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

In the Matter of

Protecting and Promoting the Open Internet ) GN Docket No. 14-28
Framework for Broadband Internet Service ) GN Docket No. 10-127

COMMENTS OF THE FIBER TO THE HOME COUNCIL AMERICAS ON THE NOTICE OF PROPOSED RULEMAKING ON PROTECTING AND PROMOTING THE OPEN INTERNET; THE FRAMEWORK FOR BROADBAND INTERNET SERVICE

The Fiber to the Home Council Americas ("FTTH Council" or the "Council")\(^1\) respectfully submits these comments in response to the Federal Communications Commission’s ("FCC’s" or "Commission’s") Notice of Proposed Rulemaking ("NPRM") on Protecting and Promoting the Open Internet and Public Notice refreshing the record in its 2010 Framework for Broadband Internet Service proceeding.\(^2\) In the NPRM, the Commission is seeking "comment

\(^1\) A complete list of FTTH Council members can be found on the organization’s website: [http://www.ftthcouncil.org](http://www.ftthcouncil.org). The FTTH Council is a not-for-profit entity whose mission is to accelerate deployment of all-fiber access networks by demonstrating how fiber-enabled applications and solutions create value for service providers and their customers, promote economic development, and enhance quality of life. The FTTH Council’s over 300 members represent all areas of the broadband access industry, including telecommunications, computing, networking, system integration, engineering, and content-provider companies, as well as traditional service providers, utilities, and municipalities. As such, the FTTH Council and its members have a substantial interest in the outcome of this proceeding.

on the best ways to define, prevent and punish the practices that threaten an open Internet.\footnote{See id., ¶ 4.} The Commission’s inquiry is focused most intensely on the practices of broadband Internet access service providers – those entities that provide end users and edge providers with access to the Internet. The Commission continues to believe that these providers have the incentive and ability to harm open access to the Internet, and it proposes enhanced transparency rules and new rules to address blocking and discrimination (prioritization) in response to the previous rules that were vacated by the D.C. Circuit.\footnote{See id., ¶ 10; see also Verizon v. FCC, 740 F.3d 623 (D.C. Cir. 2014).}

Assuming the Commission is correct about the nature of the problem, the FTTH Council urges the Commission to adopt real, long term fixes rather than apply a regulatory band-aid, which in a dynamic industry sector at best has limited value and at worst will result in a lengthy cycle of disputes and uncertainty. That is, the Commission should seek to remove any underlying incentives and abilities broadband Internet access service providers may have to harm open access. In these comments, the Council proposes one element of that solution: the Commission should limit, if not remove, incentives and effectively the ability these providers may have to harm open access to the Internet by encouraging them to deploy networks that provide unlimited bandwidth. Where there is abundant bandwidth, network congestion and any need for traffic management or prioritization become effectively a non-issue.\footnote{The Council amply demonstrated this point in comments filed in 2007 in the Broadband Industry Practices proceeding (WC Docket No. 07-52), and it holds true today. See Comments of the FTTH Council, Declaration of Michael Johnston, Jackson Energy Authority, WC Docket 07-52, ¶¶ 6-8 (June 15, 2007) (“Johnston Decl.”) (“[B]ecause of the fiber-to-the-home network’s enormous transmission capacity . . . [there is no control of] network usage or access. The . . . network does not contain any packet management equipment, nor is any planned. . . . Within the context of Internet access, business traffic is prioritized over traffic to residential customers.”).} That is, where
bandwidth is not limited, there is no material difference between a “best efforts” Internet access service and a service that provides priority access, and no economic rationale to harm or limit access. As discussed herein, the Council believes the Commission can implement this concept by adopting a rebuttable presumption that where a broadband Internet access service provider deploys and operates an all-fiber network (or a network with equivalent performance characteristics), it is deemed to comply with any open Internet blocking and discrimination regulations.6

I. BANDWIDTH SCARCITY DRIVES OPEN INTERNET CONCERNS; BANDWIDTH ABUNDANCE PROVIDES A SOLUTION

In the NPRM, the FCC seeks comment on its determination that broadband Internet access service providers7 have both the economic incentive and the ability to engage in practices that could threaten the virtuous circle of edge-service innovation, end-user demand, and network

Despite these prioritizations, any concern about discriminatory impacts or restrictions on access is largely an academic exercise in a fiber-to-the-home network. Because of the enormous transmission capacity of such a network, even with various ‘bandwidth hungry’ uses (such as real-time video streaming for business, educational, or entertainment purposes or on-line gaming), the network is vastly overpowered and the prioritization hierarchy does not impact any of the applications or class of customers.”).

6 All-fiber networks have the ability to scale to provide broadband Internet access service with virtually unlimited bandwidth and extremely low latency. In effect, for an end user, it is akin to turning on a “light switch” which opens the entire pipe. Any equivalent service needs to offer this capability upon customer request (without incurring significant additional capital expenditures).

7 The Commission defines “broadband Internet access service” as a “mass market retail service . . . that provides the capability to transmit data to and receive data from all or substantially all Internet end points . . . .” See NPRM, ¶ 54 (citing 47 C.F.R. § 8.11(a)). Broadband Internet access service is a key service provided to residential and smaller business customers on all-fiber access networks – from the end user customer up to, but not including, the point where the network interconnects and exchanges traffic with the Internet point of presence or with an unaffiliated provider carrying the traffic to and from the Internet point of presence. As such, in these comments, the Council does not address issues outside the provision of broadband Internet access service, including the interconnection and exchange of traffic with transit providers, CDNs, or similar entities.
investment. In addition, the Commission seeks comment on how recent developments in technology and business practices have increased or decreased the technical ability that broadband Internet access service providers have to limit Internet openness. The Commission suggests that in the absence of rules and regulations, broadband Internet access service providers are more likely to engage in traffic degradation, blocking, and other practices that harm open access to the Internet.

The FTTH Council submits, assuming the Commission’s concern is valid, that the root cause stems from the fact that most end users access the Internet on networks where bandwidth is limited. Problems arising from bandwidth scarcity have become even more evident as users seek access from multiple devices to sophisticated and bandwidth-intensive edge services, including cloud-based services and online video. On networks where bandwidth is limited, there is a much greater potential for congestion and need for traffic management, particularly during peak hours. In essence, bandwidth scarcity can create economic scarcity, and in such an environment, end users and edge providers have a greater need for assurances of transmission reliability and quality, and broadband Internet access providers are more able to charge for prioritization and create concerns about open Internet access.

In contrast, where bandwidth is abundant, there is no economic scarcity that can lead to the Commission’s open Internet concerns. With the unlimited bandwidth of all-fiber access networks, sophisticated traffic management and prioritization are not required because all traffic can flow freely without risk of congestion. There is, in effect, no difference between a best efforts service and a priority service. Accordingly, a service provider offering unlimited

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8 See NPRM, ¶ 44.
9 See id., ¶ 51.
10 See id., ¶ 40.
11 See Johnston Decl., supra note 5, ¶¶ 6-8.
bandwidth cannot extract value from customers on the basis of its traffic management practices or the availability of priority services, and concerns about harm to the open Internet become a non-issue. Based on this paradigm, the FTTH Council submits that the Commission could limit, if not remove, potential underlying incentives for broadband Internet access service providers to harm open access by giving them incentives to deploy and operate networks with unlimited bandwidth. Today, approximately 30 million homes have access to such (all-fiber) networks. While the number increases daily, the pace could be accelerated by the Commission adopting in this proceeding the proper incentives. Moreover, such an approach would produce significant added value, including greater economic development and increased social interaction.

II. THE COMMISSION SHOULD ADOPT A REBUTTABLE PRESUMPTION THAT AN OPERATOR OF AN ALL-FIBER NETWORK (OR A NETWORK WITH EQUIVALENT PERFORMANCE CHARACTERISTICS) COMPLIES WITH ANY OPEN INTERNET BLOCKING AND DISCRIMINATION REGULATIONS

In the NPRM, the Commission seeks comment on the administration of a commercially reasonable standard to prevent or limit open Internet harms, including the adoption of rebuttable presumptions that it should use “as a tool to focus attention on the likely impacts of particular practices.” Because the presence of abundant bandwidth effectively moots these harms, the Commission should adopt a rebuttable presumption that where a broadband Internet access provider deploys and operates an all-fiber network (or a network with equivalent performance characteristics), it is deemed to comply with the open Internet blocking and discrimination regulations.

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12 See “FTTH Progress and Impact, Understanding the FTTH landscape to enable better business decisions,” presentation by Michael Render at the FTTH 2014 Conference & Expo (June 23, 2014), available at www.ftthcouncil.org (including data from the US, Canada, and Mexico of homes passed, marketed, or connected with FTTH).

13 See NPRM, ¶¶ 116-135.
This rebuttable presumption would resolve the Commission’s main concern in this proceeding and provide a number of important benefits. First, it would recognize that operators of broadband Internet access networks with unlimited bandwidth lack the incentives and effectively the ability to engage in the sorts of practices that the Commission seeks to address through its open Internet rules. Second, it would encourage broadband Internet access providers to deploy more scalable ultra-high-speed networks, greatly benefitting all Americans and having the added benefit of closing the digital divide between those communities that have access to affordable ultra-high-speed connectivity and those that do not.14 It also would promote a psychology of bandwidth abundance, in which entrepreneurs and consumers do not view bandwidth as a scarce resource.15 As Blair Levin, architect of the National Broadband Plan, has explained, a psychology of bandwidth abundance is “critical to the development of the entrepreneurial mind,” and “drive[s consumer] use that in turns drive[s] innovation, investment and jobs.”16 In this way, unlimited capacity access networks create conditions for the ultimate virtuous cycle – one that underlies the Internet and in which consumer demand and entrepreneurial imagination are not bound by bandwidth or the short-term incentives of access providers.17 Finally, the presumption will help further the Commission’s open Internet goals while limiting harms that arise from regulatory oversight. Because the Internet is constantly evolving, the Commission should be concerned, not only that regulations may impose

14 See id., ¶ 33.
15 See Blair Levin, Upgrading America: Achieving a Strategic Bandwidth Advantage and a Psychology of Bandwidth Abundance to Drive High-Performance Knowledge Exchange, Address Before the Fujitsu Conference on Paving the Road to Unlimited Bandwidth: Technologies and Applications for a Connected Age, 7 (June 13, 2012).
16 See id.
17 See NPRM, ¶ 1 (The Internet “is characterized by low barriers to entry for developers of new content, applications, services, and devices and a consumer-demand-driven marketplace for their products.”).
unwarranted or simply substantial costs on providers, but that they may be ill-suited to resolving problems. Thus, any regulations could hinder the deployment of unlimited bandwidth networks and threaten the very innovation and investment that the Commission seeks to promote.

The Council acknowledges that its proposal is not a complete solution to addressing all open Internet issues and that there may be other ways to promote the virtuous circle of innovation and investment and to remove incentives to engage in practices that threaten the open Internet. However, by ensuring and promoting the deployment of all-fiber broadband Internet (or equivalent unlimited bandwidth) access networks unfettered by regulations designed for networks with limited bandwidth, the Commission can take an important step toward achieving its immediate goals while building a platform that drives an ultimate solution to any concerns.

III. CONCLUSION

In advancing the Commission’s open Internet goals, the Commission should adopt long-term solutions that address the underlying problem – bandwidth constraints that lead to economic scarcity. By creating incentives for bandwidth abundance, the Commission can alleviate concerns about a broadband Internet access provider using limited bandwidth to leverage end users and edge providers. The Council thus urges the Commission adopt a rebuttable presumption that where a broadband Internet access provider deploys and operates an all-fiber network (or a network with equivalent performance characteristics), it is deemed to comply with any open Internet blocking and discrimination regulations.

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18 See Blair Levin, Debate ISP Classification, but Bring on Bandwidth Abundance, re/code (Feb. 23, 2014), available at http://recode.net/2014/02/23/debate-isp-classification-but-bring-on-bandwidth-abundance/ (encouraging the removal of barriers to investment in order to “eliminate bandwidth as a constraint to innovation,” which would simultaneously reduce the concerns of open Internet advocates and opponents).
Respectfully Submitted,

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