA and the NAACP,[12] would follow the blueprint provided by the D.C. Circuit Court of Appeals in its 2014 *Verizon* decision. In that decision the D.C. Circuit suggested that the Commission could adopt no blocking and anti-discrimination rules – based on Section 706 of the Communications Act – so long as the Commission also allowed negotiated agreements between broadband and edge providers that meet a "commercially reasonable" standard.[13]

[9] *2015 Open Internet Order*, para. 23 and 154-185. These enhanced transparency rules expand upon the transparency rule adopted in the *2010 Open Internet Order* at para 1 and 53-61 ("Fixed and mobile broadband providers must disclose the network management practices, performance characteristics, and terms and conditions of their broadband services")

[10] *See 2015 Open Internet Order* para. 355-408, upheld by the D.C. Circuit Court of Appeals in *US Telecom Association v. FCC*, 825 F.3d 674, (D.C. Cir. 2016).

[11] *Protecting and Promoting the Open Internet, Notice of Proposed Rulemaking*, GN Docket No. 14-28, May 15, 2014 (rel), para 4, 100-104, 122-138 ("*2014 Open Internet NPRM*").

[12] *See* CWA/NAACP 2014 Open Internet Comments, July 15, 2014, pp. 6-7, 14-20.

[13] In discussing the no blocking rule, the D.C. Circuit Court wrote that "…if the relevant service that broadband providers furnish is access to their subscribers generally, as opposed to access to their subscribers at the specific minimum speed necessary to satisfy the anti-blocking rules, then these rules, while perhaps establishing a lower limit on the forms that broadband providers' arrangements with edge providers could take, might nonetheless leave sufficient 'room for individual bargaining and discrimination in terns' so as not to run afoul of the statutory prohibitions of common carrier treatment." *Verizon v FCC* at 658. In discussing the anti-discrimination rule and the validity of a "commercially reasonable" standard, the D.C. Circuit Court wrote: "…unlike the data roaming rule in *Cellco* - which set forth a 'commercially reasonable' standard…which spelled out 'sixteen different factors plus a catchall…that the Commission must take into account in evaluating whether a proffered roaming agreement is commercially reasonable, thus building into the standard 'considerable flexibility,' the *Open Internet Order* makes

It is long past time to provide a sound, sustainable legal basis for Commission enforcement of open Internet rules. The repeated reconsideration of these rules distracts public and policymaker attention from the core challenges we face in broadband policy: how to stimulate the hundreds of billions of dollars of investment needed to upgrade our nation's wired and wireless networks to world class standards;[14] how to maintain and create good, career jobs in the industry; and how to close the digital divide so that every American, regardless of race, income, or geography, has access to affordable, high-speed Internet.

For despite much progress, there are serious gaps in our broadband infrastructure, and most disturbing, a digital divide based on geography, race, and income persists. The Organization for Economic Co-Operation and Development (OECD) ranks the U.S. 16th in the world in broadband access and 13th in average broadband speed.[15] More than 34 million Americans lack access to broadband at the Commission's definition of 25/3 Mbps network speed, including 23 million in rural areas and 11 million in urban communities.[16] According to Pew surveys, one-quarter of all Americans, with even higher percentages of African-Americans (35 percent), Hispanics (42 percent), and low-income households (47 percent) do not subscribe to broadband at home, many because they cannot afford it.[17] And only 38 percent of homes have a choice of two broadband providers offering speeds of 25 Mbps.[18]

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no attempt to ensure that its reasonableness standard remains flexible." *Verizon v. FCC.* 740 F.3d (D.C Circuit 2014).

[14] Deloitte estimates $130-150 billion fiber investment needed over the next five to seven years for fixed and wireless networks. Deloitte, "Communications infrastructure upgrade: The need for deep fiber," July 2017 (https://www2.deloitte.com/content/dam/Deloitte/us/Documents/technology-media-telecommunications/us-tmt-5GReady-the-need-for-deep-fiber-pov.pdf).

[15] OECD, "Households with Broadband Access," 2012 and "Average and Median Download Speeds, Fixed Broadband," 2014 ((http://www.oecd.org/internet/broadband/oecdbroadbandportal.htm)

[16] FCC, *Broadband Progress Report*, Jan. 29, 2016.

[17] Pew Internet, "Internet/Broadband Fact Sheet," data as of Nov. 11, 2016 (http://www.pewinternet.org/fact-

In this proceeding, CWA and the NAACP urge the Commission to affirm the four bright-line Open Internet rules – no blocking, no throttling, no unreasonable discrimination, and full transparency – and to ground the rules in a legally sustainable manner. It continues to be our view that, the "commercially reasonable" standard outlined by the D.C. Circuit Court in the 2014 *Verizon* decision provides a legally sustainable framework to protect the open Internet, while promoting increased investment in broadband networks to benefit all Internet consumers.

II. OPEN INTERNET RULES MUST PROMOTE JOB-CREATING INVESTMENT IN UNIVERSAL, HIGH-SPEED NEWTORKS

In previous comments, we observed that the 2010 Open Internet rules (no blocking, no unreasonable discrimination, and transparency) were working effectively to preserve Internet freedom and to drive the "virtuous cycle of innovation" by network and online content, applications, services, and device companies. During the three-year period (2010-2013) in which the 2010 rules were in effect, network and applications companies' capital expenditures totaled nearly $230 billion, with network companies' investment of $193 billion representing 84 percent of total capital expenditure over that period.[19] At the same time, there was only one case over the 2010-2013 period in which the Commission intervened to protect Internet freedom.[20]

CWA has updated our analysis of capital expenditures by the 15 leading network and 15 leading edge providers for the next three-year period, 2014-2016, using company data provided to the U.S. Securities and Exchange Commission (for publicly-traded companies) and CapitalIQ for the small number of privately-held companies. We note that the 2014-2016 period straddles

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sheet/internet-broadband/).
[18] FCC, *Broadband Progress Report*, Jan. 29, 2016.
[19] CWA/NAACP 2014 Open Internet Comments, p. 4.
[20] *See* News Release, Federal Communications Commission, *Verizon Wireless to Pay $1.25 Million to Settle*

in equal parts two periods: *first,* the period from Jan. 2014 through May 2015 during which the Commission lacked authority to enforce the no blocking and anti-discrimination rules as a result of the Jan. 2014 *Verizon* decision that vacated these rules; and *second,* the period from June 2015 through Dec. 2016 during which the Commission's 2015 three bright-line rules (no blocking, no throttling, and no paid prioritization) were in effect.

Our analysis of capital expenditures, 2014-2016, as detailed in Table 1, concludes the following:

- **The Virtuous Cycle of Innovation Grew Throughout this Period: Network and Edge Providers Made $ 300.8 Billion in Capital Expenditures, 2014-2016.** Total capital expenditures for network and edge providers were $98 billion in 2014, $98.5 billion in 2015, and $104.3 billion in 2016.

- **Network Providers Were the Heavy Hitters: Network Providers' Capital Investment at $ 218.9 Billion Far Exceeded Capital Investment by Edge Providers, 2014-2016.** Capital investment by network providers over the three-year period dwarfed capital investment by edge providers. Network providers' total capital investment during this period was $ 218.9 billion, or 72.9 percent of total capital spending by network and edge providers combined. In 2016 alone, network providers invested $72.6 billion.

- **Edge Providers Made $ 82 Billion in Capital Investment, 2014-2016.** Edge provider's total capital spending over this three-year period at $ 82 billion represented 27.2 percent of total capital spending by network and edge providers. Capital investment by four companies – Google, Amazon, Microsoft, and Facebook – represented the lion's share of edge providers' capital spending. Capital investment by smaller edge providers represented less than two percent of total capital spending. During this period, Google Fiber began deployment of several all-fiber networks and expanded its content delivery network. Amazon, Microsoft, and Facebook also expanded content delivery networks.[21]

Investigation into Blocking of Consumers' Access to Certain Mobile Broadband Applications, July 31, 2012

[21] Google Fiber owns fiber networks in 10 cities: Google has a multi-tiered content delivery platform that reaches more than 100 countries," *See* Google website https://fiber.google.com/about/*;* "Amazon CloudFront is a content delivery web service. It integrates with other Amazon web services to give developers and businesses an easy way to distribute content to end users with low latency, high data transfer speeds, and no commitments." *See* *http://aws.amazon.com/cloudfront/;* "The Microsoft Azure Content Delivery Network (CDN) offers developers a global solution for delivering content that's hosted in Azure. The CDN caches publicly available objects at strategically placed locations to provide maximum bandwidth for delivering content to users. *See*

Not only did network providers' capital spending far exceed that of edge providers, network companies also account for a far greater number of jobs. In 2016, the 15 largest network providers employed about 886,000 people. Almost all of these employees are located in the United States. In contrast, the 15 leading edge providers employed about 530,000. Many of these employees are located overseas. Further, if Amazon's vast army of warehouse employees is excluded, the network providers have 4.6 times as many employees as the other 14 largest edge providers' 189,000 employees. (See Table 2).

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http://msdn.microsoft.com/en-us/library/azure/ee795176.aspx; Jamie Beach, "Facebook boosts edge network to speed content delivery," iptv-news.com, June 22, 2012 (available at http://www.iptv-news.com/2012/06/facebook-boosts-edge-network-to-speed-content-delivery/); Rachel King, "Yahoo Acquiring content delivery network PeerCDN," *ZDNet*, Dec. 17, 2013 (available at http://www.zdnet.com/yahoo-acquiring-content-delivery-network-peercdn-7000024417/).

Table 1. Capital Expenditures, 2014- 2016
$ millions

	2014	2015	2016	Three Year Total 2014-2016	Percent of Industry Total
AT&T	$ 21,433	$ 20,015	$ 22,408	**$ 63,856**	21.2%
Verizon	$ 17,191	$ 17,775	$ 17,059	**$ 52,025**	17.3%
Comcast	$ 7,420	$ 8,499	$ 9,135	**$ 25,054**	8.3%
Sprint	$ 5,952	$ 6,004	$ 6,972	**$ 18,928**	6.3%
T-Mobile	$ 4,317	$ 4,724	$ 4,702	**$ 13,743**	4.6%
Charter	$ 2,221	$ 1,840	$ 5,325	**$ 9,386**	3.1%
CenturyLink	$ 3,047	$ 2,872	$ 2,981	**$ 8,900**	3.0%
Time Warner	$ 4,097	$ 4,446	-	**$ 8,543**	2.8%
DirectTV	$ 3,225	$ 3,081	-	**$ 6,306**	2.1%
Frontier	$ 688	$ 863	$ 1,401	**$ 2,952**	1.0%
Windstream	$ 787	$ 1,055	$ 990	**$ 2,832**	0.9%
DISH	$ 1,001	$ 761	$ 603	**$ 2,365**	0.8%
Cablevision (Altice after 6/2016)	$ 892	$ 816	$ 626	**$ 2,334**	0.8%
US Cellular	$ 605	$ 581	$ 443	**$ 1,629**	0.5%
Network Operators Total	**$ 72,876**	**$ 73,332**	**$ 72,645**	**$ 218,853**	72.8%
Google	$ 11,014	$ 9,950	$ 10,212	**$ 31,176**	10.4%
Microsoft	$ 5,485	$ 5,944	$ 8,343	**$ 19,772**	6.6%
Amazon	$ 4,893	$ 4,589	$ 6,737	**$ 16,219**	5.4%
Facebook	$ 1,831	$ 2,523	$ 4,491	**$ 8,845**	2.9%
LinkedIn	$ 547	$ 507	$ 865	**$ 1,919**	0.6%
eBay	$ 622	$ 668	$ 626	**$ 1,916**	0.6%
Yahoo	$ 396	$ 543	$ 11	**$ 950**	0.3%
Twitter	$ 202	$ 347	$ 219	**$ 768**	0.3%
Netflix	$ 70	$ 91	$ 108	**$ 269**	0.1%
Vonage	$ 12	$ 17	$ 26	**$ 55**	0.0%
Etsy	$ 1	$ 11	$ 36	**$ 48**	0.0%
Zynga	$ 9	$ 8	$ 10	**$ 27**	0.0%
Applications Providers Total	**$ 25,082**	**$ 25,198**	**$ 31,684**	**$ 81,964**	27.2%
Industry Total	**$ 97,958**	**$ 98,530**	**$ 104,329**	**$ 300,817**	100.0%

Network providers include 14 largest publicly-traded wireline, wireless, cable, and satellite companies. AT&T acquired DirecTV in 2016. Charter acquired Time Warner in 2016.
Applications providers include 12 largest publicly-traded content, application, and service ("edge") providers.

Sources: SEC Forms 10-K, various years

Table 2. Jobs at Broadband Network Companies Far Exceed Jobs at Applications Companies, 2016

Network Providers	Employees	Applications Providers	Employees
AT&T	268,000	Amazon	341,400
Verizon	160,900	Google	72,053
Comcast	159,000	Youtube	owned by Google
Charter	91,500	Microsoft*	63,000
T-Mobile	50,000	Facebook	17,048
CenturyLink	40,000	LinkedIn	10,113
Frontier	28,300	Uber	6,700
Sprint	28,000	eBay*	6,600
Dish Network	16,000	Netflix	4,700
Altice USA (formerly Cablevision)	16,000	Twitter	3,583
Windstream	11,870	Vonage	1,883
US Cellular	6,300	Zynga	1,681
MediaCom	4,410	Etsy	1,043
Cinn Bell	3,400	Mozilla	630
FairPoint	2,500	Lyft	695
Total	**886,180**	**Total**	**530,434**
		Total excluding Amazon	**189,034**

Network providers include 15 largest telecom, video, wireless employers, excluding privately-held Cox for which data is not available. Network providers' employees are almost all in the US.
Applications providers include 15 largest content, application, and service ("edge") providers. Many applications providers' employees are located overseas. EBay and Microsoft's employee numbers are for the US only. Amazon employs many warehouse employees.

Source: SEC Forms 10-K for year ending 2016; CapitalIQ estimates for non-public companies

Network companies also have a far better track record for employment of African Americans and Hispanics. The share of African American workers in wireline (14 percent) and wireless (14 percent) communications exceeds the overall share of employed African Americans in the U.S. labor force (12 percent). The share of Hispanic workers in wireline (10 percent) and wireless (13 percent) is somewhat below the share of employed Hispanics in the U.S. labor force (17 percent). In contrast, the share of African Americans and Hispanics employed at four leading edge providers (Facebook, Google, Yahoo, and LinkedIn) ranges from two to five percent, almost unchanged from the 2013 figures. These are appalling statistics, more than fifty years after passage of the landmark Civil Rights Act.[22] (See Table 3)

Table 3. Employment of African Americans and Hispanics Network Providers Compared to Applications Providers
Percent Share of Workforce

	African American		Hispanic	
	2016	**2014**	**2016**	**2014**
Wireline Communications	14%	14%	10%	11%
Wireless Communications	14%	12%	13%	12%
Facebook	2%	2%	4%	4%
Google	2%	2%	4%	3%
Yahoo	2%	2%	4%	4%
LinkedIn	3%	1%	5%	4%
All US Workers	12%	10%	17%	16%

Current Population Survey, pooled 2015/2016 and 2012/2013 data (wireline, wireless); CPS 2013 and 2016 (all workers); "Facebook Diversity Update: Positive Hiring Trends Show Progress," July 14, 2016 and "Building a More Diverse Workforce, July 8, 2014; Google: "Making progress on diversity and inclusion," June 29, 2017 and "Getting to Work on Workforce Diversity," May 2014; "Yahoo's 2016 Diversity Report," Oct. 31, 2016 and 2014 data; "LinkedIn's 2016 Workforce Diversity" and 2014 data.

[22] Current Population Survey, pooled 2015 and 2016 data (wireline, wireless); CPS 2016 (all workers); Facebook, "Facebook Diversity Update: Positive Hiring Trends Show Progress," July 14, 2016 (https://newsroom.fb.com/news/2016/07/facebook-diversity-update-positive-hiring-trends-show-progress/); Google: "Making progress on diversity and inclusion," June 29, 2017 (https://www.blog.google/topics/diversity/making-progress-diversity-and-inclusion/); Yahoo: "Yahoo's 2016 Diversity Report," Oct. 31, 2016 (https://yahoo.tumblr.com/post/152561899994/yahoos-2016-diversity-report); LinkedIn: "LinkedIn's 2016 Workforce Diversity"(https://blog.linkedin.com/2016/10/18/linkedin-2016-workforce-diversity-data)

In sum, network companies provide the overwhelming majority of capital and jobs – especially for people of color – in the Internet ecosystem. The U.S. still has a long way to go to upgrade our broadband networks to meet the capacity demands of a 21st century Internet and to close the digital divide. According to a recent Deloitte study, the U.S. requires between $130 and $150 billion over the next five to seven years of fiber investment to support fixed and wireless networks.[23] The four bright-line Open Internet rules and the legal framework that we propose will protect the openness of the Internet while encouraging continued network investment. Building big broadband is the best Open Internet policy and critical to the economic, social, and democratic future of our nation.

III. THE COMMISSION SHOULD AFFIRM FOUR BRIGHT-LINE OPEN INTERNET RULES AND PUT THEM ON A SOUND LEGAL FOOTING TO PROTECT AN OPEN INTERNET AND JOB-CREATING INVESTMENT IN THE INTERNET ECOSYSTEM

The Commission should affirm four bright-line rules to protect openness and free expression on the Internet: no blocking, no throttling, no unreasonable discrimination, and full transparency. The 2014 D.C. Circuit Court *Verizon* decision provides a road map to ground these rules in Section 706 of the Telecommunications Act to establish a firm legal basis that will withstand judicial scrutiny. The *2015 Open Internet Order* reaffirmed that Section 706 "affords the Commission affirmative legal authority" to adopt all the Open Internet rules in the *Order*.[24]

No Blocking and No Unreasonable Discrimination. There is broad consensus and long established precedent at the Commission in support of a no blocking rule that prohibits

[23] Deloitte, "Communications infrastructure upgrade: The need for deep fiber," July 2017 (https://www2.deloitte.com/content/dam/Deloitte/us/Documents/technology-media-telecommunications/us-tmt-5GReady-the-need-for-deep-fiber-pov.pdf).
[24] *2015 Open Internet Order*, para. 275-282.

broadband Internet access service providers from blocking any "lawful content, applications, services, or non-harmful devices, subject to reasonable network management" in order to ensure openness and freedom of expression on the Internet.[25] The Commission should reaffirm this rule in this proceeding.

The *2010 Open Internet Order* – which represented a carefully crafted compromise with support from leading network and edge providers as well as consumer, public interest, labor and civil rights groups (including CWA and the NAACP) – went further to address concerns about potential anti-competitive treatment by broadband Internet access service providers who might discriminate and favor the transport of some Internet content, services, or applications over others (e.g. "fast lanes" and "slow lanes"). To protect against such practices, the Commission adopted an anti-discrimination rule that reads as follows: "A person engaged in the provision of fixed broadband Internet access services, insofar as such person is so engaged, shall not unreasonably discriminate in transmitting lawful network traffic over a consumer's broadband Internet access service. Reasonable network management shall not constitute unreasonable discrimination."[26]

The Commission should reaffirm the 2010 rule prohibiting *unreasonable* discrimination by broadband Internet access providers. This rule allows broadband providers to negotiate quality of service (QoS) and other specialized service offers with edge providers (such as priority treatment for transmission of real-time medical operations, X-rays, MRIs, CAT scans, etc.) so

[25] The no blocking language is identical in the *2010 Open Internet Or*der at para. 15 and the *2015 Open Internet Order* at para. 1 ("A person engaged in the provision of broadband Internet access service, insofar as such person is so engaged, shall not block lawful content, applications, services, or non-harmful devices, subject to reasonable network management.") The "no blocking" concept was also included in three Internet Freedom principles adopted in the *2005 Open Internet Policy Statement* at para 4.

[26] *2010 Open Internet Order*, para. 68

long as all edge providers can negotiate similar arrangements on comparable terms. This rule properly recognizes, as the Commission did in its *2010 Open Internet Order*, that there can be substantial consumer benefits from negotiated quality of service and other arrangements between broadband and edge providers. As the Commission noted in adopting the anti-discrimination rule, consumers and end users benefit from the ability to "choose among different broadband offerings based on such factors as assured data rates and reliability, or to select quality-of-service enhancements on their own connections for traffic of their choosing."[27] Because the Commission recognized that "some forms of discrimination…can be beneficial," the Commission adopted an anti-discrimination rule that would provide "broadband providers sufficient flexibility to develop service offerings and pricing plans, and to effectively and reasonably manage their networks."[28] The *2015 Open Internet Order* also recognized the need to provide "leeway for experimentation with innovative offerings" and that "restricting the ability of broadband providers to put the network to innovative uses may reduce the rate of improvements to network infrastructure."[29] The Commission's 2010 prohibition against "unreasonable discrimination" therefore provides the opportunity for such innovation and experimentation by allowing individual negotiation of quality of service and other arrangements so long as the broadband provider made such arrangements available on comparable terms to everyone.

As CWA and NAACP explained in our 2014 Open Internet comments, such practices can provide substantial consumer benefit. *First*, they enable new, small-entrant content, application, or service providers to purchase content delivery network services and quality of service (QoS)

[27] *Open Internet Order*, para 71.
[28] *Id.* para. 77.
[29] *2015 Open Internet Order,* para. 135 and 136.

offerings from a broadband provider, giving them the ability to compete against large content, application, or service providers like Google, Microsoft, Yahoo, and others that have built their own geographically dispersed networks of servers that enable them to prioritize their own services to end users. *Second,* allowing broadband providers to provide content delivery services and QoS offerings provides the broadband providers with a revenue stream, encouraging increased infrastructure investment by increasing the return on that investment, and shifting the cost of broadband transport from end users to edge providers, potentially lowering end-user subscriber rates for broadband service, thereby reducing cost barriers to adoption of broadband services. *Third,* allowing broadband providers to charge edge providers for content delivery network services and QoS offerings sends efficient market signals, and avoids subsidizing heavy users of broadband access at the expense of lighter users (such as small new-entrant edge providers and residential consumers).[30]

Legal Basis for No Blocking and Anti-Discrimination Rules. One approach to ground the Commission's Open Internet rules on a solid legal footing is to classify broadband Internet access service as a Title II telecommunications service, the approach the Commission took in the *2015 Open Internet Order* and one that the D.C. Circuit Court of Appeals upheld in its 2016 U.S. *Telecom v FCC* decision.[31] We note that the *2015 Open Internet Order* also reaffirmed Section 706 as a legal authority over Open Internet rules.[32] An alternative is to follow the road map provided by the D.C. Circuit Court in its 2014 *Verizon* decision. In that decision, the D.C. Circuit Court upheld the Commission's policy arguments for its Open Internet regulations and affirmed

[30] *CWA 2010 Open Internet Comments* para. 16-17.
[31] *See 2015 Open Internet Order* para. 355-408, upheld by the D.C. Circuit Court of Appeals in *US Telecom Association v. FCC*, 825 F.3d 674, (D.C. Cir. 2016).

the Commission's authority based in Section 706 of the Telecommunications Act of 1996 to regulate broadband Internet access.[33] However, the D.C. Circuit vacated the no blocking and anti-discrimination rules because the Commission did not provide a legal rationale that would not subject broadband providers to common carriage regulation.[34] At the same time, the D.C. Circuit Court provided the Commission with a blueprint – based on Section 706 – that would put the no blocking and anti-discrimination rules on a solid legal footing. The D.C. Circuit suggested that the Commission could adopt no blocking and anti-discrimination rules so long as the Commission also allowed negotiated agreements between broadband and edge providers that meet a "commercially reasonable" standard.[35]

In the *Verizon* decision, the D.C. Circuit suggested that the 2010 anti-discrimination rule would have withstood judicial review if the Commission had adopted a "commercially reasonable" standard similar to the one it adopted (and the Court accepted) in the *Cellco* data roaming case. Further, the D.C. Circuit indicated that the no blocking and anti-discrimination rules would pass muster if they articulated a discrete, flexible standard that prohibited certain practices while at the same time permitting "commercially reasonable" individualized

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[32] *2015 Open Internet Order,* para. 275-284.
[33] *Verizon v FCC* para. 4.
[34] *Id.* at 4.
[35] In discussing the no blocking rule, the D.C. Circuit Court wrote that "…if the relevant service that broadband providers furnish is access to their subscribers generally, as opposed to access to their subscribers at the specific minimum speed necessary to satisfy the anti-blocking rules, then these rules, while perhaps establishing a lower limit on the forms that broadband providers' arrangements with edge providers could take, might nonetheless leave sufficient 'room for individual bargaining and discrimination in terns' so as not to run afoul of the statutory prohibitions of common carrier treatment." *Verizon v FCC* at 658. In discussing the anti-discrimination rule and the validity of a "commercially reasonable" standard, the D.C. Circuit Court wrote: "…unlike the data roaming rule in *Cellco* - which set forth a 'commercially reasonable' standard…which spelled out 'sixteen different factors plus a catchall…that the Commission must take into account in evaluating whether a proffered roaming agreement is commercially reasonable, thus building into the standard 'considerable flexibility,' the *Open Internet Order* makes no attempt to ensure that its reasonableness standard remains flexible." *Verizon v. FCC.*

negotiations.[36] That is what the Commission initially proposed to do in the *2014 NPRM*. CWA and the NAACP supported this proposal in 2014 and urge the Commission to do so in this proceeding.[37]

No Throttling. The Commission should reaffirm the "no throttling" rule adopted in the *2015 Open Internet Order* which states: "A person engaged in the provision of broadband Internet access service, insofar as such person is so engaged, shall not impair or degrade lawful Internet traffic on the basis of Internet content, application, or service, or use of a non-harmful device, subject to reasonable network management."[38] The "no throttling" rule supplements the no blocking rule by barring practices that discriminate by degrading or impairing the delivery of content over the Internet. The rule includes a carve-out for reasonable network management, an important provision to allow broadband Internet access service providers to manage networks, for example, to prioritize transmission of time-sensitive medical information over online gaming.

Enhanced Transparency. There is broad consensus on the importance of full transparency so that consumers can make informed decisions about the Internet access they are purchasing and so that consumers and regulators can hold network and edge providers accountable for the quality of service for which they are paying. The Commission should reaffirm the enhanced transparency rule adopted in the *2015 Open Internet Order* that reads: "A person engaged in the provision of broadband Internet access service shall publicly disclose

[36] *Id*. para. 59-62.

[37] In our 2014 comments, CWA and NAACP endorsed the multiple criteria the Commission proposed to clarify the meaning of "commercially reasonable" practices that do not violate Internet openness, including 1) a rebuttable presumption against a vertically-integrated broadband provider favoring its own applications, content, services, or devices; 2) the impact of the behavior on the exercise of free speech and civic engagement; 3) whether providers have engaged in "good faith" negotiations with all parties; 4) the impact on consumers; 5) the technical feasibility of the services; and 6) compatibility with industry practice, and other actors. *See* CWA/NAACP Open Internet Comments, para. 19 and *2014 Open Internet NPRM*, para 4, 100-104, 122-138.

accurate information regarding the network management practices, performance, and commercial terms of its broadband Internet access services sufficient for consumers to make informed choices regarding use of such services and for content, application, service, and device providers to develop, market, and maintain Internet offerings."[39] The Commission should maintain current transparency requirements that require disclosure of all commercial terms, performance characteristics, and network practices, including prices, promotional rates, all fees and/or surcharges, all data caps or data allowances; actual network performance including speed, latency, and packet loss; and disclosure of application-agnostic degradation of service.[40]

Open Internet Rules Must Apply to Fixed and Mobile Broadband Internet Access Service. The Commission must apply the four open Internet rules to fixed and mobile broadband Internet Access service. Today, most consumers use smartphones and tablets – either exclusively or in addition to wired Internet service – to access the Internet, and 13 percent of low-income consumers are wireless-only for Internet access.[41] According to a 2016 NTIA study, 20 percent of households use wireless connections at home to connect to the Internet.[42] As the Commission concluded in the *2015 Open Internet Order,* "broadband users should be able to expect that they will be entitled to the same Internet openness protections no matter what technology they use to access the Internet."[43] Under the "reasonable network management" exceptions in the open

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[38] *2015 Open Internet Order,* para. 119.
[39] *Id.,* para. 23. This builds upon the transparency rule in the *2010 Open Internet Order* at para 1 ("Fixed and mobile broadband providers must disclose the network management practices, performance characteristics, and terms and conditions of their broadband services.")
[40] *Id.,* para. 154-170.
[41] Pew Research Center, "U.S. Smartphone Use in 2015," (http://www.pewinternet.org/2015/04/01/us-smartphone-use-in-2015/).
[42] NTIA, "Evolving Technologies Change the Nature of Internet Use," April 19, 2016 (https://www.ntia.doc.gov/blog/2016/evolving-technologies-change-nature-internet-use)
[43] *2015 Open Internet Order,* para. 92.

Internet rules, mobile broadband providers will be able to manage their networks to deal with congestion due to spectrum and other limitations.

In summary, the Commission should affirm four bright-line Open Internet rules: no blocking, no throttling, no unreasonable discrimination, and full transparency and establish a sound legal footing for these rules. The D.C. Circuit Court's *Verizon* decision roadmap, grounding legal authority in Section 706 of the Telecommunications Act of 1996, while clarifying that the Open Internet rules do not constitute *per se* common carriage regulation provides one approach that gives broadband providers flexibility to negotiate quality of service arrangements with edge providers, so long as those arrangements do not degrade consumers' experience on the Internet; do not favor vertically integrated broadband providers; and ensure continued investment in upgrading our nation's broadband infrastructure.

V. THE COMMISSION MUST MAINTAIN THE LIFELINE FOR BROADBAND PROGRAM

CWA and NAACP are encouraged that the *NPRM* proposes to maintain support for broadband in the Lifeline program, regardless of the classification of broadband Internet access service.[44] CWA and NAACP, together with numerous civil rights, consumer, public interest, and labor organizations, have been strong and steadfast supporters of the Commission's Lifeline for broadband subsidy program as one important mechanism to make broadband access more affordable for low-income households, thereby helping to reduce the digital divide.[45] Regardless of the classification of broadband Internet access service, there is a clear statutory authority and

[44] *NPRM*, para. 68. ("We propose to maintain support for broadband in the Lifeline program after reclassification.")
[45] More than 200 commentators urged the Commission to include broadband in the Lifeline program. *See In the Matter of Lifeline and Link Up Reform and Modernization, et al.*, WC Docket No. 11-41, 09-197, and 10-90, April 27, 2016 (rel), para.33.

Commission precedent upon which to ground the Lifeline for broadband program. Section 254 of the Communications Act states that services should be available at "affordable" rates and that "consumers in all regions of the nation, including low-income consumers…should have access to telecommunications and information services."[46] Congress also made clear in Section 254(c) of the Act that '[u]niversal services is an evolving level of telecommunications services that the Commission shall establish periodically under this section, taking into account advances in telecommunications and information technologies and services."[47] In 2009, Congress directed the Commission to develop a National Broadband Plan that included, among other provisions, a detailed strategy for achieving affordability of broadband services."[48] In addition, the *NPRM* cites as further authority the *2011 Universal Service Transformation Order* which concluded that "[s]ection 254 grants the Commission the authority to support not only voice telephony service" but also "allows us to …require carriers receiving federal universal service support to invest in modern broadband-capable networks."[49] It is absolutely essential that the Commission continue and build upon the Lifeline for broadband program to help close the digital divide in our nation.

VI. CONCLUSION

CWA and the NAACP urge the Commission to protect a free and Open Internet consistent with the need to maintain and promote job-creating investment in broadband infrastructure and closing the digital divide. Despite much progress, our nation needs hundreds of billions of dollars of investment to build the high-capacity networks we need for the data- and video-rich Internet

[46] 47 U.S.C. Section 254(b)(1)(3).
[47] 47 U.S.C. Section 254(c).
[48] *See* American Recovery and Reinvestment Act of 2009, Section 6001(k)(2)(B).
[49] *NPRM*, para. 68.

applications of today and the future. Building big broadband is the best Open Internet policy and critical to the economic, social, and democratic future of our nation.

The Commission should affirm four bright-line Open Internet rules: no blocking, no throttling, no unreasonable discrimination, and full transparency and put these rules on solid legal footing. Title II reclassification is one approach. Alternatively, the Commission can follow the D.C. Circuit Court's road map. The Court affirmed the Commission's legal authority to ground its Open Internet rules in Section 706 of the Telecommunications Act, and suggested that no blocking and anti-discrimination rules based on a "commercially reasonable" standard would be legally sound. The Commission should take this approach to protect a free and Open Internet while ensuring continued job-creating investment to upgrade our nation's infrastructure, maintain and grow jobs, and close the digital divide.

Respectfully Submitted,

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