Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
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Report on the Future of the Universal Service Fund	)	WC Docket No. 21-476
	)	
Universal Service Contribution Methodology	)	WC Docket No. 06-122

REPLY COMMENTS OF INCOMPAS

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INCOMPAS, by its undersigned counsel, hereby submits these reply comments in response to comments filed in the record regarding the Wireline Competition Bureau's *Notice of Inquiry*,[1] which seeks comment on issues related to the future of the Universal Service Fund ("USF") in light of the broadband investments in the Infrastructure Investment and Jobs Act ("IIJA").

I. INTRODUCTION AND SUMMARY

INCOMPAS is the preeminent national industry association for providers of internet and competitive communications networks, including both wireline and wireless providers in the broadband marketplace. We represent fixed broadband companies, including small local fiber and fixed wireless providers that provide residential broadband internet access service ("BIAS"), as well as other mass-market services, such as video programming distribution and voice services in urban, suburban, and rural areas. We also represent companies that are providing business broadband services to schools, libraries, hospitals and clinics, and businesses of all sizes, including regional fiber providers; transit and backbone providers that carry broadband and internet traffic; online video distributors, which offer video programming over BIAS to

[1] *Report on the Future of the Universal Service*, Notice of Inquiry, WC Docket No. 21-476 (rel. Dec. 15, 2021).

consumers, in addition to other online content, such as social media, streaming, cloud services, and voice services.

INCOMPAS filed comments in this proceeding where we discussed the following: (1) the FCC should include competition as one of its universal service and broadband goals; (2) the FCC's Report to Congress offers an opportunity for the FCC to conduct a comprehensive analysis into its USF programs, and specifically on how much funding is still needed in the High-Cost Fund, and we encouraged the FCC to include in its report its timing and process for conducting such an analysis; (3) the importance of coordination among federal agencies, states, and localities in implementing broadband funding to speed deployment of future-proof broadband networks; and (4) to complete its long-standing contribution USF reform proceeding this year by expanding the base to include BIAS revenues given that the record overwhelmingly supports the FCC to move forward based on this reform methodology.[2] These reply comments focus on items (2) and (4) of the list above in response to comments filed in the record regarding the High-Cost Fund and USF contribution reform.

II. THE RECORD SHOWS THAT HIGH-COST FUNDING NEEDS FURTHER EVALUATION.

As explained in INCOMPAS' comments, the FCC should take this opportunity to explain to Congress in its Report a plan to conduct a comprehensive analysis into the High-Cost Fund.[3] Now that billions of dollars in federal and state funding will be going out to help fund broadband deployment—the most expensive aspect of delivering affordable broadband—the FCC must

[2] *See* INCOMPAS Comments, *Report on the Future of the Universal Service Fund, Universal Service Contribution Methodology*, WC Docket Nos. 21-476, 06-122 (filed Feb. 17, 2022). Unless stated otherwise, all references to Comments in the citations below are from the above-mentioned proceeding.

[3] *See id.* at 7-10.

conduct an extensive analysis into whether continued high-cost funding is still needed. In order to make sure that finite USF dollars are being spent wisely, the FCC must assess the areas where federal funding is being spent to deploy broadband-capable networks and whether any additional funding from the High-Cost program is necessary for the delivery of affordable BIAS. In its assessment, it is important for the Commission to take into account whether other providers serve the community. In addition, the areas that received CAF II and RDOF funding should remain ineligible for additional High-Cost funds as intended by the FCC's Orders in those proceedings.[4]

Many commenters in the record discuss the need for the High-Cost Fund to provide financing for their continued operations, and in particular for maintenance of their networks, even after the tens of billions of dollars of federal funding is disbursed.[5] However, there is significant agreement in the record that further demonstration of need should be required for continued operational support from the High-Cost Fund. It is no longer sufficient just to claim it is so, and the FCC should not make any assumptions. As explained in the record:

- "The public interest and the law require the Commission to conduct a deep and skeptical analysis of its past and current High Cost support policies and consider a pause on such support."[6]

- "Absent a robust cost showing, there simply is no basis to assume that any particular provider or class of providers will need high-cost support for operating and maintenance costs," and "the NPRM should seek comment on whether funding provided by the new broadband programs will be sufficient to cover operating and

[4] *See id.* at 9.

[5] *See, e.g.*, ACA Connects Comments, at 11 ("there will be a continuing need to provide support in high cost areas served by rate-of-return carriers"); NTCA Comments, at 25 ("USF support can and should continue to be distributed in some areas even after networks are deployed.").

[6] Free Press Comments, at 23.

maintenance costs, especially when considered in combination with customer revenues."[7]

- "Additional data about the actual costs to provide broadband service in high-cost areas is necessary to determine the appropriate level of ongoing support."[8]

- "The Commission should assess the ongoing need for high-cost deployment funding" following the implementation of federal deployment programs, including IIJA, as well as "the ongoing need for operational support for high-cost areas in close collaboration with state regulators and directly impacted communities to ensure the sustainability of publicly-supported networks."[9]

As the Commission is aware, the operational costs of all IP broadband networks are more cost-effective and efficient.[10] The FCC should not assume that providers will continue to need operational support. Indeed, as we noted in our comments, the Commission purposefully did not extend continued, operational support in the CAF II and RDOF Orders,[11] and that the FCC

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[7] NCTA Comments, at 7.

[8] California Public Utilities Commission Comments, at 7.

[9] Communications Works of America Comments, at 2.

[10] Indeed, some incumbent providers have been telling the FCC for years that it must transition from its regulation of TDM networks that they allege are costly so that they can invest in new, all IP broadband networks that will be more efficient to operate and will provide significant public interest benefits. *See* AT&T Petition, GN Docket No. 12-353 (filed Nov. 7, 2012), at 4 (stating "[a]s the Commission understands, converged IP networks are more dynamic, versatile, resilient, and cost-efficient than legacy TDM networks. The prospect of those efficiencies will improve the business case for broadband investment in high-cost areas, especially when providers can avoid the costs and inefficiencies of maintaining duplicative legacy networks once IP networks are enabled."). *See also* Deloitte Report, *Communications Infrastructure Upgrade: The Need For Deep Fiber* (July 2017), at 5 (describing the types of cost efficiencies of new, modern networks, including for example "[c]arriers stand to gain tremendous efficiency from deploying new IP networking architectures like Software Defined Networks (SDN) and Network Function Virtualization (NFV).").

[11] *See* Connect America Fund, Report and Order and Further Notice of Proposed Rulemaking, WC Docket No. 10-90 (May 26, 2016), at ¶ 14 ("We expect and encourage participants to innovate and provide better service over the 10-year term."), ¶ 16 ("We want to maximize the number of consumers served within our finite budget. At the same time, we see the value to consumers in rural markets of having access to service during the 10-year term of support that exceeds our baseline requirements."), ¶ 34 ("Phase II winning bidders that elect to provide high-

should also outline a plan in the Report for how the Commission can obtain a better understanding of the economics of broadband networks serving rural America and assess whether additional funding is needed to support operations from the High-Cost Fund, and if so, the factors that should be shown to make a demonstration that such operational support is needed.[12]

Similarly, for Cap-Ex funding to deploy to areas without any broadband network connectivity through the High-Cost Fund, INCOMPAS agrees with CTIA that "the Commission should assess the impact of congressional funding for fixed broadband networks before expanding its own High-Cost Programs," and that "[p]ending the analysis of such data, the Commission should refrain from allocating additional universal service funding for fixed broadband deployment efforts[.]"[13] Before the Commission allocates any new funding for Cap-Ex, it first needs to conduct its comprehensive analysis of where funding is still needed to deploy a broadband-capable network once the projects for the American Rescue Plan Act ("ARPA"), IIJA, Re-Connect and other state funding programs are announced and available to the Commission for its comprehensive analysis. Accordingly, the FCC's report to Congress should incorporate these conclusions, and the Commission should determine the process and timing for its analysis of the High-Cost Fund recipients' continued need for support. INCOMPAS

latency service will receive support for a 10-year term."). *See also* Rural Digital Opportunity Fund, Report and Order, WC Docket No. 19-126 (Feb. 7, 2020), at ¶ 7 ("Most commenters addressing this issue agree that a 10-year term of support will provide the certainty and stability needed to encourage broadband deployment in unserved and underserved locations and attract participation from a wide variety of participants. Moreover, disbursing support over a 10-year term minimizes the impact on the contribution factor . . . we expect bidders to seek sufficient support to build and maintain their network without an expectation of ongoing support after the 10-year support term expires.").

[12] *See* INCOMPAS Comments, at 10.

[13] CTIA Comments, at 7-8.

encourages the Commission to include in its report to Congress its process and timing for such analyses.

III. THE RECORD SHOWS OVERWHELMING SUPPORT FOR THE FCC TO IMMEDIATELY ACT ON USF CONTRIBUTION REFORM.

There is overwhelming support in the record that the USF is not stable and that its contribution methodology must be reformed this year. There is also widespread agreement that the FCC should stabilize the Fund by expanding the contribution base to include BIAS revenues. However, the record also includes false factual assumptions about the role of edge providers embedded in proposals to expand the USF in ways that exceed the Commission's jurisdiction and are not rationally related to universal service programs.

(a) The Record Is Clear: There Is Growing Support That The FCC Must Act Now On USF Contribution Reform By Increasing The Base To Include BIAS Revenues.

There is broad agreement and support in the record that there is a serious problem regarding the USF, something must be done to stabilize the program, and the FCC should solve it. The FCC needs to act now if we want to stabilize and save the USF.[14] The FCC should broaden the contribution base and assess BIAS revenues, and it has the authority to do so immediately. In contrast, the FCC does not have the authority to assess edge providers and doing so, for reasons INCOMPAS has already explained, is not a viable solution.[15] In fact, even some commenters that support imposing USF fees on edge providers acknowledge that the FCC would need to obtain the authority from Congress to do so.[16] Sending this proceeding to Congress will

[14] *See* INCOMPAS Comments, at 14-15.

[15] *See id.* at 19-20.

[16] *See, e.g.*, Coalition of Rural Wireless Carriers Comments, at 30 (stating "[a]ll these factors underscore the advisability of the Commission's seeking legislative authority to add revenues of

take too much time, is too uncertain, and is inconsistent with the Commission's obligations under Section 254(b)(5) of the Communications Act to ensure that the USF's mechanisms are predictable and sufficient.[17] In addition, INCOMPAS is concerned that an appropriations process is inconsistent with the statutory requirement that the FCC ensure that the USF is predictable and sufficient to achieve access to affordable communications service throughout the nation. To the extent that the FCC includes information about this aspect of the record to Congress in its report, we urge it to conclude that it cannot meet its obligations under Section 254 via the annual appropriations process.

The record reveals broad and growing support to assess BIAS revenues, and the FCC does not need to go to Congress in order to do so. As explained and cited throughout the record, the USForward Report written by USF expert Carol Mattey recommends that the FCC expand

ISPs to the contribution base."); Hal Singer/Ted Tatos Comments, at 2 (stating "the FCC currently lacks the authority to apply the USF to digital advertising revenues[.]"); NTCA Comments, at 48 (stating "NTCA again supports ultimate adoption of a broader contribution base than even just telecommunications and broadband revenues alone, but these other methods warrant further study and will seemingly necessitate a grant of additional authority from Congress."); Rural Broadband Providers Comments, at 12 (stating "[t]he FCC has limited authority over edge providers and would likely be unable to require them to submit data related to their network usage without additional authority from Congress.").

[17] *See, e.g.*, Benton Institute for Broadband & Society Comments, at 30 (stating "proposals to finance the USF via the Congressional appropriations process are ill advised and, indeed, extremely dangerous.); Citizens Against Government Waste Comments, at 7 (noting "the appropriation's process in Congress is severely broken, with legislators passing the appropriations bills on time in only fiscal year 1977, 1989, and 1995 in the 47 years since the 1974 Budget and Impoundment Control Act was signed into law."); Coalition of Rural Wireless Carriers Comments, at 26 (stating "[m]oving universal service funding into the appropriations process has the potential to greatly complicate and disrupt Congress' core goal for universal service funding[.]"); Vermont Department of Public Service Comments, at 3 (stating such an approach is "short-sighted" because it "will not provide the stable financial footing needed to ensure the stability of the Commission's long-standing USF programs that necessitate long lasting policy objectives."); WTA Comments, at 19 (stating "Congressional appropriation cycles are anything but stable and predictable.").

the USF contribution base to include BIAS revenues and that doing so would lower the USF contribution factor to less than 4% for the foreseeable future.[18] This proposal already had unprecedented support as evidenced by the Call to Action signed by 332 diverse organizations ranging from public interest organizations to broadband providers.[19] That was just the beginning. The comments reveal even more support, including from Lumen, which is a significant BIAS provider, and the Wireless Internet Service Providers Association ("WISPA").[20] In addition, NASUCA, which represents state consumer advocates, the New York State Public Service Commission, the California Emerging Technology Fund, and the Vermont Department of Public Service all agree with the USForward Report's recommendation to stabilize and save the USF by

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[18] *See* Mattey Consulting LLC, Notice of Ex Parte Communications, WC Docket Nos. 21-476 and 06-122 (filed Feb. 14, 2022).

[19] *See* Repairing the FCC's Universal Service Fund Contribution Mechanism: A Call to Action (filed Feb. 14, 2022), WC Docket Nos. 21-476 and 06-122, *available at* https://ecfsapi.fcc.gov/file/102141954517172/USF%20Call%20to%20Action%20Letter%20with%20Signatories%20Feb14%202022.pdf.

[20] *See* Lumen Comments, at 7 (stating "[t]o fix the USF contributions system, we recommend the Commission launch a proceeding to examine expanding the USF contribution base to assess broadband revenues across the industry[.]"); *see also* WISPA Comments, at 29 (stating that the USForward Report "makes a strong case for continuing to use a revenue-based approach that includes revenues from broadband internet access providers[.]").

expanding the base to include BIAS revenues.[21] Other commenters in the record support this proposal as well.[22]

In contrast, Hal Singer and Ted Tatos argue against the USForward Report's recommendation of assessing BIAS revenues by stating that "levying a service fee on broadband revenues with the purpose of funding broadband suffers from a critical flaw: it imposes the fee on the very same target of the policy."[23] However, this is a complete misunderstanding of how the USF was created and functions.[24] Congress mandated that the FCC ensure the availability of nationwide, affordable communications services through the USF. The FCC assesses the

[21] *See* NASUCA Comments, at 10 (stating "NASUCA agrees with the identified need for reform and expansion of the USF contribution base to include revenues from broadband internet access services."); New York State Public Service Commission Comments, at 3 (stating "the FCC should recommend to Congress, and also itself examine, the impact of assessing broadband services similar to how voice-only services are assessed in order to help sustain the FUSF and its important programs."); California Emerging Technology Fund, at 26; Vermont Department of Public Service, at 3 (stating "including BIAS revenues in the USF contribution factor is the obvious solution to fixing what is currently unsustainable."); and The Hawaii Broadband and Digital Equity Office, at 3 (stating "[a] new contribution model needs to include all broadband providers[.]". The California Public Utilities Commission also appears to agree that assessing BIAS revenues is the answer. *See* California PUC Comments, at 16 (asserting that FCC should reclassify BIAS as a telecommunications service so that it can assess it).

[22] *See* Broadband Connects America Comments, at 4; National Rural Electric Cooperative Association Comments, at 12; National Tribal Telecommunications Association Comments, at 15; Sacred Wind Communications Comments, at 9; and TCA Comments, at 7.

[23] Hal Singer/Ted Tatos Comments, at 2. These comments further argue that "taxing primarily two of the wealthiest companies in the world is even more progressive than raising funds off the backs of taxpayers generally." *See* Hal Singer/Ted Tatos Comments, at 4. *Contra* AT&T Comments, at 2 (arguing "[d]irect appropriations would be the most straightforward means of spreading the funding requirements for such programs."), and NCTA Comments, at 22 (arguing "[d]irectly funding USF programs through Congressional appropriations would . . . avoid the market distortion of trying to tax some goods and services but not others.").

[24] If Messrs. Singer and Tatos had filed comments in the original USF docket implementing the Fund after the 1996 Act, their advice would have been not to assess a fee on telecom services to ensure that the USF could meet its goals of providing affordable telecom services throughout the nation. Perhaps they would have suggested a fee on television advertising of the three major broadcast networks to support the new Fund.

telecommunications services over which it has jurisdiction to ensure that they are available to the whole nation. Indeed, as we noted in our comments, the FCC has modernized all of its distribution programs in the USF to support the availability of affordable BIAS over broadband-capable networks. Thus, it in fact does make sense and is consistent with prior FCC actions to assess BIAS revenues in order to ensure that the USF can continue to meet its goals and that the modern BIAS service needed in the nation today is available and affordable.

Including BIAS revenues is the clear common consensus in the record. Even those who argue that the FCC should assess a broader scope of services agree that BIAS should be included. Many of these commenters acknowledge that BIAS should be included but justify their positions by stating that the FCC should not assess BIAS only.[25] As INCOMPAS discussed in its comments, the USForward proposal is the smart, stable, fast, transparent, and equitable solution to save the USF.[26]

(b) The Record Includes Many False Factual Assumptions About Edge Providers' Role In The Internet Ecosystem.

While some commenters argue that the FCC should assess edge providers as well as BIAS revenues, many of their justifications rely on false factual assumptions. In particular, INCOMPAS explains below how edge providers are heavily investing in the capability of broadband networks to deliver upon the promise for their customers to access the entire internet; that the cost of building a network is much more expensive than operating it, including

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[25] *See, e.g.*, AT&T Comments, at 24 (conceding that "revenues from mass-market broadband internet access services can, and should, be part of any contribution base reform"); The Hawaii Broadband and Digital Equity Office (stating "[a] new contribution model needs to include all broadband providers, whether it is wireless, wireline, cable and telecom companies and satellite broadband service providers.").

[26] *See* INCOMPAS Comments, at 16-19.

delivering the services that customers seek; BIAS revenues are increasing; everyone is benefiting from the internet ecosystem including BIAS providers and their customers; and assessing online content under the USF is not equitable or smart policy.

(i) Edge Providers Are Heavily Investing In Broadband Networks And The Internet Ecosystem.

As explained in INCOMPAS' Comments, any assumption that edge providers are "free riding" over broadband networks is inaccurate.[27] First, regarding the USF, every business that is using a USF-assessed service contributes to the USF, including edge providers. For example, companies using interconnected VoIP or business broadband service like BDS in their business operations are contributors to the USF just like any other subscriber. Therefore, these companies are in fact paying into the USF.

Second, some commenters in the record are repeating a false narrative that edge providers are not investing in the networks.[28] This is categorically false. Edge providers are investing heavily in networks and the broader internet ecosystem. For example, large edge providers invest significantly in data centers, subsea cables, CDNs, long haul lines, and cybersecurity and online safety provisioning, applications, services, and content developments.[29] Edge providers also play

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[27] *See* INCOMPAS Comments, at 21-24.

[28] *See, e.g.*, AT&T Comments, at 12 (stating "companies that now dominate many of these critical areas of the internet ecosystem do not themselves contribute to the Fund"; Alaska Communications Comments, at 25-26 (stating "[n]ew behemoths of the Internet ecosystem . . . pay little or nothing to sustain and grow the platform on which their businesses depend); USTelecom Comments, at 7-8 (stating "[t]he providers of broadband-enabled services benefit significantly from that investment without contributing to the construction and maintenance costs of the networks[.]"; NTCA Comments, at 62 (stating "large Internet companies do not contribute directly to the deployment, sustainability, or affordability of broadband in rural America.").

[29] *See* Dan O'Shea, *Facebook, Google lead latest undersea cable boom* (April 12, 2021), *available at* https://www.fiercetelecom.com/telecom/facebook-google-continue-to-lead-latest-undersea-cable-boom.

active roles in closing the digital divide by investing in rural connectivity programs as well as digital equity programs in urban cities.[30] As networking becomes more and more a software-driven and cloud-native endeavor, edge providers are leveraging their software prowess and cloud experiences to bring tremendous innovation to the networking infrastructure build-out to help BIAS providers lower capital and operating expenses and more easily scale their operations.[31] In fact, software-defined networking and AI-enhanced network management are just two examples of how cloud providers are helping to transform the networking landscape and to drive down costs. As a result, these edge providers are not "free riding" over the networks, but rather are investing significantly in them. Their investment and innovation benefits BIAS providers, consumers, businesses, and the internet ecosystem overall. Indeed, the services that these edge providers offer to consumers are the very source of the demand for BIAS, as we explain further below.

[30] *See generally* Microsoft's Airband Initiative, *available at* https://www.microsoft.com/en-us/corporate-responsibility/airband; *see also* Starry, *Starry and Microsoft Team Up to Expand Low-Cost Broadband Access in Public Housing* (Oct. 9, 2020), *available at* https://starry.com/blog/news/starry-and-microsoft-team-up-to-expand-low-cost-broadband-access-in-public-housing; *Meta (Facebook) broadband expansion in western NC is a highlight at MCNC Community Day* (Nov. 10, 2021), *available at* https://wraltechwire.com/2021/11/10/meta-facebook-broadband-expansion-in-western-nc-is-a-highlight-at-mcnc-community-day.

[31] *See* Business Wire, *NetApp and Cisco Strengthen Partnership Announcing New FlexPod XCS to Extend Converged Infrastructure into the Hybrid Cloud* (March 16, 2022), *available at* https://www.businesswire.com/news/home/20220316005269/en/NetApp-and-Cisco-Strengthen-Partnership-Announcing-New-FlexPod-XCS-to-Extend-Converged-Infrastructure-into-the-Hybrid-Cloud; *see also* Shannon Williams, *Juniper Networks makes enhancements to Apstra Software* (March 16, 2022), *available at* https://datacenternews.asia/story/juniper-networks-makes-enhancements-to-apstra-software.

(ii) The Deployment Of The BIAS Network Is The Main Cause Of Network Costs, Not Delivering Traffic Over It.

Some commenters in the record claim that certain edge providers should contribute to the USF because the traffic coming from these companies over the network is the main cause of network costs.[32] However, this assumption is inaccurate and unsubstantiated. In reality, the most expensive aspect of network infrastructure is building the network. It is much cheaper to operate the network, especially modern networks given that new generation networks have lower Op-Ex. The economic literature is clear—the vast majority of internet access networks costs are independent of traffic.[33] Local links connecting user premises to exchanges need to be built and maintained regardless of the amount of online services usage. Extensive research over the past decade confirms that costs are primarily driven by the number of lines provided, *not* the amount of traffic carried. While internet traffic is certainly increasing, there have also been offsetting cost reductions as a result of technological innovation. On fixed networks, the total usage-based cost per user is likely declining, despite the increase in traffic. In addition, the operational expenses for fiber networks are far lower than those for other access networks.[34] As the

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[32] *See e.g.*, Roslyn Layton, et. al. Comments, at 2; Digital Progress Institute Comments, at 8; Communications Coalition of Kansas Comments, at 1.

[33] *See e.g.*, Analysys Mason, *Final report for Ofcom: Delivering high-quality video services online*, at 11-12 (Nov. 10, 2008), *available at* https://www.ofcom.org.uk/__data/assets/pdf_file/0012/40323/analysyshqvs.pdf; J. Scott Marcus, WIK-Consult, *The economic impact of Internet traffic growth on network operators*, at 1, 14 (Oct. 24, 2014), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2531782.

[34] Fiber Broadband Association, *Operational Expenses for All-Fiber Networks are Far Lower Than for Other Access Networks* (June 2020), *available at* https://www.fiberbroadband.org/d/do/3686.

Commission is aware, more BIAS providers are deploying fiber—competitors, incumbent telcos, and cable alike.[35]

In order to justify the claim that traffic is increasing costs, some commenters rely on a study by Roslyn Layton and Petrus Potgieter ("Layton/Potgieter Study"), which claims that "up to 75% of data on rural broadband networks is attributable to video streaming services."[36] However, the FCC cannot rely on this study, which rests on limited data from only three rural broadband providers without any indication of its scope or methodology. The study itself rightly admits its own limitations, stating the need for a follow-up study with a larger sample of rural broadband providers and common measurement tools.[37] Furthermore, to illustrate the claim that cost challenges for providers are "driven overwhelmingly by online streaming services," the study explains that it uses "the example of three rural broadband providers who have shared *some* cost and data traffic data with us."[38] This means that not all the relevant data has been provided from even the three selected providers. It is unclear what self-reported data has been

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[35] *See, e.g.*, Trey Paul, *AT&T Is Bringing Multi-Gigabit Fiber Plans to More Cities* (March 10, 2022), *available at* https://www.cnet.com/home/internet/att-is-bringing-multi-gigabit-fiber-plans-to-more-cities/; Charter Communications, *Spectrum Begins Construction on Broadband Network Expansion In St. Louis Area*, Press Release (March 10, 2022), *available at* https://corporate.charter.com/newsroom/spectrum-begins-construction-on-broadband-network-expansion-in-st-louis-area; Diana Goovaerts, *Cox pumps $120M into fiber, DOCSIS upgrades in Rhode Island* (March 16, 2022), *available at* https://www.fiercetelecom.com/broadband/cox-pumps-120m-fiber-docsis-upgrades-rhode-island.

[36] *See* Layton, Roslyn and Potgieter, Petrus H., Rural Broadband and the Unrecovered Cost of Streaming Video Entertainment (June 11, 2021) ("Layton/Potgieter Study"), at 11; *see, e.g.*, Communications Coalition of Kansas Comments, at 1.

[37] *See* Layton/Potgieter Study, at 5 (stating "[t]his data has limitations including the use of different enterprise traffic measurement tools. Naturally, a study done with a common set of measurement tools is preferred. This suggests that a follow-up study with a larger sample of rural broadband providers and common measurement tools would further refine the analysis.").

[38] *Id.* at 2 (emphasis added).

provided, and there is no mention of the revenues associated with these rural broadband providers, which is critical to any study reporting on costs. In addition, a significant portion of the paper has no citations at all. This study is seriously flawed and cannot be a sound basis for policymaking.

Comments submitted by Roslyn Layton and other academic scholars double down on such erroneous claims without any factual basis. For example, the authors audaciously claim that: "[u]nable to raise prices and barely covering last mile costs, many broadband providers must forgo middle mile costs and network upgrades. Indeed, the lack of participation by America's richest internet companies may be the most significant reason why communications services have fallen short in many rural and Tribal areas, as well as the historically unserved, underserved, marginalized, impoverished, and other adversely impacted communities."[39] Baseless statements like these must be discounted for at least three reasons. First, this is not the experience of INCOMPAS' competitive BIAS members who have entered the market to serve customers, including in rural areas, and have found that there are new revenue opportunities due to the increasing online demands. Second, there is no legitimate data or even a citation to support the claim. Third, Congress has allocated tens of billions of dollars in recent federal funding, including through the ReConnect Program, ARPA, and IIJA in order to address those areas and communities that need additional funding. In fact, IIJA specifically allocated $1 billion to fund middle-mile infrastructure. The FCC should not countenance claims that even more funding is needed without any quantifiable and valid demonstration of proof.

[39] Roslyn Layton, et. al. Comments, at 2.

(iii) BIAS Revenues Are Not Declining; They Are Increasing.

Some commenters in the record claim that assessing BIAS is not a good idea because BIAS revenues are "declining."[40] However, this claim is not true and conflicts with recent reports and statements from the largest incumbent ISPs themselves where they report to Wall Street that their broadband revenues are increasing.[41] While many arguments have been and will continue to be made in this proceeding, it will be critical for the FCC to check whether any sources have been provided to justify them, and if so, to take a close look at what these sources say. For example, both AT&T and USTelecom claim in their comments that BIAS revenues are declining by relying on sources showing the broadband *prices* are declining, such as USTelecom's *2021 Broadband Pricing Index*.[42] However, a company's prices for its services can decrease even as the company's revenues increase. USTelecom's claims about broadband prices

[40] *See* AT&T Comments, at 25 (claiming that "[u]nless counts of broadband lines increase faster than per-line prices drop, broadband revenues will decline."); *See* USTelecom Comments, at 9 (claiming "there is already evidence that the revenues from BIAS are declining.").

[41] *See, e.g.*, AT&T, Inc., *2020 Annual Report*, at 22 (stating "[h]igh-speed internet revenues increased in 2020 and 2019, reflecting higher average revenue per user resulting from the continued shift of subscribers to our higher-speed fiber services and pricing actions."); AT&T, *AT&T Reports Fourth-Quarter and Full-Year Results*, Press Release (Jan. 26, 2022) (stating "[b]roadband revenues increased 5.4%, which reflects fiber subscriber growth and higher average revenue per user resulting from increases in higher-revenue fiber customers."); Charter Communications, *Charter Announces Fourth Quarter and Full Year 2021 Results*, Press Release (Jan. 28, 2022) (where Charter's Chairman and CEO Tom Rutledge states "[w]e continued to execute well in 2021, with solid customer growth and strong financial growth. We added over 1.2 million Internet customers and we grew full year revenue and EBITDA by 7.5% and 11.4%, respectively."); Comcast, *Comcast Reports 4th Quarter And Full Year 2021 Results*, Press Release (Jan. 27, 2022) (stating that in Q4 2021, "[b]roadband revenue increased 8.5% due to an increase in the number of residential broadband customers and an increase in average rates."); Verizon, *Verizon ends 2021 with strong wireless service revenue and EPS growth*, Press Release (Jan. 25, 2022) (stating that in full-year 2021, "[t]otal Fios revenues were $3.2 billion in fourth-quarter 2021, an increase of 5.7 percent year over year. Full-year 2021 Fios revenues were approximately $12.7 billion, up 4.6 percent year over year.").

[42] *See* USTelecom Comments, at 9; *see also* AT&T Comments, at 24.

decreasing also have been debunked, and the FCC should not rely upon this data for policy decisions.[43] Furthermore, the USForward Report explains that "BIAS revenues are expected to be stable in the future, with the potential for some modest growth,"[44] which is based on evidence gathered from Wall Street analysts, Raymond James' estimates, New Street Research, and revenues reported on FCC Form 499-A and the FCC's 2020 USF Monitoring Report, and is consistent with statements made by BIAS providers.[45]

(iv) BIAS Providers And Consumers And Businesses —In Addition To Edge Providers—Benefit From The Internet Ecosystem.

Some commenters in the record claim that edge providers should contribute to the USF because they are benefiting the most from internet infrastructure.[46] While edge providers of course benefit from the internet ecosystem, claims that they are benefiting "the most" are not accurate. As INCOMPAS explained in its Comments, in the FCC's *Restoring Internet Freedom Order*, the Commission describes the "virtuous cycle" of ISPs and edge providers and how both parties are "important drivers" of the internet.[47] Commenters cannot ignore the fact that we *all* benefit from expanded internet infrastructure and *universal* service, and BIAS providers should not ignore the symbiotic relationship that they have with edge providers. In fact, the entire purpose of broadband deployment is to achieve internet access, or in other words, to access

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[43] *See Free Press Rebuts USTelecom's Latest Flawed and Misleading Claims on Broadband Prices*, Press Release (May 27, 2021).

[44] *See USForward Report*, at 3.

[45] *See id.* at 16 (Table 5).

[46] *See, e.g.*, Verizon Comments, at 14 (stating "the most reasonable approach to broadening the base of contributors is to assess those entities that benefit most from the extended internet infrastructure and expanded user base that the universal service system enables.").

[47] *See* INCOMPAS Comments, at 22-23 (citing *RIFO*, at ¶ 119).

content from these edge providers. Without the services and applications from the edge providers, and the corresponding investments that support the provision of these applications and services, the last-mile connectivity provided by BIAS providers would be a "bridge to nowhere."

While edge providers are benefiting from this internet ecosystem, consumers and businesses are benefiting as well. It is consumers and businesses that subscribe to BIAS services in order to access online content, which drives broadband demand, the internet ecosystem, and the entire U.S. economy.[48] BIAS providers are also benefiting tremendously financially as they gain more subscribers, revenues, and business cases to deploy their services.[49] The Layton/Potgieter study acknowledges that the "growth of streaming video entertainment services for movies, TV, music, and games" has "resulted in rapidly increasing" broadband demand,[50] but the study, as well as some commenters in the record, conveniently ignore the reality that BIAS providers themselves benefit from the internet ecosystem, increasing their revenues by selling more BIAS subscriptions and moving customers to higher speeds and higher revenue earning subscriptions.[51] Moreover, consumers also benefit, using their BIAS subscriptions to access online content services and applications they need to work, educate, access telehealth, and obtain other services to meet their needs.

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[48] *See* AT&T Comments, at 12 (stating "[a]ll American enterprises and consumers benefit from broadband and broadband-enabled technologies.").

[49] *See infra* n.52.

[50] Layton/Potgieter Study, at 1.

[51] *See, e.g.*, WTA Comments, at 18 (stating "[a]nother option would be to assess for USF contributions the companies that impose substantial costs upon broadband networks while profiting significantly from the existence of those networks."). However, while arguing that the FCC should assess digital advertising revenues, Hal Singer and Ted Tatos agree that "[b]oth broadband providers and edge providers benefit from expanded broadband adoption." *See* Hal Singer/Ted Tatos Comments, at 3.

The benefits to BIAS providers are undeniable and cannot be discounted. As pointed out in INCOMPAS' Comments, according to Leichtman Research Group, in 2016 the largest BIAS providers in the U.S. accounted for 92.9 million broadband subscribers. As of the third quarter in 2021, these top providers accounted for 107.9 million subscribers. This means that in less than five years the top BIAS providers have experienced a 16% increase in BIAS subscribers, which they could not have done without the increasing demand for online services.[52] Incumbent BIAS providers, or "Big Telecom," are today selling more subscriptions, encouraging subscribers to migrate to faster, more expensive plans, and doing so via new generation networks with lower Op-Ex, all of which leads to their increased revenues and profits.

From INCOMPAS' perspective, our competitive providers who offer BIAS are finding that the increase in online services and applications is driving new opportunities to deploy new future-proof broadband networks, serve consumers and businesses, and compete against incumbents by offering higher broadband speeds and lower prices. Indeed, the availability of online video service has meant that INCOMPAS' BIAS members do not have to offer video service in the marketplace to convince customers to switch to their BIAS service. This has lowered their costs to compete in the marketplace against some of the largest, well-funded BIAS providers in the nation who have traditionally offered bundled video and broadband service. Moreover, our competitive BIAS providers have been able to focus on expanding their network reach rather than continue to offer video as a loss leader.

[52] *See* INCOMPAS Comments, at 23.

(v) Assessing USF On Selected Edge Services Is Not Equitable Or Smart Policy.

Assessing USF fees on only certain edge providers would be inequitable, discriminatory, and unpredictable. Some commenters suggest that, in addition to assessing BIAS, the FCC should also assess certain edge providers.[53] Some commenters go even further to propose that only certain edge providers should be the ones contributing to the USF, namely the largest online and streaming companies.[54] However, such proposals are not rationally tied to the USF[55] and would abandon a fundamental universal service principle enshrined in the statute—that USF fees should be assessed on an equitable and nondiscriminatory basis.[56]

Choosing certain online services to contribute and not others also risks skewing the marketplace and harming competition. BIAS customers are the ones accessing content, services, and applications of their choice based on the benefit they derive from these services. Indeed, what is considered a popular edge provider service today may not be in a few years. Assessing USF fees on some online services and not others would distort online competition, causing consumers to choose services that have no USF obligations, which could destabilize the USF (similar to the issue we have today where customers are moving away from the services that pay into the USF).

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[53] *See supra* n.25.

[54] *See* Roslyn Layton, et. al. Comments, at 2 (stating "[w]e do not propose that every organization contribute to USF . . . However, the handful of largest, richest, and most profitable corporations in America—Big Tech and particularly the Big Streamers[.]"); *see also* USTelecom Comments, at 13 (citing Hal J. Singer and Ted Tatos, *Subsidizing Universal Broadband Through a Digital Advertising Services Fee: An Alignment of Incentives*).

[55] *See supra* Section III(b)(ii).

[56] *See* 47 U.S.C. §§ 254(b)(4), (d).

Some commenters rely on the problematic Layton/Potgieter study discussed above as a reason to assess USF fees on the biggest U.S. streaming companies. But even setting aside that study's significant flaws, targeting this small pool of edge providers would skew the competitive video market. Streaming services are competing against cable, broadcast, and DBS —none of which are subject to USF contributions.

Instead, reform solutions that are focused on network access more simply, predictably, sustainably, and directly fix the disconnect between the revenue base and supported USF services. Indeed, the public benefit from universal broadband comes from connecting everyone to the *network*, not to any particular online service, so everyone can connect to one another and access whatever they want online. Infrastructure and network access has always been the basis for USF contributions—and, today, that means assessing USF fees on BIAS. This is also consistent with Section 254(b) of the Communications Act, which outlines the statutory principles of the USF and specifically calls for "equitable and non-discriminatory contributions"[57] and "specific and predictable support mechanisms."[58] By assessing the BIAS itself, the Commission would be abiding by these principles while also ensuring that no matter how one uses BIAS it would not distort the online marketplace.

Moreover, such proposals seem to willfully overlook a simple fact—it is the BIAS providers today who increasingly receive universal service funding; none of this funding goes to edge providers. The notion that the biggest edge providers should pay into the USF draws a false equivalence between the two separate markets of BIAS providers and edge providers. BIAS providers, by definition, provide access to all internet endpoints. There is no sound justification

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[57] *See* 47 U.S.C. § 254(b)(4).

[58] *See* 47 U.S.C. § 254(b)(5).

for why certain edge providers should subsidize BIAS network equipment or upgrade costs, especially given that online companies are driving increased demand for internet access, which increases BIAS providers' business, and given that Congress is investing tens of billions of dollars in broadband network accessibility.

As ITIC's Comments state: "[p]roponents of other approaches, such as taxing edge providers, online services, or digital advertising, have failed to articulate sound policy rationales or a reasonable or practical way for the Commission to administer such far-reaching, complex proposals. In addition to lacking administrability, such proposals lack appropriate justification for assessing edge provider revenues, which have a far less direct relation to the services provided by USF programs than do BIAS revenues . . . In fact, these edge services drive the demand for broadband that leads to greater broadband deployment." INCOMPAS fully agrees. Worse yet, given the daunting legal and practical problems presented by proposals to assess USF fees on edge providers, pursuing them would be a significant distraction from actually solving the USF crisis. In contrast, the USForward Report offers a real proposal that the FCC can implement, which the FCC already sought comment on almost a decade ago, is widely supported by a wide variety of entities, and does not require Congressional action.[59]

[59] AT&T tries to undermine the USForward Report by critiquing Table 6 of the Report. As it states: "Table 6 in the report, which projects the contribution factor for 2021-2024, is based on several potentially faulty assumptions. First, Table 6 presumes that USF program demand will be flat to declining. Second, Table 6 assumes that 'the full amount of end user retail broadband revenues would be assessable' even though revenues from Lifeline customers (and likely Affordable Connectivity Program customers) will not be assessable. Perhaps most importantly, Table 6 assumes that, contrary to evidence, broadband revenues will rise by 5% annually." *See* AT&T Comments, at n.64. However, the USForward Report is not based on faulty information. Rather, the assumptions in Table 6 are based on the FCC Ten-Year Forecast of program demand, as is written right under the Table. Table 6 also does not presume demand will be flat or declining. In fact, the table shows that in four years demand will fluctuate both up and down. Similarly, the Report is not "assuming" revenues will rise by five percent annually, but rather is basing its information from a legitimate source, mainly the FCC's own estimates.

Finally, some commenters assert that the Commission should assess all broadband-enabled transmission,[60] including private networks or “self providers”; however, they fail to offer how the Commission would assert jurisdiction over such companies or implement a mechanism by which it could assess these components of online services in any manageable way. The Commission should reject these proposals, which would expand the FCC’s authority to the entire internet, effectively sweeping into the USF every company with an online presence today.

IV. CONCLUSION

For the reasons stated herein, INCOMPAS appreciates the opportunity to respond to comments filed in the record and to continue encouraging the Commission to make the best policy decisions to help ensure that our nation’s most important connectivity programs are used efficiently, effectively, and long into the future.

Respectfully submitted,

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[60] *See, e.g.*, USTelecom Comments, at 7-8.