



August 9, 2016

**VIA ECFS**

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

***Re: Business Data Services in an Internet Protocol Environment; Investigation of Certain Price Cap Local Exchange Carrier Business Data Services Tariff Pricing Plans; Special Access for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services; WC Docket Nos. 16-143, 15-247 & 05-25, RM-10593***

Dear Ms. Dortch:

Pursuant to the Commission’s June 24, 2016 *Order* (“*June 24 Order*”), which “extends the procedures for submitting and accessing Confidential Information adopted in the business data services protective orders in WC Docket No. 05-25 to Confidential Information filed in the record in WC Docket No. 16-143,”<sup>1</sup> Sprint Corporation (“Sprint”) hereby submits a redacted version of the attached reply comments, which contain redacted highly confidential information protected under the following protective orders adopted by the Commission:

- *Modified Protective Order*<sup>2</sup> in WC Docket No. 05-25, RM-10593
- *Second Protective Order*<sup>3</sup> in WC Docket No. 05-25, RM-10593
- *Data Collection Protective Order*<sup>4</sup> in WC Docket No. 05-25, RM-10593

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<sup>1</sup> *Business Data Services in an Internet Protocol Environment; Investigation of Certain Price Cap Local Exchange Carrier Business Data Services Tariff Pricing Plans; Special Access for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, WC Docket Nos. 16-143, 15-247, and 05-25, RM-10593, Order, DA 16-722 (rel. June 24, 2016).

<sup>2</sup> See *Special Access Rates for Price Cap Local Exchange Carriers*, Modified Protective Order, DA 10-2075, 25 FCC Rcd. 15,168 (Wireline Comp. Bur. 2010).

<sup>3</sup> See *Special Access Rates for Price Cap Local Exchange Carriers*, Second Protective Order, DA 10-2419, 25 FCC Rcd. 17,725 (Wireline Comp. Bur. 2010) (“*Second Protective Order*”).

<sup>4</sup> See *Special Access for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, Order and Data Collection Protective Order, DA 14-1424, 29 FCC

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- *Business Data Services Data Collection Protective Order*<sup>5</sup> in WC Docket Nos. 15-247 & 05-25, RM-10593
- *Tariff Investigation Protective Order*<sup>6</sup> in WC Docket Nos. 15-247 & 05-25, RM-10593

Highly confidential treatment of the respectively marked portions of the attached document is required to protect information subject to the above-mentioned protective orders, including information regarding:

- The “extent to which companies rely on incumbent local exchange carrier . . . and non-incumbent LEC last-mile facilities and local transport facilities” and “the nature of those inputs”;<sup>7</sup>
- Factors that companies “take into account when deciding what types of channel termination and local transport facilities to lease”;<sup>8</sup>
- The “types of customers companies serve and the types of special access-type services demanded by those customers”;<sup>9</sup>
- The factors companies consider “when deciding whether to self-deploy channel termination and local transport facilities or lease such facilities from a third party”;<sup>10</sup>
- The “nature or type of structure where . . . cell sites are placed” and “the type or capacity of the connections provided to companies’ cell sites”;<sup>11</sup>
- The “terms and conditions of or strategy related to . . . most sensitive business negotiations or contracts”;<sup>12</sup>
- “[D]etailed or granular information about specific network facilities, including types, equivalents, and capacities, whether TDM- or IP-based services”;<sup>13</sup>

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Rcd. 11,657 (Wireline Comp. Bur. 2014) (“*Data Collection Protective Order*”). See also *Public Statements Derived from Highly Confidential Data Filed in Response to the Business Data Services (Special Access) Data Collection*, Public Notice, DA 16-368, 31 FCC Rcd. 3420 (2016) (clarifying the confidential treatment of data derived from the data collection).

<sup>5</sup> See *Investigation of Certain Price Cap Local Exchange Carrier Business Data Services Tariff Pricing Plans; Special Access for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, Order and Protective Orders, DA 15-1387, 30 FCC Rcd. 13,680, App. A (Wireline Comp. Bur. 2015).

<sup>6</sup> See *id.* App. B (“*Tariff Investigation Protective Order*”).

<sup>7</sup> *Second Protective Order* ¶ 6.

<sup>8</sup> *Id.*

<sup>9</sup> *Id.*

<sup>10</sup> *Id.*; *Data Collection Protective Order* at App. B.

<sup>11</sup> *Second Protective Order* ¶ 6.

<sup>12</sup> *Tariff Investigation Protective Order* at 13,704.

<sup>13</sup> *Id.*

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- “[C]urrent or future plans regarding the transition from TDM- to IP-based services or to compete for a customer or specific groups or types of customers (e.g., retail business or wholesale customers), including specific pricing or (tariffed or non-tariffed) contract proposals, pricing strategies, product strategies, advertising or marketing strategies, future business plans, procurement strategies, technology implementation or deployment plans and strategies (e.g., engineering capacity planning documents)”;<sup>14</sup>
- The “nature or contents of private non-tariffed commercial agreements”;<sup>15</sup>
- The analyses performed about “competitors, including data, sources and methods used in those analyses”;<sup>16</sup>
- “Descriptions of CLEC or out-of-region ILEC sales, pricing structures and discounts” and “expenditures” under “certain rate structures and discount plans”;<sup>17</sup>
- “Pricing, to the extent such information is not publicly available, for . . . all [packet-switched data services]”;<sup>18</sup>
- “[R]ates or charges associated with channel terminations or transport facilities, and information from which, whether alone or in combination with other confidential or non-confidential information, such rates or charges . . . ”;<sup>19</sup> and
- “Information about Requests for Proposals (‘RFPs’), including descriptions of RFPs for which a party was selected as the winning bidder, descriptions of RFPs for which a party submitted unsuccessful competitive bids, and the business rules companies take into consideration to determine whether to submit a bid in response to an RFP”.<sup>20</sup>

The marked information is not available from public sources, and, “if released to competitors, would allow those competitors to gain a significant advantage in the marketplace.”<sup>21</sup>

In accordance with the protective orders in WC Docket No. 05-25, extended to WC Docket No. 16-143 by the *June 24 Order*, Sprint, in addition to filing this redacted version electronically via ECFS, will submit one original and two hardcopies without redaction to the

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<sup>14</sup> *Id.*

<sup>15</sup> *Id.*

<sup>16</sup> *Id.*

<sup>17</sup> Letter from Sharon E. Gillett, Chief, Wireline Competition Bureau, to Donna Epps, Vice President, Federal Regulatory Affairs, Verizon, DA 12-199, 27 FCC Rcd. 1545, 1548 (Feb. 13, 2012) (supplementing the *Second Protective Order*) (“*Second Supplement to Second Protective Order*”).

<sup>18</sup> *Id.*

<sup>19</sup> Letter from Sharon E. Gillett, Chief, Wireline Competition Bureau, to Paul Margie, Esq., Wiltshire & Grannis LLP, DA 11-805, 26 FCC Rcd. 6571, 6572 (May 2, 2011) (supplementing the *Second Protective Order*) (“*First Supplement to Second Protective Order*”).

<sup>20</sup> *Data Collection Protective Order* at App. B.

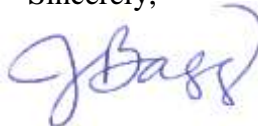
<sup>21</sup> *Second Protective Order* ¶ 3; *First Supplement to Second Protective Order* at 6571; *Second Supplement to Second Protective Order* at 1546; *Data Collection Protective Order* ¶ 5.

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Secretary's Office. Sprint will also submit one CD copy without redaction to Christopher Koves, Pricing Policy Division, Wireline Competition Bureau.

Please contact me if you have any questions or require any additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Bagg".

Jennifer P. Bagg  
*Counsel to Sprint Corporation*

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

In the Matter of	)	
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	)	
AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593
	)	

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August 9, 2016

**EXECUTIVE SUMMARY**

The most comprehensive record in the Commission’s history is clear: Competition for business data services (“BDS”) is insufficient and the Federal Communications Commission (“FCC” or “Commission”) must act now to ensure BDS rates, terms, and conditions are just, reasonable, and non-discriminatory. Comments submitted by wireless carriers, consumer advocates, competitive carriers, public interest groups, large enterprises, and rural providers agree. The Commission’s data collection and the real-world marketplace experience of consumers, businesses, and carriers, demonstrate that prices are exorbitant, and that incumbent local exchange carriers (“incumbent LECs” or “ILECs”) are restraining competition. Even Verizon—one of the largest incumbent LEC providers of BDS—has concluded that the Commission should reduce BDS prices for both TDM and IP-based services, and confirms that it has a strong legal basis for doing so.

The comments filed in response to the Commission’s *Further Notice*<sup>1</sup> confirm that BDS competition is insufficient to discipline the unjust and unreasonable prices incumbent LECs impose in almost every community in the nation. The data show that:

- 77 percent of locations and 80 percent of census blocks where BDS is sold have only one provider—a monopoly.<sup>2</sup>

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<sup>1</sup> *Business Data Services in an Internet Protocol Environment; Investigation of Certain Price Cap Local Exchange Carrier Business Data Services Tariff Pricing Plans; Special Access for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, Tariff Investigation Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd. 4723 (2016) (“*BDS Order & FNPRM*” or “*Further Notice*”).

<sup>2</sup> Declaration of Jonathan B. Baker on Market Power in the Provision of Dedicated (Special Access) Services ¶ 44, WC Docket No. 05-25 (filed Jan. 27, 2016; revised public version submitted on Apr. 14, 2016) (“*Baker Jan. Decl.*”); Declaration of Stanley M. Besen and Bridger M. Mitchell ¶ 27 (“*Besen/Mitchell Decl.*”), appended as Attachment 1 to Comments

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- 97 percent of locations and 95 percent of census blocks where BDS is sold have at most two providers—a duopoly.<sup>3</sup>
- 0.1 percent of commercial buildings<sup>4</sup> and 1.3 percent of census blocks<sup>5</sup> are served by at least four providers.

Competition for BDS at or below 50 Mbps is even worse than these aggregate numbers suggest—there are virtually no geographic markets in the nation with sufficient lower-bandwidth competition to discipline unjust and unreasonable behavior.

Furthermore, while competition for BDS services above 50 Mbps varies by geography, there is inadequate competition in the great majority of the country even for these higher-capacity services:

- 94 percent of locations and 83 percent of census blocks where BDS is sold have at most two providers of BDS above 50 Mbps.<sup>6</sup>
- 0.7 percent of locations and 2.6 percent of census blocks where BDS is sold are served by at least four providers of BDS above 50 Mbps.<sup>7</sup>

The new, more granular analyses of Dr. Rysman’s regression results performed by both Dr. Kwoka and Dr. Baker confirm that reduced concentration in the provision of these higher-

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of Sprint Corporation, WC Docket No. 05-25 (filed Jan. 27, 2016; revised public version submitted Apr. 11, 2016) (“Sprint Jan. Comments”).

<sup>3</sup> Besen/Mitchell Decl. ¶¶ 26-27.

<sup>4</sup> *BDS Order & FNPRM* ¶ 220 (Table 3).

<sup>5</sup> Besen/Mitchell Decl. ¶ 27 (Table 2).

<sup>6</sup> Further Supplemental Declaration of William P. Zarakas ¶¶ 16, 18, appended hereto as Attachment A (“Further Supplemental Zarakas Declaration”).

<sup>7</sup> *Id.* at Tables 5 & 6.

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capacity BDS services would lead to lower prices, consistent with the record’s finding that competition is inadequate to discipline incumbent LEC behavior.

Notably, the supplemental data filed by cable companies on their hybrid fiber-coax facilities (“HFC”) does not change the conclusion that there is inadequate competition in the vast majority of geographic markets for BDS. A new analysis conducted by the Brattle Group, as described in the attached Further Supplemental Declaration of William P. Zarakas, accounts for the supplemental cable data. It reveals that even after including these data, and assuming that cable HFC facilities represent real BDS competition (which they generally do not), four or more competitors are present in only 1.4 percent of census blocks, whereas 91 percent of census blocks are served by only a monopoly or a duopoly. Further expansion of HFC networks to locations beyond those reported in the supplemental data would still leave the vast majority of the marketplace insufficiently competitive, as other analyses, including the Commission’s own,<sup>8</sup> have shown. Moreover, regardless of how many locations HFC networks eventually may reach, cable companies uniformly report that their networks are simply incapable of delivering Ethernet over hybrid fiber-coaxial cable (“EoHFC”) services at scale—and that the eventual upgrade to a DOCSIS 3.1 standard will not resolve this problem.

Faced with overwhelming evidence that the overall BDS marketplace is inadequately competitive, some incumbent LECs now, incredibly, ask the FCC to exempt BDS purchased by their wireless competitors from the FCC’s new rules. The Commission should reject this transparent attempt to undermine wireless competition. BDS reform is critical to the Nation’s 5G future, and the inadequate competition and anticompetitive behavior that characterize the

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<sup>8</sup> See *BDS Order & FNPRM* ¶¶ 221-223.



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BDS marketplace as a whole produce unjust and unreasonable rates, terms, and conditions for wireless purchasers specifically.

To ensure that rates, terms, and conditions, are just, reasonable, and nondiscriminatory, the Commission must repair its broken BDS regulatory system. A wide range of commenters agree with Sprint that the Commission's new approach should include four essential elements.

*Two-tiered Competitive Analysis.* First, the FCC should adopt a two-tier competitive analysis that reflects differences in BDS products. Specifically, the Commission should recognize that sufficient competition for BDS products at or below 50 Mbps is essentially non-existent, and that competition is unlikely to develop for these services. It should therefore establish a presumption that these services are non-competitive. Competition for BDS above 50 Mbps varies more by geography, but remains non-competitive for the vast majority of the country. The FCC should therefore apply a competitive market test ("CMT") to BDS above 50 Mbps to identify specific areas where competition is adequate to restrain unjust and unreasonable behavior.

*Competitive Market Test.* Second, the CMT should analyze actual and potential competition. Specifically, the test should deem census blocks or adjacent census blocks where four or more companies reported connections to be competitive, and those with fewer than four such companies to be inadequately competitive.

A range of commenters agree that the Commission should administer the CMT by census block. While the relevant geographic market for BDS remains the customer location, administration by census block will reduce administrative burden for the Commission. Using census blocks also conservatively accounts for potential competition by assuming that BDS providers will extend nearby networks to serve new locations in response to price increases. The

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Commission could also examine adjacent census blocks as the appropriate geographic area to apply the CMT which would further reduce administrative burdens and conservatively account for potential competition.

The record also supports a CMT that analyzes whether four or more companies report connections in each census block or adjacent census blocks. Declarations submitted by a variety of economists demonstrate that the BDS market requires four actual or potential competitors to produce adequate competition. Commenters also show that while measuring connections conservatively accounts for nearby potential competition, measuring the presence of mere fiber would inaccurately and arbitrarily sweep in huge areas of the country where there is no competition and no promise of competitive entry. Furthermore, numerous commenters demonstrate that the CMT should consider only services in the BDS product market, and reject arguments from incumbent LECs that attempt to skew results by including services that are not substitutes for BDS, including best efforts services, wireless backhaul, unbundled network elements (“UNEs”), and the vast majority, if not all, of cable EoHFC services.

*Price Remedies.* Third, the record supports different FCC price remedies for TDM and Ethernet BDS. For TDM services, Verizon, Windstream, competitive BDS providers, and Sprint support a one-time price reduction of the existing TDM price cap indices to account for the long time gap since the system last accounted for productivity gains. Furthermore, a broad group of commenters, including Verizon, agree that the FCC should adopt a going-forward X-Factor of at least 4.4 percent.

For Ethernet BDS, the record supports an FCC decision to establish a safe-harbor pricing system in geographic markets deemed non-competitive. Verizon and Sprint agree that this system should establish benchmarks at rates that will be presumed just and reasonable, subject to

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an expedited challenge process. If a seller prices at or below the benchmark, the buyer should have the burden of proving that the rate is unjust and unreasonable. If a seller prices above the benchmark, the seller should have the burden of proving that the rate is just and reasonable. Sprint's initial comments described one of several possible methods for setting initial benchmark rates, but the Commission should consider other worthwhile proposals that ensure just and reasonable rates. Sprint has also demonstrated that the FCC should reduce these initial rates by 4.4 percent per year going forward to account for productivity gains.

*Competitive Backstops.* Fourth, the record supports FCC rules that establish competitive backstops in all geographic markets to ensure just and reasonable behavior. Specifically, the Commission should: (a) confirm that wholesale rates must be lower than retail rates in order to be just and reasonable; (b) apply the rules for non-competitive markets to multi-location contracts that cover locations in competitive and non-competitive census blocks; (c) confirm that setting higher prices for BDS sold to wireless carriers, or disqualifying wireless backhaul from certain rate plans, violates the Communications Act; and (d) adopt rules that prohibit unjust and unreasonable terms and conditions.

Finally, cable companies and a small group of ILECs argue that the Commission lacks authority to adopt a new BDS framework. They are incorrect. As described in these reply comments, the Commission has broad authority to regulate BDS under Title II of the Communications Act. Specifically, the FCC can regulate cable-provided Ethernet services, which are common carrier services and not private carriage. Furthermore, the Commission can apply the Ethernet safe harbor approach without the need to find that cable companies are dominant providers. And while CenturyLink and Frontier argue that the FCC cannot partially reverse forbearance "deemed granted" to Verizon without an act of Congress, this is plainly

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incorrect—and even Verizon would not oppose this action. The FCC can also require carriers to disclose their rates, even if it decides to detariff TDM services, and can adopt competitive backstops to ensure wholesale rates are just and reasonable.

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	)	
AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593

**REPLY COMMENTS OF SPRINT CORPORATION**

Sprint Corporation (“Sprint”) hereby submits these reply comments in response to the comments filed regarding the Tariff Investigation Order and Further Notice of Proposed Rulemaking released by the Federal Communications Commission on May 2, 2016 in the above-captioned proceedings.

**I. INTRODUCTION**

The record in response to the *BDS Order & FNPRM* reflects a growing consensus among BDS purchasers, competitive wireline and wireless providers, public interest groups, and even some incumbent LECs. These comments express the urgency of addressing the lack of competition in the BDS marketplace, and growing agreement on the approach the FCC should take to achieve that goal.

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In Section II of these reply comments, Sprint explains that the BDS marketplace is insufficiently competitive. The record demonstrates that the FCC should analyze actual and potential competition by measuring the number of connections in a census block, and that the mere presence of fiber is an unreliable and arbitrary metric. The record is also clear that best efforts, fixed wireless, UNEs, and the vast majority, if not all, of cable EoHFC services, are not in the same product market as BDS. An analysis of competition informed by these principles supports two key findings. First, the marketplace for BDS at and below 50 Mbps is insufficiently competitive in the overwhelming majority of the country, and that competition for these services is unlikely to develop in the future. Second, competition for BDS above 50 Mbps varies with geography, although the large majority of the country remain insufficiently competitive. Furthermore, supplemental filings by cable companies on HFC networks has no material impact on these findings.

In Section III, Sprint explains why the Commission should reject the self-serving call of some incumbent LECs to undermine wireless competition. Wireless backhaul should not be excluded from BDS reform. Quite the contrary: prompt action on BDS reform is an essential component of the Commission's agenda to unleash 5G services.

Section IV demonstrates that the record supports the CMT Sprint proposed in its opening comments. The Commission should deem census blocks where four or more companies reported connections as competitive, and refrain from applying pricing regulation in these areas. In the alternative, the Commission could measure competition within adjacent census blocks. Contrary to the arguments of the incumbent LECs, the Commission's test cannot rely on the mere existence of fiber to measure competitive presence, and should not assume the mere presence of one competitor is sufficient to discipline incumbent LEC pricing.



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Finally, in Section V Sprint explains that the Commission has the authority to adopt these proposals, and should reject legal arguments raised by cable operators and certain incumbent LECs.

**II. THE RECORD DEMONSTRATES THAT COMPETITION FOR THE PROVISION OF MOST BDS SERVICES DOES NOT DISCIPLINE PRICES AND PRACTICES**

The initial comments in this round of the Commission’s BDS reform proceeding once again confirm that competition does not discipline rates, terms, and conditions for the overwhelming majority of BDS offerings. As set forth below, claims that competition exists for BDS across all transmission speeds and geographic areas are without merit. These allegations are refuted by the data collected by the Commission, multiple economic analyses, and substantial other evidence submitted in the record. The Commission should “follow the facts where they lead,”<sup>9</sup> and implement reforms that will ensure that rates are just and reasonable for every BDS offering.

**A. The Commission Must Construct an Accurate Framework for Assessing Competition**

The Commission’s assessment of the competitiveness of the BDS marketplace must be based on an accurate identification of the relevant services in a defined geographic area. To ensure accuracy, the Commission must reject incumbent LECs’ continued insistence that the FCC corrupt its analysis by including services that plainly are not substitutes for BDS offerings

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<sup>9</sup> Comments of AT&T Inc. at 2 (“AT&T Comments”). Unless otherwise indicated, all comments referenced herein were filed in WC Docket No. 16-143 on June 28, 2016.

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in the relevant product market, and by considering the mere presence of a fiber facility anywhere in a census block or tract to represent full-fledged competition.<sup>10</sup>

As Windstream observes, “it is important that the Commission base its determination on the presence of actual competition” in order to “avoid perpetuating mistakes of the past.”<sup>11</sup> The Commission already has carried out “two failed efforts to draw the line successfully between competitive and non-competitive areas—the 1999 *Pricing Flexibility Order* and the *Packet Forbearance Order*”<sup>12</sup>—that based analysis of the market on proxies for competition instead of competition itself. The Commission laudably now has committed to creating a “new path forward.”<sup>13</sup> The first step in establishing that path is the adoption of an analytical framework that abandons the erroneous predictive approaches of the past and, instead, measures competitive rivals that actual compete today—or are likely to compete in the near future—with the incumbent LEC BDS offerings.<sup>14</sup>

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<sup>10</sup> *Id.* at 36-41; *see also* 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, WC Docket No. 05-25, at 32 (filed June 28, 2016) (“IRW Second White Paper”) (“Our proposed CMT accounts for all facilities capable of providing broadband services to businesses. These facilities include copper, fiber, HFC, and fixed wireless facilities (to the extent reported in the 2013 SADC)[.]”); Declaration of Eric Sandman at n.1, attached to Comments of Lightower Fiber Networks I, LLC, Lightower Fiber Networks II, LLC, and Fiber Technologies Networks, LLC (“Lightower Comments”) (counting as “a competitor a company that has fiber within 0.5 miles of a Lightower customer location and . . . cable company broadband . . . if it is in the same census block”).

<sup>11</sup> Comments of Windstream Services, LLC at 21 (“Windstream Comments”).

<sup>12</sup> *Id.* at 22.

<sup>13</sup> *BDS Order & FNPRM* ¶ 4.

<sup>14</sup> *See, e.g.*, Windstream Comments at 23 (In light of the Commission’s authority to exercise forbearance in areas where regulation is no longer necessary, “it makes much more sense for the Commission to tailor its competitive test to the presence of actual competition, and then to remove rules when actual competition is present, rather than designating broad areas as competitive on the hope that technological evolution will increase actual competition.”).

**1. The Number of Competitors Offering BDS Connections—and Not the Mere Presence of Fiber—Is the Correct Measure of Competition**

BDS connections are the correct measure of a competitor’s ability to offer a substitute BDS service to an existing or future customer quickly enough to discipline prices. Nevertheless, in the most recent round of comments, a number of parties again suggest that the mere presence of a fiber facility in proximity to a customer location is equal to a company with actual customers,<sup>15</sup> and must be included in the Commission’s competitive assessment of a particular geographic area.<sup>16</sup>

AT&T, for example, describes competition in the provision of BDS as “robust and ubiquitous” because “virtually all buildings with special access demand [a]re either connected to, or within one half mile of, competitive fiber.”<sup>17</sup> The close proximity of these fiber facilities means that “any attempt by competitors . . . to charge above competitive prices will induce other competitors to compete for those customers and build their own connections to the building.”<sup>18</sup> Therefore, in AT&T’s view, “existing competitive facilities are materially constraining prices virtually everywhere there is special access demand.”<sup>19</sup> While AT&T focuses on nearby fiber in

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<sup>15</sup> See AT&T Comments at 2, 11-12, 51-52; Comments of The National Cable & Telecommunications Association at 44-45, 70-71 (“NCTA Comments”); Comments of The Fiber to the Home Council Americas at 12-14 (“FTTH Council Comments”).

<sup>16</sup> As Sprint has described in past filings, the individual location is the appropriate geographic area at which to assess competition. As described in more detail below, however, Sprint suggests that the Commission could measure competition at the census block or adjacent census block level in order to fully address arguments regarding potential competition and enhance the administrability of the CMT. See discussion *infra* at Section IV.C.

<sup>17</sup> AT&T Comments at 2.

<sup>18</sup> *Id.* at 52 (quoting Declaration of Mark Israel, Daniel Rubinfeld, and Glenn Woroch at 11-12, attached to Reply Comments of AT&T Inc., WC Docket No. 05-25 (filed Feb. 19, 2016; revised public version submitted on Apr. 7, 2016)).

<sup>19</sup> *Id.* at 2.

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the ground, others urge the Commission to expand its analysis of potential competition to include even more speculative factors. For example, NCTA argues that “competition cannot refer merely to existing nearby fiber,” so the Commission “must assume that *additional nearby fiber* can be deployed along the same or similar routes.”<sup>20</sup>

The record demonstrates that the assertion that “fiber presence equals competition” is baseless and must be rejected. As the Joint CLECs observe, “significant barriers to entry prevent competitive carriers from deploying connections to most locations.”<sup>21</sup>

The Commission cannot assume that a company with fiber can extend a last-mile lateral from any location along a fiber route quickly and inexpensively enough to discipline prices. In fact, constructing such a lateral is difficult and expensive, and cannot occur at any point along a fiber strand. To begin with, the provider must have a splice point located in close proximity to a customer location in order to provide a feasible interconnection point for a BDS offering.<sup>22</sup>

Operators of fiber links do not install splice points in every census block. TDS, for example,

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<sup>20</sup> NCTA Comments at 71 (emphasis added).

<sup>21</sup> Comments of Birch Communications, Inc., EarthLink, Inc., and Level 3 Communications, LLC at 4 (“Joint CLEC Comments”); *see also, e.g.*, Windstream Comments at 6 (“The record is also clear that there are high barriers to further entry and expansion to additional locations, even within the same census block: Last-mile fiber deployments are subject to multiple high hurdles including a need to aggregate sufficient potential revenue at a location to justify entry that precludes entry to serve customers at many different service tiers.”).

<sup>22</sup> *See, e.g.*, Joint CLEC Comments at 50 (“The fact that a competitor has deployed fiber that runs near to a building does not mean that the competitor has a splice point near enough to deploy a connection to a customer.”); Comments of INCOMPAS at 8 (“INCOMPAS Comments”) (quoting the Commission for the proposition that “[t]he distance to a fiber splice point, as opposed to fiber in general, is an important determining factor in build/buy decisions”); Letter from Tamar E. Finn, Counsel, TDS Metrocom, LLC, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25, at 8 (filed Mar. 24, 2016) (“TDS *Ex Parte*”) (“TDS CLEC has established that the critical distance in determining whether it is economical to construct fiber to reach a prospective customer is the distance to the nearest splice point, not the distance to the nearest point on the fiber[.]”).

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estimates that it has splice points in only a small fraction of the census blocks that its fiber facilities traverse.<sup>23</sup> Assuming that a competitor can build a lateral from any point on its fiber would represent a misunderstanding of the technology and the network.

Moreover, even the existence of a splice point by no means indicates that BDS can be deployed to every consumer in a census block. If the fiber facility in a census block is a long-haul transmission circuit, the closest splice point may be as far as a mile and a half away from the fiber location nearest the customer.<sup>24</sup> In this common scenario, extending a lateral would be costly, time consuming, and could undermine the operator's primary business—the operator of such a facility would have to weigh the prospect of new BDS sales against the increase in the number of potential failure points caused by the installation of new splice points along a long-haul route.<sup>25</sup>

Even if the fiber itself passes close to a potential customer location, the splice point still may not be sufficiently near that location to make the construction of a lateral economically viable.<sup>26</sup> Fiber operators would still face substantial costs and other barriers to deploying BDS to

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<sup>23</sup> See Third Declaration of Matthew J. Loch ¶ 9 (“Loch Third Decl.”), appended as Attachment A to Reply Comments of TDS Metrocom, WC Docket No. 05-25 (filed Feb. 19, 2016) (“Although we have fiber in hundreds of census blocks, TDS CLEC only has splice points in approximately 10% of the census blocks that its fiber ring runs through.”); TDS *Ex Parte* at 9 (“[N]one of the ILECs have offered any evidence as to the number of census blocks with CLEC splice points or the proximity of customers to CLEC splice points.”).

<sup>24</sup> Declaration of Ed Carey ¶ 9(a) (“Carey Decl.”), attached as Exhibit A to Opposition to ILEC Direct Cases of Sprint Corporation, WC Docket No. 15-247 (filed Feb. 5, 2016).

<sup>25</sup> See Loch Third Decl. ¶ 4; TDS *Ex Parte* at 10.

<sup>26</sup> See, e.g., Comments of Cox Communications, Inc. at 11 (“Cox Comments”) (“Cox must ensure that the costs of extending its fiber network, which often include the costs of trenching to the building, can be recovered by the potential financial benefits of the deployment.”); Joint CLEC Comments at 23 (“[T]he construction feasibility limit must be ‘measured from a splice point on Level 3’s transport network, not merely from any point along the relevant fiber route.’”) (quoting the Second Declaration of John Merriman on Behalf of Level 3

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serve a customer location,<sup>27</sup> a fact that the Commission repeatedly has acknowledged and that ultimately renders the distances for competitive buildout, as the Commission has found, “quite short.”<sup>28</sup> A provider, for example, must incur “significant” costs when it “deploy[s] the physical fiber infrastructure into the underground conduit to a particular location.”<sup>29</sup> Sprint previously has shown that these construction costs can amount to \$400 per foot for a simple lateral and up to

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Communications, LLC ¶ 5, attached as an Appendix to Joint CLEC Comments); Comments of TDS Metrocom, LLC at 14 (“TDS Comments”) (“[T]he presence of TDS CLEC fiber in a census block does not establish TDS CLEC’s ability to extend a lateral to a business customer in that block on an economical basis.”); Windstream Comments at 30 (“The level of demand in a particular building . . . informs the calculus of a nearby provider as to whether to expand supply to that location. The nearby provider is likely to remain a mere would-be competitor if the customer location is not likely to generate sufficient revenue. Most locations would not present a sufficient revenue opportunity.”).

<sup>27</sup> See, e.g., Declaration of Dan Deem, Douglas Derstine, Mike Kozlowski, Arthur Nichols, Joe Scattareggia, and Drew Smith ¶ 51, appended as Attachment A to Comments of Windstream Services, LLC, WC Docket No. 05-25 (filed Jan. 27, 2016) (“Deem *et al.* Decl.”); Windstream Comments at 30 (“A nearby competitor must surmount high barriers to entry to become an actual competitor. These barriers include not just the cost associated with building a fiber ring and laterals, but also the availability of a close enough splice point at which to access the fiber, the cost of obtaining building access and access to necessary rights of way to a particular location, the cost of obtaining local construction permits, and the substantial delay that can accompany all of these items.”).

<sup>28</sup> See *BDS Order & FNPRM* ¶ 211; see also *id.* ¶ 227 (“[C]urrent barriers are sufficient to deter new construction in most business locations.”); *Petition of Qwest Corporation for Forbearance Pursuant to 47 USC § 160(c) in the Phoenix, Arizona Metropolitan Statistical Area*, Memorandum Opinion and Order, 25 FCC Rcd. 8622, ¶ 84 (2010) (“*Qwest Forbearance Order*”) (discussing the “extensive economic barriers to the construction of last-mile facilities” and concluding that “nothing in the record . . . indicate[s] that, in the years since the passage of the 1996 Act, these barriers have been lowered for competitive LECs”); *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, 18 FCC Rcd. 16978, ¶ 305 (2003) (discussing barriers to entry “even where a competitive carrier may be ready, willing, and otherwise able to self-deploy the loop”).

<sup>29</sup> *Unbundling Access to Network Elements; Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Order on Remand, 20 FCC Rcd. 2533, ¶ 150 (2005) (“*TRRO*”).

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twice that amount for a customer location that requires redundancy.<sup>30</sup> Further, installation of the electronics needed at the customer’s premises to “light” the fiber will add between \$20,000 and \$50,000 or more to the cost of the lateral, depending on the customer’s service requirements.<sup>31</sup> Of course, these figures assume that the potential provider is able to overcome the additional costs, delays, and uncertainties associated with obtaining necessary building permits as well as access to rights of way and customer locations.<sup>32</sup> These cost estimates further assume that the fiber operator has enough fibers available to serve a new customer. If the operator does not have enough fibers, it either must pull new ones or augment the capacity of its equipment.<sup>33</sup> These improvements alone cost tens of thousands of dollars and may even run into the hundreds of thousands of dollars.<sup>34</sup> Finally, because the extension of BDS services is accomplished location-by-location, the end user purchasing the service must be willing and able to wait for the construction to be completed and pay some or all of the construction costs.

In addition to this significant record evidence regarding the many barriers to last-mile construction and deployment, the lack of competition in the BDS marketplace itself refutes the claim that the presence of fiber represents a viable source of potential competition. The Joint CLECs’ analysis of the fiber deployment data found that there were more than one million census blocks with three or more competitors with fiber in which not a single BDS circuit was

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<sup>30</sup> Carey Decl. ¶¶ 9(a)-(b).

<sup>31</sup> *Id.* ¶ 9(c).

<sup>32</sup> *Id.* ¶ 9(e); *see also, e.g.*, Lightower Comments at 14 (“competitive carriers constructing fiber networks incur costs that are not typically incurred by ILECs under similar circumstances, including franchise fees and building access fees”).

<sup>33</sup> *See* Carey Decl. ¶ 9(d) (discussing dense wave division multiplexing to augment capacity).

<sup>34</sup> *Id.*

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purchased, and more than 540,000 census blocks with four or more competitors with fiber in which no customer purchased even a single BDS circuit as of 2013. In light of the “failure to provide a compelling explanation for why so little CLEC fiber is actually employed to serve nearby customers,” Dr. Sappington appropriately calls into question “[t]he credibility of the . . . assertion that fiber deployment implies effective competition.”<sup>35</sup> Indeed, if fiber presence were sufficient, “this proceeding would be largely unnecessary because potential competition would have already prevented incumbent LECs from offering their BDS at supra-competitive rates and on anticompetitive terms and conditions.”<sup>36</sup>

In short, the record demonstrates that reliance on the mere presence of fiber facilities as a reliable indicator of the availability of competing BDS offerings would be as misguided as the FCC’s previous attempts to distinguish between competitive and non-competitive areas for purposes of granting pricing flexibility to incumbent LECs.<sup>37</sup> As Windstream notes, the Commission’s prior decisions to “eschew[] relying on actual competition and instead ma[ke] predictions about the development of competitive markets that were not grounded in data or economic analysis” resulted in supracompetitive BDS prices that the incumbent LECs could

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<sup>35</sup> Declaration of David Sappington ¶¶ 24-25, appended as Attachment 1 to Reply Comments of Sprint Corporation, WC Docket No. 05-25 (filed Feb. 19, 2016; revised public version submitted Apr. 11, 2016) (“Sprint Feb. Reply Comments”); *see also, e.g.*, Windstream Comments at 19 (“The ILECs’ lack of fiber deployment outside of their territories likewise reveals the impracticability of most competitive overbuilds in the last mile.”).

<sup>36</sup> Comments of Public Knowledge, Open Technology Institute at New America, Common Cause, Next Century Cities, Engine, and Schools, Health & Libraries Broadband Coalition at 9 (“Public Knowledge *et al.* Comments”).

<sup>37</sup> *See, e.g., id.* at 5, 9-10 (“If the FCC relies on the presence of competitive fiber in a census block as a proxy for effective BDS competition, it risks repeating the same mistake it made when it adopted its flawed pricing flexibility triggers for BDS.”).



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“wield . . . as a club against rivals in adjacent markets.”<sup>38</sup> The FCC need not make the same mistake twice.

A much more accurate indicator of actual and potential BDS competition is the number of providers with a connection in a census block, an approach supported by multiple parties in this proceeding.<sup>39</sup> Use of this metric avoids the need to address whether there is a workable splice point and also establishes that the impediments to deployment in the census block are not insurmountable, because it provides real evidence that a specific potential competitor was able to surmount these barriers in a specific geographic area.<sup>40</sup> Consequently, reliance on connections in a census block provides not only a reliable measure of actual competition in customer locations in an area, but also a reliable indication of potential competition in the form of a nearby provider building out to serve locations where there is no competition today. Alternatively, the Commission could rely on the number of connections in adjacent census blocks, which would still provide a more reliable measurement of competition than the mere presence of nearby fiber.

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<sup>38</sup> Windstream Comments at 22-23; *see also, e.g.*, Comments of NASUCA and the Maryland People’s Counsel at 21 (“NASUCA/MPC Comments”) (“It would dissuade consumers and competitors for the FCC to base its decision today on speculation about tomorrow’s developments.”).

<sup>39</sup> *See* Joint CLEC Comments at 50-51 (“[T]he presence of connections to nearby customer locations is a better means of measuring competitors’ ability to deploy connections than the available alternatives.”); INCOMPAS Comments at 8 (arguing that “the number of facilities-based providers in the census block” should be the relevant measure).

<sup>40</sup> *See, e.g.*, Joint CLEC Comments at 7-8 (“The most appropriate way of assessing whether a competitor can serve a building is to determine whether the building is close enough to a splice point on the competitor’s network that the competitor can profitably deploy a connection to the customer. . . . [U]nless and until such data are available, the Commission should instead assess a competitor’s ability to deploy a connection to a location based on whether the competitor has already deployed a connection within the vicinity of the customer’s building.”); TDS Comments at 13-14 (“In the absence of splice point data, actual connections are a reasonable proxy for splice points because most providers deploy connections from nearby splice points.”).

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To be sure, this method of assessing competition is not “perfect,”<sup>41</sup> but it errs on the side of less regulation. This is the case because the use of connections in a census block as a measure of competition will often overstate the availability of competitive alternatives to BDS customers in a census block. The fact that four providers may have a connection to *any* single location in an area (such as a multi-floor office building) clearly does not mean that these companies can serve *every* location, such as an end user at the other edge of the same census block, as this assessment would assume. For the same reasons, proceeding on the basis of the number of connections across adjacent census blocks would produce a CMT that is even more conservative in its effort to limit regulation. But, any framework the Commission adopts to assess competition for each BDS marketplace in the United States inevitably will fail to capture the state of competition perfectly in every instance. Therefore, the Commission should adopt criteria for analyzing a marketplace at the most granular level that is both reliable and administratively feasible. As discussed in more detail below,<sup>42</sup> counting the number of providers with a BDS connection in a census block or in adjacent census blocks accomplishes those goals, and can form the basis for a competitive market test that the Commission and sellers can readily implement.

### **2. The Commission Should Reject Attempts to Include Services That Are Not Substitutes for BDS in its Competitive Assessment**

The Commission’s competitive assessment of the BDS marketplace must include all services that are reasonable substitutes for TDM and Ethernet BDS and exclude those that are not. The inclusion of non-substitutable services would overstate the availability of rival offerings and lead to the erroneous designation of areas as competitive that are actually non-

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<sup>41</sup> See Joint CLEC Comments at 50.

<sup>42</sup> See *infra* Section IV.

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competitive. As a result, customers located in those areas would be forced to continue paying unjust and unreasonable BDS rates—precisely the circumstance that the Commission is committed to correcting in this proceeding. As discussed below, in performing its competitive assessment of the BDS marketplace, the Commission therefore should exclude from its analysis “best efforts” broadband offerings, fixed wireless, UNEs, and, in most cases, EoHFC.

*Best Efforts.* The Commission should not consider best efforts broadband offerings to be part of the BDS marketplace. As Drs. Besen and Mitchell previously established, “services provided on a ‘best-efforts’ basis are not regarded by most purchasers as substitutes for special access dedicated circuits at guaranteed service levels.”<sup>43</sup> Best efforts services lack many of the key features and minimum attributes of BDS offerings, including the “reliability and symmetry that customers seek when they purchase specialized dedicated circuits.”<sup>44</sup> As Windstream correctly observes, the distinctions between BDS and best efforts are “apparent in the different offerings of providers . . . [and] in the difference in price that providers are able to charge.”<sup>45</sup> As Comcast explains, because best efforts services are “offered with asymmetrical download and upload speeds [and] . . . without [service level agreements] providing availability or performance guarantees,” these services “are priced very differently than dedicated services with [service level agreements] and are not considered competitive substitutes by customers.”<sup>46</sup>

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<sup>43</sup> Besen/Mitchell Decl. ¶ 16; Baker Jan. Decl. ¶ 31 (“Most customers of dedicated services would not substitute . . . a service provided over best efforts broadband in response to a small increase in the price of dedicated services, and few would substitute from best efforts broadband to dedicated services in response to a small decrease in the price of dedicated services.”).

<sup>44</sup> NASUCA/MPC Comments at 15-16.

<sup>45</sup> Windstream Comments at 25-29.

<sup>46</sup> Comments of Comcast Corporation at 10-11 (“Comcast Comments”).

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The Commission itself has recognized these distinctions, highlighting the “dedicated symmetrical transmission speeds [and] performance guarantees” typical of BDS that best efforts offerings fail to provide.<sup>47</sup> Cable operators confirm that the Commission’s analysis is correct. Cox explains that its best efforts services are ““shared among multiple users absent service guarantees, and [are] subject to failure during congestion period[s].””<sup>48</sup> As NCTA observes, best efforts services are suited for “asymmetric Internet access,” and not “higher quality dedicated services” or “point to point applications.”<sup>49</sup> As Comcast concludes, “[t]hese critical distinctions—and the accompanying price differences between BDS and best-efforts services—demonstrate that best efforts services are ‘not . . . in the same product market or markets as BDS.’”<sup>50</sup>

In short, the record fully supports the Commission’s conclusion that “BDS is distinctly different from . . . ‘best efforts’ broadband Internet access services.”<sup>51</sup> While a number of incumbent LECs make claims to the contrary,<sup>52</sup> their arguments are both self-serving and

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<sup>47</sup> *BDS Order & FNPRM* ¶ 13. Elaborating on this point, the Commission proceeds to list the various “performance guarantees” that usually accompany BDS, including “guarantees for traffic prioritization, guarantees against certain levels of frame latency, loss, and jitter to support real-time IP telephony and video applications, [and] guarantees on service availability and resolving outages.” *Id.* By contrast, the Commission describes best efforts as “an asymmetrical service . . . shared among multiple users absent service guarantees.” *Id.* ¶ 14. As such, it is “subject to failure during high congestion periods.” *Id.*

<sup>48</sup> Cox Comments at 16 (quoting *BDS Order & FNPRM* ¶¶ 13-14).

<sup>49</sup> NCTA Comments at 9.

<sup>50</sup> Comcast Comments at 30 (quoting *BDS Order & FNPRM* ¶ 191).

<sup>51</sup> *BDS Order & FNPRM* ¶ 13.

<sup>52</sup> AT&T Comments at 44-47 (“‘[B]est efforts’ services offered by cable companies must be included within the definition of BDS.”); Joint Comments of CenturyLink, Inc., Consolidated Communications, Fairpoint Communications, Inc., and Frontier Communications Corp. at vi, 35-48 (“Mid-Size ILEC Comments”) (“The Commission must consider the important role played in the marketplace by so-called ‘best efforts’ cable offerings.”); Comments of

ineffective. For example, USTelecom, based on an online survey of employees at small and medium businesses, contends that many customers do not believe that “‘best effort’ Internet service is in a different product market than BDS.”<sup>53</sup> However, even the cursory explanation offered by USTelecom of the survey’s methodology reveals that this study is flawed,<sup>54</sup> and the results themselves are far from compelling. In any event, the survey does not shift the weight of evidence demonstrating that the vast majority of customers that purchase BDS do not perceive best efforts offerings as adequate substitutes to satisfy their service requirements. Indeed, as repeatedly noted since 2013, Sprint does not purchase best efforts wholesale offerings to serve its enterprise customers.<sup>55</sup> Moreover, as the cable companies explain, purchases of dedicated Ethernet services **\*\*\*BEGIN HIGHLY CONFIDENTIAL\*\*\*** [REDACTED]

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Hawaiian Telcom, Inc. at 2-4 (The Commission should “include all best efforts services” as part of the BDS market.); IRW Second White Paper at 34-37 (“[W]e . . . disagree with the proposal to exclude ‘best efforts’ services offered by cable companies over their HFC facilities from the definition of BDS[.]”).

<sup>53</sup> Comments of the United States Telecom Association at 13-17, 30 (“USTelecom Comments”); *see also, e.g.*, Comments of ITTA—The Voice of Mid-Size Communications Companies at 11 (“ITTA Comments”) (“best efforts broadband services are increasingly viewed by customers, particularly small businesses, as a viable substitute for incumbent LEC business data services”).

<sup>54</sup> As USTelecom’s own marketing consultant explains, “the self-selected nature of opt-in online panels” means that USTelecom’s sample “cannot technically be considered to be representative of a population of interest.” USTelecom Comments at 30.

<sup>55</sup> *See* Comments of Sprint Nextel Corporation at 21-22, WC Docket No. 05-25 (filed Feb. 11, 2013) (“Sprint is familiar with best efforts offerings that are provided over HFC networks and has found those services to be unsuitable for its wireless macrocell-site backhaul needs or as wholesale inputs to the core retail services it sells to its enterprise customers. . . . Consequently, Sprint does not purchase best efforts services[.]”); Sprint Jan. Comments at 13-14 (“Sprint, as a wholesale purchaser of Ethernet to serve business customers, does not purchase best efforts Ethernet service.”); Sprint Feb. Reply Comments at 15 (“[T]hese characteristics make it easy to understand why Sprint, as a wholesale purchaser of Ethernet, does not purchase best efforts Ethernet service, including those offered by cable companies.”).



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best-efforts broadband Internet access services, are offered.”<sup>62</sup> When providers of both best efforts broadband (*e.g.*, Comcast) and BDS (*e.g.*, Level 3) fully separate the two types of service, it is clear that they are not competitive substitutes.

*Ethernet over Hybrid Fiber-Coaxial.* The record confirms that EoHFC offerings are generally akin to best efforts offerings. The record also confirms that EoHFC can only serve as an alternative to BDS in the limited circumstances where a cable company will guarantee performance with service level agreements (“SLAs”) comparable to those provided with BDS services.<sup>63</sup> The reasons are clear: EoHFC cannot substitute for **\*\*\*BEGIN HIGHLY**

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Indeed, given that EoHFC services currently are limited in capacity to 10 Mbps, they inherently cannot serve as a competitive alternative for high-bandwidth needs.<sup>65</sup>

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<sup>62</sup> Declaration of Chris McReynolds on Behalf of Level 3 Communications, LLC ¶ 7 (“McReynolds Decl.”), attached as Appendix A to Comments of Birch, BT Americas, EarthLink, and Level 3, WC Docket No. 05-25 (filed Jan. 22, 2016).

<sup>63</sup> *See, e.g.*, Cox Comments at 16-19 (“Notwithstanding the Commission’s proposal to include EoHFC in the BDS product market, the lack of performance guarantees renders the service outside the product definition. . . . Indeed EoHFC is much more akin to the best effort Internet services that the Commission correctly excludes from the market and that is provided over the same shared HFC network.”).

<sup>64</sup> **\*\*\*BEGIN HIGHLY CONFIDENTIAL\*\*\*** [REDACTED] **\*\*\*END HIGHLY CONFIDENTIAL\*\*\***

<sup>65</sup> *See, e.g.*, Joint CLEC Comments at 26 (“[W]ith a maximum capacity of 10 Mbps (and sometimes below), Ethernet-over-HFC . . . cannot deliver speeds sufficient to serve many business customers’ locations.”); Letter from Melissa E. Newman, Vice President, Federal Policy and Regulatory Affairs, CenturyLink, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25, at 8 (filed Apr. 8, 2016) (noting that EoHFC “currently provides symmetrical speeds up to 10 Mbps”); Letter from Maggie McCready, Vice President, Federal Regulatory and Legal Affairs, Verizon, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25, at 3 (Mar. 1, 2016) (acknowledging that the bandwidth of EoHFC is “limited to about 10 Mbps”).

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Even when a customer does not have high-capacity requirements, many EoHFC offerings do not meet the strict technical specifications required for BDS. As cable companies themselves explain, EoHFC services typically are not offered with SLAs that guarantee service at relevant performance specifications.<sup>66</sup> Moreover, even when cable companies offer EoHFC with SLAs (or mere performance “objectives”), they typically fall far short of the service level guarantees generally associated with BDS.<sup>67</sup> As Charter notes, EoHFC does not comply with these requirements because **\*\*\*BEGIN HIGHLY CONFIDENTIAL\*\*\*** [REDACTED]

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Importantly, in light of these service limitations, some cable companies go even further, and argue that EoHFC services should not be considered BDS substitutes under *any* circumstances. Cox explains that “EoHFC is not viewed by Cox’s customers as a viable alternative to fiber (or legacy TDM services) for many business applications or for cell site

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<sup>66</sup> See, e.g., Cox Comments at 16 (“Commission’s assertion that EoHFC is often supplied with service reliability guarantees is flatly wrong”); NCTA Comments at 28 (“Ethernet over HFC may be offered without any performance commitments or guarantees for critical parameters such as latency, jitter or packet loss. Rather, the service level agreements (SLAs) in the EoHFC contracts with customers typically include only performance objectives that are not backed by credits should the performance fall below intended levels.”).

<sup>67</sup> See Comcast Comments at 11-12, 35-38; Cox Comments at 7; **\*\*\*BEGIN HIGHLY CONFIDENTIAL\*\*\*** [REDACTED]  
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<sup>68</sup> Declaration of Phil Meeks ¶ 11, attached as Exhibit A to Charter Comments; see also, e.g., Joint CLEC Comments at 25 (EoHFC services “are often subject to high levels of jitter and a relatively low maximum transmission unit.”) (quoting McReynolds Decl. ¶ 22).



backhaul,”<sup>69</sup> because it is “provided over the same shared facilities used to provide Cox’s mass market voice, video and Internet services, sharply limiting offered speeds and precluding guarantees of performance.”<sup>70</sup> As a result, Cox concludes that “EoHFC does not fall within the Commission’s definition of BDS.”<sup>71</sup>

Comcast describes its EoHFC offerings as mere “gap-fillers for customers with hard-to-reach, off-network locations,” and confirms that the “vast majority of businesses seeking Ethernet services demand full carrier-grade performance and SLAs that EoHFC cannot provide.”<sup>72</sup> And with two simple statistics, Comcast brings the ILECs’ hyperbolic claims of an HFC revolution back to reality. As Comcast explains, of all the “business locations Comcast identified in its 2013 special access submission, only approximately **\*\*\*BEGIN HIGHLY CONFIDENTIAL\*\*\*** **██████████** **\*\*\*END HIGHLY CONFIDENTIAL\*\*\*** consisted of EoHFC connections,” and that “percentage has seen minimal growth over time,” reaching just **\*\*\*BEGIN HIGHLY CONFIDENTIAL\*\*\*** **██████████** **\*\*\*END HIGHLY CONFIDENTIAL\*\*\*** as of March 2016.<sup>73</sup>

As NCTA concludes, “cable company HFC networks, which were designed as shared networks to support primarily downstream services to residential customers, have different capabilities than ILEC networks and those network differences affect the usefulness of the

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<sup>69</sup> Cox Comments at 4.

<sup>70</sup> *Id.* at i-ii; *see also, e.g.*, Declaration of Jonathan B. Baker on Competition and Market Power in the Provision of Business Data Services ¶ 28, WC Docket No. 05-25 (filed June 28, 2016; revised public version submitted on July 14, 2016) (“Baker June Decl.”) (describing why EoHFC connections are not substitutes for business data services).

<sup>71</sup> *Id.* at ii.

<sup>72</sup> Comcast Comments at 30-31.

<sup>73</sup> *Id.* at 31-32.

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business services offered over those networks.”<sup>74</sup> Critically, because “DOCSIS 3.1 remains a shared network service,” “there is little likelihood that expected service upgrades, including the deployment of DOCSIS 3.1 will make a difference.”<sup>75</sup>

In light of the cable industry’s own account of the limitations of EoHFC networks, the Commission should not treat EoHFC as a competitive alternative to traditional BDS. Indeed, because the maximum capacity of an EoHFC circuit is approximately 10 Mbps, the Commission must exclude such offerings from any competitive analysis involving higher-capacity BDS offerings (*i.e.*, above 10 Mbps). With respect to lower-capacity offerings, the Commission could, at most, confirm that a specific and unusual EoHFC offering actually meets the transmission capacity, service quality, and other technical criteria that BDS requires, and consider such an offering to be an alternative for some lower-capacity BDS offerings.<sup>76</sup> However, the inconsequential impact of this enormous undertaking does not justify the cost and delay it would create. As explained below, even assuming that *all* EoHFC could function as a substitute for BDS, the presence of HFC facilities would not produce a material impact on the Commission’s assessment of competition.<sup>77</sup>

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<sup>74</sup> NCTA Comments at iv, 27-30.

<sup>75</sup> Cox Comments at 18.

<sup>76</sup> *See, e.g.*, TDS Comments at 15-16 (“Nor should the Commission count HFC or all locations potentially served by a MetroE headend as ‘connections’ in a census block.”). In addition, as NCTA notes, “Ethernet over HFC services that contain objectives rather than performance ‘requirements’ or ‘guarantees’ . . . should not be considered within the BDS product market.” NCTA Comments at 28-29; *see also, e.g.*, Joint CLEC Comments at 25-26 (“[U]nless cable companies can provide Ethernet-over-HFC, customers with service level guarantees comparable to those provided to customers of fiber-based PBDS, Ethernet-over-HFC cannot be considered to be in the same market as Business Data Services.”).

<sup>77</sup> *See infra* Section II.B.1.

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*Fixed Wireless.* The record also demonstrates that fixed wireless services are not substitutes for BDS. Nonetheless, a group of commenters asserts that fixed wireless offerings also should be included in the BDS product market.<sup>78</sup> As a practical matter, however, fixed wireless cannot be used to offer services that are realistic substitutes for BDS.

In proposing a definition for BDS, the Commission recognized that BDS offerings involve “prescribed performance requirements that typically include . . . reliability[.]”<sup>79</sup> The record makes clear that fixed wireless services are far from reliable due to “various limitations, including congestion, interference, rain fade, and need for line-of-sight.”<sup>80</sup> These limitations are significant enough that companies like XO and Level 3 “do[] not consider wireless media to have the performance capabilities or sufficient reliability for the provision of [their] Dedicated Services.”<sup>81</sup> As a result, Level 3 aptly notes that fixed wireless services “play only a fringe role in the [BDS] marketplace” and thus do not offer effective competition.<sup>82</sup> In the event that new technologies allow fixed wireless services to emerge as a serious competitor to traditional BDS services, the Commission can account for these developments in subsequent applications of the CMT.

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<sup>78</sup> See AT&T Comments at 16, 42; Mid-Size ILEC Comments at 48-50 (“The Commission must . . . account for fixed wireless and non-traditional providers of BDS.”); FTTH Comments at 2, 19; IRW Second White Paper at 32; NCTA Comments at n.135, 44-45, 67.

<sup>79</sup> *BDS Order & FNPRM* ¶ 279; see also *id.* (also seeking comment on whether the “definition should include minimum performance guarantees, such as 99.99 percent reliability”).

<sup>80</sup> Deem *et al.* Decl. ¶ 35.

<sup>81</sup> Comments of XO Communications, LLC at 25, WC Docket No. 05-25 (filed Jan. 27, 2016); see also McReynolds Decl. ¶ 23 (“Level 3 generally monitors developments in this area, [and it] does not respond to the rates, terms, and conditions offered by providers of these services.”).

<sup>82</sup> McReynolds Decl. ¶ 23.

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*Unbundled Network Elements.* A number of BDS providers seek to skew the Commission’s analysis by erroneously asserting that UNEs should be included in the same product market as BDS and, thus, should be counted as a competitive BDS offering when the Commission performs its competitive assessment in a particular marketplace.<sup>83</sup> For example, CenturyLink and Frontier state that “UNE-based competition plays a significant role in the business broadband marketplace.”<sup>84</sup> Echoing this argument, ITTA asserts that “to the extent incumbent LECs remain under a regulatory obligation to offer UNEs, UNE-based competition should count as part of the business data services product market.”<sup>85</sup>

The record, however, establishes that UNE-based competitors “have limited ability to constrain incumbent LECs’ Business Data Services prices” and should not be considered a competitive presence in the BDS marketplace.<sup>86</sup> As parties have discussed at length, “[c]ompetitive LECs face significant impediments that constrain their ability to compete on an

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<sup>83</sup> See Mid-Size ILEC Comments at 29-30, 44- 48; IRW Second White Paper at 30-31; ITTA Comments at 13-14; AT&T Comments at 39 (failure to include such providers paints an inaccurate portrait of the BDS market by “dramatically understat[ing] the true extent of competition”).

<sup>84</sup> Mid-Size ILEC Comments at 44, 46 (further noting that “the Commission should continue to acknowledge that the availability of UNEs serves to constrain prices in the BDS marketplace”).

<sup>85</sup> ITTA Comments at 14.

<sup>86</sup> Joint CLEC Comments at 9, 41 (further noting that the Commission “should not count competitors that rely on unbundled network element loops to serve the customer”); see also, e.g., Comments of Verizon at 3 (“Verizon Comments”) (Pursuant to their proposed CMT, “no consideration would be given to the use of UNEs.”); Windstream Comments at 34 (“The term ‘competitor’ should not include a provider that has merely . . . provisioned service using UNEs.”). See also Baker June Decl. at n.3 (explaining that those who offer BDS via UNEs are excluded from the definition of BDS providers).

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equal footing with the incumbent LECs,”<sup>87</sup> and the ability to lease access to another provider’s network is “subject to significant limitations.”<sup>88</sup> For example, UNEs only permit service “at a limited number of customer locations and for a limited set of dedicated services.”<sup>89</sup> Moreover, use restrictions prevent UNEs from being purchased by wireless carriers and interexchange carriers, two of the largest categories of BDS purchasers, for the provision of wireless and long distance services. Indeed, the Commission rightly has acknowledged in the past that effective competition comes from providers that own their own facilities.<sup>90</sup> Moreover, as Windstream notes, it would be misguided for the Commission to count UNE-based offerings as “competition” based on the incumbent LECs’ arguments while those same parties “are arguing that they have no duty to provide unbundled DS1 or DS3 capacity loops after migrating to packet-based transmission or to fiber.”<sup>91</sup> Consequently, even Verizon admits that in a proper CMT “no consideration would be given to the use of UNEs.”<sup>92</sup>

**B. BDS at and Below 50 Mbps Is Not Competitive**

The initial comments confirm what the extensive record in this rulemaking already has shown beyond question: competition is either completely absent or woefully insufficient to constrain the practices of incumbent LECs for BDS at and below 50 Mbps at almost every

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<sup>87</sup> Comments of Birch, BT Americas, EarthLink, and Level 3 at 22, WC Docket No. 05-25 (filed Jan. 27, 2016).

<sup>88</sup> *Id.* at 24.

<sup>89</sup> *Id.* at 25.

<sup>90</sup> *See* Besen/Mitchell Decl. ¶ 24 (“The Commission . . . concluded that competition from providers that own facilities is necessary to discipline market prices.”) (citing *Qwest Forbearance Order* ¶ 87).

<sup>91</sup> Windstream Comments at 34.

<sup>92</sup> Verizon Comments at 3.

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location across the nation.<sup>93</sup> As Windstream finds, “[t]he record before the Commission demonstrates what purchasers of business data services know—that large ILECs control the market for business data services.”<sup>94</sup> Indeed, multiple analyses of the data collection conclude that the “overwhelming majority of business locations do not have more than one dedicated connection.”<sup>95</sup> Further, the Commission itself observes that more than 70 percent of locations have only one option, while there are four or more competitors with customer connections in a meager *0.1 percent* of commercial buildings with BDS demand.<sup>96</sup>

Notably, the data also demonstrate that the competitive landscape is equally grim when assessed at the census block level. For example, Drs. Besen and Mitchell found that more than 80 percent of all census blocks with BDS demand are served by only one provider, while four or more competitors are present in only 1.3 percent of census blocks.<sup>97</sup>

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<sup>93</sup> See, e.g., NASUCA/MPC Comments at 19 (“The FCC has gathered ample evidence, and stakeholders have demonstrated unambiguously that ILECs possess market power in their provision of DS1 and DS3 BDS.”); Comments of Competitive Carriers Association at 3 (“CCA Comments”) (“As the Commission has recognized and as the record evidence makes clear, competition for lower-capacity BDS is practically non-existent.”).

<sup>94</sup> Windstream Comments at 9.

<sup>95</sup> *Id.*; see also, e.g., Besen/Mitchell Decl. ¶¶ 25 (Table 1), 26 (demonstrating that the incumbent LEC is the only facilities-based provider of special access services in approximately 73 percent of locations); Baker Jan. Decl. ¶ 44 (showing that more than 77 percent of buildings have only one in-building provider); Declaration of Susan M. Gately on Behalf of Ad Hoc Telecommunications User Committee ¶ 4, appended to Comments of the Ad Hoc Telecommunications User Committee, WC Docket No. 05-25 (filed Jan. 28, 2016) (concluding that incumbent-only locations represent between 71 and 78 percent of total nationwide locations with BDS demand). The concentration measures discussed herein generally relate to BDS offerings of all bandwidths. Because circuits of 50 Mbps or below represent approximately 88 percent of the circuits in the FCC’s dataset, however, these figures plainly illustrate the state of competition for low-bandwidth BDS. Zarakas/Gately Decl. ¶ 17.

<sup>96</sup> *BDS Order & FNPRM* ¶ 220.

<sup>97</sup> Besen/Mitchell Decl. ¶ 27 (Table 2).

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A powerful demonstration that the provision of BDS at and below 50 Mbps remains non-competitive is the recent decision by AT&T and Verizon to announce actual or effective price increases across all geographic areas for these services. For example, Verizon recently proposed to raise DS1 prices for month-to-month offerings as well as term plans.<sup>98</sup> Regardless of purported motive, the fact that Verizon is capable of increasing prices across the board for services for which some incumbent LECs claim to face competition is quite telling. When a company can unilaterally raise its prices across its service area without the fear that other companies will enter the market in response, it faces no meaningful competitive constraints.<sup>99</sup> Clearly, in the marketplace the incumbent LECs are not worried that the cable companies will steal their customers, no matter what they say to the FCC.

Based on this record evidence, the Commission should adopt a low-bandwidth threshold of at least 50 Mbps, at or below which it would assume that services are non-competitive.<sup>100</sup>

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<sup>98</sup> See Verizon Telephone Companies, Tariff F.C.C. Nos. 1, 11, 14 and 16, Transmittal No. 1335, Description and Justification at 4 (July 1, 2016). See also *Ameritech Operating Companies Tariff F.C.C. No. 2, Transmittal No. 1847 et al.*, Petition of Windstream Services, LLC to Reject or Suspend and Investigate at 2 (filed July 8, 2016) (“If allowed to take effect AT&T would, *de facto*, force a huge price increase on wholesale purchasers, and, in turn, on retail customers); *Ameritech Operating Companies Tariff F.C.C. No. 2, Transmittal No. 1847 et al.*, Petition of Birch Communications, Inc., EarthLink, Inc., INCOMPAS, Level 3 Communications, LLC, Sprint Corporation, and Windstream Services, LLC to Reject or Suspend and Investigate (filed July 8, 2016) (explaining that AT&T’s proposed elimination of circuit portability would effectively increase rates for wholesale purchasers).

<sup>99</sup> Verizon’s across-the-board increase also provides additional evidence that the Commission’s existing price caps are insufficient to discipline incumbent LEC pricing.

<sup>100</sup> Letter from Kathleen Grillo, Verizon, and Chip Pickering, INCOMPAS, to Marlene H. Dortch, Secretary, FCC, at 2, WC Dockets No. 16-143 & 05-25 (filed June 27, 2016); see also, e.g., CCA Comments at 3 (“the Commission should adopt a rebuttable presumption that BDS at or below 50 Mbps are not competitive”); NASUCA/MPC Comments at 5 (“the FCC should presume that all BDS service 50 Mbps and below are not competitive”); Comments of Zayo Group, LLC at 6 (“services below 50 Mbps should be presumed to be non-competitive”). Notably, other parties encourage the Commission to adopt an even higher threshold. See, e.g., Joint CLEC Comments at 7 (“the Commission should classify Business

Establishing such a threshold would appropriately “recognize the economic realities of competing with legacy, circuit-switched services.”<sup>101</sup> These well-documented economic constraints make it highly unlikely that the marketplace for lower-bandwidth BDS will become more competitive over time. As the Joint CLECs find, “competitive carriers generally cannot deploy fiber connections to customers that demand Business Data Services with capacity of 100 Mbps or less.”<sup>102</sup> Accordingly, “any measure of potential competition is largely irrelevant [in this context] because carriers are not building out low-capacity services.”<sup>103</sup>

**1. The Presence of Ethernet over HFC Facilities Does Not Alter the Competitive Landscape**

Despite the overwhelming evidence that the marketplace for BDS offerings of 50 Mbps and below is not competitive, some parties argue that the Commission’s analysis of that marketplace “is fundamentally—and fatally—flawed due to the omission . . . of significant information demonstrating the extent to which cable operators have upgraded their networks to

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Data Services of 100 Mbps capacity and below as non-competitive in all geographic areas”); TDS Comments at 12 (“[T]he Commission [should] seriously consider whether to classify all symmetrical bandwidth at or below a minimum speed of 50 Mbps as non-competitive or initially establish that cut-off at 100 Mbps since a 50 Mbps threshold may need to be adjusted upwards within months.”); Windstream Comments at 7 (“Services at or below 100 Mbps—for which there is extremely little likelihood that a fourth (or even third) last-mile facilities-based provider will deploy facilities—are deemed non-competitive in all areas.”).

<sup>101</sup> Comments of the Computer & Communications Industry Association at 7 (“CCIA Comments”).

<sup>102</sup> Joint CLEC Comments at 22; *see also, e.g.*, INCOMPAS Comments at 6 (“There is no realistic prospect that reasonably efficient competitors could deploy connections to serve at or below a certain bandwidth.”); CCA Comments at 3 (“There is little prospect of new entrants for these services.”).

<sup>103</sup> CCA Comments at 9; *see also, e.g.*, Joint CLEC Comments at 22 (“[T]he presence of nearby fiber has virtually no effect on competition at 100 Mbps and below.”).



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support Ethernet services.”<sup>104</sup> According to CenturyLink and Frontier, this “significant information,” which was added to the data enclave after the release of the *Further Notice*, demonstrates that “[c]able operators have a ubiquitous or near-ubiquitous competitive presence in the BDS marketplace via true Metro Ethernet service.”<sup>105</sup>

As an initial matter, claims of cable “ubiquity” are incorrect. As the cable companies explain, “HFC network[s] [are] still overwhelmingly located in residential areas.”<sup>106</sup> More importantly, the mere presence of HFC network infrastructure does not mean that a provider can deploy a BDS-equivalent service throughout an area, much less that a provider can do so quickly, efficiently, and to scale. To the contrary, as the cable industry acknowledges, expansion of EoHFC services faces both buildout and capacity-related barriers.

First, as NCTA explains, “cable companies incur substantial construction costs in expanding their HFC plant to new business locations, just as they do in constructing fiber laterals.”<sup>107</sup>

Moreover, “notwithstanding an existing HFC network presence, it may well not be feasible to provide BDS-level services in many places due to the limited capabilities of the HFC

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<sup>104</sup> Mid-Size ILEC Comments at 39.

<sup>105</sup> *Id.* (further claiming that the new data show that “true Metro Ethernet service” is “available in twenty-two times as many locations as were originally reported”).

<sup>106</sup> Cox Comments at 10; *see also* Comcast Comments at 9 (business district “hyperbuilds” focus on Comcast’s “fiber network”).

<sup>107</sup> NCTA Comments at 29; *see also, e.g.*, Cox Comments at 17 (“EoHFC entails offering a symmetrical service within an asymmetrically designed network. Expanding the amount of shared capacity is an expensive and time consuming process . . . .”); Comcast Comments at 32 (“It would be far more efficient to build new fiber connections than to undertake significant expansions of shared HFC capacity to support dedicated connectivity to business customers.”).

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plant.”<sup>108</sup> Indeed, to avoid undermining lucrative mass-market video and best efforts Internet access services, cable companies must carefully calibrate the extent to which they offer BDS bandwidth. As Cox explains, “[t]he more ‘dedicated’ bandwidth is sold as EoHFC, the less bandwidth ‘headroom’ is available for all of the mass market and small businesses sharing the network and who generate substantially more revenue than EoHFC services.”<sup>109</sup>

In light of the shared architecture of HFC networks, Comcast concludes that EoHFC offerings “would encounter significant capacity constraints if cable operators sought to carry high volumes of dedicated traffic via HFC facilities,”<sup>110</sup> and Comcast’s Vice President for Product Management & Strategy cautions that the company’s “HFC network could not support large-scale growth of EoHFC without eventually impacting residential subscribers of those services.”<sup>111</sup> Thus, even if BDS customers showed interest in increasing their use of EoHFC for limited low-bandwidth applications, the presence of cable network infrastructure in no way means that the cable provider can deliver a legitimate BDS substitute using these facilities throughout a geographic area. Put simply, cable’s “ability to grow this product to scale is capacity-constrained”—and not limited by footprint alone.<sup>112</sup>

Even assuming that the presence of an HFC connection means that a cable company is capable of supplying BDS to all nearby locations, the reach of cable HFC networks would not

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<sup>108</sup> NCTA Comments at 30.

<sup>109</sup> Cox Comments at 17.

<sup>110</sup> Comcast Comments at 5 (further noting that “[i]n order to add significant wholesale BDS traffic to its shared HFC network, Comcast would need to undertake significant expansions of capacity to avoid adverse impacts on the broadband Internet access, video, and voice traffic supported by that network, including impacts on residential subscribers”).

<sup>111</sup> Declaration of John Guillaume ¶ 8, attached as Exhibit C to Comcast Comments.

<sup>112</sup> Comcast Comments at 32.

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materially impact analysis of the *2015 Collection*—or the state of competition going forward. In an attachment to these reply comments, the Brattle Group has revised its analysis of the distribution of BDS providers to include the supplemental cable data. Inclusion of the new cable data does not change the conclusion that the overwhelming majority of census blocks would have two or only one provider of BDS.<sup>113</sup> Specifically, the new analysis demonstrates that four or more competitors are present in only 1.4 percent of census blocks, whereas 91 percent of census blocks are served by one or, at most, two providers.<sup>114</sup> As Mr. Zarakas notes, even these bleak numbers overstate competition, as “the cable companies have made no representation that they actually are providing EoHFC in these census blocks or intend to do so.”<sup>115</sup> Thus, Mr. Zarakas concludes that “the overall conclusion of [his] prior declarations – that there is only one or no more than two BDS providers present in the vast majority of census blocks – is not altered by the inclusion of the supplemental special access data provided by the cable companies.”<sup>116</sup>

Even if the dramatic, sustained and rapid growth in the cable industry’s EoHFC offerings that the incumbent LECs imagine were true—the type of growth the cable companies assert has not occurred<sup>117</sup> and could not possibly occur given the capacity constraints of cable networks<sup>118</sup>—this would not alter the fact that the marketplace for BDS below 50 Mbps is non-competitive. Indeed, the Commission already has fully accounted for even this hypothetical impact by examining the effect of ubiquitous cable service on the competitiveness of the BDS

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<sup>113</sup> See Further Supplemental Zarakas Declaration ¶ 6.

<sup>114</sup> *Id.* ¶ 9 & Table 1.

<sup>115</sup> *Id.* ¶ 5; see also *id.* ¶ 19.

<sup>116</sup> *Id.* ¶ 9.

<sup>117</sup> See *supra* notes 73-75.

<sup>118</sup> See *id.*; see also *supra* notes 108-112.

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marketplace. Even assuming *arguendo* that BDS over EoHFC is available at every single location served by an incumbent LEC and is a realistic alternative to traditional BDS offerings—neither of which are true—the Commission finds that only approximately 1 percent of those locations would be served by four or more competitors.<sup>119</sup> Even at the census block level, the Commission concludes that “it remains true that nearly 70 percent of census blocks with BDS demand have two or fewer competitors capable of serving a unique location in the block.”<sup>120</sup>

Prior to the availability of the supplemental cable data, Sprint provided a similar analysis prepared by William Zarakas that examined the distribution of BDS providers by service locations and census blocks after assuming that cable was present in every building and census block where BDS was reported to be sold. This study shows that there are four or more competitors present in just 0.5 percent of locations with BDS demand and only 2 percent of census blocks with BDS demand.<sup>121</sup> In contrast, customers in 90 percent of locations and 86 percent of census blocks with special access demand would only have two choices.<sup>122</sup>

In short, neither the recently submitted data regarding the presence of cable EoHFC facilities, nor the assumption of ubiquitous deployment of cable EoHFC facilities, materially impact the Commission’s finding that BDS offerings of 50 Mbps and below should be treated as presumptively not competitive. Yet again, the data belie the incumbent LECs’ attempts to

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<sup>119</sup> *BDS Order & FNPRM* ¶ 221 (Table 4).

<sup>120</sup> *Id.* ¶ 222.

<sup>121</sup> See Letter from Jennifer Bagg, Counsel, Sprint Corporation, to Marlene H. Dortch, Secretary, FCC, at 10, WC Docket Nos. 05-25 & 15-247 (“Sprint March 24 *Ex Parte*”); Supplemental Declaration of William P. Zarakas ¶¶ 10, 12, appended to Sprint March 24 *Ex Parte* as Attachment A (“Zarakas March Decl.”).

<sup>122</sup> Sprint March 24 *Ex Parte* at 10; Zarakas March Decl. ¶¶ 9, 12.

overstate the extent and competitive importance of cable entry.<sup>123</sup> The Commission should reject their renewed efforts to further stall BDS reform.

**2. The Record Contains Substantial Empirical Evidence that Reduced Concentration in the Provision of BDS Would Lead to Lower Prices**

The regressions performed by Dr. Rysman, and the separate regressions performed by Dr. Baker, provide empirical evidence demonstrating that the introduction of competition into the BDS marketplace, in the limited locations where such competition exists, results in lower prices. Dr. Rysman concludes that “competitive supply in a unique location is correlated in both statistically and economically significant ways with lower ILEC prices for DS1s and DS3s at that location.”<sup>124</sup> Similarly, Dr. Baker finds that “ILEC prices to end users tend to decline as the number of rivals selling dedicated services increase, and the price decline is generally more pronounced with multiple in-building rivals than with multiple nearby rivals.”<sup>125</sup>

In the most recent comments, several parties challenge these conclusions. Some claim that competitive entry has little impact on prices for BDS, while others contend that Dr. Rysman’s analysis suffers from a fundamental flaw, such as an endogeneity problem or failure to account for EoHFC offerings. As demonstrated below, these arguments are meritless.

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<sup>123</sup> See, e.g., Supplemental Comments of AT&T at 18, WC Docket No. 05-25 (filed Aug. 8, 2007) (“AT&T 2007 Comments”) (“Competition provided by cable operators has dramatically intensified over the past two years.”); Comments of Verizon at 28, WC Docket No. 05-25 (filed June 13, 2005) (“Verizon 2005 Comments”) (“Cable operators aggressively are extending their fiber to the premises of office buildings.”).

<sup>124</sup> *BDS Order & FNPRM* ¶ 238.

<sup>125</sup> Baker Jan. Decl. ¶ 53.

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*Magnitude of Competition’s Impact on Prices.* The incumbent LECs’ assertion that the impact of competition on BDS pricing is “generally very small”<sup>126</sup> is factually incorrect. The 3.2 percent figure cited by the incumbent LECs is but one of four estimates that Dr. Rysman provides in that paragraph of his report. The others—which the incumbent LECs conveniently choose not to mention—are materially higher at 5.6, 10.9, and 11.4 percent.<sup>127</sup> Moreover, these estimates were part of Dr. Rysman’s preliminary analysis. After “dig[ging] deep[er] into these regressions,” Dr. Rysman produced more refined estimates of the relationship between BDS prices and concentration that are, almost without exception, larger than the single estimate on which the incumbent LECs have selectively focused.<sup>128</sup>

Additionally, the incumbent LECs entirely ignore Dr. Baker’s analysis. As he notes in his Second Supplemental Reply Declaration, the “decline in price associated with additional rivals is likely greater than the reported results suggest, because the regression results are likely biased against identifying an inverse relationship between the number of rivals and price.”<sup>129</sup>

Specifically, Dr. Baker identifies six possible reasons for this bias:

- (1) Unobservable customer heterogeneity (*e.g.*, the number of customer locations, type of business, character of managed services purchased, and past purchases of dedicated services);

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<sup>126</sup> IRW Second White Paper at 20; AT&T Comments at 22. *See also* Mid-Size ILEC Comments at 9 (“[T]he data indicate that the prices charged by ILECs in ‘competitive’ markets do not actually vary significantly from prices charged in non-competitive markets.”).

<sup>127</sup> *See* Dr. Marc Rysman, *Empirics of Business Data Services*, at 4939-40 (Apr. 2016), appended to *BDS Order & FNPRM*, 31 FCC Rcd. at 4919, App. B (“Rysman White Paper”).

<sup>128</sup> *Id.* at 4940-41.

<sup>129</sup> Second Supplemental Reply Declaration of Jonathan B. Baker, WC Docket No. 05-25, ¶ 2 (filed Apr. 21, 2016) (“Baker Apr. Decl.”); *see also* Baker Jan. Decl. ¶¶ 68-94 (outlining six reasons why the estimated coefficients would be biased against finding an inverse relationship); Joint CLEC Comments at 20 (“The magnitude of the inverse relationship between the number of competitors and the prices incumbent LECs charge for Business Data Services likely is even greater than Dr. Baker observed.”).

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- (2) Unobservable impediments to competitive LEC expansion (*e.g.*, higher marginal costs to serve multi-location customers because of the need to lease circuits from incumbent LECs);
- (3) Errors in measuring price (*e.g.*, the allocation of BDS prices in the data enclave when purchased with managed services);
- (4) Multi-year incumbent LEC contracts (*i.e.*, the data will not reflect competitive impact of entry during contract term);
- (5) Unobservable wholesale customer switching costs (*e.g.*, penalty and loyalty clauses that permit high wholesale rates to be maintained in the presence of competition); and
- (6) Incumbent LEC wholesale pricing policies (*i.e.*, the inability to control for wholesale pricing policies without a time series component in the data set).

These factors, taken collectively, likely understate the magnitude of Dr. Baker's regression results.<sup>130</sup>

***Endogeneity.*** The incumbent LECs also argue at length that Dr. Rysman's regressions suffer from a "fatal endogeneity problem."<sup>131</sup> Specifically, they contend that Dr. Rysman does not "demonstrate that adding a new competitor to a given area *causes* lower prices" or otherwise "establish any causal relationship between ILEC prices and the existence of other competitive providers."<sup>132</sup> Dr. Baker has addressed this argument repeatedly in explaining his own regression results.<sup>133</sup>

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<sup>130</sup> See Baker Jan. Decl. ¶ 68 ("These statistical issues mean that each additional rival is likely associated with a greater reduction in ILEC retail prices than was measured by the regression equations.").

<sup>131</sup> Mid-Size ILEC Comments at 11.

<sup>132</sup> IRW Second White Paper at 3; *see also* AT&T Comments at 19 ("To the extent regression analyses indicate that lower ILEC prices may be *correlated* to some degree with competitive entry, such regressions do not establish that they are *caused* by competitive entry.").

<sup>133</sup> Supplemental Reply Declaration of Jonathan B. Baker, WC Docket No. 05-25, ¶¶ 19-21 (filed Mar. 2, 2016; revised public version submitted on Apr. 14, 2016) ("Baker Mar. Decl."); Baker Apr. Decl. ¶¶ 10-17.

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In particular, the incumbent LECs’ theoretical concern over possible endogeneity and bias—whatever its merits—is not supported by any empirical evidence that the Rysman or Baker regression results are distorted for the reasons advanced by the incumbent LECs at all. Crucially, the incumbent LECs also fail to establish that the findings are distorted in the direction that the incumbent LECs suppose. That is, the incumbent LECs have failed to provide any evidence that these issues are anything more than theoretical concerns that in fact do not affect the results of the Rysman and Baker regressions in any material way.

Moreover, Dr. Rysman and Dr. Baker have both explained several times why fixed effects go far toward addressing these theoretical concerns. Specifically, Dr. Rysman noted that including fixed effects for census tracts controlled for variation across tracts.<sup>134</sup> Dr. Rysman’s regressions thus controlled for the cost differences most likely to affect results, and including the cost differences did not disturb the key results.

Dr. Baker has gone further, noting that the inclusion of “fixed effects for census tracts and a control variable that increases with (the logarithm of) bandwidth” renders the incumbent LECs’ theory of bias based on endogeneity of entry “implausible.”<sup>135</sup> As a result, he explains that the “possibility of endogeneity bias is unlikely to be important practically when analyzing the relationship between the number of rivals and prices in the FCC’s Special Access Data.”<sup>136</sup> These findings apply with equal force to the Rysman regressions.

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<sup>134</sup> See Rysman White Paper at 4939 (“[I]t does not matter whether some markets differ in ways that are constant across the census tract, since the fixed effects allow me to isolate the effect of the competitive variables by comparing only within census tracts.”).

<sup>135</sup> Baker Mar. Decl. ¶ 21.

<sup>136</sup> Baker Apr. Decl. ¶ 17.



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At base, the Commission must recognize the incumbent LECs’ purported “concerns” for what they are—yet another attempt to impeach the value of the FCC’s data collection and to further delay long overdue BDS reform. The incumbent LECs’ efforts to delay resolution of this proceeding in spite of a voluminous and clear record are well-documented, and the Commission must not let such tactics succeed.

“*Reverse Causality.*” Separately, Dr. John Mayo urges the Commission to ignore Dr. Rysman’s analysis because of what he describes as a “reverse causality” problem. Specifically, Dr. Mayo argues that Dr. Rysman inappropriately mixes the level of competition present in 2013 with prices observed in 2013, many of which “involve contracts whose terms . . . were established *before* 2013.”<sup>137</sup> Because it “is impossible for *Competitive Presence*—observed in 2013—to cause prices that were set in earlier years,” Dr. Mayo concludes that “empirical application of [Rysman’s] model finds a correlation that cannot be interpreted as evidence of ‘market power.’”<sup>138</sup>

This argument also has been addressed and refuted. As noted above, the influence of competitive LEC entry that occurs during the term of a contract will not be reflected in pricing data until a multi-year contract is renewed.<sup>139</sup> Thus, Dr. Baker concludes that “where multi-year ILEC contracts are common, ILEC price data, which is for a single year, would not reveal the full downward price effect of a new CLEC entrant.”<sup>140</sup> In other words, the direction of bias that

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<sup>137</sup> Declaration of John W. Mayo, ¶¶ 70-78, attached as Exhibit B to Comcast Comments (“Mayo Decl.”).

<sup>138</sup> *Id.* ¶ 71.

<sup>139</sup> Baker Jan. Decl. ¶¶ 90-92.

<sup>140</sup> *Id.* ¶ 92.

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might be introduced by mixing contracts of longer duration would be to understate the full competitive effect of entry, which would contradict Dr. Mayo's claim.

*Impact of EoHFC.* As Sprint has shown, the record contains compelling evidence that the supplemental cable data do not change the fact that the marketplace for BDS at and below 50 Mbps remains non-competitive. Nonetheless, the incumbent LECs continue to insist that the EoHFC "revelation" calls into question Rysman's regressions, which were based on the earlier enclave data.<sup>141</sup> The Commission apparently anticipated this line of argument, reconsidered this aspect of its analysis, and released a memorandum explaining its results on the same day that comments were filed.<sup>142</sup> In its memorandum, the Commission concluded that: (1) "inclusion of the cable infrastructure has no appreciable effect on the previously estimated effects of facilities-based competition," and (2) "the presence of the potential cable competition generally does not have a statistically significant effect on its own."<sup>143</sup> As discussed above, Sprint agrees with these findings. Similarly, Dr. Baker updated his findings to account for the EoHFC data. Notably, he also found that the "validity of the estimation results I have presented . . . is not called into

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<sup>141</sup> USTelecom Comments at 19-20.

<sup>142</sup> See Wireline Competition Bureau, Federal Communications Commission, Peer Review of *Empirics of Business Data Services* White Paper by Dr. Marc Rysman, Attachment 3 – "Competitive Effect of Cable Network Infrastructure" (June 28, 2016, revised July 8, 2016), [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2016/db0708/DOC-340040A8.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2016/db0708/DOC-340040A8.pdf) ("FCC Staff Memorandum, Attachment 3"). Due to "an inadvertent coding error," the Commission then released a revised version of the memorandum on July 8, 2016, correcting the coding errors. *Wireline Competition Bureau Updates Staff Regression Analysis from Peer Review of Empirics of Business Data Services White Paper*, Public Notice, DA 16-788 (rel. July 8, 2016).

<sup>143</sup> FCC Staff Memorandum, Attachment 3 at 1.

question by the data.”<sup>144</sup> In particular, inclusion of EoHFC offerings “has no material effect on the estimates of the competitive significance of in-building and nearby rivalry.”<sup>145</sup>

**C. Competition for BDS Above 50 Mbps Is, At Best, Uneven, and Inadequate in the Vast Majority of Locations or Census Blocks**

While competitive conditions for BDS services with bandwidths greater than 50 Mbps are more varied than those for lower-bandwidth offerings, there is no basis upon which the Commission reasonably could presume that competition is effectively disciplining the rates, terms, and conditions for these services in a large percentage of areas, much less across all areas and transmission speeds.<sup>146</sup> To the contrary, the record establishes that there is “significant evidence that competition for these services is also lacking in the vast majority of the country.”<sup>147</sup> As Mr. Zarakas explains, “for circuits sized at greater than 50 Mbps,” there are at most two providers in “about 83 percent of census blocks,” and at least four providers in just 2.6 percent of census blocks.<sup>148</sup>

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<sup>144</sup> Baker June Decl. ¶ 27.

<sup>145</sup> *Id.* ¶ 32.

<sup>146</sup> *See, e.g., id.* ¶ 3 (“Evidence does not support the suggestion that all business data services markets at bandwidths above 50 Mbps are competitive.”); CCA Comments at 3-4 (“The FCC cannot simply assume that all higher-capacity BDS services are competitive.”); Joint CLEC Comments at 28-35 (“The available evidence demonstrates that the level of competition for Business Data Services above the 100 Mbps capacity threshold is mixed, and there is strong evidence that the market is not competitive in many situations.”); Windstream Comments at 7 (“There is certainly no basis for any claim that business data services above 50 Mbps should be categorically deemed competitive—or for drawing any such line at or below 1 Gbps.”).

<sup>147</sup> CCA Comments at 3-4, 11; Windstream Comments at 9 (The “lack of widespread competition permeates market conditions for low- and high- bandwidth business data services alike.”); *id.* at 17 (“At many locations, competitive providers may have fewer options for provisioning inputs for higher-bandwidth business data services than for sub-50 Mbps business data services.”).

<sup>148</sup> Further Supplemental Zarakas Declaration ¶ 16 & Table 5.

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Nevertheless, a number of parties argue that the “Ethernet market is enormously competitive.”<sup>149</sup> In support of such arguments, parties claim that Dr. Rysman “found *no* evidence of market power in his regressions for Ethernet and other BDS with speeds of 45 Mbps and higher.”<sup>150</sup> Dr. Rysman’s analysis, however, does not support this conclusion. Indeed, the Commission points out that there are several possible explanations for Dr. Rysman’s finding, including “too little competition to produce material competitive effects.”<sup>151</sup> Accordingly, as the Joint CLECs rightly conclude, it would be “inappropriate to assume that the explanation is that competition broadly exists for all services above 50 Mbps.”<sup>152</sup>

To specifically analyze this question, Dr. Kwoka provided a declaration, attached to Sprint’s comments, that explained that once the FCC’s data are disaggregated appropriately, Dr. Rysman’s regression analysis demonstrates that competition does, in fact, impact pricing for high-bandwidth BDS.<sup>153</sup> These results represent “clear evidence of the effect of competition and hence the existence of market power.”<sup>154</sup> Dr. Baker performed analysis to answer the same questions, and, using a different approach, reached the same result. Dr. Baker has explained that the “data reveal an inverse relationship between rivalry and price for high-bandwidth

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<sup>149</sup> NCTA Comments at vi; *see also, e.g.*, FTTH Comments at 6-7 (arguing that the market is competitive for BDS at bandwidths of 50 Mbps and above based on “falling prices, increased output, and greater innovation”); Mid-Size ILEC Comments at iv (“The record in this docket reveals nearly ubiquitous facilities-based competition in the business data services marketplace and ever-growing demand for the optical and packetized services recognized to be the most competitive at all.”).

<sup>150</sup> AT&T Comments at 4, 10.

<sup>151</sup> *BDS Order & FNPRM* ¶ 244.

<sup>152</sup> Joint CLEC Comments at 30.

<sup>153</sup> Declaration of John Kwoka ¶¶ 23-26, 32-33, attached as Exhibit A to Comments of Sprint Corporation (“Sprint Comments”).

<sup>154</sup> *Id.* ¶ 33.

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connections, and thus suggest the exercise of ILEC market power in the supply of high-bandwidth business data services connections.”<sup>155</sup>

Additional evidence from outside of the FCC’s dataset validates this conclusion. For example, Sprint’s Network Vision experience discloses that the prices for the Ethernet services it purchased reflected a **\*\*\*BEGIN HIGHLY CONFIDENTIAL\*\*\*** [REDACTED]

[REDACTED] **\*\*\*END HIGHLY**

**CONFIDENTIAL\*\*\***<sup>156</sup> Perhaps even more notably, **\*\*\*BEGIN HIGHLY**

**CONFIDENTIAL\*\*\*** [REDACTED]

[REDACTED] **\*\*\*END HIGHLY**

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Apart from market power arguments, a number of parties argue that Commission intervention is not warranted because the exorbitant prices for high-bandwidth BDS have been decreasing.<sup>158</sup> The fact that inflated prices may be declining in some instances, however, does not prove that competition is disciplining the rates that are being assessed. To the contrary, Dr.

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<sup>155</sup> Baker June Decl. ¶ 10.

<sup>156</sup> Declaration of Chris Frentrup ¶ 10, attached as Exhibit B to Sprint Comments.

<sup>157</sup> Declaration of Ed Carey ¶¶ 2-7 (Table 1), attached as Exhibit C to Sprint Comments (“Carey June Decl.”).

<sup>158</sup> See Comments of American Cable Association at 36 (“ACA Comments”) (“In general, smaller providers’ prices for BDS have been decreasing across their markets, whether urban or rural and for all customer segments, retail and wholesale.”); Mid-Size ILEC Comments Comments at 20 (identifying “declining prices in the Ethernet services market” as a “bellwether[] of robust and effective competition”); Charter Comments at 2 (stating that cable investment in fiber “has contributed to broadly declining prices for BDS”); Comcast Comments 10 (claiming its investment in “network infrastructure and human capital . . . has begun to have a positive competitive impact in the BDS arena, driving legacy providers to reduce prices”); NCTA Comments at i (“[B]usinesses all over America are experiencing declining prices due to competitive entry and expansion.”); see also, e.g., AT&T Comments at 5 (There is “no evidence of pricing above competitive levels.”).

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Baker has found that “prices of high-bandwidth connections are likely substantially in excess of competitive levels.”<sup>159</sup> Further, the record contains ample evidence that the prices charged for high-bandwidth BDS have little relationship to the actual costs associated with these offerings.<sup>160</sup> As CCA aptly concludes, high-capacity BDS pricing simply “do[es] not reflect the presence of competitive pressure.”<sup>161</sup>

Put briefly, the initial comments in this round of the proceeding demonstrate that there is no “critical bandwidth level between 45 Mbps and 1 Gbps beyond which ease of entry reduces competitive concerns so much as to make regulation unnecessary.”<sup>162</sup> The Commission, therefore, must implement a competitive test to ensure that prices for these services in non-competitive areas are just and reasonable. Failure to do so will result in a BDS marketplace that

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<sup>159</sup> Baker June Decl. ¶ 3.

<sup>160</sup> *See, e.g.*, Letter from Jennifer Bagg, Counsel, Sprint Corporation, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25 (filed May 26, 2016) (finding that incumbent LECs charge rates for BDS that vastly exceed the costs associated with deploying facilities and providing service, even after fully accounting for overhead expenses and an adequate return on investment); Letter from Jennifer Bagg, Counsel, Sprint Corporation, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25, at 1 (filed June 3, 2016) (noting that the “pricing distortions” described in its cost model “are much greater in magnitude for higher bandwidth BDS”); Reply Comments of BT Americas, WC Docket No. 05-25, at 8 (filed Feb. 19, 2016) (“As the WIK Study explains, the costs of providing Ethernet business access services do not increase significantly as bandwidths increase. Therefore, those costs do not justify the U.S. incumbent LECs’ exorbitant rates for higher-speed Ethernet services.”). *See also* Letter from Sheba Chacko, Head of Americas Regulation and Global Telecoms Policy, BT Americas Inc., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25, Attachment at 1 (filed Feb. 29, 2016) (international comparisons reveal that “the increases in prices between the various speeds of Ethernet access services in the US are much higher than the increases in prices between bandwidths in” France, Germany, the Netherlands, and the UK).

<sup>161</sup> CCA Comments at 11.

<sup>162</sup> Baker June Decl. ¶ 4.

continues to be fundamentally broken—and diminish “any impact this proceeding will have on 5G deployment.”<sup>163</sup>

**D. Narrative Evidence and Analyses of Data from Outside the Commission’s Collection Are Consistent with These Findings**

Throughout this proceeding, parties have submitted evidence from outside the Commission’s data collection that corroborate the findings set forth above that the incumbent LECs continue to exercise market power in the provision of BDS, particularly with respect to lower-bandwidth offerings. Such evidence from the most recent comments includes analyses prepared by industry experts, data provided by purchasers of BDS, and information confirming the importance of the sustained high levels of price-capped BDS rates.

**Industry Experts.** Windstream notes that “Sanford Bernstein estimated the incumbent LECs’ share of the fixed enterprise market in 2013 to be 78 percent.”<sup>164</sup> This estimate is consistent with the FCC’s calculation that incumbent LECs and incumbent LEC affiliates controlled \$37 billion of the \$45 billion generated by BDS in 2013.<sup>165</sup> Windstream also cites a 2015 report prepared by Frost & Sullivan concluding that the three largest incumbent LECs controlled more than two-thirds of the revenues generated by wholesale carrier sales of Ethernet services in 2014, an *increase* from their 2013 share.<sup>166</sup> Moreover, industry experts confirm that

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<sup>163</sup> Letter from Steven K. Berry, President & CEO, Competitive Carriers Association, to Marlene H. Dortch, Secretary, FCC < WC Docket No. 16-143, at 1 (filed Aug. 3, 2016) (“CCA 5G *Ex Parte*”).

<sup>164</sup> Windstream Comments at 10 (citing Sanford C Bernstein & Co., LLC, US Telecom, A Primer in the \$70 B Enterprise Telecom Market (Cable’s Opportunity=Telcos’ Loss?), at 6 (July 15, 2015)).

<sup>165</sup> See *BDS Order & FNPRM* at Figure 9.

<sup>166</sup> Windstream Comments at 11 (citing Frost & Sullivan, Wholesale Carrier Ethernet Services Market Update, 2015, at 27 (Aug. 2015)).

the incumbent LECs’ dominance of the provision of last-mile connections is even more pronounced. According to a different Sanford Bernstein report, less than 5 percent of the connections to enterprise and cell site locations are provided by rivals of the incumbent LECs, including cable providers.<sup>167</sup>

**Purchaser Data.** In its recent comments, Windstream also provides compelling evidence of its own continued reliance on incumbent LEC-provided BDS to reach its end-user customers.

Specifically, Windstream reports that **\*\*\*BEGIN HIGHLY CONFIDENTIAL\*\*\*** [REDACTED]

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**Incumbent LEC Headroom.** As commenters note, the Commission’s recent analysis of the prices that price cap incumbent LECs assess for services that remain subject to price caps provides additional evidence of market power.<sup>169</sup> That analysis shows that the “six largest price cap incumbent LECs have been charging close to maximum prices for the last four tariff years.”<sup>170</sup> Since the end of the CALLS Plan, “there has been no evidence that the price caps have been a source of any kind of financial stress to the incumbent LECs.”<sup>171</sup> The Commission,

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<sup>167</sup> *Id.* at 13 (citing Sanford C. Bernstein & Co., LLC, US Telecom: Friday’s Announcement of an FCC Investigation into Data Pricing (A Three Page Summary and Assessment) at 2 (Oct. 19, 2015)).

<sup>168</sup> *Id.* at 12-13.

<sup>169</sup> *See, e.g., id.* at 61.

<sup>170</sup> *BDS Order & FNPRM* ¶ 240.

<sup>171</sup> *Id.* ¶ 239.



therefore, concludes that “the fact that the price capped incumbent LECs have kept their prices at the top of the cap is additional evidence of market power.”<sup>172</sup>

The incumbent LECs, however, contend their scheme of consistently imposing on their customers the highest prices that the price cap permitted somehow does not establish that they possess market power. Rather, they argue that this finding is relevant only if it is accompanied by a showing that the price ceiling exceeds the level at which prices would be set in a competitive marketplace.<sup>173</sup> The record, however, contains precisely such a showing. In particular, the declaration submitted by David Sappington and William Zarakas analyzes the trends in productivity and input prices in the U.S. telecommunications industry between 1998 and 2010.<sup>174</sup> Those trends show that the price cap incumbent LECs realized ongoing gains in productivity in the period following the CALLS plan were not passed through to customers in the form of lower prices because the price cap indices were adjusted only to account for inflation. Based on that analysis, Dr. Sappington and Mr. Zarakas conclude that the BDS price cap indices for incumbent LECs should be reduced to the levels that would produce a “normal profit,” thus establishing that the prevailing price ceiling is well above the level at which prices would be set in a competitive marketplace.<sup>175</sup>

### **III. THE COMMISSION SHOULD REJECT TRANSPARENT ATTEMPTS TO UNDERMINE WIRELESS COMPETITION**

BDS circuits play a critical role in the nation’s mobile network infrastructure by connecting tens of thousands of cell sites to mobile switching offices and other aggregation

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<sup>172</sup> *Id.*

<sup>173</sup> *See* IRW Second White Paper at 21-22; AT&T Comments at 24-25.

<sup>174</sup> Declaration of David E.M. Sappington and William P. Zarakas ¶¶ 19, 22, attached as Exhibit E to Sprint Comments.

<sup>175</sup> *Id.* ¶ 22.

points. The demand for ever higher-capacity links to serve these backhaul routes has grown dramatically over the past several years as the volume of wireless traffic has skyrocketed, spurred by the unprecedented popularity of smartphones, tablets, and other advanced devices that consume enormous amounts of bandwidth. With the prospect of the rollout of 5G and other advanced services on the horizon, the need for still higher-capacity backhaul circuits inevitably will continue for years to come. Despite the importance of these connections, a number of parties assert that the Commission need not be concerned whether wireless backhaul services will be available at reasonable prices during the deployment of advanced 5G services. Without foundation, they argue that the marketplace for wireless backhaul services is intensely competitive. As we explain below, these arguments are meritless and should be rejected.

**A. There Is No Basis for Exempting Wireless Backhaul from BDS Reform**

Several parties urge the Commission to deregulate the provision of BDS offerings that are used for wireless backhaul. CenturyLink asserts that wireless backhaul services have “distinct needs and characteristics” warranting different regulatory treatment and that, in any event, the marketplace for backhaul services is “clearly competitive.”<sup>176</sup> ITTA similarly claims that “no additional competitive protections” are needed for purchasers of wireless backhaul because the marketplace is characterized by “robust” competition and wireless backhaul purchasers are sophisticated.<sup>177</sup> NCTA contends that the Commission already has found that

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<sup>176</sup> Mid-Size ILEC Comments at 54-55; *see also, e.g.*, Lighttower Comments at 23 (arguing that “regulation should not extend to fiber to the tower or fiber to the small cell”).

<sup>177</sup> ITTA Comments at 20-21; *see also id.* at 19 (“If the Commission subdivides the product market, it should only do so with respect to wireless backhaul.”).

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“the wireless industry has flourished using special access services” and, hence, there is no justification for FCC intervention.<sup>178</sup>

These characterizations of the marketplace for wireless backhaul services are baseless. The record in this proceeding unquestionably demonstrates that the marketplace for BDS—with very few exceptions—is not effectively competitive. Furthermore, there is no evidence that could justify the exclusion of BDS used for wireless backhaul from the Commission’s reform efforts. Rather, Sprint’s Network Vision experience provides concrete evidence that incumbent LECs continue to have market power in the provision of backhaul services. As Sprint previously has explained, Network Vision was, to the company’s experience, the most concerted effort in history to try to find competitive BDS options, all to modernize its backhaul infrastructure while reducing its reliance on incumbent LECs.<sup>179</sup> Ultimately, however, Sprint was forced to enter into a large number of new service agreements with incumbent LECs because there were no other bids for many locations. Despite the fact that Sprint clearly meets the profile of a substantial, sophisticated customer, and designed a massive nationwide purchasing opportunity specifically to draw out competitive options, it simply could not transform a non-competitive marketplace into a competitive one.<sup>180</sup>

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<sup>178</sup> NTCA Comments at 66.

<sup>179</sup> *See, e.g.*, Sprint Jan. Comments at 55-56; Sprint Feb. Reply Comments 60-61.

<sup>180</sup> Sprint’s Network Vision experience unequivocally rebuts arguments that “large and sophisticated” BDS customers are always capable of obtaining service on just and reasonable terms and conditions. *See, e.g.*, ACA Comments at 38 (“[M]any of the BDS customers . . . are large and sophisticated, which means they have the wherewithal to induce competitive pricing from providers even without the presence of a minimum number of competitors.”); NCTA Comments at vii (“[L]arge enterprise customers are highly sophisticated purchasers of telecommunications that are perfectly capable of negotiating favorable terms.”).

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The record also shows that Sprint’s Network Vision experience is not unique. For example, the Rural Wireless Association notes that “[i]n many areas across the U.S., there is often only one option for purchasing dedicated high-capacity connections, which leads to backhaul services being offered at exorbitant prices.”<sup>181</sup> Similarly, NTCH “attest[s] to the serious lack of competition in most discrete markets for these services,” which “makes it possible for the service providers to offer service only at rates which would never be acceptable if there were any significant level of competition to discipline them.”<sup>182</sup>

In short, the marketplace for BDS backhaul services has the same structural characteristics as the overall BDS marketplace—the availability of competitive alternatives to incumbent LECs for BDS offerings to connect cell towers therefore is just as limited as the alternatives to incumbent LECs for BDS that serve enterprise customers in buildings. Accordingly, the record provides no basis for treating wireless backhaul as a separate product market, let alone deregulating backhaul BDS.

There similarly is no record basis for treating backhaul purchasers as a separate “customer class.” Instead, parties in the record generally agree with Sprint that the Commission need not complicate its competitive market test by separately analyzing different customer classes. As NASUCA and the Maryland People’s Counsel conclude, customer class “designations do not necessarily correspond with economically-sound product markets.”<sup>183</sup> Moreover, Ad Hoc correctly notes that the “identity of the customer does not play a significant role in determining the costs and available revenues for a competitor deciding whether to deploy

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<sup>181</sup> Comments of the Rural Wireless Association, Inc. at 2 (“RWA Comments”).

<sup>182</sup> Comments of NTCH at 1.

<sup>183</sup> NASUCA/MPC Comments at 16.

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facilities[,] nor can it change the economic characteristics associated with competitive supply.”<sup>184</sup> Instead, the Commission can and should address the fact that “different types of customers have different needs” by adopting limited backstop remedies.<sup>185</sup>

Finally, NCTA’s characterization of the Commission’s 2004 decision in the *Triennial Review Remand Order* (“*TRRO*”) proceeding is plainly wrong.<sup>186</sup> The issue before the Commission in that rulemaking was whether a wireless carrier’s ability to compete in the retail marketplace would be “impaired” if it was unable to obtain access to UNEs to interconnect its cell towers with its mobile switching offices.<sup>187</sup> The Commission’s references to competition in that context clearly concerned competition in the downstream *retail* marketplace for CMRS, not the upstream wholesale BDS marketplace.<sup>188</sup> Moreover, the court of appeals decision that remanded the impairment issue to the FCC explicitly noted that wireless “competitors cannot generally be said to be impaired by having to purchase special access services from ILECs, rather than leasing the necessary facilities at UNE rates, where robust competition in the relevant markets belies any suggestion that the lack of unbundling makes entry uneconomic.”<sup>189</sup> Thus, the decision to deny wireless carriers access to UNEs clearly was not based on a finding that the BDS marketplace was competitive. Rather, that decision was based in large part on a finding that the continued availability of BDS offerings, which were largely still subject to price cap

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<sup>184</sup> Comments of the Ad Hoc Telecommunications Users Committee at 3-4 (“Ad Hoc Comments”); *see also id.* at i (“Categorizing services for purposes of regulation according to the nature and characteristics of the customers that purchase them serves no purpose.”).

<sup>185</sup> Sprint Comments at 28 (quoting *BDS Order & FNPRM* ¶ 283); *id.* at 73-79.

<sup>186</sup> NCTA Comments at 65-66. *See also TRRO*.

<sup>187</sup> *See TRRO* ¶¶ 2-3, 34-40.

<sup>188</sup> *See id.* ¶ 39 (discussing how competition in “the enterprise services market . . . is evolving more slowly and in more limited geographic areas” than the mass market).

<sup>189</sup> *United States Telecom Ass’n v. FCC*, 359 F.3d 554, 592 (D.C. Cir. 2004).

regulation in 2004, meant that new entrants into the retail market for wireless services would not be impaired without access to UNEs. Over the decade since the court’s decision, as the record in this proceeding shows, incumbent LECs have been able to assess charges for BDS that are unjust and unreasonable.

**B. BDS Reform Is Imperative to the Nation’s 5G Wireless Future**

Several parties contend that the Commission’s efforts to reform the BDS marketplace will have no impact at all on the pace of deployment of 5G wireless networks. NCTA, for example, labels fears “that there will be insufficient supply of backhaul facilities . . . for the next generation of wireless technology . . . highly speculative at best.”<sup>190</sup> Relatedly, AT&T suggests that the promise of 5G creates a virtuous cycle of competition whereby “5G backhaul increases demand for Ethernet-based backhaul, [which] only creates new opportunities for the numerous providers already competing in that space and others who might want to enter.”<sup>191</sup> Building on arguments that the wireless backhaul market is rife with competition, CenturyLink and Frontier assert that any regulatory framework attempting “to promote 5G wireless buildout on the backs of America’s rural ILECs [will] effectuate a simple wealth transfer from wireline providers facing challenging economic terrain to larger, better-funded, and more highly capitalized mobile wireless companies.”<sup>192</sup>

The Commission has heard the false mantra of “competition is coming—competition is coming” many times before over the past two decades.<sup>193</sup> These latest claims of a robustly

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<sup>190</sup> NCTA Comments at 66-67.

<sup>191</sup> AT&T Comments at 28.

<sup>192</sup> Mid-Size ILEC Comments at 3.

<sup>193</sup> *See* Verizon 2005 Comments at 22 (“As one would expect given the pricing evidence discussed above, competition in the provision of special access services is widespread.”);

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competitive BDS marketplace spurred by demand for new services are as hollow as those advanced in the past. The Commission must reject empty arguments made by self-interested BDS providers hoping to maintain their huge profit margins, and instead turn to the reality of the marketplace as demonstrated by the record. The Commission must examine the actual availability of alternative backhaul BDS offerings as shown in the data request, which show that wireless backhaul purchasers like Sprint—with every incentive in the world to buy from anyone other than the incumbent LECs—most often find no competitive choice.

The Commission also must reject baseless arguments that attempt to minimize the relationship between BDS reform and 5G, such as NCTA’s contention that any concern that supracompetitive “BDS prices might undermine the deployment of wireless 5G services . . . is entirely misplaced.”<sup>194</sup> As Chairman Wheeler stressed, “dependen[ce] on the use of BDS for the backhaul of mobile traffic . . . will only grow as wireless carriers expand their networks and

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AT&T 2007 Comments at 2 (“The last two years . . . have seen far more than a continuation of the falling prices and widespread and increasing *intramodal* competition . . . . In addition, the promise of *intermodal* competition has now indisputably been realized.”); Letter from Robert W. Quinn, Jr., AT&T Services, Inc., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25, at 3 (Feb. 6, 2009) (“The facts are that the special access marketplace exhibits all of the hallmarks of an intensely competitive market.”); Comments of AT&T Inc., WC Docket No. 05-25, at 1 (filed Apr. 16, 2013) (“Six years ago, the Commission correctly recognized that the enterprise marketplace for broadband optical and packet-switched services had become so intensely competitive that monopoly-era regulation of the services that ILECs provided in that marketplace was no longer required.”); Comments of CenturyLink, WC Docket No. 05-25, at i (filed Jan. 28, 2016) (“The 2013 data set collected by the Wireline Competition Bureau . . . conclusively demonstrates what should have been apparent at each phase of this proceeding: The high-capacity transmission marketplace is one of the most dynamic and competitive sectors of the communications ecosystem.”).

<sup>194</sup> NCTA Comments at vii. *See also* AT&T Comments at 9 (“[S]uggestions that reregulation of BDS is necessary to facilitate wireless carriers’ transition to 5G are nonsense.”).

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move into 5G wireless.”<sup>195</sup> Indeed, the comments in this proceeding show that the risk of excessive prices for backhaul circuits delaying the deployment of 5G is real. CCA notes that the “need for backhaul, coupled with its high costs, create[s] a significant barrier to wireless innovation and entry into next generation technology,”<sup>196</sup> while CCIA estimates that the expense of “connecting a tower to a wireless carrier’s network can amount to roughly one-quarter of the tower’s operating cost.”<sup>197</sup> Should the Commission fail to help providers overcome these barriers by adequately disciplining BDS rates, terms, and conditions, “[t]he lack of competition in this marketplace [and] the high costs imposed by ILECs on their competitors . . . [will] delay the deployment of 5G networks.”<sup>198</sup> The continued presence of anticompetitive rates, terms, and conditions also will put competitive carriers at an “entrenched disadvantage going forward,” since “competitive carriers will not be able to migrate to 5G services at the same time as the wireless affiliates of ILECs.”<sup>199</sup> Furthermore, Commission inaction almost certainly would create wider ripple effects within the American economy.<sup>200</sup>

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<sup>195</sup> See Chairman Tom Wheeler, *Out with the Old, In with the New*, Apr. 8, 2016, <https://www.fcc.gov/news-events/blog/2016/04/08/out-old-new>.

<sup>196</sup> CCA Comments at 5-6; *see also, e.g.*, CCIA Comments at 4 (“Carriers will need to utilize more backhaul to connect additional antennae and towers to their networks.”); INCOMPAS Comments at 2-3 (“[A]ccess to Business Data Services at 100 Mbps and above at reasonable prices is vital for wireless providers to meet the current demand for wireless broadband services and to build next generation mobile broadband networks.”).

<sup>197</sup> CCIA Comments at 4; *see also, e.g.*, CCA Comments at 6 (“As it stands, backhaul costs represent a significant portion of a wireless carrier’s costs and impact competitive carriers’ ability to provide competitive wireless service.”).

<sup>198</sup> CCIA Comments at 4.

<sup>199</sup> CCA Comments at 7.

<sup>200</sup> RWA Comments at 3 (“If the U.S. is to become the world leader in 5G, the Commission must act to address the problematic BDS market.”); Public Knowledge *et al.* Comments at 3 (Without access to just and reasonably priced wireless backhaul, “5G deployments—and the economic and social benefits these investments promise to deliver to American consumers,



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NCTA suggests that a recent statement by a Sprint executive that dark fiber and microwave radio links are key elements of the company’s 5G backhaul strategy belies the company’s contentions that BDS reform is critical to the timely deployment of 5G technology.<sup>201</sup> Dark fiber and microwave undoubtedly will be options to consider for the construction of an efficient 5G network that will rely much more heavily on microcells than a traditional 3G or 4G network. That fact, however, clearly does not mean that BDS offerings will no longer be needed to provide critical transmission components of Sprint’s network. The deployment of 5G networks will only further stimulate consumer demand for bandwidth that inevitably will require wireless carriers to include high-capacity BDS circuits in their networks. In short, the deployment of a 5G network will expand the array of transmission services and technologies needed to deliver the advanced, high-bandwidth services consumers will demand, but BDS offerings will remain a vital component of that panoply.<sup>202</sup>

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anchor institutions, and businesses—will suffer the types of delays and scale reductions that could cost the United States its lead in technological capacity, job creation, and economic growth.”).

<sup>201</sup> NCTA Comments at 68.

<sup>202</sup> In a related vein, the Mid-Size ILECs rely on anecdotal evidence in an effort to show that BDS is no longer needed to meet Sprint’s backhaul needs. Specifically, a CenturyLink declarant states that **\*\*\*BEGIN HIGHLY CONFIDENTIAL\*\*\*** [REDACTED]

[REDACTED] **\*\*\*END HIGHLY CONFIDENTIAL\*\*\*** See Declaration of David Williams, ¶ 10, attached as Exhibit B to Mid-Size ILEC Comments. This statement, like the statement of the Sprint executive discussed above, indicates that the company intends to deploy a new architecture for its 5G network that is better suited to that technology by, for example, increasing the use of microcells and reducing reliance on macro cells. That statement, however, cannot reasonably be read to say that Sprint no longer needs access to reasonably priced BDS circuits for its backhaul requirements.

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Fortunately, the public statements of Chairman Wheeler and the FCC Commissioners reflect a keen understanding of the importance of 5G networks to the country’s future and the vital role that backhaul will play in the timely deployment of those advanced facilities. For example, as noted above, Chairman Wheeler has explicitly emphasized that backhaul facilities will have to grow to meet the demands of 5G networks. Similarly, Commissioner Clyburn testified earlier this year about the need to ensure that commercial wireless companies have the necessary infrastructure to deploy that spectrum.<sup>203</sup> Commissioner O’Rielly has stressed that “ensuring backhaul for the plethora of 5G wireless towers and antennas will be a huge challenge.”<sup>204</sup> Most recently, the Commission has acted to accelerate 5G buildout through its adoption of the *Spectrum Frontiers Report and Order*. That decision is designed to open up high-frequency spectrum specifically for 5G networks and applications, which will feature higher capacities and lower latencies than current wireless networks.<sup>205</sup> The Commission should recognize that this BDS reform proceeding is another key opportunity to “encourage innovation and investment” in necessary infrastructure and “ensur[e] that lack of competition . . . cannot be used to hold 5G hostage.”<sup>206</sup> Indeed, this proceeding provides the primary vehicle through which

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<sup>203</sup> Testimony of Commissioner Mignon L. Clyburn Before the U.S. House of Representatives, Committee on Energy & Commerce, Subcommittee on Communications & Technology, at 2 (Mar. 22, 2016), [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-338509A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-338509A1.pdf).

<sup>204</sup> Remarks of Commissioner Michael O’Rielly, *The 5G Triangle*, Hogan Lovells’ Technology Forum, at 3 (May 25, 2016), [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-339558A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-339558A1.pdf).

<sup>205</sup> *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, GN Docket No. 14-177, Report and Order and Further Notice of Proposed Rulemaking, FCC 16-89 (rel. July 14, 2016).

<sup>206</sup> Remarks of Chairman Tom Wheeler, *The Future of Wireless: A Vision for U.S. Leadership in a 5G World*, National Press Club, at 6 (June 20, 2016), [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2016/db0620/DOC-339920A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2016/db0620/DOC-339920A1.pdf).

the Commission can assure that vital backhaul links will be available at just, reasonable, and not unduly discriminatory rates, terms, and conditions.

**IV. THE RECORD SUPPORTS A PRESUMPTION THAT BDS AT AND BELOW 50 MBPS IS NOT COMPETITIVE, AND A COMPETITIVE MARKET TEST IS NEEDED FOR BDS ABOVE 50 MBPS**

The evidence in the record is clear: product markets for BDS at and below 50 Mbps are not competitive, and competition for BDS product markets above 50 Mbps is, at best, uneven. Based on this evidence, a diverse range of commenters—including Verizon, Windstream, competitive BDS sellers, and Sprint—support a two-tier approach to assess competition.

Under the first tier, the Commission would presume that all BDS at and below a certain speed is not competitive and apply price remedies to such products in all geographic areas. Under the second tier, the Commission would adopt a CMT for higher-bandwidth services in order to identify the specific geographic markets where competition is inadequate to discipline prices. As discussed below, the CMT would deem areas where four or more companies reported connections to be competitive. Applying the CMT only to higher-bandwidth BDS reflects the substantial record evidence that competition for higher-bandwidth services varies by geographic areas, although the vast majority of such areas remain inadequately competitive as explained above.<sup>207</sup> The FCC's price remedy would not apply to the sale of higher-bandwidth BDS in geographic markets deemed competitive.

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<sup>207</sup> See *supra* Section II.C.

**A. There is Diverse Support for a Two-Tier Competition Assessment**

As explained above and supported extensively in the record, the data are clear that lower-capacity BDS is overwhelmingly not competitive.<sup>208</sup> Based on this evidence, the Commission should adopt a presumption that services below a certain level are non-competitive. Sprint, Verizon, and INCOMPAS have proposed that the Commission establish this presumption for products at and below 50 Mbps.<sup>209</sup> Other commenters have convincingly argued that the FCC should establish the presumption for products at or below 100 Mbps, and Sprint would support this decision.<sup>210</sup>

While the level of competition for high-capacity BDS Mbps is uneven, the record clearly demonstrates, as discussed above, that there is a dearth of competition for such services in many locations across the country. As a result, the Commission should not simply presume the competitive nature of the markets for these services. Instead, the record firmly supports that the Commission apply a CMT to determine which areas are not competitive (and therefore in need of pricing remedies) and which are competitive (and therefore subject to minimal, backstop

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<sup>208</sup> See *supra* Section II.B. See also, e.g., *BDS Order & FNPRM* ¶ 220 (Table 3) (less than 1 percent of commercial buildings have a BDS connection, and less than 0.1 percent have four or more); *id.* 222 ¶ (Table 4) (even assuming cable is ubiquitous, less than 1 percent of locations would have four or more connections); Baker Jan. Decl. ¶ 44 (“Nationwide, 77.3% of buildings in the FCC’s data have one in-building provider and almost all of the rest (20.8%) have only two in-building providers”); Besen/Mitchell Decl. ¶¶ 25-26 (concluding that only 1 percent of locations had four or more in-building providers and that approximately 73 percent of locations had an ILEC as the sole in-building provider); Sprint March 24 *Ex Parte* (showing that, even under the clearly over-conservative assumption that incumbent LECs face ubiquitous competition from cable operators, three or more providers would still serve only 9.3 percent of locations).

<sup>209</sup> Sprint Comments at 4; INCOMPAS Comments at 6; Verizon Comments at 8-9.

<sup>210</sup> See Joint CLEC Comments at 21-27; TDS Comments at 11-12; Windstream Comments at 32-34.

regulations). Importantly, the record is also clear that a presumption that higher-bandwidth BDS is somehow competitive would undermine 5G. As Sprint and others have explained, 5G wireless backhaul solutions depend on access to high-capacity BDS at just and reasonable rates.<sup>211</sup> If the FCC excludes the very BDS that supports 5G from reform, it will have permitted incumbents to delay or deny their competitors' ability to invest in next generation networks.

**B. The CMT Should Deem an Area Competitive Only If at Least Four Separate Providers Have Deployed Connections**

The record strongly supports a finding that four providers of BDS are necessary to produce effective competition in a BDS geographic market. As Sprint explained in its initial comments, “[a]lthough not universal to all markets for telecommunications, the principle that four competitors can constrain incumbent behavior is well supported by the record, economic theory, and the nature of competition in the BDS marketplace.”<sup>212</sup> Further, the record supports measuring competition based on a connection, which includes actual customers as well as connections where there currently is no active customer, and no more expansively.

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<sup>211</sup> See, e.g., INCOMPAS Comments at 2-3 (wireless carriers need access to BDS at “100 Mbps and above . . . to meet the current demand for wireless broadband services and to build next generation mobile broadband networks”); CCA Comments at 10 (“To ensure the Commission’s BDS framework is constructed to meet today’s marketplace—and tomorrow’s, the Commission must ensure that its BDS framework provides reasonable access to high-capacity BDS.”) (internal quotation marks and alteration omitted); RWA Comments at 2-4 (explaining that “high-capacity backhaul” is a critical input to ongoing LTE buildout and 5G); Sprint Comments at 16; CCA 5G Ex Parte at 1 (“Backhaul at 50-100 Mbps or below likely will not support 5G, even if there is only one commercial carrier in a given market.”).

<sup>212</sup> Sprint Comments at 29.

**1. The CMT Should Require a Showing of Four BDS Providers for Effective Competition**

Numerous commenters support the adoption of a CMT that requires the presence of four BDS providers in order to deem a relevant market competitive. Windstream, citing Dr. Baker’s analysis, explains that locations with only “three facilities-based providers are subject to the negative consequences of a business data services provider’s market power.”<sup>213</sup> Dr. Baker further concludes that “the full effect of rivalry on price likely requires (at least) four in-building providers and four nearby providers.”<sup>214</sup> Similarly, Drs. Zarakas and Verlinda conclude that

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Finally, Sprint’s own experience with Network Vision confirms that rates do not reach competitive levels until four providers have entered the relevant market.<sup>216</sup>

The Commission should disregard attempts by AT&T and other incumbent LECs to define markets as competitive based on the presence of a mere duopoly. Not only does the record make abundantly clear that four BDS providers are necessary for effective competition, but the incumbent LECs’ position is riddled with numerous additional flaws.

*First*, the incumbent LECs’ position contradicts precedent and literature firmly establishing that duopolies do not render markets competitive. As the Joint CLECs and TDS Metrocom observe, Commission precedent—including the *Qwest Forbearance Order*, multiple

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<sup>213</sup> Windstream Comments at 14.

<sup>214</sup> Baker June Decl. ¶ 19.

<sup>215</sup> Declaration of William P. Zarakas and Jeremy A. Verlinda ¶¶ 17-19, appended attached as Exhibit D to Sprint Comments.

<sup>216</sup> Sprint Comments at 29-30.

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orders in the wireless industry, and the *Pricing Flexibility Order*—all acknowledge that multiple competitors are necessary to discipline the largest providers in a market.<sup>217</sup> And other agencies and commentators alike recognize that multiple competitors are required in order to eliminate competitive threats.<sup>218</sup>

*Second*, the incumbent LECs not only ignore precedent and literature that undermines their position, but they also mischaracterize Commission precedent. For example, AT&T wrongly claims that the Commission, in the *Pricing Flexibility Order*, “determined that the presence of a *single* facilities-based competitor to an ILEC is sufficient to ensure competition . . . .”<sup>219</sup> In fact, the Commission concluded that “rules to prevent exclusionary pricing behavior are no longer necessary” only after “*multiple* rivals have entered the market and cannot be driven out.”<sup>220</sup>

*Third*, AT&T cites inapposite precedent when it claims the Justice Department has endorsed duopolies as providing effective competition.<sup>221</sup> To be sure, the Justice Department took the unremarkable position in a prior merger proceeding that competition would suffer in markets where the merger reduced the number of competitors from two to one.<sup>222</sup> There, however, neither the Justice Department nor the Commission examined or determined whether a

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<sup>217</sup> Joint CLEC Comments at 43-44; TDS Comments at 13.

<sup>218</sup> Joint CLEC Comments at 44-45.

<sup>219</sup> AT&T Comments at 50-51 (emphasis added).

<sup>220</sup> *Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers; Interexchange Carrier Purchases of Switched Access Services Offered by Competitive Local Exchange Carriers*, Fifth Report and Order and Further Notice of Proposed Rulemaking, 14 FCC Rcd. 14221, 14264, ¶ 80 (1999) (emphasis added).

<sup>221</sup> See AT&T Comments at 51.

<sup>222</sup> See *AT&T Inc. and BellSouth Corp., Application for Transfer of Control*, Memorandum Opinion and Order, 22 FCC Rcd. 5662, 5682-83, ¶¶ 41-42 (2007) (discussing the Justice Department consent decrees).

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duopoly constitutes effective competition in the BDS marketplace. Nor did either agency have access to the robust record available to the Commission today. Thus, the factual conclusions reached in the Justice Department's and Commission's previous merger reviews have no bearing on subsequent analyses of the BDS marketplace. Indeed, the 2010 *Qwest Forbearance Order*, where the Commission concluded that duopolies do *not* yield effective competition, post-dated the 2007 order AT&T cites. The *BellSouth* order did not constrain the Commission's decision in *Phoenix*, and AT&T provides no valid reason why it should constrain the Commission's decision here.

*Fourth*, AT&T and other incumbent LECs ask the Commission to adopt the misguided proposition that a duopoly renders a market competitive because a single competitor generally has incentives to maximize sunk investments in BDS facilities through aggressive price competition, which will, according to the incumbent LECs, drive rates down to competitive levels.<sup>223</sup> This defense of duopoly, however, ignores the core realities of the BDS marketplace. Indeed, the record is clear that multiple factors, such as high marginal costs of serving additional customers and the frequent need to serve customers across multiple locations, preclude a single competitor from disciplining the incumbent's rates.<sup>224</sup> In addition, even if a single competitor manages to have some impact on an incumbent's rates,<sup>225</sup> one competitor alone cannot bring rates all the way down to competitive levels. As discussed above, it is not until a third and fourth competitor enter that rates become truly competitive. Put differently, even if price competition within a duopoly could bring BDS rates below monopolistic levels, duopolies do not discipline

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<sup>223</sup> See AT&T Comments at 51-52; Mid-Size ILEC Comments at 58-61.

<sup>224</sup> Sprint Comments at 32; Joint CLEC Comments at 45.

<sup>225</sup> See, e.g., ITTA Comments at 14 (“[T]he price effect of one additional competitor is negative and significant.”).



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prices sufficiently to produce competitive levels. To produce just and reasonable BDS rates, the record is clear that four—and certainly well more than two—BDS providers must be able to rapidly respond to incumbent prices in the relevant geographic market.

*Finally*, the incumbent LECs base their defense of duopoly, curiously, on economic incentives that exist within a single customer location—despite their vigorous opposition to the use of a single location as a relevant geographic market. AT&T, for example, asserts that “each competitor *connected to a building* has strong incentives to make maximum use of its facilities . . . .”<sup>226</sup> And the mid-size incumbent LECs focus their arguments on the “number of special access competitors *connected to a building*.”<sup>227</sup> The incumbent LECs’ defense of duopolies, however, appears limited to competition within a specific location where a provider has an active connection.

These incumbent LECs’ argument appears to be that when a competitive BDS provider does not serve a particular location, it lacks the facilities at that location over which it needs to maximize use. When a competitor does not have a connection in a building, therefore, the incumbent LECs presumably believe that the single competitive provider does not offer meaningful competition to the incumbent in that building. As CenturyLink and Frontier recognize, “[s]maller markets by their nature may be able to support fewer competitors than larger ones.”<sup>228</sup> If the Commission opts to measure competition using geographic areas larger than a single customer location (*e.g.*, census block), then even by the incumbent LECs’ logic a duopoly would not represent adequate competition. The resulting conclusion that a duopoly does

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<sup>226</sup> AT&T Comments at 51-52 (emphasis added).

<sup>227</sup> Mid-Size ILEC Comments at 60 (emphasis added).

<sup>228</sup> *Id.* at 60-61.

not protect against unjust and unreasonable rates is clearly correct, and consistent with the FCC precedent and economic literature discussed in Sprint’s opening comments, even if the rest of the ILECs’ theory is not. The number of competitors needed to ensure effective competition must be greater than three, given the larger area that competitors would have to build in order to provision services. The Joint CLECs, when discussing a census block test, therefore correctly describe a “four-competitor threshold” as “conservative because competitors with a network presence in the relevant area may not in fact be able to compete for a Business Data Services customer.”<sup>229</sup>

**2. The CMT Should Use a “Connection” to Measure Competitive Presence**

As explained in detail above, although the presence of nearby fiber provides little indication that competitive entry is timely, likely, and sufficient to discipline incumbent pricing, the presence of a BDS connection in a census block or in adjacent census blocks provides a conservative measure of both actual and potential competition.<sup>230</sup> The Commission’s CMT should operate consistently with these findings. Multiple commenters agree with Sprint that, when the Commission calculates the number of competitors present in a geographic area, it should count the number of actual “connections” deployed by facilities-based providers, and not just the number of providers who have deployed fiber within the geographic area. A connection in the FCC’s data collection includes not only actual customers, but also active facilities at a location that could support a new customer. INCOMPAS recognizes that “the presence of fiber in the vicinity of a customer location provides no indication as to whether the carrier has any

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<sup>229</sup> Joint CLEC Comments at 45.

<sup>230</sup> See *supra* Section II.A.

ability to, or interest in, using the fiber facility to serve the customer.”<sup>231</sup> As a result, the Joint CLECs support a connections-based CMT, and observe, “[f]iber presence is therefore a poor proxy for competition in the provision of BDS.”<sup>232</sup>

As discussed above,<sup>233</sup> and as reflected throughout the record, counting “connections” will allow the Commission to determine which providers are actually capable of extending their networks.<sup>234</sup> It also will avoid incorrectly counting providers with only facilities such as transiting long-haul fiber, that are not used to offer BDS, as potential competitors for BDS.

**C. The Commission Should Assess BDS Competition at the Census Block or Adjacent Census Blocks Level**

For the first time in this proceeding, a diverse group including providers and purchasers of BDS has agreed that the Commission should administer its competitive market test at the census block level.<sup>235</sup>

As explained in Sprint’s comments,<sup>236</sup> individual customer locations are the appropriate geographic market when measuring BDS competition. Administering the CMT at the census block level, however, will substantially expand the Commission’s analytical area.<sup>237</sup> As many

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<sup>231</sup> INCOMPAS Comments at 8.

<sup>232</sup> Joint CLEC Comments at 51.

<sup>233</sup> *See supra* Section II.A.

<sup>234</sup> *See* INCOMPAS Comments at 8; Joint CLEC Comments at 49-54; TDS Comments at 13-17; Sprint Comments at 8-12.

<sup>235</sup> *See* Sprint Comments at 7; Windstream Comments at 32; Joint CLEC Comments at 52; CCA Comments at 4; INCOMPAS Comments at 7; Verizon Comments at 10; Letter from Kathleen Grillo and Chip Pickering, Verizon and INCOMPAS, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25, at 2 (filed Apr. 7, 2016).

<sup>236</sup> Sprint Comments at 5-6.

<sup>237</sup> *See* Sprint Comments at 5 (“As Sprint and other providers have explained, and as the Commission previously concluded, the relevant geographic market for BDS is the individual customer location, either a building or cell site”); Joint CLEC Comments at 52 (“[T]he Joint

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commenters have noted, a census block test both eases the administration of the CMT and gives great weight to potential competition by assuming that any company with a connection near a customer location will discipline prices at that location, even if they do not offer service.<sup>238</sup>

As the record demonstrates, administering the CMT by census block is a very conservative approach because these areas are far larger than the distance that competitors are typically willing to extend their networks in response to a price increase by an incumbent. For example, TDS Metrocom reported that the average distance from a lateral to a splice point is only **\*\*\*BEGIN HIGHLY CONFIDENTIAL\*\*\* [REDACTED] \*\*\*END HIGHLY CONFIDENTIAL\*\*\*** and the vast majority of on-net builds are less than **\*\*\*BEGIN HIGHLY CONFIDENTIAL\*\*\* [REDACTED] \*\*\*END HIGHLY CONFIDENTIAL\*\*\*** from a splice point.<sup>239</sup> Other providers indicate that the majority of their customer locations are within **\*\*\*BEGIN HIGHLY CONFIDENTIAL\*\*\* [REDACTED] \*\*\*END HIGHLY CONFIDENTIAL\*\*\*** of their networks,<sup>240</sup> smaller than a Census Block, and report that they will not even bid on projects that are more than **\*\*\*BEGIN HIGHLY CONFIDENTIAL\*\*\* [REDACTED] \*\*\*END HIGHLY CONFIDENTIAL\*\*\*** from their fiber.<sup>241</sup> Accordingly, assessing competition by census block conservatively accounts for the possibility a nearby competitor will

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CLECs believe that a building-by-building approach is administratively feasible...”); INCOMPAS Comments at 7 (“INCOMPAS believes a building-by-building analysis is feasible and would provide a more accurate depiction of the state of competition...”).

<sup>238</sup> Sprint Comments at 7; Joint CLEC Comments at 52; INCOMPAS Comments at 7-8; Verizon Comments at 10.

<sup>239</sup> TDS *Ex Parte* at 9.

<sup>240</sup> Comcast Mar. 25 *Ex Parte* at 2.

<sup>241</sup> Baker Jan. Decl. ¶ 43 n.40.

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extend a lateral to buildings farther from existing customers than is typical today in response to a price increase from an incumbent.

The parties that oppose this consensus position argue that the FCC should administer the CMT over huge Census Tracts or zip codes, but fail to provide any legitimate basis for such a large geographic area. By conducting the CMT across census tracts,<sup>242</sup> or an entire zip code,<sup>243</sup> the CMT would dramatically overstate the likelihood of potential competition. The record makes clear that competitive BDS providers will not extend their networks from a single location in order to cover such large areas. As INCOMPAS notes, the Commission has already concluded that the “distances competitive LECs are generally willing to extend their facilities to reach potential customers . . . are quite short,” and “census tracts [tend] to be large relative to the build-out distances.”<sup>244</sup> In addition, the Joint CLECs advocate that the CMT “should only count existing connections that are close to a customer location in order to assess competitors’ ability to serve the customer location,” and census blocks are “therefore more appropriate than other standardized geographic units such as census tracts, counties, or zip codes.”<sup>245</sup> Finally, CCA observes that it would be inappropriate to expand the CMT’s application beyond a census block because of “significant limitations in building new fiber facilities . . . as a result of cost, access to infrastructure, and oppressive long-term service contracts with ILEC providers that shrink the pool of potential new customers.”<sup>246</sup>

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<sup>242</sup> See AT&T Comments at 39; Mid-Size ILEC Comments at 51.

<sup>243</sup> See Mid-Size ILEC Comments at 51.

<sup>244</sup> INCOMPAS Comments at 7-8 (citing *BDS Order & FNPRM* ¶¶ 211, 214).

<sup>245</sup> Joint CLEC Comments at 52.

<sup>246</sup> CCA Comments at 4.

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Unable to justify their position in the face of these marketplace realities, the AT&T, CenturyLink, and Frontier arguments for the use of larger geographic areas for the CMT largely claim that it would be too difficult to administer BDS regulation at the census block level.<sup>247</sup>

These claims are meritless. Tellingly, **\*\*\*BEGIN HIGHLY CONFIDENTIAL\*\*\*** [REDACTED]

**\*\*\*END HIGHLY CONFIDENTIAL\*\*\***<sup>248</sup> How can it be reasonable **\*\*\*BEGIN HIGHLY CONFIDENTIAL\*\*\*** [REDACTED] **\*\*\*END**

**HIGHLY CONFIDENTIAL\*\*\*** but unreasonable to price by far larger census blocks? By aggregating locations at the census block level, the CMT will in fact simplify the incumbent LECs' existing practices. Indeed, Verizon, one of the largest incumbent BDS providers in the country, plainly states that a census block approach is "administratively feasible."<sup>249</sup> AT&T, CenturyLink, and Frontier have not explained why this approach would be feasible for Verizon, but not for them.

Further, other BDS providers or purchasers report that administering the CMT by census block is administratively reasonable. Sprint itself, as a large BDS purchaser whose systems will also have to accommodate the varying levels of BDS regulation across census blocks, has already voiced its support for the census block approach.<sup>250</sup> Multiple competitive LECs that both buy and sell BDS support "the use of census blocks as the geographic area for the market

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<sup>247</sup> See AT&T Comments at 40-41; Mid-Size ILEC Comments at 50-51.

<sup>248</sup> Carey June Decl. ¶¶ 4-5.

<sup>249</sup> Verizon Comments at 10.

<sup>250</sup> Sprint Comments at 7.

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competition test.”<sup>251</sup> And INCOMPAS, the trade association that represents many competitive BDS providers, as well as many purchasers, states that “a census block-based test would be reasonable.”<sup>252</sup>

Nevertheless, if the Commission determines that even census blocks present administrative challenges, it could apply the CMT across adjacent census blocks. Under this formulation of the CMT, the Commission would deem competitive any group of adjacent census blocks where four or more separate providers have deployed BDS connections to customer locations.<sup>253</sup> Using this approach, the CMT also would be even more conservative by over-valuing potential competition of providers operating at large distances from customer locations. Measuring competition by adjacent census blocks will incorporate the possibility, even if remote, that a BDS provider may be willing to extend its network beyond a census block where it currently provisions services in response to demand in an adjacent block, such as when a splice point is located near a census block boundary.

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<sup>251</sup> Joint CLEC Comments at 52.

<sup>252</sup> INCOMPAS Comments at 7.

<sup>253</sup> To illustrate this concept, consider two adjacent census blocks, Block A and Block B. If four BDS providers have deployed facilities at locations in Block A, and one BDS provider had deployed facilities to locations in Block B, both Blocks A and B would be deemed competitive. Likewise, if two providers deployed facilities in Block A, and two different providers deployed facilities to locations in Block B, both Blocks A and B would be deemed competitive. On the other hand, if three providers (e.g., an incumbent LEC, a competitive LEC, and a cable operator) deployed BDS connections to locations in Block A, and only the same incumbent LEC had BDS connections to locations in Block B, neither Block A nor Block B would be deemed competitive.

V. THE FCC HAS THE AUTHORITY TO ADOPT THE PROPOSED BDS FRAMEWORK

A. The FCC Can Regulate Cable Ethernet Services

Cable industry commenters argue that the FCC lacks the legal authority to regulate cable companies. First, these commenters assert that a portion of the BDS services that they supply are private carrier services not subject to common carrier regulation. Second, cable operators argue that the FCC lacks the authority to address unjust and unreasonable rates charged by cable companies unless the agency first determines that these companies are dominant. As discussed below, the Commission has the authority to include cable companies in its BDS rules should it determine to do so.

1. Cable Provides BDS on a Common Carrier Basis

Cable BDS products have all the traditional marks of a common carrier service. The cable industry sells BDS to “various types of customers,” including “small and medium,” “mid-market,” and “national and enterprise businesses,” and to “customer segments” spanning a number of “enterprise/verticals.”<sup>254</sup> The cable companies also use standard capacity and quality of service tiers in their marketing,<sup>255</sup> and even offer BDS at standardized rates.<sup>256</sup> Unsurprisingly, even the cable industry does not attempt to argue that *all* of its BDS amounts to private carriage—and it could hardly do so given the evidence of cable marketing practices that

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<sup>254</sup> Comcast Mar. 25 *Ex Parte* at 2-3; TWC Mar. 3 *Ex Parte* at 3.

<sup>255</sup> Comcast Comments at 11-13 (describing the company’s Basic, Priority, and Premium service tiers); *see also* Bye and Steelman Decl. ¶ 12 (describing standard performance specifications for BDS offerings).

<sup>256</sup> Comcast Comments at 10 (describing retail BDS sales); *see also* **\*\*\*BEGIN HIGHLY CONFIDENTIAL\*\*\*** [REDACTED]  
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cable companies themselves have put on the record. Instead, the cable industry focuses its argument on sales made to other carriers—including cable’s retail competitors—and, to a lesser extent, large, multi-location enterprise customers.<sup>257</sup> Sales to these customers are especially critical to effective and robust broadband competition. As Sprint explained previously, wholesale BDS is a critical input into wireless and wireline broadband services,<sup>258</sup> and contracts with large, multi-location enterprise customers are often subject to diminished competition.<sup>259</sup>

The cable companies claim that these services are exempt from common carrier regulation because cable companies individually negotiate agreements with wholesale and large enterprise customers.<sup>260</sup> However, as the Commission has held previously, individually negotiated sales are not uncommon for non-tariffed telecommunications services, and are not subject to an automatic exclusion from common carrier regulation.<sup>261</sup> In addition, Comcast claims that it does not serve carrier customers indiscriminately, because it restricts availability of

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<sup>257</sup> See, e.g., Comcast Comments at 15 (arguing that some, but not all, cable BDS is private carriage, and focusing specifically on BDS sold to carrier and large multi-location enterprise customers); NCTA Comments at 11 (arguing against a “blanket assertion” that “every competitive BDS offering is a common carrier service”); Charter Comments at 2 (arguing that “[m]any BDS,” and specifically BDS offered to “large enterprise customers,” are private carrier services).

<sup>258</sup> See, e.g., Sprint Comments at 64-68, 78-79; Letter from R. Paul Margie, Counsel, Sprint Corporation, to Marlene H. Dortch, Secretary, FCC, at 5-6, WC Docket No. 05-25 (filed Sept. 23, 2015).

<sup>259</sup> See Sprint Comments at 77; Sprint Feb. Reply Comments at 26-27.

<sup>260</sup> See Comcast Comments at 15-17; Charter Comments at 18; NCTA Comments at 11-13; Declaration of Jeffrey Finkelstein ¶ 11, attached as Exhibit 3 to Cox Comments.

<sup>261</sup> See, e.g., *Iowa Telecommc ’ns Servs., Inc., v. Iowa Util. Bd.*, 563 F.3d 743, 750 (8th Cir. 2009); *Cellco P’ship v. FCC*, 700 F.3d 534, 545-8 (D.C. Cir. 2012); *Orloff v. FCC*, 352 F.3d 415, 418-20 (D.C. Cir. 2005); *Protecting and Promoting the Open Internet*, Report and Order on Remand, Declaratory Ruling, and Order, 30 FCC Rcd. 5601, 5763 ¶ 363 (2015), *aff’d United States Telecom Ass’n v. FCC*, No. 15-1063, 2016 WL 3251234, at \*18 (D.C. Cir. June 14, 2016).

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wholesale BDS to “a limited number of carriers with which [it] chooses to create a network-to-network interface.”<sup>262</sup> Here, too, longstanding Commission precedent undermines Comcast’s demand to exclude carrier sales from regulation. As the Commission has made clear, time and time again, common carrier services plainly “include wholesale services to other carriers.”<sup>263</sup> Moreover, in light of Comcast’s general provision of service to any interested customer,<sup>264</sup> it cannot selectively refuse to deal with buyers that it competes with for retail business.

### **2. The FCC Can Apply the Ethernet Safe Harbor Benchmark to All Providers, Including Cable Companies**

Incumbent LEC Verizon and several competitive providers have proposed that the Commission address unjust and unreasonable Ethernet prices through a safe harbor benchmarking mechanism.<sup>265</sup> The safe harbor approach results in significant deregulation of the FCC’s price cap system, which was itself a deregulation of the prior rate-of-return system.

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<sup>262</sup> Comcast Comments at 16.

<sup>263</sup> *Implementation of the Non-Accounting Safeguards of Sections 271 and 272 of the Communications Act of 1934, As Amended*, First Report and Order and Further Notice of Proposed Rulemaking, 11 FCC Rcd. 21,905, 22,032-33 & 22,033-34 ¶¶ 263, 265 (1996); *see also Implementation of the Non-Accounting Safeguards of Section 271 and 272 of the Communications Act of 1934, As Amended*, Second Order on Reconsideration, 12 FCC Rcd. 8653, 8670-71 ¶ 33 (1997) (there is “no basis in the statute, legislative history, or FCC precedent for finding the reference to ‘the public’ in the statutory definition to be intended to exclude wholesale telecommunications services”); *Federal-State Joint Board on Universal Service*, Report and Order, 12 FCC Rcd. 8776, 9177-8 ¶ 785 (1997) (“[c]ommon carrier services include services offered to other carriers”); *Time Warner Cable Request for Declaratory Ruling*, Memorandum Opinion and Order, 22 FCC Rcd. 3513, 3518 ¶ 12 (2007).

<sup>264</sup> *See, e.g., Comcast Mar. 25 Ex Parte* (describing service to businesses of all needs and sizes).

<sup>265</sup> Verizon Comments at 17-20; Joint CLEC Comments at 11-13; Windstream Comments at 49-55. Sprint’s initial comments described one of several possible methods for setting initial safe harbor benchmark rates, but the Commission should consider other worthwhile proposals that ensure just and reasonable rates.

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Sprint believes that a properly crafted benchmark with a safe harbor remedy could nonetheless promote just and reasonable pricing.<sup>266</sup>

The cable industry, however, argues that the Commission lacks authority to adopt such a light-touch regulatory approach. Specifically, the cable companies claim that the FCC cannot apply a benchmark without first determining that cable is dominant in the provision of BDS, and cannot support a finding of dominance because cable companies do not have market power in the sale of BDS in any product market, anywhere in the country.

Both arguments are incorrect. As an initial matter, a benchmark safe harbor will not subject competitive providers of packet-based BDS to dominant carrier regulation, and therefore does not require a finding of dominance under the Commission's existing rules. Unlike dominant carrier regulation, the benchmark would allow BDS providers to sell service using commercially negotiated agreements rather than tariffs.<sup>267</sup> Along the same lines, the benchmark would not require BDS suppliers to submit cost justification before using each published rate.<sup>268</sup> Thus, a benchmark will continue to provide BDS suppliers, including cable operators, with the “‘flexibility’ to ‘experiment with price/service offerings,’ ‘enter new markets quickly where they perceive competitive opportunities exist,’ [and] ‘leave others on relatively short notice if their projections aren’t realized,’”<sup>269</sup> and thereby ensure that the core benefits of non-dominant carrier regulation remain intact.

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<sup>266</sup> Sprint Comments at 64-73.

<sup>267</sup> *Id.* at 69-70.

<sup>268</sup> *Cf.* 47 C.F.R. §§ 61.38-39, 61.41, 61.49, 61.58 (dominant carriers must submit cost support and other information to justify tariffed rates).

<sup>269</sup> *See* Comcast Comments at 74 (quoting *Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities Authorizations Therefor*, First Report and Order, 85 FCC.2d 1, 20-21 ¶ 55 (1980)).

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In addition to differing in key respects from dominant carrier regulation, the light-touch, less regulatory approach that Verizon, competitive BDS providers, and Sprint propose falls squarely within the existing scope of the Commission’s policy toward non-dominant carriers. Since the inception of the *Competitive Carrier Proceeding*, non-dominant carriers have consistently remained subject to the substantive requirements of Sections 201 and 202, and to enforcement of these provisions through actions filed with the FCC by purchasers of their services.<sup>270</sup> Indeed, when the Commission forbore from applying dominant carrier regulation to competitive access providers, it emphasized that it would “not hesitate” to “investigate and adjudicate” complaints to “address any issue of unlawful rates.”<sup>271</sup> The proposed Ethernet benchmark approach builds upon these long-standing obligations and means of enforcement—and in fact, simplifies them. By providing BDS suppliers with a presumption that rates at or

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<sup>270</sup> See, e.g., *Policy & Rules Concerning Rates for Competitive Common Carrier Servs. & Facilities Authorizations Therefor*, Notice of Inquiry and Proposed Rulemaking, 77 FCC.2d 308, 329 (1979) (proposing that non-dominant carrier pricing “will remain subject to our review and complaint processes, and should unlawful tariffs or practices come before the Commission we will act appropriately”) (together with subsequent notices, reports, and orders in CC Docket No. 79-252, the “*Common Carrier Proceeding*”); *Policy & Rules Concerning Rates for Competitive Common Carrier Servs. & Facilities Authorizations Therefor*, Second Report and Order, 91 FCC.2d 59, 70 ¶ 22 (1982) (“use of the complaint process allows for the continued monitoring of the justness and reasonableness of the charges and practices of [non-dominant] carriers”); *Policy and Rules Concerning Rates for Competitive Common Carrier Servs. & Facilities Authorizations Therefor*, Fourth Report and Order, 95 FCC.2d 554, 576-77 ¶ 33 (1983) (the FCC “can investigate complaints against non-dominant carriers . . . [u]nder Section 208 of the Communications Act of 1934”); *Motion of AT&T Corp. to Be Reclassified As A Non-Dominant Carrier*, Order, 11 FCC Rcd. 3271, 3342 ¶ 131 (1995) (“post-effective tariff review and our complaint process provide adequate means of redress” to enforce sections 201 and 202); *Hyperion Telecommunications, Inc. Petition Requesting Forbearance, et al.*, Memorandum Opinion and Order and Notice of Proposed Rulemaking, 12 FCC Rcd. 8596, 8609 ¶ 25 (1997) (“*Hyperion Order*”) (forbearing from dominant carrier regulation for competitive access providers, noting that the FCC can “address any issue of unlawful rates through the exercise of our authority to investigate and adjudicate complaints under Section 208”).

<sup>271</sup> *Hyperion Order* ¶ 25.

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below the benchmark are reasonable, and streamlining the process for adjudicating challenges to BDS rates, the proposal will increase business certainty for buyers and sellers.

Finally, the FCC may decide to apply the Ethernet benchmark only to firms with market power in a particular geography. The Commission’s proposal would only apply in areas deemed non-competitive by the CMT. In these areas, the benchmark could operate to govern pricing only for the incumbent carrier that possesses market power in the first instance. The Commission could then periodically update its data to determine if new BDS providers have gained market power. As the *2015 Collection* confirms, monopolistic and duopolistic conditions describe the vast majority of the BDS marketplace.<sup>272</sup> Even assuming that a finding of market power was necessary to adopt the light-touch pricing regulations that Sprint, Verizon, and others propose for Ethernet services, it is enough for the Commission to conclude that an incumbent LEC and a second, non-ILEC BDS provider have joint market power in these areas.<sup>273</sup>

To the extent cable companies suggest that Commission policy is that only monopolists are capable of exercising market power,<sup>274</sup> they ignore decades of FCC precedent since the beginning of the *Competitive Carrier Proceeding*, which culminated in the Commission’s explicit rejection of such a claim. Citing a bevy of legal authority and economic literature in the *Qwest Forbearance Order*, the Commission explained:

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<sup>272</sup> See Besen/Mitchell Decl. ¶ 25 (Table 1) (97 percent of locations have at most two providers); see also *BDS Order & FNPRM* ¶ 221 (Table 4) (counting HFC, 69 percent of census blocks with BDS demand have at most two carriers).

<sup>273</sup> See *Access Charge Reform*, Seventh Report and Order and Further Notice of Proposed Rulemaking, 16 FCC Rcd. 9923, 9936 ¶¶ 33-34 (2001) (“*Access Charge Reform FNPRM*”) (regulating competitive local exchange carrier access charges without making firm-specific findings, and without concluding that “CLEC access rates, across the board, are unreasonable”).

<sup>274</sup> See, e.g., Comcast Comments at 43-44; NCTA Comments at 32, 35.

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In the *Competitive Carrier Proceeding* and in certain subsequent proceedings relating to dominance classification, the Commission was primarily concerned with whether the carrier possessed “individual” market power. In the *AT&T Domestic Nondominance Order*, the Commission again primarily focused on individual or unilateral market power. *Importantly, however, the Commission in that order also recognized possible concerns that could arise from collusion. In subsequent decisions applying its market power analysis, the Commission expressly recognized the potential for either individual or joint market power in particular circumstances.*<sup>275</sup>

Critically, by finding that competitive BDS carriers possess market power over the sale of BDS in some parts of the country, the Commission would not need to formally declare that competitive BDS providers are dominant carriers and subject them to the full panoply of dominant carrier regulation. Indeed, the Commission has previously declined to determine that

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<sup>275</sup> *Qwest Forbearance Order*, 25 FCC Rcd. at 8626 ¶ 8 (footnotes omitted) (emphasis added); see also *id.* n.84 (citing *FTC v. H.J. Heinz Co.*, 246 F.3d 708, 724 n.23 (D.C. Cir. 2001) (“In a duopoly, a market with only two competitors, supra-competitive pricing at monopolistic levels is a danger.”)); *id.* n.85 (citing *Amendment of the Commission’s Space Station Licensing Rules and Policies*, IB Docket Nos. 02-34, 02- 54, First Report and Order and Further Notice of Proposed Rulemaking, 18 FCC Rcd 10760, 10789 ¶ 64 (2003); *Application of EchoStar Commc’ns Corp., General Motors Corp, and Hughes Electronics Corp. and EchoStar Commc’ns Corp.*, CS Docket No. 01-348, Hearing Designation Order, 17 FCC Rcd 20559, 20624–26 ¶¶ 170–74 (2002); *Application of Air Virginia, Inc. and Clear Channel Radio Licenses, Inc. for Consent to the Assignment of the License of WUMX (FM), Charlottesville, VA*, MM Docket No. 02-38, Hearing Designation Order, 17 FCC Rcd 5423, 5432 ¶ 27 (2002) (“In general, duopolies are conducive to coordinated behavior that facilitates market division and inefficient price discrimination.”); *SBC Communications Inc. and AT&T Corp. Applications for Approval of Transfer of Control*, WC Docket No. 05-65, Memorandum Opinion and Order, 20 FCC Rcd 18290, 18325–34 ¶¶ 65-78 (2005); *Applications of NYNEX Corp., Transferor, and Bell Atlantic Corp., Transferee, for Consent to Transfer Control of NYNEX Corp. and Its Subsidiaries*, WC Docket No. 05-65, Memorandum Opinion and Order, 12 FCC Rcd 19985, 20008–09 ¶ 37 (1997); *Amendment of Parts 20 and 24 of the Commission’s Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap, Amendment of the Commission’s Cellular/PCS Cross-Ownership Rule*, WT Docket No. 96-59, GN Docket No. 90-314, Report and Order, 11 FCC Rcd 7824, 7872–73 ¶ 100 (1996).

competitive providers are dominant carriers notwithstanding its adoption of pricing constraints to address their market power.<sup>276</sup>

Sprint acknowledges that in some cases, a second or third entrant may prove to be an especially weak competitor given the harsh economics of overbuilding BDS facilities. Accordingly, Sprint does not object to proposals that would exclude these weak competitors from Ethernet benchmark regulation, either by granting a temporary exemption to new entrants<sup>277</sup> or a permanent exemption to all providers with a sufficiently low share of the market.<sup>278</sup> Sprint emphasizes, however, that the Commission need not adopt these exemptions or make firm-specific findings of market power in each non-competitive market in order to move forward with its BDS reform proposal.<sup>279</sup>

**B. Remaining ILEC Legal Arguments are Baseless**

**1. The FCC Can Partially Reverse Forbearance “Deemed Granted” to Verizon**

As Sprint explained previously,<sup>280</sup> the FCC should reverse the forbearance from Sections 201 and 202 of the Act deemed granted to Verizon and implement BDS reform across all services and providers. In their comments, CenturyLink and Frontier ambitiously argue that the grant of forbearance to Verizon was an act of Congress, and that the Commission “would somehow have to re-enact the statute” in order to reverse forbearance. In support, CenturyLink and Frontier point to the D.C. Circuit’s decision in *Sprint Nextel Corp. v. FCC*, 508 F.3d 1129,

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<sup>276</sup> See *Access Charge Reform FNPRM* at 9936, 9970 ¶¶ 34, 124 (concluding that a “benchmark approach is more desirable than subjecting CLECs to the panoply of ILEC regulation”).

<sup>277</sup> Verizon Comments at 17-20.

<sup>278</sup> See, e.g., Joint CLEC Comments at 10 (benchmarks should apply to “leading competitors”); Windstream Comments at 49-55 (benchmarks should apply to “market leaders”).

<sup>279</sup> See *supra* note 274.

<sup>280</sup> Sprint Comments at 95-97.

1132 (D.C. Cir. 2007), where it held that the “deemed” granting of Verizon’s petition was unreviewable on appeal.

CenturyLink’s and Frontier’s reliance on the *Sprint Nextel* case is misplaced. The court in *Sprint Nextel* addressed *its own* authority to review the disposition of Verizon’s petition. It expressed no opinion on *the Commission’s* authority to revisit the forbearance granted to Verizon. More importantly, however, the D.C. Circuit addressed the FCC’s authority two years later in *Ad Hoc Telecommunications Users Committee v. FCC*, 572 F.3d 903 (D.C. Cir. 2009). After explicitly acknowledging its prior decision in *Sprint Nextel*,<sup>281</sup> the court in *Ad Hoc* proceeded to determine that “the FCC’s forbearance decision[s]” on ILEC Ethernet services—including those raised “in the . . . Verizon . . . matter[]”—are “not chiseled in marble,” and that the “FCC will be able to reassess as [it] reasonably see[s] fit based on changes in market conditions, technical capabilities, or policy approaches to regulation in this area.”<sup>282</sup> Thus, as the D.C. Circuit has held—with respect to the precise Verizon petition at issue in this rulemaking—the FCC can lawfully reverse the forbearance granted to Verizon. CenturyLink and Frontier did not discuss the *Ad Hoc* decision in their comments.

## **2. The FCC Can Detariff TDM Services**

In its comments, Sprint agreed that the Commission has authority to require incumbent LECs to publish their rates, terms, and conditions online in lieu of filing tariffs for TDM services, as it proposed in the *BDS Order & FNPRM*.<sup>283</sup> AT&T argues that the FCC cannot detariff TDM services, and thereby preclude operation of the “deemed lawful” provision of

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<sup>281</sup> *Ad Hoc Telecommc’ns Users Comm. v. FCC*, 572 F.3d 903, 907.

<sup>282</sup> *Id.* at 911.

<sup>283</sup> Sprint Comments at 62.



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Section 204(a), while also requiring BDS suppliers to disclose their rates online.<sup>284</sup> According to AT&T, the FCC’s detariffing approach would “in effect . . . ‘forbear’ only from the limitations on its own power, while retaining essentially all of the carrier burdens of a tariffing regime.”<sup>285</sup>

AT&T does not point to any authority in support of its argument. This is hardly surprising, because the argument conflicts with the Act’s provisions and Commission precedent. The Act broadly authorizes the FCC to forbear from applying “any regulation or provision”—regardless of whether it expands or limits the rights of carriers.<sup>286</sup> Moreover, the Commission has previously required carriers subject to mandatory detariffing to publish their rates online,<sup>287</sup> and expressly declined to extend protections afforded to tariffed rates, terms, and conditions to the rates, terms, and conditions posted pursuant to the public disclosure requirement.<sup>288</sup>

### 3. The FCC Can Adopt Backstop Regulation of Wholesale Rates

As Sprint proposed in its comments, in addition to regulating BDS prices in areas deemed non-competitive by the CMT, the FCC should “reiterate and enforce a simple, common sense backstop” governing the sale of BDS in all areas: “the wholesale BDS rates offered by an incumbent LEC must be lower than its lowest retail rates for the same services by an amount at least equal to the costs that are ‘avoided’ when the services are offered on a wholesale basis.”<sup>289</sup> AT&T argues that a wholesale pricing remedy would conflict with the Act’s tariff-based “regime

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<sup>284</sup> AT&T Comments at 80-81.

<sup>285</sup> *Id.* at 81.

<sup>286</sup> 47 U.S.C. § 160(a).

<sup>287</sup> *Policy & Rules Concerning the Interstate, Interexchange Marketplace*, Second Order on Reconsideration and Erratum, 14 FCC Rcd. 6004, 6006-7, 6012-17, ¶¶ 4, 14-19 (1999).

<sup>288</sup> *Id.* ¶ 17 (“We agree . . . that the ‘filed-rate’ doctrine that the courts have applied to the tariff filing requirement should not apply to the public disclosure requirement.”)

<sup>289</sup> Sprint Comments at 73.

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of carrier-initiated rates,”<sup>290</sup> which AT&T claims limits the Commission’s authority to opine on the lawfulness of telecommunications pricing until after the Commission holds a rate prescription hearing.

As an initial matter, the Commission need not engage in a rate prescription hearing to adopt a wholesale pricing discount because the remedy proposed does not entail prescription of a rate. The Commission would instead clarify circumstances under which a wholesale rate would be unreasonable, subject to enforcement in individual complaint proceedings. More importantly, however, AT&T ignores that many Ethernet services are not currently subject to tariff-based pricing regulation, and that the proposed BDS reforms would take the deregulatory step of eliminating tariffs altogether and rely instead on commercially negotiated agreements. Thus, the BDS marketplace already has shifted, and will continue to shift, away from “carrier-initiated” rates set unilaterally by tariff. As a result, rate-setting in the BDS marketplace should also shift from the traditional operation contemplated in statutory tariffing provisions upon which AT&T relies.

AT&T further argues that a wholesale pricing discount would amount to a “use restriction” that violates the Act’s anti-discrimination provisions.<sup>291</sup> Here, again, AT&T misunderstands the nature of the proposed remedy. The wholesale pricing discount would not restrict service availability for any class of users. To the contrary, the discount would ensure that service remains effectively available to wholesale users by deterring anticompetitive price squeeze behavior that restricts the ability of a seller’s retail competitors to purchase wholesale

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<sup>290</sup> AT&T Comments at 65.

<sup>291</sup> *Id.* at 66.

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BDS.<sup>292</sup> Thus, the “longstanding precedent”<sup>293</sup> cited by AT&T<sup>294</sup> directly supports FCC action on wholesale BDS pricing. Indeed, in addressing use restrictions, the FCC has consistently sought to eliminate terms and conditions that would restrict the ability of buyers to use telecommunications as input into competing retail services.<sup>295</sup>

### VI. CONCLUSION

The comments the Commission received in response to the *Further Notice* establish broad support for the key elements of a framework for BDS reform, and represent an emerging consensus on the key questions raised in this proceeding. Best efforts and almost all EoHFC are not part of the BDS product market. Wireless backhaul purchasers should benefit from the same protections as other BDS customers. Connections in a census block (or adjacent census blocks)

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<sup>292</sup> See, e.g., Windstream Comments at 37-48, 57-58.

<sup>293</sup> AT&T Comments at 8.

<sup>294</sup> *Id.* at 66-67 n.187 (citing *Amendment of Sections 64.702 of the Commission’s Rules and Regulations (Third Computer Inquiry); Policy Rules Concerning Rates for Competitive Common Carrier Services and Facilities Authorizations Thereof Communications Protocols under Section 64.702 of the Commission’s Rules and Regulations*, 104 FCC 2d 958, \*1042, ¶ 165 (1986) (“Third Computer Inquiry”); *Amendment of Sections 64.702 of the Commission’s Rules and Regulations (Third Computer Inquiry) and Policy Rules Concerning Rates for Competitive Common Carrier Service & Facilities Authorizations Thereof Communications Protocols under Sections 64.702 of the Commission’s Rules and Regulations*, Memorandum Opinion and Order on Reconsideration, 2 FCC Rcd. 3035, 3051, ¶ 109 (1987) (“Third Computer Inquiry MO&O on Reconsideration”); *MCI Telecommunications Corp. v. AT&T Co. & the Pacific Telephone & Telegraph Co.*, 94 FCC 2d 360, \*391-92, ¶¶ 97-100 (1981) (“MCI Telecomm.”)).


<sup>295</sup> See Third Computer Inquiry at \*1042, ¶ 165 (1986) (carriers “should not restrict the availability” of comparably efficient interconnection (CEI) opportunities “to any particular class of customer or enhanced service competitor,” because “enhanced services vendors and large users are, in a sense, competitors of the carriers in enhanced services markets”); Third Computer Inquiry MO&O on Reconsideration at 3051, ¶ 109 (1987) (“We agree with the general position of IBM and the Clearing Houses that the direct availability of such basic services will promote economic and network efficiency by providing end users with the flexibility to design their own services that best respond to their needs”); MCI Telecomm. at \*391-92, ¶¶ 97-100 (1981) (prohibiting restrictions on wholesale purchases by resellers).

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provide a conservative measure of both actual and potential competition, while fiber in a census block is an unreliable and inaccurate metric. Duopolies do not discipline unjust and unreasonable behavior in the BDS marketplace, but four competitors do. The market for BDS at or below 50 Mbps is almost uniformly non-competitive. While suppliers possess market power at high capacities as well, competition varies more by geographic market. And EoHFC services are too limited in scope, capability, and scalability to alter these fundamental conclusions.

These findings—and an understanding that the FCC’s new rules must be administrable—form the foundation of the framework Sprint proposes. By adopting Sprint’s recommendations, the FCC can finally resolve this long-running proceeding, take another leap forward to secure American leadership on 5G, and continue to promote the Nation’s evolution toward more advanced IP-based networks.

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