



May 6, 2019

Via ECFS

Ms. Marlene H. Dortch
Secretary, Federal Communications Commission
445 12th Street SW
Washington, D.C. 20554

Re: *Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. §160(c) to Accelerate Investment in Broadband and Next-Generation Networks*
(WC Docket No. 18-141)

Dear Ms. Dortch:

USTelecom submits this letter and the attached declaration¹ to demonstrate that recently available data, and information requested by the Federal Communications Commission (“Commission” or “FCC”), further supports USTelecom’s Petition for Forbearance.² In addition, this letter refutes the meritless arguments made by some opponents that USTelecom’s Petition violates the Commission’s “complete-as-filed” rules.³

After nearly a year, detractors have been unable to show why one-time “incumbent” wireline providers, whose market shares have declined precipitously and who lag wireless and cable competitors, should continue to bear the weight of intrusive regulatory mandates that do not apply to their rivals. The competition objectives of the 1996 Telecommunications Act have been achieved. The data in the record – as USTelecom explains here, in the supporting declaration, and in our Petition and supporting comments – supports nationwide relief. At a minimum, there is no legally justifiable reason to require the continued provisioning of UNEs and incumbent local exchange carrier (“ILEC”)-specific resale mandates in any areas presently subject to demonstrable competition for voice and broadband service.⁴ To that end, at the

¹ See Declaration of Glenn Woroch and Robert Calzaretta, WC Docket No. 18-141 (attached hereto) (“May 6 Economists Decl.”).

² See generally Petition for Forbearance of USTelecom – The Broadband Association, WC Docket No. 18-141, at iv, 24-25 (filed May 4, 2018) (“Petition”).

³ 47 C.F.R. § 1.54; see also *infra* Section II.

⁴ While commenters have expressed concerns that the unavailability of UNEs would impact the ability of some companies to provide broadband service, USTelecom notes that that Section 251(c)(3) on its face only allows unbundling for the provision of *telecommunications services* and not for the provision of information services alone. As the statute requires, an ILEC “shall provide such unbundled network elements in a manner that allows requesting carriers to combine such elements in order to provide such *telecommunications services*.” Broadband internet access service is an integrated *information service*. Thus, arguments that certain UNEs are necessary for the provision of broadband service alone must be rejected. However, even if the Act permitted unbundling for the provision of broadband internet access, it

request of Commission staff for additional data demonstrating the nature of facilities-based competition relevant to the services for which we seek forbearance, included in this filing is an analysis of two data sets that became available after USTelecom submitted the Petition.⁵ Using a conservative analysis,⁶ this data establishes two key findings: First, cable operators are providing broadband service in areas that cover nearly 90 percent of households and 90 percent of the population in the United States at minimum speeds of 25/3 Mbps, and typically much higher. Second, about 78 percent of ILEC wire centers are within a half mile of competitive fiber and/or buildings with a competitive connection.⁷

As explained below, these data and analyses provide additional clear evidence of nearly ubiquitous facilities-based competition for the supply of transmission over local transport and local loops throughout the United States, further justifying granting USTelecom's request for nationwide relief. If, however, the Commission does not grant nationwide relief for all UNEs at this time, it should still grant relief from unbundling of DS1 and DS3 loops, as well as digital DS0 loops, in areas subject to facilities-based competition, such as census blocks with cable competition, the existence of which demonstrates a fertile environment for facilities-based investment without reliance on UNEs.⁸ Similarly, forbearance is justified for transport UNEs nationwide, but at the very least relief must be granted where evidence demonstrates competitors' ability to connect to ILEC wire centers to duplicate or bypass ILEC transport, such as on routes connecting any Tier 1 or 2 wire center to any other such wire center.⁹

The Commission's April 15 decision granting forbearance from the affiliate- and pole attachment-related requirements at issue¹⁰ was a welcome and proper first step toward resolving

would not be permissible in light of the market's competitiveness today. *See* Reply Comments of USTelecom – the Broadband Association, WC Docket No. 18-141, at 31 (filed Sept. 5, 2018).

⁵ *See generally* May 6 Economists Decl.

⁶ As explained in the May 6 Economists Decl. at n.5, the data relied on here represents the state of broadband deployment as of December 2017 (Form 477 data) and from the end of 2013 (April Data Tables) and thus *understate* the amount of competition in these areas.

⁷ *Id.* at 2, 5. Note that this second finding dramatically understates the geographic scope of competition to UNE transport services, as it fails to account for competition from competitors that bypass ILEC networks entirely and therefore have no need to place competitive facilities near ILEC wire centers. Indeed, cable companies have deployed networks that entirely circumvent ILEC transport covering virtually every person and household (in addition to most businesses, as confirmed in the *BDS Order*) and competitors generally have deployed fiber transport networks within a half mile of virtually all buildings with BDS demand. *See* May 6 Economists Decl. at 4; *see also BDS Order* ¶ 91 (“for all census blocks with business data services demand, 89.6 have at least one served building within a half mile of competitive LEC fiber” – and “92.1 percent of buildings served were within a half mile of competitive fiber transport facilities”).

⁸ As detailed below, the Commission should in any event forbear nationwide from enforcing unbundling requirements applicable to analog DS0 loops.

⁹ *See* 47 C.F.R. § 51.319(d)(3) (specifying the criteria for Tier 1 and Tier 2 wire centers).

¹⁰ *Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) to Accelerate Investment in Broadband and Next-Generation Networks et al.*, Memorandum Opinion and Order, WC Docket No. 18-141, CC Docket No. 00-175 (rel. Apr. 15, 2019).

the Petition. The next step, given the record, is to grant USTelecom's remaining requests, forbearing nationwide from the Section 251(c)(3) and (4) unbundling and resale requirements and related mandates (as detailed in the Petition). Moreover, even if the Commission were to determine that additional fact gathering is needed to consider granting the full scope of relief sought in the Petition, it can and should still partially forbear from applying these regulations in any areas subject to facilities-based competition.¹¹ Such partial forbearance is consistent with the extensive marketplace data on which USTelecom has relied since this proceeding's inception, as well as the more detailed evidence that the Wireline Competition Bureau ("WCB") recently entered into the record¹² and USTelecom has further supplemented at the Commission's request.¹³ Further, should the Commission elect to grant partial relief, doing so would be wholly within the scope of the Commission's legal authority and would not (contra opponents' claims) in any way conflict with the framework governing forbearance requests.

I. NATIONWIDE FORBEARANCE IS JUSTIFIED; AT A MINIMUM, PARTIAL FORBEARANCE SHOULD BE GRANTED.

The record warrants an unconditional grant of the Petition's remaining requests seeking relief from Section 251(c) unbundling and resale requirements, as well as related mandates. These requirements were always intended as transitional measures, designed to usher in facilities-based competition. That competition has arrived across the country and is irreversible. Moreover, a grant of the Petition does not equal the removal of facilities. Rather, granting the petition will only remedy outdated and lopsided regulations and restore a fair playing field for all competitors.

In the event the Commission does not grant USTelecom's remaining forbearance requests entirely, it should, at a minimum, (1) forbear from enforcing unbundling requirements for DS1 and DS3 loops in both census blocks featuring competition from a cable provider offering service at speeds of at least 25 Mbps downstream and 3 Mbps upstream and in counties that have already been deemed competitive by the Commission in the BDS proceeding; (2) forbear from enforcing unbundling requirements for digital DS0 loops in census blocks featuring competition from a cable provider offering service at speeds of at least 25 Mbps downstream and 3 Mbps upstream; (3) forbear from enforcing unbundling requirements for analog DS0 loops nationwide; (4) forbear from enforcing unbundling requirements for transport where there is demonstrable evidence of competition, such as on routes between wire centers that qualify as Tier 1 or Tier 2 wire centers under the Commission's unbundling rules; and (5) forbear from enforcing 251(c)(4) resale nationwide. This approach would recognize that, given extensive retail voice competition, there is no basis for continued unbundling of analog loops or resale, which are used by CLECs

¹¹ 47 U.S.C. § 160.

¹² *Wireline Competition Bureau Seeks Focused Additional Comment in Business Data Services and USTelecom Forbearance Petition Proceedings and Reopens Secure Data Enclave*, Public Notice, WC Docket Nos. 18-141, 17-144, 16-143, 05-25, RM-10593, DA 19-281 (WCB rel. Apr. 15, 2019).

¹³ *See* Letter from Patrick Halley, Senior Vice President, USTelecom, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 18-141 (filed Apr. 26, 2019) (attaching MS Excel listing of Tier 1 and Tier 2 Wire Centers).

almost exclusively to provision voice services. It also would recognize that, where cable operators are providing robust broadband in competition with the ILEC, there is no basis for requiring the unbundling of DS1 or DS3 loops, or of digital DS0 loops, because retail customers have options for obtaining high-capacity services from at least two providers relying on distinct networks.¹⁴

A. *NATIONWIDE FORBEARANCE FOR DS0, DS1, AND DS3 LOOPS IS JUSTIFIED; IN THE ALTERNATIVE, PARTIAL RELIEF IS WARRANTED.*

1. DS1/DS3 LOOPS

Unbundled DS1 and DS3 loops are functionally identical to DS1 and DS3 channel terminations, which the Commission classifies as business data services, and which are sold purely for the provision of enterprise services. ILECs do not market DS1s or DS3s as consumer services, and USTelecom is unaware of significant UNE-based consumer offerings at these capacity levels. As the Commission found in the *BDS Order*: “Businesses, non-profits, and government institutions use business data services to enable secure and reliable transfer of data, for example, as a means of connecting to the Internet or the cloud, and to create private or virtual private networks. Business data services support applications that require symmetrical bandwidth, substantial reliability, security, and connected service to more than one location.”¹⁵ Similarly, when sold as UNEs, DS1 and DS3 loops are designed and priced in a way that makes them attractive only to serve businesses and other customers needing the capabilities of a business data service.

Because (no matter how they are obtained) DS1 and DS3 loops are only used to provide business data services, the Commission’s findings in the BDS proceeding – which the Eighth Circuit affirmed¹⁶ – are the definitive statement on competition for these services. Given that the Commission has already determined that 91.9¹⁷ percent of locations with special access demand are competitive pursuant to the BDS Competitive Market Test (“CMT”), forbearance is clearly appropriate for DS1 and DS3 loops in at least counties the Commission deemed to be competitive. Moreover, in light of the *BDS Order* forbearance,¹⁸ UNE forbearance is also appropriate in counties not satisfying the CMT. The FCC in the *BDS Order* adopted a carefully calibrated set of *ex ante* price cap regulations designed to balance the need to facilitate wholesale entry against the harms to investment and innovation. Maintaining duplicate sets of pricing regulations (UNE and resale) undermines this careful balance and harms competition and consumers, particularly given that application of tariff obligations and price caps under the

¹⁴ As the Commission held in the *BDS Order*, “even a single competitor exerts competitive pressure which results in just and reasonable rates.” *BDS Order* ¶ 15.

¹⁵ *Id.* ¶ 6.

¹⁶ See generally *Citizens Telecomms. Co. of Minn., LLC v. FCC*, 901 F.3d 991 (8th Cir. 2018).

¹⁷ *BDS Order* ¶¶ 134, 142.

¹⁸ See generally *id.* ¶¶ 153-77.

revised (and more aggressive) productivity factor is likely to ensure that rates and practices are just and reasonable.¹⁹

Even if competitors were using DS1/DS3 UNEs to provision consumer-based offerings, the recently released Form 477 data confirm that those UNEs are not needed to facilitate competition for consumer-based broadband services, even if unbundling were permitted for use in provisioning consumer broadband – which it is not.²⁰ While the number is surely higher today, as of December 2017, nearly 90 percent of the U.S. population and 90 percent of households had access to cable services with at least 25 Mbps download speeds.²¹ Moreover, cable broadband deployment at higher speed tiers is rapidly growing and is available to similar portions of U.S. households at higher speeds tiers. For example, as of year-end 2017, cable broadband at 50 Mbps download and 5 Mbps upload was available to approximately 88 percent of U.S. households, and cable broadband at 100 Mbps download and 10 Mbps upload was available to approximately 85 percent of U.S. households.²² As of the end of 2018, CableLabs reported that cable broadband at gigabit speeds was available to 80 percent of U.S. households, up from just 4 percent at the end of 2016.²³ Today, cable operator statements indicate that deployment of gigabit services continues and that those services are either available or will soon be available across most or all of their residential and business footprints.²⁴

¹⁹ See, e.g., Petition at 28-29; see also, e.g., Comments of AT&T, WC Docket No. 18-141, at 13 (filed Sept. 5, 2018) (“[P]rice caps render continued UNE-based pricing regulation unnecessary and counterproductive.”).

²⁰ See *supra* n.4.

²¹ May 6 Economists Decl. at 2-3.

²² *CensusNBM Report 153 – National Broadband Availability for Housing Units by Technology*, CensusNBM (Dec. 31, 2017), <http://censusnbm.com/doc/CensusNBM%20153%20Technology%20by%20Speeds%2010M1M%2025M3M%2050M5M%20100M10M.pdf>; see also generally *December 2017 Data*, Census NBM (Dec. 2017), http://censusnbm.com/reports_dec2017_p5.php. CensusNBM publishes estimates of broadband availability by technology at various speeds based on the FCC’s 477 broadband deployment data as of December 31, 2017 and Census 2010 information.

²³ *Driving Gigabit Speeds from Lab to Consumer*, CABLELABS, <https://www.cablelabs.com/gigabit-internet-speeds> (last visited May 2, 2019).

²⁴ See, e.g., *Edited Transcript CMCSA – 4Q 2018 Comcast Corp Earnings Call*, THOMSON REUTERS STREET EVENTS (Jan. 23, 2019), <https://www.cmcsa.com/financials/earnings> (Comcast CEO Brian Roberts: “We rolled out gigabit speed availability to nearly all of the 58 million homes and businesses in our footprint); *Charter Communications, Inc., CEO Tom Rutledge on Q4 2018 Results – Earnings Call Transcript*, SEEKING ALPHA (January 31, 2019), <https://seekingalpha.com/article/4237148-charter-communications-inc-chtr-ceo-tom-rutledge-q4-2018-results-earnings-call-transcript?part=single> (Charter CEO Tom Rutledge: “We’ve completed ... the launch of our gigabit speed offering across our entire residential and business footprint.”); Press Release, Cox Communications, Gig Speeds Available to 90 percent of Cox Customers This Holiday Season (December 17, 2018), <https://newsroom.cox.com/2018-12-17-Gig-Speeds-Available-to-90-percent-of-Cox-Customers-This-Holiday-Season> (“The rapid deployment of gig speeds this year has made it possible for nine out of 10 homes in the Cox footprint ... with 99 percent of customers able to get gig speeds by the end of next year.”); Press Release, Altice USA, Altice USA Unveils “Generation Gigaspeed” (November 30, 2016), <https://www.businesswire.com/news/home/20161130005572/en/Altice-USA-Unveils->

Notwithstanding a suggestion to the contrary in one recent filing,²⁵ reliance on FCC Form 477 census block data is more than adequate for assessing the presence of and feasibility of competition for last-mile facilities. The Commission expressly held as much in the *BDS Order*: “We find the Form 477 data well suited for supplementing the 2015 Collection in the initial analysis of market conditions and a conservative proxy for competitive deployment going forward. Form 477 broadband service availability data necessarily imply the presence of broadband-capable cable network facilities, which makes it an ideal dataset to ensure the competitive market test accounts for competition from cable operators.”²⁶ This finding was correct. Of the nearly 11 million census blocks in the United States, the mean area is 0.34 square miles, and 85 percent of blocks are less than the mean; the median is only 0.01 square miles. The median is so much lower because the mean is skewed upward by a relatively small number of very large rural census blocks. “If the median census block were a circle, it would be approximately 0.2 miles across – an area that can easily fit (and often does fit) a single building. Indeed, half of all census blocks are smaller than a tenth of a square mile (6.4 acres).”²⁷ The areas served by cable represent approximately 50 percent of all census blocks and approximately 90 percent of the population.²⁸ Thus, cable-served census blocks are significantly smaller and denser than average. The mean areas of a cable-served census block is 0.9 square miles and the median is 0.008 square miles. Thus, if a cable operator has deployed facilities in a census block, it is a highly reliable indicator that competitive facilities are generally available or deployable throughout the census block.

[%E2%80%9CGeneration-GigaSpeed%E2%80%9D---Full-Scale](#) (“Altice USA ... today announced plans to invest further in the U.S. by building a next-generation fiber-to-the-home network capable of delivering broadband speeds of up to 10 Gbps across its footprint ... The company’s five-year deployment schedule will begin in 2017[.]”); Press Release, Altice USA, Altice USA Reports Third Quarter 2018 Results (November 5, 2018), <https://www.businesswire.com/news/home/20181105005869/en/Altice-USA-Reports-Quarter-2018-Results> (“1 Gbps broadband services are expected to be available across the whole Optimum footprint in 2019 ... In addition, further 1 Gbps capacity will be added in certain areas in the Suddenlink footprint.”).

²⁵ See Letter from Thomas Jones and Mia Guizzetti Hayes, Counsel for Granite Telecommunications, LLC, Manhattan Telecommunications Corporation d/b/a Metropolitan Telecommunications, and Access One, Inc., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 18-141 (filed Apr. 24, 2019) (“Apr. 24 Granite Letter”). Granite *et al.* cite USTelecom advocacy in support of more precise broadband maps to argue that the FCC’s current Form 477 data are flawed and therefore the Commission cannot use the data to assess competitive deployment. This is false. While it is essential to have more granular last-mile broadband availability data in the context of, for example, targeting scarce federal universal service dollars to unserved locations, the existing Form 477 data are perfectly adequate to assess the environment for the deployment of competitive facilities.

²⁶ *BDS Order* ¶ 106.

²⁷ *Id.* ¶ 133 (internal quotations and citations omitted).

²⁸ May 6 Economists Decl. at 3, n.8.

2. DIGITAL DS0 LOOPS

The intense facilities-based competition described above, which includes nearly ubiquitous deployment of cable broadband at speeds equaling or exceeding 25 Mbps/3 Mbps, obviates any need for unbundling of DS0 digital loops. As described above, in addition to ILEC-provided broadband service, as of December 2017, about 90 percent of the population and 90 percent of households were located in census blocks with access to cable broadband service (with nearly all cable broadband offering download speeds of at least 25 Mbps).²⁹ Further, nationwide satellite broadband offerings now provide up to 100 Mbps downstream and up to 20 Mbps upstream, and offer voice service over such networks.³⁰ While it remains to be seen if satellite companies who successfully bid for support in the Connect America Fund (“CAF”) Phase II auction will be able to meet the associated service obligations, the Commission nonetheless determined that satellite companies would be eligible for support.³¹ Based on the determination that satellite companies could provide sufficient voice and broadband service, one company successfully competed and was conditionally awarded \$122.5 million in support.³² While that provider has petitioned for reconsideration of the underlying service rules, the Commission must still consider the ubiquitous availability of satellite broadband and voice service in the context of network unbundling as well. Whether or not satellite voice service meets current CAF service rules, satellite service exerts competitive pressures and is an alternative service provider, representing broadband and voice competition that was not present twenty-three years ago at the time of the Act or even as recently as a few years ago.

Finally, while a handful of parties have suggested that unbundling is necessary to provide broadband service in rural areas, there is no validity to such claims – with respect to digital DS0s or other network elements. The limited filings that make such claims do not provide any detail to support the claims and the assertions misconstrue the fundamental nature of service to rural areas.³³ In reality, as Frontier has explained,³⁴ UNEs are *not* being relied upon in substantial quantities to serve such communities.

²⁹ *See id.* at 2-4.

³⁰ *See, e.g., Connect Your Business With High-Speed Internet*, VIASAT EXEDE, <https://www.exede.com/business/> (last visited Apr. 28, 2019) (“Viasat Business Internet: Plans starting at \$50/mo[;] Nationwide broadband; up to 35 Mbps across most the US[;] Speeds up to 100 Mbps in select areas”); Comments of Hughes Network Systems, LLC, IB Docket No. 17-95 (filed Apr. 8, 2019) (“Hughes offers Commission-defined broadband speeds of over 25 Mbps down and 3 Mbps up for residential customers, and 55 Mbps down and 5 Mbps up for enterprise users, across the continental United States, southern Alaska and Puerto Rico.”).

³¹ *Connect America Fund et al.*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 5949, 5960-63 ¶¶ 28-37 (2016).

³² *Connect America Fund Phase II Auction (Auction 193) Closes Winning Bidders Announced FCC Form 683 Due October 15, 2018*, Public Notice, 33 FCC Rcd 8257, 8280-81 (WTB & WCB 2018).

³³ *See, e.g., Apr. 24 Granite letter at 3; Letter from Karen Reidy, Vice President, INCOMPAS, to Marlene H. Dortch, Secretary, FCC, at 2, WC Docket No. 18-141 (filed Mar. 4, 2019); Letter from Karen Reidy,*

For these reasons, the Commission should forbear nationwide from unbundling obligations with respect to digital DS0 loops. In the event it does not do so, it should at the very least forbear in census blocks exhibiting competition from a cable provider offering service at speeds of at least 25 Mbps downstream and 3 Mbps upstream. As described above, cable-served census blocks are significantly smaller and denser than average. Thus, the presence of a cable competitor in a census block is a highly reliable indicator that competitive facilities are generally already available or easily deployable. In these areas, there is undisputedly competition and the harms imposed by unbundling are not warranted.

3. ANALOG DS0 LOOPS

There is no basis in any case for continued unbundling of analog DS0 loops, which are used virtually exclusively to provide residential voice service. As the Petition and subsequent filings have made clear, ILECs have no market power in the residential voice market. Competition is rampant, and the objectives Congress sought to promote in 1996 have been achieved. ILEC line counts have tumbled, from a high of 186 million in 2000 to barely 35 million.³⁵ Only 11 percent of households even subscribe to ILEC switched voice service today.³⁶ Nearly 60 percent of Americans are projected to have abandoned wireline voice service completely in favor of wireless alternatives and a substantial majority of those with a wired phone are served by a non-ILEC (typically a cable or Voice over Internet Protocol (“VoIP”) provider).³⁷ Under these circumstances, there is no basis whatsoever for continued unbundling of analog DS0 loops.

B. NATIONWIDE FORBEARANCE FOR TRANSPORT IS JUSTIFIED.

The *BDS Order* provides the roadmap for assessing competition for UNE transport. In the *BDS Order*, the Commission found that economic barriers to deployment of competitive transport were relatively low and that competition for the provision of BDS transport is now nearly ubiquitous. Specifically, the Commission reiterated its two decades’ worth of prior findings (both in the context of UNEs and commercial BDS) that competitive deployment of transport is generally the most economically feasible because transport carries aggregated traffic.³⁸ The Commission therefore determined that existing transport networks and the

Vice President, INCOMPAS, to Marlene H. Dortch, Secretary, FCC, at 1, WC Docket No. 18-141 (filed Jun. 29, 2018).

³⁴ Letter from AJ Burton, Vice President – Federal Regulatory, Frontier, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 18-141, at 2 (filed July 11, 2018) (“We explained that there was in fact very little CLEC ordering in rural areas. To the extent that there was any ordering in rural areas, this ordering was for business locations, and these locations could be served by at least one other facilities-based provider in addition to Frontier.”).

³⁵ Petition at 7-8.

³⁶ *Id.* at 8-9.

³⁷ *Id.* at 9-10.

³⁸ See, e.g., *BDS Order* ¶ 82; see also, e.g., *Access Charge Reform et al.*, Fifth Report and Order and Further Notice of Proposed Rulemaking, 14 FCC Rcd 14221, 14279 ¶ 102 (1999) (“[C]ompetitors are

welcoming environment for new transport deployment were sufficient to establish competition for transport services.³⁹ In particular, the *BDS Order* cited “substantial evidence of competition in TDM-based transport markets, which, accordingly, suggests that price regulation is not required” and that “the marketplace for packet-based business data services is [also] competitive.”⁴⁰ For these reasons, the Commission eliminated *ex ante* price regulation for (1) all packet-based services, including transport,⁴¹ and (2) all TDM-based transport.⁴² Competition has only grown since then. For example, as the Commission noted in 2018, “cable providers’ market share of lower speed business data services continues to grow significantly” – and “cable operators self-provision all aspects of their BDS, *including transport functionality*[.]”⁴³ Indeed, cable companies have deployed networks covering a large portion of BDS demand,⁴⁴ and competitors have deployed fiber transport networks within a half mile of virtually all buildings

likely to enter the market for entrance facilities, direct-trunked transport, channel mileage, and the flat-rated portion of tandem-switched transport before they enter the market for channel terminations between a LEC end office and a customer premises.”) (“*Pricing Flexibility Order*”), *aff’d*, *Worldcom v. FCC*, 238 F.3d 449 (D.C. Cir. 2001).

³⁹ *BDS Order* ¶¶ 79-83.

⁴⁰ *Id.* ¶¶ 83, 85.

⁴¹ *Id.* ¶¶ 87-89.

⁴² *Id.* ¶¶ 90-93. While the U.S. Court of Appeals for the Eighth Circuit found that the agency had not provided sufficient notice that it might remove regulation for all TDM transport, and thus remanded on that basis, it never questioned the Commission’s finding of ubiquitous competition. *Citizens Telecomms. Co. of Minn.*, 901 F.3d at 997 (remanding only “regarding notice” and “deny[ing] ... petitions in all other respects”).

As USTelecom and others have explained in connection with the remand, the Commission can and should readopt the remanded regime, having cured the notice concerns identified by the court. *See generally*, e.g., Comments of ITTA and USTelecom, WC Docket No. 17-144 *et al.* (filed Feb. 8, 2019); Reply Comments of USTelecom and ITTA, WC Docket No. 17-144 *et al.* (filed Mar. 11, 2019); Comments of AT&T, WC Docket No. 17-144 *et al.* (filed Feb. 8, 2019) (explaining that the Commission should readopt its rules eliminating *ex ante* price cap regulation for TDM transport nationwide, and that the CLECs’ arguments against nationwide elimination of *ex ante* price cap regulation for transport “have no merit”); Comments of CenturyLink, WC Docket No. 17-144 *et al.* (filed Feb. 8, 2019) (explaining that price cap carriers’ TDM transport services are subject to intense competition, and that *ex ante* pricing regulation of TDM transport is unnecessary and counterproductive); Reply Comments of CenturyLink, WC Docket No. 17-144 *et al.* (filed Mar. 11, 2019); Reply Comments of AT&T, WC Docket No. 17-144 *et al.* (filed Mar. 11, 2019); Reply Comments of Frontier Communication, WC Docket No. 17-144 *et al.* (filed Mar. 11, 2019) (explaining that, “as the majority of commenters recognize,” “eliminating *ex ante* pricing regulation of TDM transport services” is the correct move).

⁴³ *Business Data Services for Rate-of-Return Local Exchange Carriers et al.*, Report and Order, Second Further Notice of Proposed Rulemaking, and Further Notice of Proposed Rulemaking, 33 FCC Rcd 10403, 10456 ¶ 154 (2018) (“*2018 BDS FNPRM*”) (emphasis added).

⁴⁴ *Id.* (“cable providers’ market share of lower speed business data services continues to grow significantly,” and “cable operators self-provision all aspects of their BDS, *including transport functionality*” (emphasis added)).

with BDS demand.⁴⁵ Based on this record, the Commission found competition for transport to be nearly ubiquitous, and determined that continued application of *ex ante* pricing regulation for BDS transport would be counterproductive, serving little or no purpose and instead distorting and reducing economic incentives for investment innovation.⁴⁶

This same analysis requires forbearance from all unbundled transport obligations – with respect to both lit and dark facilities – on a nationwide basis. There is nothing unique about UNE-based transport that distinguishes it from transport used for BDS. All transport, whether UNE-based or commercial, carries aggregated traffic from one point on the network to another point on the network. Indeed, in many cases, carrier-customers use BDS and UNE transport interchangeably. Because all transport carries aggregated traffic – whether BDS or residential – the economics of deployment are the same.

Application of the *BDS Order*'s analysis confirms that competition for transport is near-ubiquitous, justifying nationwide forbearance from all UNE transport requirements. To begin with, the *BDS Order* confirms that there is nationwide competition for transport used for BDS, which means that any UNE transport used to provision business data offerings is also subject to competition. Forbearance is required in those cases. Further, the recently available Form 477 data (released in December 2018) and the April Data Tables confirm that forbearance from transport unbundling requirements is necessary for transport in other contexts as well.

The Form 477 data confirm that cable companies have deployed networks that entirely circumvent ILEC transport covering virtually every person and household (in addition to most businesses, as confirmed in the *BDS Order*).⁴⁷ Accordingly, there is nearly ubiquitous competition for transport in all its forms on a nearly nationwide basis. On this basis alone, the Commission can find that transport is competitive nationwide for all services and that forbearance from the UNE transport requirements is necessary.

The April Data Tables further confirm that competition for transport is nearly ubiquitous for all services nationwide. ILEC transport routes connect ILEC wire centers. Therefore, if competitors can connect to a significant portion of ILEC wire centers, they can duplicate or bypass most ILEC transport. In the *BDS Order*, the FCC found that competitors can extend lateral channel terminations (loops) from their fiber networks to any location within a half mile of their networks; as noted above, the economics for deploying transport are even more favorable than for lateral channel terminations. The April Data Tables show that 78 percent of ILEC central offices are within a half mile of competitive fiber, and that 56 percent are within 500

⁴⁵ *BDS Order* ¶ 91 (“for all census blocks with business data services demand, 89.6 have at least one served building within a half mile of competitive LEC fiber” – and “92.1 percent of buildings served were within a half mile of competitive fiber transport facilities”).

⁴⁶ *Id.* (“We find that the high percentage of locations within a half mile of competitive fiber and the high percentage of census blocks with at least one building within a half mile of competitive fiber justify our refraining from applying pricing regulation across all price cap areas to TDM transport services.”).

⁴⁷ May 6 Economists Decl. at 4.

feet.⁴⁸ These data thus confirm that competitors can connect to the vast majority of ILEC central offices and consequently can duplicate or circumvent most ILEC interoffice transport routes. And, as noted, competitors can and frequently do bypass ILEC networks entirely, eliminating the need for them to connect to ILEC wire centers to reach end user customers.

These facts warrant nationwide forbearance from all transport unbundling obligations. As Congress, the courts, and the Commission have all made clear, there is no rationale for unbundling a market characterized by facilities-based competition.⁴⁹ The Commission's holding that the markets for both packet-based and TDM transport are competitive nationwide speaks as directly to the need for unbundling as it does to the need for *ex ante* price-cap regulation. Accordingly, the Commission should forbear from all transport unbundling requirements.

In the alternative, if the Commission were to determine that an expanded record is necessary to consider elimination of unbundled transport nationwide, it must eliminate that requirement where there is demonstrable evidence of competition, such as on routes between wire centers that qualify as Tier 1 or Tier 2 wire centers under the Commission's unbundling rules.⁵⁰ At the Commission's request, USTelecom recently submitted a list of the largest ILECs' Tier 1 and Tier 2 wire centers. Each of these wire centers has been shown to contain a substantial concentration of business demand, significant facilities-based competition, or both.⁵¹ However, because this unbundling rule was established in the *Triennial Review Remand Order* nearly 15 years ago, it fails to account for cable companies and other competitors that bypass the ILEC's network entirely. The Commission has now supplemented the record with data on competitive fiber compiled in the BDS proceeding and the April Data Tables. Given those data,

⁴⁸ *Id.* at 2.

⁴⁹ *See, e.g.*, Petition at 4-7; *see also* May 6 Economists Decl. at 2-3 (“Absent relief from these now obsolete requirements, the Commission would be leaving in place price regulations that are no longer needed to serve their intended purpose but risk distorting market forces governing these services. By retaining these requirements, the Commission increases the likelihood that consumers will suffer the harms associated with slower ILEC investment in next-generation services and distorted entry and investment incentives of competitors that are favored by these rules.”); *U.S. Telecom Ass’n v. FCC*, 290 F.3d 415, 429 (D.C. Cir. 2002) (citing *AT&T Corp. v. Iowa Utils. Bd.*, 525 U.S. 366, 428-29 (1999) (Breyer, J., concurring in part and dissenting in part) (“[M]andatory unbundling comes at a cost, including disincentives to research and development by both ILECs and CLECs and the tangled management inherent in shared use of a common resource.”); *BDS Order* ¶ 101 (explaining that regulated pricing in areas with competition is “harmful to long run incentives to invest, can lead to inefficient short run levels of production and consumption, and can prevent entry indefinitely.”); Mark Israel, Daniel Rubinfeld and Glenn Woroch, *Analysis of the Regressions and Other Data Relied Upon in the Business Data Services FNPRM And a Proposed Competitive Market Test: Second White Paper*, WC Docket Nos. 16-143, 05-25, RM 10593, at 21 (June 28, 2016) (“regulations that require ILECs to reduce prices for DS1 and DS3 services risk substantially undermining incentives for customers to migrate to next generation, and more efficient, Ethernet offerings. Further, reduced demand for Ethernet will result in less investment in Ethernet facilities and upward pricing pressure for those services.”).

⁵⁰ *See* 47 C.F.R. § 51.319(d)(3)

⁵¹ *See id.*

the Commission, at a minimum, must eliminate the unbundled transport requirement between wire centers that qualify as Tier 1 or Tier 2 under the Commission’s unbundling rules.⁵²

C. *NATIONWIDE FORBEARANCE FROM SECTION 251(C)4 RESALE OBLIGATIONS IS JUSTIFIED.*

The Commission should grant nationwide relief from Section 251(c)(4) resale obligations. These lines are not currently widely used: as of mid-2017, less than 1 percent of total retail lines – and approximately 1.5 percent of non-ILEC retail lines use 251(c)(4) resale. And, as USTelecom’s Petition and other materials in the docket make clear, Section 251(c)(4) resale is used almost exclusively to provide voice service, and there is extensive competition in the provision of such offerings.⁵³ Moreover, forbearance from enforcing Section 251(c)(4) does not mean the elimination of resale from the marketplace. As the Petition established, following a forbearance grant, Section 251(b) resale obligations will continue to apply to all local exchange carriers, including “incumbents.” Moreover, market incentives favoring resale will remain in place, and ILECs will continue to offer services for resale. Likewise, ILECs will continue to offer UNE-P commercial replacement services. ILECs have incentives to deal reasonably with wholesale customers and to recover the costs they incur in deploying networks. They can best do so by bringing more traffic onto their networks and collecting associated revenues from carrier-customers. This is the lesson of the wireless marketplace, in which the elimination of the wireless resale rule in 1996 begat a robust and competitive wholesale market for wireless services, characterized by numerous mobile virtual network operators. Just as in the wireless market, resale arrangements in the wireline ecosystem should be undertaken pursuant to commercial market agreements, not the burdensome ILEC-specific resale regime established in a bygone era of state-enforced monopolies.

As stated in the Petition, ILEC resold lines constitute a small and declining portion of competitive lines in the marketplace.”⁵⁴ Resold ILEC lines declined from 5.9 million at the end of 2008 to 3.5 million at the end of 2016. The most current FCC data show a continuing decline in resold ILEC lines for the subsequent 6-months: by mid- 2017 they had fallen by another 120,000 to 3.4 million.⁵⁵ While the FCC does not have more current data, a USTelecom analysis of ILEC data collected from AT&T, CenturyLink, Frontier, and Verizon show that resale of ILEC services generally, and 251(c)(4) resale in particular, continue to decline rapidly.⁵⁶ From

⁵² See *id.* §§ 51.319(d)(3)(i)-(ii).

⁵³ See, e.g., Petition at 8-11, 15-18, 26-27; Comments of AT&T, WC Docket No. 18-141, at 23 (filed Sept. 5, 2018); Reply Comments of CenturyLink, WC Docket No. 18-141, at 2-3, 12-14, 16-25 (filed Sept. 5, 2018); Letter from James P. Young, Counsel, AT&T, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 18-141, at 8 (filed Dec. 28, 2018).

⁵⁴ Petition at 18, Chart 6.

⁵⁵ See FCC, *Voice Telephone Services Report*, at Table 1, Reference Line 80 (Nov. 28, 2018), <https://www.fcc.gov/voice-telephone-services-report> (“FCC Mid-2017 VTS Report”).

⁵⁶ Using a consistent methodology among all companies, AT&T, CenturyLink, Frontier, and Verizon submitted data to USTelecom describing their retail and wholesale lines, including 251(c)(4) resale lines

the end of 2016 to the end of 2018, total resold ILEC lines⁵⁷ for these four companies declined by 11 percent. 251(c)(4) resale lines declined at an even faster rate, falling from 560,000 at the end of 2016 to 419,000 at the end of 2018, or a 26 percent drop.

The carrier analysis also indicates that 251(c)(4) resale is a very small and declining portion of total resold ILEC services. 251(c)(4) resale constituted 15.9 percent of total resold ILEC lines at the end of 2016 for these four carriers and 13.1 percent of total resold ILEC lines at the end of 2018. Moreover, the data make clear that total resold ILEC service, especially 251(c)(4) resale, continues to be a small and declining portion of the overall competitive voice marketplace. For example, the most current data available from the FCC for mid-2017 indicate that there were 119.2 million ILEC and non-ILEC retail voice lines, of which 63.4 million are non-ILEC retail voice lines. According to the Commission, out of the 63.4 million non-ILEC retail lines, a maximum of 6.3 million relied on ILEC resold services.⁵⁸ Thus, non-ILEC retail lines utilizing any type of resold ILEC services represented no more than 5.3 percent of total retail lines (6.3 million divided by 119.2 million) and 10.0 percent of non-ILEC retail lines (6.3 million divided by 63.4 million). But 251(c)(4) resale lines represented a significantly lower portion. It is possible to estimate the share of 251(c)(4) resale lines based on the data obtained from the four member ILECs. For these four ILECs, 251(c)(4) resale lines were 15.3 percent of their total resold ILEC lines in mid-2017. Applying this factor to the non-ILEC lines utilizing resold ILEC service, we can estimate that approximately 0.8 percent (5.3 percent times 15.3 percent) of total ILEC and non-ILEC retail lines, and 1.5 percent (10.0 percent times 15.3 percent) of non-ILEC retail lines, utilized 251(c)(4) resale as of mid-2017. As the wholesale lines decline, competitive share continues to grow. None of this analysis takes into account wireless voice services, which have supplanted landline telephony in approximately 60 percent of U.S. homes.⁵⁹

and UNE-L lines, from year-end 2016 through year-end 2018. Based on mid-2017 data, the most current available from the FCC, these companies represent approximately 80 percent of national ILEC lines.

⁵⁷ These lines include Section 251(c)(4) resale, Section 251(b)(2) resale, commercial UNE-P arrangements and other commercial arrangements.

⁵⁸ See *FCC Mid-2017 VTS Report* at Table 1. ILECs report Wholesale lines (Reference Line 80) provided for resale, but non-ILECs may channelize some portion of the wholesale lines they utilize to serve multiple subscribers over a single wholesale line reported by the ILEC. Non-ILECs report retail lines sold over their owned loops (Reference Line 76), UNE loops (Reference Line 77), and other services obtained from an unaffiliated entity (Reference Line 78). Subscribers served over ILEC wholesale lines are included in this latter category. One can think of the ILEC-reported “wholesale lines” as a lower bound and the non-ILEC reported “lines provided over other services obtained from an unaffiliated entity” as an upper bound for the numerator in the calculation of the percentage of total retail lines or non-ILEC retail lines utilizing ILEC wholesale. To provide a conservative estimate, the calculations for percent of retail lines and percent of non-ILEC lines above use the non-ILEC lines using other services obtained from an unaffiliated entity in the numerator.

⁵⁹ *FCC Mid-2017 VTS Report* at Table 1, Reference Line 1 (noting that there were 335.7 million voice subscriptions as of mid-2017).

Given these facts, the Commission should forbear nationally from 251(c)(4) resale obligations.

II. ADOPTION OF THIS PROPOSED RESOLUTION IS CONSISTENT WITH STATUTE, RULE, AND COMMISSION PRECEDENT ALIKE, INCLUDING THE “COMPLETE-AS-FILED” REQUIREMENT.

The Commission is fully empowered to adopt the relief requested as set forth above. USTelecom’s petition was complete as filed, and nothing in the Act, the Commission’s rules, or the agency’s prior practices precludes it from granting partial or conditional relief.

A. THE PETITION SATISFIED THE “COMPLETE-AS-FILED RULE.

Contrary to INCOMPAS’ suggestion, USTelecom’s Petition fully satisfied the Commission’s “complete-as-filed” requirement.⁶⁰ As an initial matter, the Petition satisfied Section 1.54(a) of the Commission’s rules, which requires a “[d]escription of the relief sought,” a fact that INCOMPAS appears to acknowledge.⁶¹ Moreover, notwithstanding INCOMPAS’ allegations, the Petition also established a *prima facie* case for relief. As the Commission explained in the 2009 *Forbearance Procedures Order*, a “petition for forbearance must include in the petition the facts, information, data, and arguments on which the petitioner intends to rely to make the *prima facie* case for forbearance,” and must “show in detail how each of the statutory criteria are met[.]”⁶² The Petition inarguably satisfied this requirement by presenting “facts and arguments which, if true and persuasive, are sufficient to meet each of the statutory criteria for forbearance.”⁶³

For each category of relief sought in the Petition, including the unbundling and resale requirements still at issue in this proceeding, the Petition addressed in detail how the data provided satisfied each of the statute’s criteria for forbearance.⁶⁴ Notably, an economic study attached to the Petition evaluated the impacts of forbearance on individual UNE types, including market pricing for a range of UNE wholesale equivalents (as well as detailing “natural” migration rates).⁶⁵ The Petition also included national market data to support USTelecom’s request for nationwide forbearance relief,⁶⁶ in full satisfaction with the complete-as-filed

⁶⁰ See, e.g., Letter from John Nakahata and Henri Shi, Counsel to INCOMPAS, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 18-141 (filed Mar. 13, 2019).

⁶¹ See generally 47 C.F.R. § 1.54(a).

⁶² *Petition to Establish Procedural Requirements to Govern Proceedings for Forbearance Under Section 10 of the Communications Act of 1934, as Amended*, Report and Order, 24 FCC Rcd. 9543, 9553 ¶ 17 (2009) (“*Forbearance Procedures Order*”); see also 47 C.F.R. § 1.54(b).

⁶³ 47 C.F.R. § 1.54(b).

⁶⁴ See Petition at 24-33 (unbundling and resale), 33-38 (affiliate relationships), 38-43 (pole attachments).

⁶⁵ See *id.* Attachment B at 14-21.

⁶⁶ See *id.* at 7-19; *id.* Attachment B (attaching a study containing said national market data conducted by expert economists).

requirement. The fact that USTelecom did not provide data at the level of granularity that INCOMPAS has argued is most appropriate does nothing to change the fact that USTelecom provided ample data on the geographic market for which it initially sought relief. Indeed, if INCOMPAS's arguments were given credence, the effect would be that any forbearance opponent could stymie any petition simply by asserting that relief should be considered at a different level of geographic granularity than was reflected by the original request.

Nor is there any merit to INCOMPAS's claim that WCB's incorporation of data from the *Business Data Services* docket somehow violates the complete-as-filed rule or principles of procedural fairness.⁶⁷ First, USTelecom's Petition relied extensively on several data sources, including not only the Commission's publicly available Form 477 data,⁶⁸ but also the data collected during the agency's BDS proceeding.⁶⁹ Accordingly, every interested party – including “smaller carriers that did not participate in the BDS proceedings [but] filed comments and declarations in opposition to [USTelecom's] Petition,”⁷⁰ – has had notice *from this proceeding's inception* that the BDS and Form 477 data were pertinent. Second, to the extent INCOMPAS is arguing that the Commission must rely exclusively on material that a forbearance petitioner includes in the original petition, this claim is flatly untrue. The complete-as-filed rule provides that a petition must describe the relief sought and set out the *prima facie* case for a grant (which, as detailed above, USTelecom's Petition did).⁷¹ The rule expressly contemplates the entry of “further facts and arguments entered into the record by a petitioner” when offered “in response to facts and arguments introduced by commenters or opponents” or with the Commission's permission.⁷² It imposes no time frame for the entry of such information. It would be absurd to interpret this rule to allow the Commission to permit a party to enter facts into the record, but to preclude the Commission from entering such material on its own motion. Third, there is nothing “unfair” about the agency's decision to consult the BDS data here.⁷³ This data has been referenced again and again since the start of this proceeding, including numerous

⁶⁷ Letter from John Nakahata, Counsel to INCOMPAS, and Karen Reidy, Vice President, INCOMPAS, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 18-141 *et al.*, at 3-4 (filed Apr. 15, 2019) (“INCOMPAS April 15 Letter”).

⁶⁸ *See, e.g., id.* at 10 n.21, 16 n.45, 17 n.46, 29 n.85 (citing to the FCC's then-most-current report on voice telephone services); *see also FCC Mid-2017 VTS Report* (explaining the publicly available Form 477 data); Reply Comments of USTelecom – The Broadband Association, WC Docket No. 18-141, Exhibit A, at 4-19 and Attachment A (filed Sept. 5, 2018) (further demonstrating how publicly available Form 477 data supported the requested forbearance).

⁶⁹ *See, e.g.,* Petition Attachment B at 12 (relying on public data from the business data services proceeding); Petition at 11-12 (same).

⁷⁰ INCOMPAS April 15 Letter at 3.

⁷¹ 47 C.F.R. §§ 1.54(a), (b).

⁷² *Id.* § 1.54(f).

⁷³ Because the data collected in the BDS proceeding reflected deployments as of 2013, and because competitive deployment has only increased since then, the BDS dataset likely understates competition. Nevertheless, it reflects the most extensive and granular dataset available regarding the state of competitive buildout.

times by INCOMPAS itself, its members, and other opponents of the Petition.⁷⁴ Moreover, the statutory deadline for the Petition's resolution is now August 2, 2019, affording parties of all sizes more than three months to review and comment on newly available materials. INCOMPAS provides no reason why this period is inadequate. Indeed, the amount of time available is *longer* than the 90-day start-to-finish deadlines prescribed by Congress for the highly data-intensive Section 271 application process – and in that context, the same participants (again, large and small alike) were often forced to focus on multiple applications *at the same time*. Finally, INCOMPAS conveniently overlooks the fact that it is INCOMPAS itself, along with its members, that pushed the Commission to consider geographic markets more granular than the nationwide market the Petition argued was appropriate. As detailed above, USTelecom continues to believe that nationwide relief is warranted. However, to the extent the Commission disagrees, and is as a result consulting more granular data from the BDS docket, this approach is directly responsive to the advocacy of INCOMPAS and its allies. The framework INCOMPAS prefers, in which its criticism of the Petition can lead only to its outright denial, not to modified relief, is procedurally nonsensical – it would consign consumers and providers alike to continued application of burdensome and costly regulation long after it had ceased to promote the public interest.

⁷⁴ See generally, e.g., Letter from Karen Reidy, Vice President, INCOMPAS, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 18-141 (filed Mar. 4, 2019); Letter from Larry G. Antonellis, Director, Granite Telecommunications, LLC, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 18-141 (filed Nov. 8, 2018); Letter from Jose Perez Diaz, Administrator, WorldNet Telecommunications, Inc., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 18-141 (filed Oct. 19, 2018); Comments of INCOMPAS, GN Docket No. 18-238, filed Aug. 17, 2018 (cross-filed by INCOMPAS in the instant docket); Reply Comments of CALTEL, WC Docket No. 18-141 (filed Sept. 5, 2018); Reply Comments of Raw Bandwidth Telecom, Inc. *et al.*, WC Docket No. 18-141 (filed Sept. 5, 2018); Reply Comments of U.S. TelePacific Corp., Mpower Communications Corp., and Arrival Communications, Inc., WC Docket No. 18-141 (filed Sept. 5, 2018); Comments of INCOMPAS, WC Docket No. 18-141 (filed Aug. 17, 2018); Comments of ICG CLEC Coalition, WC Docket No. 18-141 (filed Aug. 7, 2018); Opposition of Public Knowledge *et al.*, WC Docket No. 18-141 (filed Aug. 6, 2018); Opposition of First Communications, LLC, WC Docket No. 18-141 (filed Aug. 6, 2018); Opposition of U.S. TelePacific Corp., Mpower Communications Corp., and Arrival Communications, Inc., WC Docket No. 18-141 (filed Aug. 6, 2018); Motion for Partial Summary Denial and Comments of Cox Communications, Inc. (filed Aug. 6, 2018); Comments of the California Public Utilities Commission, WC Docket No. 18-141 (filed Aug. 6, 2018); Opposition of INCOMPAS *et al.*, WC Docket No. 18-141 (filed Aug. 6, 2018); Comments of the Center for Democracy and Technology, WC Docket No. 18-141 (filed Aug. 6, 2018).

Each of the forgoing submissions (1) opposed, either in whole or in part, USTelecom's Petition, and (2) invoked the Commission's BDS proceeding, thereby acknowledging the relevance of the BDS data set. Frequently, these filings also expressly referenced the USTelecom's Petition's own invocation of the BDS data collection.

B. THE COMPLETE-AS-FILED RULE DOES NOT, AND SHOULD NOT, DEPRIVE FORBEARANCE PETITIONERS OF THEIR RIGHT TO RESPOND TO ARGUMENTS MADE BY PARTIES OPPOSING OR PROPOSING MODIFIED RELIEF.

INCOMPAS is simply wrong to suggest the complete-as-filed rule prohibits USTelecom from responding to others' comments by offering a proposal for partial relief, or from using Form 477 data or BDS data to support that proposal.

First, USTelecom has set out the proposal above, and the additional arguments and data supporting that proposal, in direct response to arguments by opponents that the Commission should assess forbearance on a more granular geographic basis than proposed in the Petition. The suggestion that the complete-as-filed rule precludes a petitioner from responding to criticisms of its request, and proposing modifications to the relief requested, is absurd. To the contrary, the Commission's complete-as-filed rule expressly allows "supplemental information" to be considered "[i]n response to facts and arguments *introduced by commenters or opponents.*"⁷⁵

Second, the Commission's rules expressly contemplate submission of additional information "[b]y permission of the Commission," and afford the agency the sole discretion authority to make that determination. Indeed, the Commission has explained that a "petitioner may submit substantively new material, including new information, data, studies, or arguments, at the request of the Commission."⁷⁶ Here, the Commission itself has taken the step of incorporating the entire record of the BDS proceeding and the entire *2015 Data Collection* into this proceeding and seeking further comment on USTelecom's Petition in light of those materials, which contain extensive discussions of Form 477 and the *2015 Data Collection*. The Commission's actions thus provide all the "permission" that the rules require.

Third, and finally, reliance on the Form 477 to support the proposal set out above is also fully consistent with the complete-as-filed rules for a separate reason. The most current set of Form 477 the data, on which USTelecom asks the Commission to rely, was not available when USTelecom filed its petition. The Commission has made clear that such data may be submitted and relied upon without violating the complete-as-filed rule.⁷⁷ Specifically, in adopting those rules, the Commission "disagree[d]" with AT&T's concern that such rules would "prohibit petitions . . . from providing the Commission with relevant, updated market information," explaining that "[p]etitioners may update data ... as a matter of course."⁷⁸

Ultimately, a framework in which a forbearance petitioner were barred from even *commenting* on the possibility of partial relief during the statutory review period, or from offering its views on how the Commission might best design such partial relief, would establish

⁷⁵ 47 C.F.R. § 1.54(f)(1).

⁷⁶ *Forbearance Procedures Order* ¶ 15.

⁷⁷ *See id.*; *see also id.* n.64.

⁷⁸ *Id.* n.64.

perverse incentives that deterred compromise and the resolution of differences among the parties to a proceeding. There is no public-interest basis for adopting this nonsensical approach, which finds no support in the Forbearance Procedures Order or other Commission decisions.

C. *SECTION 10 EXPRESSLY PERMITS PARTIAL FORBEARANCE GRANTS.*

The Act explicitly refutes any suggestion that the Commission must fully grant or fully deny a forbearance petition, rather than granting it in part. Specifically, Section 10(c) states that “[t]he Commission may grant or deny a petition [for forbearance] in whole *or in part*,”⁷⁹ granting the agency wide discretion to craft appropriate relief. Section 10 also expressly contemplates that the Commission may grant relief “in any or some of its or their geographic markets.”⁸⁰ As outlined below, the Commission has on several instances (including occasions post-dating the 2009 *Forbearance Procedures Order*) used this discretion to grant forbearance narrower than that which the petitioner initially sought. Even the Commission’s rule implementing the complete-as-filed requirement demonstrates the agency’s discretionary power, by allowing submission of further facts and arguments supplementing the record “[i]n response to facts and arguments introduced by commenters or opponents” or with the “permission” of the agency, at its own choosing.⁸¹ These provisions indicate the Commission’s ability to craft partial grants in response to arguments presented during the course of a proceeding.

Here, if the Commission does not grant nationwide relief for some elements of the Petition and instead grants the alternative relief herein described, the proposed modification to the relief initially requested is modest, and a partial grant falls squarely within the Commission’s discretion. The alternatives to nationwide relief, as necessary, set out above would narrow the requested action within one of the three categories of relief sought by the original Petition, cabining relief to specific geographic areas. The basis for relief remains largely identical to that presented in the Petition, and both the Petition’s *prima facie* showing and the arguments set out in USTelecom’s Reply Comments remain pertinent. Such modification is consistent with the complete-as-filed rule.

D. *GRANT OF PARTIAL FORBEARANCE WOULD BE ENTIRELY CONSISTENT WITH COMMISSION PRACTICE.*

Even since the *Forbearance Procedures Order*, the Commission has issued “partial” and “conditional” grants of forbearance petitions filed pursuant to Section 10(c).⁸² This includes actions taken with the complete-as-filed requirement on the books, making clear that the Commission has discretion to grant forbearance more limited than what the petitioner requests.

For example, in October 2014 USTelecom sought forbearance from several different categories of the Commission’s rules, including complete forbearance from the enforcement of

⁷⁹ 47 U.S.C. § 160(c).

⁸⁰ *Id.*

⁸¹ 47 C.F.R. § 1.54(f).

⁸² 47 U.S.C. § 160(c).

Section 214(e)(1)(A) in areas where a price-cap carrier received no high cost support.⁸³ In December 2014, the Commission granted partial forbearance from that requirement, limiting relief to three specific types of census blocks: (1) those determined to be low-cost; (2) those served by an unsubsidized competitor; and (3) those where a subsidized competitor received federal high-cost support. The Commission described this as “limited forbearance” at the time, explicitly stating that it was “not forbear[ing] from enforcing the section 214(e) obligation of a price cap carrier to offer voice telephony services in extremely high-cost areas where it is not receiving support.”⁸⁴ In December 2015, when the Commission resolved the remaining requests set out in USTelecom’s October 2014 petition, it described its actions a year earlier as “grant[ing] partial forbearance in connection with the request to forbear from section 214(e) obligations.”⁸⁵ Notably, USTelecom’s initial petition had not suggested, even in the alternative, that forbearance from Section 214(e) could or should be cabined in this way. Nor did USTelecom suggest such a limitation *vis-à-vis* Section 214 in its Reply Comments, nor in any filing before or after the Commission issued its December 2014 order. Similarly, the December 2015 decision also granted partial or conditional forbearance with regard to several other obligations from which USTelecom had sought relief. Specifically, it granted either partial or conditional relief from remaining Section 271 obligations, equal access mandates, the requirement that incumbents make unbundled 64 kbps channels available after replacing copper loops with fiber, *Computer Inquiry* requirements, and mandates regarding the rates charged for newly deployed entrance conduit.⁸⁶ Once again, USTelecom had not suggested that the Commission limit in that (or any other) way the relief the association had sought in its initial October 2014 filing.

The Commission has also exercised its authority to forbear “conditionally” – that is, to grant forbearance subject to the petitioner’s fulfillment of conditions that were not set forth in the petition itself. Here, too, the agency has taken such action since the “complete-as-filed” requirement’s adoption in 2009. Specifically, in 2013, the Commission under then-Chairman Genachowski noted that where it “cannot forbear from a requirement completely” it can still “reduce burdens by *granting partial or conditional forbearance*,” because that approach “allows [the agency] to modernize [its] rules by removing outmoded requirements, while preserving requirements that remain essential to [its] fundamental mission[.]”⁸⁷ On that basis, the Commission granted USTelecom’s request for forbearance from application of the cost

⁸³ See generally *Petition for Forbearance of the United States Telecom Association*, WC Docket No. 14-192 (filed Oct. 5, 2014).

⁸⁴ *Connect America Fund et al.*, Report and Order, 29 FCC Rcd 15644, 15663-64 ¶¶ 50-52 (2014); see also *id.* ¶¶ 50-70 (describing the limited forbearance granted generally).

⁸⁵ *Petition of USTelecom for Forbearance et al.*, Memorandum Opinion and Order, 31 FCC Rcd 6157, 6159 ¶ 3 & n.6 (2015) (characterizing the previous partial grant).

⁸⁶ See generally *id.* ¶ 11 (summarizing resolution of outstanding forbearance requests).

⁸⁷ *Petition of USTelecom for Forbearance Under 47 U.S.C. § 160(c) from Enforcement of Certain Legacy Telecommunications Regulations*, Memorandum Opinion and Order, 28 FCC Rcd 7627, 7630 ¶ 2 (2013) (emphasis added), *pet. for rev. denied sub nom. Verizon v. FCC*, 770 F.3d 961 (D.C. Cir. 2014).

assignment rules to price cap carriers – but only where the carrier satisfied four conditions.⁸⁸ The agency also conditionally forbore from obligations relating to property records⁸⁹ and revenue reporting obligations.⁹⁰ Again, USTelecom had not suggested any such limitations on forbearance, either in its original petition or otherwise.

Nor are these the only examples of the Commission forbearing partially or conditionally.⁹¹ Indeed, the Commission’s history of forbearing of its own volition without outside prompting speaks directly to the agency’s power to fashion, without solicitation, appropriate outcomes to effectuate Congress’s preference for competition over regulation where warranted and to ensure maximum market efficiency.⁹² In short, USTelecom’s proposal, and the preexisting data and analyses on which it relies, is appropriately part of the back-and forth debate that arises during the consideration of any forbearance petition. Indeed, the Commission specifically “reassure[d]” the industry when it adopted the complete-as-filed rule that the rule is “not formalistic or otherwise rigid and inflexible.”⁹³ To the extent INCOMPAS and others have nudged the debate over USTelecom’s unbundling and resale proposals toward greater geographic granularity, it would be irrational to interpret the rule as prohibiting the petitioning party – and only the petitioning party – from participating in the discussion about how relief might be cabined to allow a partial grant of relief without restarting the statutory clock.

* * *

⁸⁸ *Id.* ¶¶ 43-46. A price-cap carrier would only enjoy relief if it (1) continued to comply with the Part 32 accounting rules, (2) adhered to access charge imputation requirements similar to those applied to Bell Operating Companies, (3) certified annually that it complied with Section 254(k)’s bar on cross-subsidization, and (4) filed a compliance plan detailing how it would continue to fulfill the various obligations that remained in place.

⁸⁹ *Id.* ¶ 78 *et seq.*

⁹⁰ *Id.* ¶ 110 *et seq.*

⁹¹ *See, e.g., Petition for Declaratory Ruling to Clarify 47 U.S.C. § 572 in the Context of Transactions Between Competitive Local Exchange Carriers and Cable Operators Conditional Petition for Forbearance from Section 652 of the Communications Act for Transactions Between Competitive Local Exchange Carriers and Cable Operators*, Order, 27 FCC Rcd 11532, 11542-43 ¶¶ 21-25 (2012).

⁹² *See, e.g., Protecting and Promoting the Open Internet*, Report and Order on Remand, Declaratory Ruling, and Order, 30 FCC Rcd 5601, 5616 ¶ 51 (describing the Commission’s “broad forbearance” issued *sua sponte*); *id.* ¶ 438 (describing the Commission’s powers to “forbear on its own motion” pursuant to Section 160(a)).

⁹³ *Forbearance Procedures Order* ¶ 14.

For the reasons discussed above, the arguments USTelecom has presented, and the data backing such arguments, support nationwide relief. At a minimum, there is no legally justifiable reason to require the continued provisioning of UNEs and ILEC-specific resale mandates in any areas presently subject to demonstrable competition for voice and broadband service. If the Commission does not grant the remaining forbearance requests in full, it should instead provide the alternative relief proposed via a partial grant of forbearance. The Commission is fully authorized to do so under the text of the statute and has granted similar partial relief on multiple occasions.

Sincerely,

/s/ Patrick R. Halley

Patrick R. Halley

Senior Vice President, Advocacy and
Regulatory Affairs

USTelecom—The Broadband Association

cc: Terri Natoli (Wireline Competition Bureau)

ATTACHMENT A

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

In the Matter of)	
)	
Petition of USTelecom for Forbearance)	WC Docket No. 18-141
Pursuant to 47 U.S.C. § 160(c) to Accelerate)	
Investment in Broadband and Next-)	
Generation Networks)	
)	

DECLARATION OF

GLENN WOROCH AND ROBERT CALZARETTA

IN SUPPORT OF USTELECOM PETITION FOR FORBEARANCE

May 6, 2019

I. OVERVIEW¹

We have been asked by USTelecom on behalf of its members to analyze two data sets that were recently released or incorporated into the record of USTelecom Petition for Forbearance.² As explained below, these data provide evidence of near ubiquitous facilities-based competition for the supply of local transport and local loop services from cable networks and competitive local exchange carriers (“CLECs”) throughout the United States. This competition makes obsolete certain sharing obligations imposed by the 1996 Telecom Act on incumbent local exchange carriers (“ILECs”) and supports USTelecom’s petition for forbearance from the 1996 Act’s unbundled network element (“UNE”) and avoided-cost resale requirements for all DSN-level loop and transport facilities nationwide.³

First, using the Form 477 data that the Federal Communications Commission (“FCC” or “Commission”) released in December 2018, we calculated the portion of the U.S. population and households covered by broadband services offered by cable companies. We found that cable operators deployed wireline broadband facilities in census blocks covering about 90 percent of the U.S. population and about 90 percent of U.S. households. The results are nearly identical when we restrict the cable broadband offerings to a maximum advertised download speed of at

¹ Glenn Woroch is a Senior Consultant with the economic consulting firm Compass Lexecon. He has a Ph.D. in Economics and an M.A. in Statistics from the University of California at Berkeley, and a B.A. from the University of Wisconsin, Madison. Dr. Woroch has taught in the Economics Department of the University of California at Berkeley since 1993. He has also taught economics at the University of Rochester and Stanford University, and served on the editorial boards of *Information Economics & Policy*, the *Journal of Regulatory Economics*, and *Telecommunications Policy*. He has extensive experience evaluating markets for special access services; while on the research staff of GTE Laboratories in the early 1990s, Dr. Woroch collected data on special access rates in local exchange areas throughout the country to entry by Competitive Access Providers. Dr. Woroch has submitted a number of filings in regulatory and court proceedings on these issues, including in the FCC BDS proceedings. Robert Calzaretta is an Economist with Compass Lexecon in Oakland, California. Mr. Calzaretta has consulted on matters of antitrust litigation and international arbitration such as class certification, damage calculations, mergers and acquisitions, and predatory conduct. He holds degrees in Economics and Political Science from Boston College. He has conducted economic analysis on a variety of network industries including energy, transportation and telecommunications. He has extensive experience performing analysis of geographical information system data, including analysis of data from the FCC BDS proceedings.

² Petition for Forbearance of USTelecom, *Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) to Accelerate Investment in Broadband and Next-Generation Networks*, WC Docket No. 18-141 (May 4, 2018) (“Forbearance Petition” or “Petition”).

³ See *id.* at 24-31 (seeking forbearance from the UNE and avoided-cost resale requirements under 47 U.S.C. §§ 251 & 252).

least 25 Mbps. These data confirm that cable companies offer high speed broadband services to the vast majority of persons and households where ILECs have facilities.

Second, we analyzed the “April Data Tables” that were uploaded to the Commission’s Secure Data Enclave earlier this month.⁴ Those tables contain the distances between the location of each ILEC wire center and (1) the nearest point of CLEC fiber networks and (2) nearby buildings with competitive connections. The April Data Tables show that about 78 percent of the verified ILEC wire centers are a half mile or closer to competitive fiber and/or buildings with a competitive connection, and the majority are even closer to competition. For example, about 56 percent of verified ILEC wire centers are 500 feet or closer to competitive fiber. As explained below, these data further confirm that competitors can replicate or circumvent ILEC transport, providing an additional reason why the UNE requirements are no longer needed to facilitate competition for ILEC transport services.

Overall, these recently-released datasets indicate that there is near ubiquitous facilities-based competition for local transport and loop services. Moreover, additional facilities-based competition has occurred since the datasets were collected which would show even more competition for these services.⁵ It is this sort of competition that the network unbundling and avoided-cost resale requirements were designed to facilitate. The data show that this purpose has been achieved and thus supports granting USTelecom’s Petition to forbear from continued application of these requirements. Absent relief from these now obsolete requirements, the Commission would be leaving in place price regulations that are no longer needed to serve their intended purpose but risk distorting market forces governing these services. By retaining these requirements, the Commission increases the likelihood that consumers will suffer the harms

⁴ FCC Public Notice, Wireline Competition Bureau Seeks Focused Additional Comment in Business Data Services and USTelecom Forbearance Petition Proceedings and Reopens Secure Data Enclave, DA 19-281 (April 15, 2019).

⁵ The most current Form 477 data represent the state of broadband deployment as of December 2017 and so they do not reflect the additional coverage that has occurred in the meantime. Similarly, the April Data Tables are drawn from the FCC’s 2015 Business Data Services Collection and so are current as of the end of 2013, thereby omitting any subsequent deployment of competitive facilities. *See also* Mark Israel, Daniel Rubinfeld, and Glenn Woroch, *Competitive Analysis of the FCC’s Special Access Data Collection (White Paper)*, WC Docket No. 05-25 (Jan. 26, 2016) at 22-25.

associated with slower ILEC investment in next-generation services and distorted entry and investment incentives of competitors that are favored by these rules.⁶

The remainder of this paper explains how we conducted our analyses and presents the results.

II. FORM 477 DATA CONFIRM THAT COMPETITIVE BROADBAND SERVICES ARE NEARLY UBIQUITOUS

Form 477 data identify U.S. census blocks where, as of December 2017, facilities-based providers offered cable broadband services.⁷ Because the average size of a census block is relatively small,⁸ these data provide a granular view of where facilities-based broadband providers deploy facilities and offer service.⁹ We used Form 477 data to identify the census blocks where cable operators have deployed broadband facilities, regardless of bandwidth and

⁶ See, e.g., *U.S. Telecom Ass'n v. FCC*, 290 F.3d 415, 429 (D.C. Cir. 2002) (citing *AT&T Corp. v. Iowa Utils. Bd.*, 525 U.S. 366, 428-29 (1999) (Breyer, J., concurring in part and dissenting in part) (“[M]andatory unbundling comes at a cost, including disincentives to research and development by both ILECs and CLECs and the tangled management inherent in shared use of a common resource.”); *BDS Order* ¶ 101 (explaining that regulated pricing in areas with competition is “harmful to long run incentives to invest, can lead to inefficient short run levels of production and consumption, and can prevent entry indefinitely.”); Mark Israel, Daniel Rubinfeld and Glenn Woroch, *Analysis of the Regressions and Other Data Relied Upon in the Business Data Services FNPRM And a Proposed Competitive Market Test: Second White Paper*, WC Docket No. 16-143, 05-25, RM 10593, at 21 (June 28, 2016) (“regulations that require ILECs to reduce prices for DS1 and DS3 services risk substantially undermining incentives for customers to migrate to next generation, and more efficient, Ethernet offerings. Further, reduced demand for Ethernet will result in less investment in Ethernet facilities and upward pricing pressure for those services.”).

⁷ These data are publicly available at <https://www.fcc.gov/general/broadband-deployment-data-fcc-form-477>. We consider technology codes 40, 41, 42 and 43 which refer to various types of cable modem services. The vintage of the data we used for this analysis was not affected by the mis-reporting of a non-cable fiber service provider that required revisions to the 2019 Broadband Deployment Report. See FCC, Revised Draft Broadband Deployment Report Continues to Show America’s Digital Divide Narrowing Substantially, Press Release (May 1, 2019).

⁸ The implied median diameter of a census block is less than 0.20 miles. *BDS Order* ¶ 133. The overall distribution of surface areas of census blocks is highly skewed. The mean size of all census blocks is 0.34 square miles, but 50% of them are smaller than 0.01 square miles (*i.e.*, the median size), and more than 85% are smaller than the average of 0.34 square miles. Census blocks that are served by cable are even smaller and more populated, with a mean size of 0.09 square miles and a median of 0.008 square miles (or about 5 acres).

⁹ The Commission used the presence of cable broadband facilities in census blocks based on Form 477 as a prong of its BDS Competitive Market Test (“CMT”) applied to price-cap ILECs. *BDS Order* ¶ 86 (The CMT checks whether 75 percent of the census blocks in a county has a cable provider present based on the Commission’s Form 477 data).

where maximum advertised download speeds were at least 25 Mbps. A list of these census blocks is contained in a file submitted with this declaration.

To determine the portion of the U.S. population and households covered by these census blocks, we merged onto the Form 477 data the Census Bureau files containing population and household estimates by census block reported in the most recent decennial census (2010).¹⁰ The number of people and households in each census block where cable operators offer broadband services are also included in the file submitted with this declaration.

As shown in the table below, these data establish that nearly 90 percent of the U.S. population and households are in census blocks where cable companies offered wireline broadband services as of December 2017. This evidence confirms the ubiquity of last-mile broadband facilities that compete with ILEC loops. Given the architecture of cable’s hybrid-fiber coaxial (“HFC”) networks, we can be certain that there are middle-mile fiber trunks that feed this distribution network in these same areas.¹¹ For that reason, the presence of cable represents competition for ILEC interoffice transport as well.

	U.S. Population Covered	U.S. Households Covered
Any Cable Broadband Service	89.6%	89.8%
Any Cable Broadband Service with a Maximum Advertised Download Speed Exceeding 25 Mbps	89.0%	89.2%

These data confirm that the vast majority of Americans have access to alternative wireline broadband services other than an ILEC’s network. As mentioned, these data are more than a year old and so our estimates of competition are necessarily conservative because they omit subsequent deployment of cable facilities. It is our understanding that the purpose of the UNE and resale requirements was to enable facilities-based competition of this sort to develop. These data show that facilities-based competition has been achieved in the vast majority of the

¹⁰ These data are publicly available on the Census Bureau’s website. *See* <https://www.census.gov/programs-surveys/decennial-census/data/datasets.2010.html>

¹¹ *BDS Order* ¶¶ 13, 27, 29.

country, and thus these sharing requirements are no longer necessary to serve that purpose at least in those areas.

III. THE APRIL DATA TABLES CONFIRM THAT CLECS CAN REPLICATE OR CIRCUMVENT ILEC TRANSPORT.

As we have explained, the Form 477 data confirm that cable companies have already circumvented ILEC loop and transport facilities, which by itself confirms that access to ILEC-provided UNE loop and transport is no longer necessary to facilitate competition. The April Data Tables recently made available by the Commission provide further evidence that competitors can replicate or circumvent the ILECs' current interoffice transport routes.

As explained above, an interoffice transport route is a connection between two ILEC wire centers. If a competitor can connect its own fiber networks to those two wire centers, then it can provide the same interoffice transport connection using its own fiber network. Similarly, if two different competitors can connect to different wire centers, they can contract with each other to exchange traffic and in that way duplicate or circumvent the ILECs' interoffice routes.

In the *BDS Order*, the Commission determined that competitors can reasonably connect to locations with BDS demand within a half mile of their fiber networks.¹² The April Data Tables identify the distances between each ILEC wire center (as verified using the LERG) and the fiber facilities owned by any competitor within a half mile. Those tables also include the distances to buildings served by each wire center no more than five miles away.¹³ These data enable us to compute the portion of ILEC wire centers that can be connected to a competitor's network by measuring the portion of ILEC wire centers that are within a half mile of a competitor's fiber facilities or connected buildings.

Our analysis of these data shows that about 78 percent of ILEC wire centers that have been verified using the LERG are a half mile or closer to competitive fiber network and/or one or more buildings served by a competitive connection. Most of that facilities-based competition is even closer. For example, using only distances between LERG verified wire centers and competitive fiber networks, we found that more than about 56 percent are 500 feet or less from

¹² *BDS Order* ¶¶ 101, 130.

¹³ The calculated wire-center-to-building distances are rounded up to the nearest half mile up to five miles.

competitive fiber. This is an underestimate of the true amount of competition within 500 feet because we cannot take account of the possibility of buildings with competitive connections within 500 feet because the April Data Tables do not reveal distances between ILEC wire centers and buildings that are less than a half mile; those are all recoded as one-half mile. Moreover, all of these metrics are likely much higher in Tier 1 and Tier 2 wire centers which, by definition, are the wire centers with the most competitive entry and the most demand for transport.¹⁴

These data indicate that CLECs can replicate most or all ILEC interoffice transport routes, and thus further confirm near ubiquitous nationwide competition for transport and that that continued application of the unbundling of local transport is no longer necessary to facilitate facilities-based competition.

¹⁴ See 47 C.F.R. § 51.319(d)(3)(i)-(iii) (defining Tier 1, Tier 2, and Tier 3 wire centers). We could not calculate the corresponding figures for Tier 1 and Tier 2 wire centers because the data in the Enclave lack the information needed to make such calculations.

VERIFICATION

I hereby swear under penalty of perjury that, based on the best information available to me, the foregoing is true and correct.

/s/ Glenn Woroch
Glenn Woroch

Dated: May 6, 2019

VERIFICATION

I hereby swear under penalty of perjury that, based on the best information available to me, the foregoing is true and correct.

/s/ Robert Calzaretta
Robert Calzaretta

Dated: May 6, 2019