

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Business Data Services in an Internet Protocol Environment)	WC Docket No. 16-143
)	
Investigation of Certain Price Cap Local Exchange Carrier Business Data Services Tariff Pricing Plans)	WC Docket No. 15-247
)	
Special Access for Price Cap Local Exchange Carriers)	WC Docket No. 05-25
)	
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
THE UNITED STATES TELECOM ASSOCIATION**

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SUMMARY

The Commission recognized decades ago, in an era when providing voice service was a legal monopoly, that competition for business customers was possible given the concentration of demand and substantial revenue opportunities compared to the residential market. That competition has grown steadily under Commission policies that were put in place to support facilities-based competition. Chairman Wheeler continues a long line of Commission precedent recognizing that new entry by facilities-based competitors “is bringing more competition – and that’s an outcome that needs to be encouraged.” Competitive facilities now exist in over 95% of the census blocks in the country, and over 97% of the country’s businesses are located in those areas.

Competitive providers claimed 51% of business data services (BDS) revenues in 2013, likely to be close to 60% now. Although some competitors argue that for them a substantial portion of this revenue comes from reselling incumbent facilities, if prices are reduced as they request, that will serve only to increase resale competition and harm facilities-based competition, as the Commission has consistently recognized in related proceedings over the last decade. Whatever new regulatory framework the Commission chooses to put in place for business services should continue its longstanding goal of encouraging investment in facilities. Extending regulatory burdens to investment in newly constructed and upgraded facilities needed to meet skyrocketing demand at businesses and cell sites will hardly encourage facilities-based investment or competition.

Business data services are in a period of rapid transition and technological change. New competitors and new technologies are transforming this market. The Commission’s own data and analyses reflect these changes and do not provide any solid basis for heavy-handed regulatory intervention such as resetting market prices. Perhaps that is why some parties seem willing to abandon the data analyses route altogether and opt for presumptions that do not reflect what is in the record. Competitive LECs in particular offer to forego regulation of access to BDS above a certain threshold, despite never having a right to such regulated access under past or existing rules. This gesture is offered in exchange for expanded regulation of BDS below a certain threshold offered at speeds roughly equivalent to TDM-based T-1, DS-1, and DS-3 services, except that regulation would extend to BDS offered over new fiber, cable, and hybrid facilities, to which competitors have never had regulated access under past or existing rules. Rather than using the volumes of data collected to determine which areas are competitive and which product categories are competitively offered, they say the Commission should just draw a line in the sand so competitors can keep getting regulated access to the facilities of other providers without investing in their own facilities.

The Commission should not, and lawfully cannot, abandon its duty to conduct this rulemaking in accordance with the laws governing the administrative process. That means the Commission must assess the record and use it, if possible, to determine where regulation is necessary because competition does not and cannot exist. If the record is insufficient to make that determination, the Commission must collect more data and ask more questions. As the Commission has recognized, the right regulatory policy will create incentives for the communication industry to continue to invest to successfully achieve technology transitions and to enable competition on a level playing field in which all carriers are building facilities to ensure that they can meet the broadband requirements of their business customers.

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The United States Telecom Association (USTelecom) submits these reply comments in response to the Federal Communications Commission’s (FCC or Commission) Further Notice of Proposed Rulemaking in this proceeding.¹

I. INTRODUCTION

Although commenters strongly disagree about the need for regulation of business data services – and the form of such regulation – there is no dispute that the Commission’s overarching goal in this proceeding should be to encourage facilities-based competition. That

¹ *Business Data Services in an Internet Protocol Environment*, Tariff Investigation Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 4723, ¶ 5 (2016) (*Further Notice*).

goal is enshrined in the Telecommunications Act of 1996 (Act) and has been embraced by the Commission in numerous decisions implementing the Act over the past 20 years.

When viewed through the prism of increasing facilities-based competition, the Commission's proposals in this proceeding wildly miss the mark. As noted by numerous commenters – including the facilities-based competitors that have invested billions in the network infrastructure to provide business data services – a new regulatory regime to identify allegedly “non-competitive” markets for business data services and impose draconian rate regulation on service providers in those markets would undermine the facilities-based competition the Commission seeks to encourage. If adopted, the Commission's proposals would only create incentives for competitors to engage in subsidized resale rather than to deploy their own network facilities – an outcome that is inconsistent with the Act and Commission precedent and that would harm the very business customers this proceeding is ostensibly intended to protect.

The Commission's proposals also are flawed in other respects. First, the Commission proposes to define broadband data services that would be subject to regulation based on antiquated technology and limited features indicative of incumbent local exchange carriers' (LECs) legacy service offerings, rather than acknowledging the range of options available with the newer and more dynamic technologies that incumbent and competing providers are currently deploying. This backwards-looking approach makes no sense, given that businesses have embraced services based on newer technologies such as Ethernet for their broadband needs. Notably, the proposed definition improperly incorporates contractual or formal “performance” guarantees, even though providers offer a broad range of assurances and guarantees and many

business customers do not highly value the particular format of such guarantees – Service Level Agreements (SLAs) – that the Commission may rely on.

Second, the Commission improperly ignores certain cable services, both in defining the business data services market and in assessing competition in that market. This approach contravenes Commission precedent and the record evidence that business customers consider such “best efforts” cable services and traditional special access services to be reasonable substitutes.

Third, the Commission’s proposals to regulate business data services are predicated on a misguided view of the marketplace. The Commission and some commenters seek to rely upon regression analyses using inaccurate and outdated data, which skews the analysis of competition for business data services. The actual record confirms the robustness of competition in the business data market by demonstrating the multitude of competitive options available to large, medium, and small business customers in urban, suburban, and rural areas across the United States. Even the Commission’s own data and analyses – flawed as they are – confirm the competitiveness of the market.²

If the Commission proceeds down the regulatory path laid out in the *Further Notice* – which the agency should not do – it must accurately assess the level of competition for business data services before adopting any new rules. Specifically, in addition to considering the impact of all facilities-based competitors, the Commission must consider competition from unbundled network elements, which play a significant role in the business data services market. If not, the

² *Further Notice*, App. B, Marc Rysman, “Empirics of Business Data Services,” White Paper, Table 1, Table 8 (April 2016) (Rysman Paper) (finding that competing providers have a 51 percent market share in terms of business data services revenues and serve approximately one half of all buildings with fiber).

Commission should eliminate mandates to supply relevant UNEs. Likewise, the Commission must account for competitive growth since its 2013 data collection, including projected increases in competition over the next several years. The Commission cannot purport to establish a test to identify markets with sufficient “current and potential competition” by ignoring certain aspects of and known changes in the competitive landscape.³

The Commission should reject the use of arbitrary speed thresholds to establish a presumption of non-competitiveness. Such proposals defeat the purpose of the Commission’s costly and time-consuming data collection. Furthermore, this approach contravenes Commission precedent and the record evidence regarding the economics of self-deployment, which confirm that competing providers can economically self-deploy network facilities at speeds below certain thresholds.

Finally, the Commission should avoid adopting a regulatory framework that increases regulatory burdens on some but not all providers in favor of one that regulates all providers offering similar services in a similar manner. An approach by which incumbent providers are regulated differently from competing providers when offering the same services would result in an un-level playing field and a loss of incentives to build, to the detriment of business customers.

II. THE FCC SHOULD SEEK TO PROMOTE FACILITIES-BASED RATHER THAN SUBSIDIZE RESALE COMPETITION FOR BUSINESS DATA SERVICES.

USTelecom agrees with commenters that the Commission, in its apparent zeal to regulate business data services, appears to have lost sight of the critical importance of facilities-based

³ *Further Notice* ¶ 6.

competition.⁴ “[E]ncouraging facilities-based competition” is an “aim” of the Act.⁵ Indeed, as Chairman Wheeler recently observed in this proceeding, new entry by true facilities-based competitors, such as cable companies, “is bringing more competition – and that’s an outcome that needs to be encouraged.”⁶

Chairman Wheeler’s observation about the need to encourage facilities-based competition is consistent with a long line of FCC decisions which recognize that real facilities-based competition protects consumers and drives investment.⁷ For example, in adopting the unbundling rules that ultimately were upheld by the D.C. Circuit, the Commission noted the importance of ensuring that “unbundling does not frustrate sustainable, facilities-based

⁴ See, e.g., Comments of the National Cable & Telecommunications Association, WC Docket No. 16-143, at 15-17 (filed June 28, 2016) (NCTA Comments); Comments of Charter Communications, Inc., WC Docket No. 16-143, at 3-5 (filed June 28, 2016) (Charter Comments); Comments of Comcast Corp., WC Docket No. 16-143, at 27-56 (filed June 28, 2016) (Comcast Comments); Comments of Cox Communications, Inc., WC Docket No. 16-143, at 21-29 (filed June 28, 2016) (Cox Comments).

⁵ *Unbundled Access to Network Elements*, Order on Remand, 20 FCC Rcd 2533, ¶ 219 (2005) (*Triennial Review Remand Order*); see also *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, 18 FCC Rcd 16978, ¶ 113 (2003) (“one of the goals of the Act, impressed upon us by the courts, is investment in facilities by both incumbent LECs and new entrants”) (*Triennial Review Order*).

⁶ *Further Notice*, Statement of Chairman Tom Wheeler, at 1.

⁷ *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, Third Report and Order and Notice of Proposed Rulemaking, 15 FCC Rcd 3696, ¶ 7 (1999) (*UNE Remand Order*) (noting that the “unbundling rules we adopt in this proceeding seek to promote the development of facilities-based competition” because “encourag[ing] competitors to deploy their own facilities in the long run will provide incentives for both incumbents and competitors to invest and innovate ...”); see also *id.* ¶ 14 (noting “preference for development of facilities-based competition”); *id.* ¶ 134 (“We believe that it is through self-provisioning their own facilities that competitive LECs will have a greater ability to serve all classes of customers.”); *Unbundled Access to Network Elements*, Order and Notice of Proposed Rulemaking, 19 FCC Rcd 16783, ¶ 2 (2004) (“we renew our commitment to promoting the development of facilities-based competition and seek to adopt unbundling rules that will achieve this end”).

competition.”⁸ According to the Commission, providing “the right incentives” for network investment is the “best” means by which to promote “innovation and sustainable competition.”⁹

Unfortunately, commenters supporting the Commission’s proposals in this proceeding make no attempt to explain how government micromangement of the business data services market would promote facilities-based competition. This omission is not surprising because, as the Commission’s own data collection revealed, the market currently features considerably more competing providers that largely purchase special access for resale as an input to their offerings (373) than true facilities-based competitors (96).¹⁰ Thus, the Commission’s adoption of the draconian reductions in the prices for business data services that some commenters endorse would merely cement in place subsidies for – and thereby create incentives for competitors to engage in – a predominantly resale business model.¹¹ The inevitable outcome would be more resale and less facilities investment to the detriment of facilities-based competitors and business customers alike.¹²

⁸ *Triennial Review Remand Order* ¶ 2.

⁹ *Id.*; see also *id.* ¶ 183 (“Because we favor competitive deployment as a matter of policy, making dark fiber available on an unbundled basis would undermine the incentives established” for competitive deployment of fiber facilities.); *Triennial Review Order* ¶ 272 (finding that refraining from “unbundling incumbent LEC next-generation networks” would “stimulate facilities-based”).

¹⁰ *Further Notice* ¶¶ 42, 70.

¹¹ See, e.g., Comments of Sprint Corporation, WC Docket No. 16-143, at 66 (filed June 28, 2016) (proposing a “one-time 20 percent reduction to 2016 rates” and subsequent 4.4 percent annual reductions “going forward”) (Sprint Comments); Comments of INCOMPAS, WC Docket No. 16-143, at 6 (filed June 28, 2016) (INCOMPAS Comments).

¹² See, e.g., Comments of Lightower Fiber Networks I, LLC, Lightower Fiber Networks II, LLC, and Fiber Technologies Networks, LLC, WC Docket No. 16-143, at 21, Declaration of Eric Sandman, ¶ 16 (filed June 28, 2016) (noting that “infrastructure investment would be reduced, and customers would lose competitive benefits” of network construction if the FCC adopts regulations “that impose additional costs (including the cost of uncertainty), reduce

The Commission and the courts have rejected this subsidized resale approach in other contexts, and the Commission should do likewise here.¹³ For example, in permitting unbundled access to local circuit switching and the so-called unbundled network element platform (UNE-P), the Commission explained that UNE-P “was designed as a tool to enable a transition to facilities-based competition.”¹⁴ However, when it became clear that the unbundling of mass market local circuit switching generally and the UNE-P specifically had become “a disincentive to competitive LECs’ infrastructure investment,” the Commission declined to require continued unbundling, finding that it “would seriously undermine infrastructure investment and hinder the development of genuine, facilities-based competition.”¹⁵

Indeed, because of the harm to facilities-based competition resulting from subsidized resale, the Commission historically has imposed significant limits on such subsidies. First, as the Commission observed in the unbundling context, subsidized resale is not appropriate in markets that are sufficiently competitive – such as the wireless market.¹⁶ As a direct result of this

(footnote cont’d.)

anticipated revenues, or both ...”); Cox Comments, Declaration of Jeremy Bye and Larry Steelman, ¶ 20 (proposed reductions in the rates of business data services “could reduce Cox’s revenues to the point where construction would no longer be viable on some projects, especially those borderline projects where there is already risk that Cox will not recoup its investment”); Charter Comments at 8-11.

¹³ *USTelecom Ass’n v. FCC*, 290 F.3d 415, 424, 427 (D.C. Cir. 2002) (“*USTA I*”) (noting the “completely synthetic competition” resulting from the Commission’s unbundling rules, which “spread the disincentive to invest”).

¹⁴ *Triennial Review Remand Order* ¶ 218.

¹⁵ *Id.*

¹⁶ *Id.* ¶¶ 3, 34 (declining to unbundle network elements to serve the wireless market, finding it impossible “to justify the costs of mandatory unbundling” in markets “where competition has evolved without such access”); *see also United States Telecom Ass’n v. FCC*, 359 F.3d 554 (D.C. Cir. 2004) (*USTA II*), *cert. denied*, 125 S.Ct. 313 (2004) (stating that it is “hard to see any need

decision, incumbent and competing providers invested billions of dollars in deploying fiber to cell towers, which allowed the U.S. to lead the world in 4G wireless deployments.¹⁷

Here, the market for business data services is broadly competitive, as discussed below. From the largest enterprises to small businesses, customers enjoy numerous competitive options. Such competition has taken hold under current regulatory policies. And, the adoption of regulatory policies that put in place permanent subsidies for a resale business model would only discourage further facilities-based competition for business services, contrary to the Act and the Chairman’s stated objective in this proceeding.¹⁸

(footnote cont’d.)

for the Commission to impose the costs of mandatory unbundling” in cases “where robust competition in the relevant markets belies any suggestion that the lack of unbundling makes entry uneconomic”).

¹⁷ *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, Report and Order and Further Notice of Proposed Rulemaking, GN Docket No. 14-177, FCC 16-89 (rel. July 14, 2016), Statement of Chairman Tom Wheeler (noting “the proven formula that made the United States the world leader in 4G,” which includes “encourage[ing] and protect[ing] innovation-driving competition” and “stay[ing] out of the way of market-driven, private sector technological development”); White House Fact Sheet, “Administration Announces an Advanced Wireless Research Initiative, Building on President’s Legacy of Forward-Leaning Broadband Policy” (July 15, 2016), available at <https://www.whitehouse.gov/the-press-office/2016/07/15/fact-sheet-administration-announces-advanced-wireless-research> (observing that “[t]he United States leads the world in 4G deployment” partly as a result of “aggressive private investment”); *see also* Samantha Bookman, “Zayo’s Small Cell, Backhaul Investments Poised To Pay Off,” *FierceTelecom* (April 20, 2016) (noting Zayo’s total U.S. fiber-to-the-tower network coverage extends to 8,500 towers), available at <http://www.fiercetelecom.com/telecom/zayo-s-small-cell-backhaul-investments-poised-to-pay-off-as-5g-iot-come-to-fore>; Harry Domash, “Crown Castle: Cell Towers Drive Income,” *MoneyShow.com* (May 25, 2015) (noting Crown Castle’s agreement to pay \$1 billion to acquire 10,000 miles of fiber to connect small cell sites), available at <https://www.moneyshow.com/articles.asp?aid=tptp072513-42730>.

¹⁸ *See, e.g., Triennial Review Remand Order* ¶ 36 (noting that subsidized resale resulting from “unbundling can create disincentives for incumbent LECs and competitive LECs to deploy innovative services and facilities, and is an especially intrusive form of economic regulation”) (*citing Triennial Review Order* ¶¶ 141, 404)).

Second, because of the disincentives to facilities-based competition resulting from subsidized resale, the Commission has declined to permit subsidies in markets where competitive entry is likely, even if actual competition has not yet taken hold. For example, in declining to require unbundled access to certain dedicated transport, the Commission found “no impairment not only on routes exhibiting actual competitive deployment but also on routes that are similar, in relevant respects, to those routes.”¹⁹ The Commission adopted tests “designed to capture both actual and potential competition.”²⁰ Even when it found impairment that would justify some unbundling, moreover, the Commission went to great lengths to limit its availability so as not to discourage facilities-based competition.²¹

For the same reasons, USTelecom agrees with commenters that the Commission cannot lawfully turn a blind eye to potential competition in the market for business data services.²² That

¹⁹ *Triennial Review Remand Order* ¶ 45 (noting that the “use of inferences – which denies unbundled access in markets similar to other markets in which competitors have entered without relying on UNEs – gives effect to our requirement that impairment should be found only where a reasonably efficient requesting carrier could not enter and provide service on an economic basis”); *see also USTA II*, 359 F.3d at 574 (“[a]ny process of inferring impairment (or its absence) from levels of deployment depends on a sensible definition of the markets in which deployment is counted”).

²⁰ *Triennial Review Remand Order* ¶¶ 87-88; *see also id.* ¶ 160 (rejecting a building-specific approach to loop unbundling that accounted for the presence of competitive alternatives within a building as “flawed” by virtue of “its failure to draw reasonable inferences from actual deployment regarding potential deployment”).

²¹ *See, e.g., Triennial Review Remand Order* ¶ 131 (establishing a limitation of 12 DS3s per carrier for unbundled transport on any route as a “safeguard to limit access to a carrier that has attained a significant scale on such a route indicating that more than sufficient potential revenues exist to justify deployment ...”); *see id.* ¶ 177 (limiting “the number of unbundled DS3s that a competitive LEC can obtain at each building to a single DS3 to encourage facilities-based deployment when such competitive deployment is economic”).

²² NCTA Comments at 69-71; Comments of AT&T Inc., WC Docket No. 16-143, at 11-12 (AT&T Comments); Comcast Comments at 53-54 (“any test that simply looks to the number of existing carriers’ serving customers – whether in a building, census block, or broader geographic

a provider has deployed network infrastructure near a customer location but waits to win the customer's business before building out to serve that location does not render the provider irrelevant for competitive purposes.²³ Indeed, the record conclusively demonstrates providers routinely compete for customers in buildings located in close proximity to their networks, which has a "material effect on prices" of business data services.²⁴

Third, any subsidies for resold services could only be appropriate as a temporary measure to jumpstart competition. As the Commission observed in establishing its current unbundling rules, they were "designed to remove unbundling obligations over time as carriers deploy their own networks and downstream local exchange markets exhibit the same robust competition that characterizes the long distance and wireless markets."²⁵ Here, commenters are seeking subsidies that would merely reduce artificially – and indefinitely – the price they pay for wholesale

(footnote cont'd.)

area – risks systemically understating the extent of competition by improperly excluding potential competitors with a *present* ability to enter") (emphasis in original).

²³ Comments of ITTA – The Voice of Mid-Size Communications Companies, WC Docket No. 16-143, at 7 (filed June 28, 2016) ("A provider should not be imputed with market power merely because a would-be competitor has made the business decision to only cherry-pick high-density locations or not actually deploy to a particular location until it already has threshold customer commitments") (ITTA Comments); AT&T Comments at 11.

²⁴ *Further Notice* ¶ 161; Rysman Paper, at 218-219; *see also* AT&T Comments at 11 (noting that "Professor Baker, an economist hired by CLECs, found that competitors typically compete for customers in buildings within about a half mile of their network facilities"). Given the Commission's and the D.C. Circuit's pronouncements on the legal necessity of taking into account potential competition under the Act, the suggestion by some commenters that the Commission can disregard potential competition as a matter of "policy" is misguided. *See* Comments of Public Knowledge, Open Technology Institute at New America, Common Cause, Next Century Cities, Engine, and Schools, Health & Libraries Broadband Coalition, WC Docket No. 16-143, at 8 (filed June 28, 2016); Comments of Competitive Carriers Association, WC Docket No. 16-143, at 12 (filed June 28, 2016) ("nearby providers should [not] be assumed potential competitors as a matter of Commission policy") (CCA Comments).

²⁵ *Triennial Review Remand Order* ¶ 3.

business data services and are not looking for a temporary means to facilitate the transition to facilities-based competition – an outcome the Commission should not condone or support.

Furthermore, there is no demonstrated need for widespread subsidized resale of business data services given the dynamic nature of the market. As providers increasingly deploy fiber to support IP-enabled services, such as Ethernet, no provider enjoys any particular competitive advantage. Thus, for the same reasons that the Commission declined to require the unbundling of network facilities in so-called “greenfield” deployments – “the entry barriers appear to be largely the same for both incumbent and competitive LECs” – it would be nonsensical and counterproductive to establish a system of subsidized resale for business data services, as the Commission has proposed and some commenters endorse.²⁶

III. THE BUSINESS DATA SERVICES MARKET IS CONSIDERABLY BROADER THAN THE NARROW DEFINITION PROPOSED BY THE COMMISSION AND THE CONSTRAINED VIEW ESPOUSED BY VARIOUS COMMENTERS.

A. The FCC Should Reject Any “Business Data Services” Definition Based on Outdated Technology.

There can be no serious dispute that the market for business data services is constantly evolving. Business customers have a host of technological platforms to meet their needs and a multitude of competitive offerings from which to choose.²⁷

Nowhere is the dynamic nature of the market more evident than with respect to Ethernet services, which offer customers a range of speeds and performance guarantees.²⁸ “[C]ustomers

²⁶ See *Triennial Review Order* ¶ 275; see also *Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) from Enforcement of Obsolete ILEC Legacy Regulations That Inhibit Deployment of Next-Generation Networks*, Memorandum Opinion and Order, ¶ 75 (2015) (*USTelecom Forbearance Order*).

²⁷ See, e.g., Comcast Comments at 10-13; Cox Comments at 6-7 (noting the “variety of high-capacity services” that Cox offers to its “business customers”); Comments of American Cable Association, WC Docket No. 16-143, at 27-32 (filed June 28, 2016) (ACA Comments).

increasingly want Ethernet services because they are more efficient, highly scalable, and less costly.”²⁹ As a result, the demand for and availability of Ethernet services have exploded,³⁰ and competing providers increasingly are the major players in the Ethernet market.³¹ Indeed, cable is the “fastest growing” segment in the wholesale and retail business Ethernet markets, “outpac[ing]” incumbent and other competing providers.³²

Despite this explosion in new services and the plethora of competitive options, the Commission proposes to define “business data services” using characteristics and performance requirements that are indicative of a market based on the antiquated legacy technologies historically employed by incumbent LECs.³³ The Commission offers no rationale for this backwards-looking approach, which does not take into account that the BDS market is rapidly changing, with demand exploding for capacity and new services that offer benefits other than

(footnote cont’d.)

²⁸ See, e.g., NCTA Comments at 27 (noting introduction of Ethernet services by cable operators over their HFC networks as a “‘middle’ alternative between more expensive fiber-based services and best efforts services”); *id.* at 28 (“Ethernet over HFC may be offered without any performance commitments or guarantees for critical parameters such as latency, jitter or packet loss”); Mid-Size ILEC Comments at 24.

²⁹ Cox Comments at 9.

³⁰ See Comments of the Fiber to the Home Council Americas, WC Docket No. 16-143, at 9 (filed June 28, 2016) (“Ethernet spending is expected to grow by more than 50 percent by 2020”) (FTTH Council Comments).

³¹ FTTH Council Comments at 14 (noting that “Level 3 jumped from the ninth largest Ethernet provider in 2013 to the second largest in 2015”); Joint Comments of CenturyLink, Inc., Consolidated Communications, FairPoint Communications, Inc., and Frontier Communications Corp., WC Docket No. 16-143, at 22 (filed June 28, 2016) (“Three cable operators already are among the eight largest Ethernet providers in the country based on retail share of Ethernet ports”) (Mid-Size ILEC Comments).

³² Mid-Size ILEC Comments at 22 (quoting Vertical Systems Group, *2014 U.S. Cable MSO Ethernet LEADERBOARD* (Mar. 16, 2015)).

³³ See *Further Notice* ¶ 279.

minimum speed guarantees and SLAs. Thus, the proposed definition's exclusion of "best efforts" cable services is troubling. The Commission appears to be focused on excluding cable residential offerings as unsuitable substitutes, but that approach fails to acknowledge that the cable industry has designed specific business-quality broadband services to market to businesses. These come with a variety of service assurances and commitments that are on continuum with those in traditional SLAs, even though they may incorporate other performance guarantees. Dismissing these business broadband services, as discussed below, is short-sighted and inappropriate.

The Commission's proposed definition of "business data services" requires the inclusion of "prescribed performance requirements," which ignores the manner in which businesses purchase such services. For example, instead of paying more for a specified level of service, some business customers elect to pay less for a higher capacity bandwidth offering, which in many cases obviates the need for "performance" guarantees.³⁴ Even though business customers view these offerings as reasonably interchangeable, services without "prescribed performance requirements" would be improperly excluded from the relevant product market under the Commission's proposed definition.³⁵

³⁴ See, e.g., Comcast Comments at 11-12. See also Paul de Sa, Bernstein Research, "U.S. Telecom: Business Data Services/Special Access, a Nine-Chart Primer for Cable and Telco Investors" at n.2 (June 28, 2016) ("Many business customers who might have required a quality of service (QoS) guarantee when buying a legacy telco BDS (e.g., a ~\$200/month 1.5Mbps T1) are presumably willing to buy a much cheaper cable best-efforts service as the higher bandwidth makes QoS issues less likely."); at Exhibit 3 ("In reality the distinction between 'best efforts' and 'guaranteed quality of service' is blurry, making even the BDS product-market definition a major point of dispute.").

³⁵ USTelecom also agrees with AT&T that the Commission's proposed definition is "too vague" because "it is unclear from the test which combination of performance metrics must be offered, and at what levels" AT&T Comments at 42.

B. The FCC Cannot Lawfully Ignore Cable Business Broadband Service as a Reasonable Substitute to Business Data Services.

USTelecom disagrees with those commenters that endorse the Commission’s proposal to exclude “best efforts” cable services provided to businesses in assessing competition for business data services.³⁶ Although purely residential “best efforts” Internet access may not be a major competitive force in the business broadband market, the broadband offerings that the cable industry has designed specifically for businesses customers cannot be excluded as a competitive force. Any proposal to exclude these business broadband services is contrary to Commission precedent, which requires that a relevant product market include “all products ‘that consumers consider reasonably interchangeable for the same purposes.’”³⁷ “When one product is a reasonable substitute for the other in the eyes of consumers, it is to be included in the relevant product market even though the products themselves are not identical.”³⁸

³⁶ See, e.g., Sprint Comments at 13; Comments of Windstream Services LLC, WC Docket No. 16-143, at 21-29 (filed June 28, 2016) (Windstream Comments).

³⁷ *Applications of Nextel Communication, Inc. and Sprint Corp. for Consent to Transfer Control of Licenses and Authorizations*, Memorandum Opinion and Order, 20 FCC Rcd 13967, ¶ 39 (2005); *Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corp., et al.*, Memorandum Opinion and Order, 19 FCC Rcd 21522, ¶ 71 (2004); *Applications of Western Wireless Corp. and ALLTEL Corp.*, Memorandum Opinion and Order, 20 FCC Rcd 13053, ¶¶ 60-64 (2005); *Applications for Consent to the Transfer of Control of Licenses, XM Satellite Radio Holdings Inc., Transferor, To Sirius Satellite Radio Inc., Transferee*, Memorandum Opinion and Order, 23 FCC Rcd 12348, 12367-68 (2008) (quoting *United States v. E.I. du Pont de Nemours & Co.* 351 U.S. 377, 395, (1956)); see also *United States v. Microsoft*, 253 F.3d 34, 52, (D.C. Cir. 2001), cert. denied, 534 U.S. 952 (2001) (in determining reasonable substitutes, the court excluded “middleware” software from the definition of the relevant product market because of its present non-interchangeability with Windows notwithstanding its long-term future potential).

³⁸ *Application of Echostar Communications Corporation, General Motors Corporation, and Hughes Electronics Corporation (Transferors) and Echostar Communications Corporation (Transferee)*, Hearing Designation Order, 17 FCC Rcd 20559, ¶ 106 (2002).

Whether different services are reasonably interchangeable must be assessed from “the perspective of most consumers.”³⁹ In making this assessment, the Commission must consider “customers’ ability and willingness to substitute away from one product to another in response” to changes in price and quality.⁴⁰ That services may not be “exact substitutes” is irrelevant.⁴¹

Here, both the empirical and economic evidence demonstrate that business customers consider traditional special access services and cable best efforts offerings to be reasonable substitutes.⁴² For example, customers seeking an internet connection who are motivated

³⁹ *Verizon Communications Inc. and MCI, Inc. Application for Approval of Transfer of Control*, Memorandum Opinion and Order, 20 FCC Rcd 18433, ¶ 88 (2005) (finding that mass market consumers view facilities-based VoIP services, such as those offered by cable providers, as sufficiently close substitutes for local service to include them in the relevant product market) (*Verizon/MCI Order*); *SBC Communications Inc. and AT&T Corp. Applications for Approval of Transfer of Control*, Memorandum Opinion and Order, 20 FCC Rcd 18290, ¶ 87 (2005) (*SBC/AT&T Order*).

⁴⁰ See U.S. Department of Justice/Federal Trade Commission Horizontal Merger Guidelines, § 4 at 7 (Aug. 19, 2010); see also *Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses and Transfer Control of Licensees*, Memorandum Opinion and Order, 26 FCC Rcd 4238, ¶ 41 (2011) (concluding that, regardless of whether online video currently is a complement to or a substitute for MVPD service, it is potentially a substitute product).

⁴¹ See *Robert M. Franklin, Transferor; Inmarsat, plc, Transferee; Consolidated Application for Consent to Transfer of Control of Stratos Global Corporation and Its Subsidiaries from an Irrevocable Trust to Inmarsat, plc*, Memorandum Opinion and Order and Declaratory Ruling, 24 FCC Rcd 449, ¶ 38 (2009) (rejecting the argument that “Inmarsat offers unique services that effectively restrict the ability of customers to choose alternatives because there are no exact substitutes” because “imperfect substitutes exist” in the form of other mobile satellite service and fixed satellite service providers that “constrain Inmarsat’s power to restrict supply and raise price”).

⁴² Mid-Size ILEC Comments at 42 (that “[l]ower cost-cable offerings may not be *perfect* substitutes” for dedicated business data services “does not mean that they are not substitutes *at all*”) (emphasis in original); ITTA Comments at 11 (“Cable providers market best efforts business broadband services as competitive alternatives to incumbent LEC business data services, especially lower-end services like DS1”); AT&T Comments at 44-45 (demonstrating

primarily by price may prefer a business broadband service offering over traditional BDS.⁴³

Indeed, as NCTA candidly acknowledges, “A number of these [business] customers have switched from using DS1 services to cable company best efforts services, which are priced well below dedicated services and thus provide substantial value for smaller businesses.”⁴⁴

That customers view “best efforts” cable business internet services and dedicated business data services to be reasonably interchangeable is confirmed by the survey of small and medium business customers (SMBs) conducted by USTelecom.⁴⁵ The results of that survey – a summary of which is attached as Appendix A – reflect that SMBs: (1) largely buy services that likely fit the FCC’s definition of “best efforts” cable services (i.e., “business internet” services) and dedicated business data services for the same reasons; and (2) switch between business internet services and dedicated business data services.⁴⁶ Moreover, a large majority of survey respondents who did not currently have a cable service were willing to consider cable in similar

(footnote cont’d.)

that, during the period from November 2014 through November 2015, “a very substantial portion of AT&T’s competitive losses were to cable companies and a significant portion of those losses were to best efforts cable services”).

⁴³ See Mid-Size ILEC Comments at 43. That fiber-based and “best efforts” cable services may be offered over “completely separate” networks is beside the point. Cox Comments at 9. The record reflects that most customers purchasing business data services do not care about the underlying network used to provide service. See Comments of the United States Telecom Association, WC Docket No. 16-143, at 10 (filed June 28, 2016) (noting survey results reflecting that business customers purchasing business data services rank service characteristics “more highly than particular technologies or facilities (such as copper, cable, or fiber)”) (USTelecom Comments).

⁴⁴ NCTA Comments at 9.

⁴⁵ See USTelecom Comments, at 3-12.

⁴⁶ *Id.* at 13-14.

degree for both business internet and business data services.⁴⁷ Even large customers have shown a willingness to substitute “best efforts” cable service for traditional special access services, as evidenced by incumbent LECs purchasing such cable services for use as inputs to their enterprise offerings.⁴⁸

Consistent with its precedent, the Commission must account for all forms of substitutable competition in defining the relevant market and identifying the availability of competitive alternatives. Based on the overwhelming evidence in the record that business customers of all sizes regard “best efforts” cable service and traditional special access services to be reasonably interchangeable, the Commission’s proposal to ignore “best efforts” cable service provided to businesses is unlawful.

IV. NEITHER THE DATA IN THE RECORD NOR THE ANALYSES THEREOF PLAUSIBLY DISPUTES THAT THE MARKET FOR BUSINESS DATA SERVICES IS ROBUSTLY COMPETITIVE.

A. The Special Access Data Collection Does Not and Cannot Support a Finding that ILEC Market Power Results in “Too High” BDS Prices.

As much of the industry has suspected for some time, recent filings and discussions with Commission staff make clear that “[this] proceeding is all about rate regulation.”⁴⁹ A respected

⁴⁷ See USTelecom Survey of Small and Medium Business Internet and Data Networking Service Users, Methodology, Results, and Implications (June 2016) (attached hereto as Appendix A), at Chart 3 (showing that 67 percent of decision makers with business internet (or “best efforts”) service, and 70 percent of decision makers with data networking service (or BDS) would consider cable for their respective services; only 13 percent with business internet and 12 percent with data networking said they would not consider cable, and the remainder responded “unsure”).

⁴⁸ See, e.g., AT&T Comments at 45; Reply Comments of CenturyLink, WC Docket No. 05-25, at 11-12 (filed Feb. 19, 2016).

⁴⁹ George D. Ford, PhD, Chief Economist, Phoenix Center for Advanced Legal and Economic Public Policy Studies, *Learning from Bad Technique: The WIK-Consult Report on*

economist makes a strong case for why much of the “unskilled economic analysis” in the record before the Commission contains serious analytical errors, noting that one such paper includes “a focus on irrelevant factors, inaccurate computations, self-contradictory claims, and improper benchmarks,” and thus should be accorded “no probative weight” in the Commission’s own analysis of the record.⁵⁰ For example, the critique points to a major fallacy in the INCOMPAS-commissioned report by WIK-Consult: the claim that BDS prices are “too high” without comparing them to a proper benchmark, or basing them on any other evidence besides CLEC complaints. The critique goes on to explain why seeking to analyze the effects of mandatory price cuts from this starting point ignores the legal standard for determining whether rates are just and reasonable or non-discriminatory,⁵¹ concluding that “no evidence has been presented to or crafted by the Commission providing a legitimate economic basis for intervention.”⁵²

Other critiques of analyses of the special access data by the Commission and other commenters have yielded similar precautions. For example, the most recent White Paper by Compass Lexecon confirms its prior conclusions that, not only is there nearly ubiquitous facilities-based BDS competition, but even the revised regressions do not make the case for increased BDS regulation because they are flawed.⁵³ Moreover, even after corrections were

(footnote cont’d.)

Business Data Services at 1 (Aug. 4, 2016) (also labeling the FCC an “economics free zone”) (Ford BDS Critique) (attached hereto as Appendix B).

⁵⁰ Ford BDS Critique at 2.

⁵¹ *Id.*

⁵² *Id.* at 7.

⁵³ See generally 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

made to the shortcomings identified in those analyses, they nevertheless do not show that ILECs have market power in the Ethernet services market, or more specifically for DS1 and DS3 services.⁵⁴ This lack of evidence of “too high” BDS prices belies the perceived need for price regulation in the BDS market, or a finding that businesses lack competitive choices for BDS services.

B. The Commission Has Long Recognized That Serving Large Enterprise Customers is a Vibrantly Competitive Market.

The market for business data services provided to large enterprise customers is robust, as the Commission recognized more than a decade ago. Because “enterprise customers are sophisticated, high-volume purchasers of communications services,” the Commission found that there are “a significant number of carriers competing in the market” to serve these customers.⁵⁵ According to the Commission, enterprise customers “often contract for more complex services” and are able to “negotiate for significant discounts,” given “their size and geographically-dispersed operations” and their use of “communications consultants” or “in-house communications experts,” which demonstrate that these users have a “multitude of choices” and “are likely to make informed choices based on expert advice about service offerings and

(footnote cont’d.)

Competitive Market Test” (Aug. 9, 2016) (IRW Third White Paper). Specifically, the White Paper explains how Commission Staff results are “facially invalid.” *Id.* at 9-11.

⁵⁴ IRW Third White Paper at 8-9.

⁵⁵ *AT&T Inc. and BellSouth Corp. Application for Transfer of Control*, Memorandum Opinion and Order, 22 FCC Rcd 5662, ¶¶ 62, 71 (2007) (*AT&T/BellSouth Order*); *see also SBC/AT&T Order* ¶¶ 65, 75; *Verizon/MCI Order* ¶¶ 56, 65, 75, 76.

prices.”⁵⁶ Furthermore, with the advent of “systems integrators and the use of emerging technologies, including various Internet Protocol enabled (IP-enabled) technologies,” the Commission concluded that the enterprise market will only become “more competitive” – a “trend that is likely to continue in the future.”⁵⁷

The Commission’s conclusions in prior proceedings belie claims in this proceeding that larger enterprise customers lack competitive alternatives for low capacity connections or locations in smaller geographic markets such that regulation is warranted.⁵⁸ If anything – as the Commission correctly predicted nearly ten years ago and as the record makes clear – larger enterprise businesses throughout the United States enjoy even more competitive options and even greater negotiating leverage when purchasing business data services today.⁵⁹

C. Competition to Serve Small and Medium-Size Businesses is Strong and Growing.

The record confirms that small and medium-size businesses have competitive options for business data services.⁶⁰ For example competitors have deployed facilities in more than 95

⁵⁶ *AT&T/BellSouth Order* ¶¶ 66, 81, 82; *see also SBC/AT&T Order* ¶¶ 74, 75; *Verizon/MCI Order* ¶¶ 60, 76.

⁵⁷ *AT&T/BellSouth Order*, ¶ 81; *see also SBC/AT&T Order* ¶ 74; *Verizon/MCI Order* ¶ 75.

⁵⁸ *Further Notice* ¶ 201.

⁵⁹ NCTA Comments at 10 (noting that “larger, multi-location customers ... have the ability to negotiate reasonable terms and conditions even if it means their BDS provider may at times need to purchase wholesale BDS inputs from other carriers”); Charter Comments at 12 (noting that largest BDS customers typically seek “multiple bidders on requests for proposals that contain strict pricing constraints ...”); AT&T Comments at 48-49 (“because they tend to be large volume customers,” multistate customers “are typically more aggressive in their requirements and during negotiations, and are able to command the best rates, terms and conditions”).

⁶⁰ *See, e.g., Comcast Comments* at 10 (“Comcast offers data services to business customers of all sizes”); *id.* at 11 (“Comcast’s retail BDS offerings are broadly available”); *ACA Comments* at 28 (“Smaller competitive providers offer BDS to all major customer segments,” including “[s]mall to medium-sized commercial customers”).

percent of census blocks with special access demand, and those census blocks cover about 97 percent of all special access locations and about 99 percent of all establishments with potential demand for special access services.⁶¹ Competition for business data services even extends to rural geographic areas.⁶²

Furthermore, with the increased availability of Ethernet services, small and medium-size businesses have additional competitive alternatives. Indeed, Ethernet services are an ideal “substitute” for legacy DS1 services, and the average monthly price for Ethernet services below 10 Mbps “has decreased more than 20 percent” since 2011.⁶³ In short, competitive alternatives continue to proliferate for even the smallest customers interested in purchasing business data services.

D. The Commission Cannot Disregard Competition From Unbundled Network Elements in Defining Relevant Product Markets or Assessing Competition.

The Commission should reject the position of commenters who urge that unbundled network elements be disregarded in evaluating competition for business data services.⁶⁴ When commenters lament the number of buildings served by one or two facilities-based competitors,⁶⁵

⁶¹ Mark Israel, Daniel Rubinfeld and Glenn Woroch, “Competitive Analysis of the FCC’s Special Access Data Collection” at 5 (Jan. 26, 2016) (IRW White Paper).

⁶² Comments of Mediacom Communications Corp., WC Docket No. 16-143, at 1 (filed June 28, 2016) (noting that Mediacom is “one of the leading broadband service providers focused on smaller cities and towns in rural communities in twenty-two states,” which offers “favorably priced BDS to small businesses and community anchor institutions”).

⁶³ Mid-Size ILEC Comments at 24.

⁶⁴ See, e.g., Comments of Birch Communications, Inc., EarthLink, Inc., and Level 3 Communications, LLC, WC Docket No. 16-143, at 41 (filed June 28, 2016); Comments of TDS Metrocom LLC, WC Docket No. 16-143, at 12 (filed June 28, 2016); Windstream Comments at 34.

⁶⁵ INCOMPAS Comments at 3 (“99 percent of commercial buildings with demand for Business Data Services were served by one or two facilities-based competitors as of 2013”).

they conveniently ignore that, under the Commission’s rules, competitors have access to the unbundled network elements necessary to reach customers in buildings that may be otherwise uneconomic to serve. The availability of unbundled network elements plays a significant role in the business market, as the Commission has acknowledged,⁶⁶ and which the data in this proceeding confirms.⁶⁷

Furthermore, there is no functional difference between network facilities that a competing carrier purchases on an unbundled basis or leases through an indefeasible right to use (“IRU”) arrangement.⁶⁸ As the Commission made clear nearly two decades ago, a competing provider purchasing an unbundled loop from an incumbent enjoys “exclusive control over network facilities dedicated to particular end users”⁶⁹

Claims that unbundled network elements should be disregarded in assessing competition for business data services because their availability is “limited” ignore the fact that the Commission imposed specific limits on UNE availability exactly to create and support facilities-based competition.⁷⁰ As required by the Act and consistent with the Commission’s establishment of a lawful unbundling regime (after multiple attempts), unbundled network

⁶⁶ *Triennial Review Remand Order* ¶ 65 (noting that the availability of UNEs “is itself a check on special access pricing”); *see also Covad Commc’ns v. FCC*, 450 F.3d 528, 539 (D.C. Cir. 2006) (noting the Commission’s finding “that the availability of UNEs serves to discipline special access rates by exercising a ‘constraining influence’ on the ILECs’ ability to increase their rates”).

⁶⁷ *See ITTA Comments* at 13 (“competitive providers have connections to 20 percent of all locations through UNE lines”); *Rysman Paper*, Table 4 (indicating that “47 percent of locations served by competitive providers are provisioned through UNEs”).

⁶⁸ *Further Notice* ¶ 220 (counting competitors “when they own their own fiber, or lease it under a long-term IRU”).

⁶⁹ *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, First Report and Order, 11 FCC Rcd 15499, ¶ 385 (1996) (subsequent history omitted).

⁷⁰ *Further Notice* ¶ 57.

elements – including DS1 and DS3 unbundled loops – are available in every market where competing carriers are impaired without such access. Limits on UNE availability in a few of the densest wire centers were imposed because those wire centers could support and were supporting vibrant facilities-based competition. UNE availability would serve only to reduce competitive incentives in those areas. Similarly, ceilings imposed on the number of UNEs available to a particular location were imposed at a threshold that would support investment in facilities to the location in order to avoid creating a disincentive to investment. Thus, any complaints about the limitations on unbundled access are simply an attack on the facilities-based competition policies that underlie them.⁷¹

Under the circumstances, USTelecom agrees with commenters that “UNE-based services” must be taken into account in assessing competition “in markets for both retail and wholesale BDS services” because “[t]o do otherwise would be arbitrary and capricious.”⁷² Nonetheless, if the Commission is intent on ignoring the competitive effects of its unbundling regime, which ostensibly was put in place to facilitate competition, the Commission should grant forbearance from any further unbundling obligations under 47 U.S.C. § 251(c)(3). The Commission cannot have it both ways. If competing providers are impaired without access to unbundled network elements, and thus will continue to have a legal right to access them, then a competitor’s use of such unbundled elements should be considered in assessing competition.

⁷¹ See *Further Notice* ¶ 57 (noting that unbundled loops “are allowed only in those buildings located within the service area of an incumbent LEC wire center that falls below certain business density line and fiber collocation thresholds” and that unbundled network elements are not available for the “exclusive provision of mobile wireless services”); *id.* ¶ 228 (“UNE reliance, therefore, is successful ‘only in some locations, only for some customers, and only to some extent’”).

⁷² Mid-Size ILEC Comments at 30.

Otherwise, the Commission risks failing to account for a significant source of competition and competitive pressure that affects incumbent LEC pricing, market share, and the ability to compete.

E. The Commission Must Account for Competitive Growth and Projected Growth Since 2013.

Putting aside the significant deficiencies in the Commission’s data collection,⁷³ relying solely upon market data from 2013 to assess the level of competition for business data services in 2016 and beyond would be misguided for the simple fact that this approach overlooks the significant increase in competition that has occurred in the interim and is likely to occur going forward.⁷⁴ For example, between 2013 and 2015, providers of business data services have added “a total of more than 100,000 miles of metro fiber,” and competing providers “increased the number of fiber lit buildings they serve at an average rate of 14 percent.”⁷⁵ As one commenter points out, Level 3 alone expects to “deploy new loops to approximately 3,000 to 4,000 commercial buildings in the U.S. each year,” and its business data services revenues grew by approximately 70% (from \$3 billion to nearly \$5 billion) between 2013 and 2015.⁷⁶

⁷³ See, e.g., Mid-Size ILEC Comments at 5; NCTA Comments at 44; AT&T Comments at 3-5; see also Motion to Strike of CenturyLink, Inc., WC Docket No. 16-143 (filed June 17, 2016).

⁷⁴ See ITTA Comments at 6 (noting that “[i]n the past two years, ‘cable operators have increased the penetration of business locations they serve by more than 50 percent ...’”) (quoting Sean Buckley, “Cable Operators Taking Greater Share of Large Businesses, Says Analyst Firm,” *FierceTelecom* (Sept. 21, 2015)); NCTA Comments at 44; Cox Comments at 7-8.

⁷⁵ FTTH Council Comments at 13.

⁷⁶ Charter Comments at 15 (citations omitted).

If the Commission is intent on adopting a test “to identify the markets in which *current* and potential competition is bringing material competitive effects to customers,”⁷⁷ that test must take into account the level of competition in 2016 and beyond, not merely as of 2013. Thus, at the very least, the Commission must reasonably project the significant increase in competition in the business data services market since its 2013 data collection.

F. Any Presumption of Non-Competitiveness Below a Certain Speed Threshold Would Nullify the Commission’s Data Collection and Contravene Commission Precedent.

The Commission should decline invitations by commenters to establish speed thresholds below which business data services would be deemed non-competitive.⁷⁸ This approach defeats the purpose of the Commission’s massive data collection, which was undertaken to ascertain the level of competition for business data services. If the Commission deems a market to be “non-competitive” based on an arbitrary speed threshold that has no basis in the record, why was it necessary for the Commission to collect and competitors to provide extensive data demonstrating actual and potential competition in that market? Even if the extensive data collection and the analyses thereof are now yielding inconvenient findings that fail to support, or outright disprove, what CLECs have been complaining about for years, that is no reason to disregard the record in favor of adopting a shortcut that fails to account for the harm to investment that inevitably will ensue.

There are other problems with this approach. First, establishing an arbitrary speed threshold (such as 50 Mbps) at or below which services would be deemed “non-competitive”

⁷⁷ *Further Notice* ¶ 5 (emphasis added).

⁷⁸ *See, e.g.*, INCOMPAS Comments at 6; CCA Comments at 7 (urging the Commission to adopt “a rebuttable presumption that BDS at or below 50 Mbps are not competitive and therefore subject to *ex ante* price regulations”); Sprint Comments at 15.

would contravene the Commission’s prior determinations that competitors routinely deploy network facilities at such speeds. For example, in its *Triennial Review Remand Order*, the Commission found that competitive LECs “are able to self-deploy” DS3 loops and can even “economically serve lower-capacity customers (*e.g.*, customers at the DS1 capacity level) in multi-tenant buildings”⁷⁹ Likewise, in its *Triennial Review Order*, the Commission found that competitors were “active[ly] ... deploying” fiber loops” and were not impaired without unbundled access to such network facilities (regardless of capacity), because of the “substantial revenue opportunities” posed by such deployments and because any “entry barriers appear to be largely the same for both incumbent and competitive LECs.”⁸⁰

Second, the Commission has already considered and rejected the arguments offered by some commenters in this proceeding that “competitive providers will not extend their networks, even within very short distances, to deliver lower-capacity services to a new customer.”⁸¹ For example, in concluding that competitors were not impaired without access to unbundled DS1 and DS3 loops in certain markets, the Commission found more than ten years ago that competing LECs had deployed lower capacity loops in “areas that offer the greatest demand for high-capacity offerings (*i.e.*, that maximize potential revenues) and that are close to their current fiber rings (*i.e.*, that minimize the costs of deployment).”⁸² In reaching this conclusion, the

⁷⁹ *Triennial Review Remand Order* ¶ 154.

⁸⁰ *Triennial Review Order* ¶¶ 274-275.

⁸¹ Sprint Comments at 20; *see also* CCA Comments at 9 (“any measure of potential competition is largely irrelevant because carriers are not building out low-capacity services”); INCOMPAS Comments at 6 (insisting that “high costs and other conditions” preclude a reasonably efficient competitor from “deploy[ing] loops to customers with demand at or below a certain bandwidth”).

⁸² *Triennial Review Remand Order* ¶ 154.

Commission was persuaded that competitors could economically extend their networks under certain circumstances.

Likewise, the Commission has determined that competing providers and incumbent carriers are on the same footing when it comes to investing in the network facilities required to serve new buildings.⁸³ Most recently, in granting forbearance from the obligation to provide access to newly deployed entrance cable in “greenfield” situations, the Commission found that “both incumbents and competitive LECs are subject to the same permitting and legal requirements for the construction of entrance conduit in new developments, and that both have incentives to build out entrance conduit in greenfield areas when it is justified by new revenue opportunities.”⁸⁴

Third, the suggestion that competing providers only decide “to build” network facilities “when there is an interested, potential customer” ignores the economic benefits associated with providing even lower capacity services to customers once a fiber network has been built.⁸⁵ Because of the capital-intensive nature of a communications network, providers often will construct fiber facilities when they have an “anchor contract” that will largely cover the cost of the construction.⁸⁶ However, once the fiber has been deployed, a provider can leverage its network to make “follow-on customer sales” to other customers located near the fiber route, who

⁸³ *Triennial Review Order* ¶ 275 (finding that “the entry barriers appear to be largely the same for both incumbent and competitive LECs” in “so-called ‘greenfield’ construction projects”).

⁸⁴ *USTelecom Forbearance Order* ¶ 75.

⁸⁵ *Further Notice* ¶ 55.

⁸⁶ Wells Fargo Securities, Equity Research - Zayo Group Holdings, Inc., “ZAYO: Do The Math! Economics Make A LOT of Sense,” at 1 (July 6, 2016).

can be served at considerably lower cost and who can generate significantly higher returns.⁸⁷

Given these economic realities, it should be no surprise that the special access data confirm the presence of competitive facilities in most areas.⁸⁸

The Commission cannot disregard its precedent or ignore the evidence for the sake of “administrative ease.”⁸⁹ Accordingly, the Commission should reject proposals to determine the competitiveness of business data services based on an arbitrary and unsupported speed threshold.

V. PROVIDERS OFFERING SIMILAR SERVICES SHOULD BE REGULATED SIMILARLY.

As misguided as the Commission’s proposals to regulate business data services have been shown to be, the Commission should not make matters worse by adopting a regulatory regime that imposes requirements only on incumbent providers when they face competition from other providers of similar services. In the Ethernet services market, for example, in which multiple providers using diverse technologies compete fiercely for market share, there is no basis for subjecting providers to different regulations because of their incumbent status or differences in past market shares in the provision of other business data services. Thus, in a market deemed “non-competitive” (and thus subject to appropriate regulation), all providers of Ethernet services should be subject to the same regulatory obligations regardless of whether the provider is an incumbent LEC, a cable operator, or a competing LEC.

⁸⁷ *Id.*

⁸⁸ *See, e.g.,* AT&T Comments at 6-7 (noting that based on 2013 data, “more than 90 percent of ILEC buildings with BDS demand in these census tracts are within 2,000 feet of two or more providers, and these buildings account for more than 90% of BDS bandwidth in those census tracts”).

⁸⁹ *See, e.g.,* INCOMPAS Comments at 5-6.

Competition is working in the Ethernet services market, as the record shows; CLECs, ILECs, and cable providers are among the top providers in the country, and no one Ethernet provider has more than a 20 percent market share.⁹⁰ This suggests that the Commission should refrain from imposing *any* additional regulations on Ethernet services, rather than reversing the regulatory relief it adopted through forbearance action several years ago, as some have proposed.

VI. CONCLUSION

The Commission's proposals to impose new and dramatic regulations on business data services would be counterproductive to its goal of promoting facilities-based competition. Furthermore, given the dynamic nature of the business data services market and the robust competition in the marketplace, additional regulations are unnecessary.

Respectfully submitted,

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August 9, 2016

⁹⁰ See AT&T Comments at 4-5 (citing Vertical Systems Group, "2015 U.S. Carrier Ethernet LEADERBOARD" (Feb. 25, 2016), available at <http://www.verticalsystems.com/vsglb/2015-u-s-carrier-ethernet-leaderboard/>).

APPENDIX A



USTELECOM
THE BROADBAND ASSOCIATION

We are Broadband.

Survey of Small and Medium Business Internet and Data Networking Service Users

Methodology, Results, and Implications

June 2016

Overview of Survey

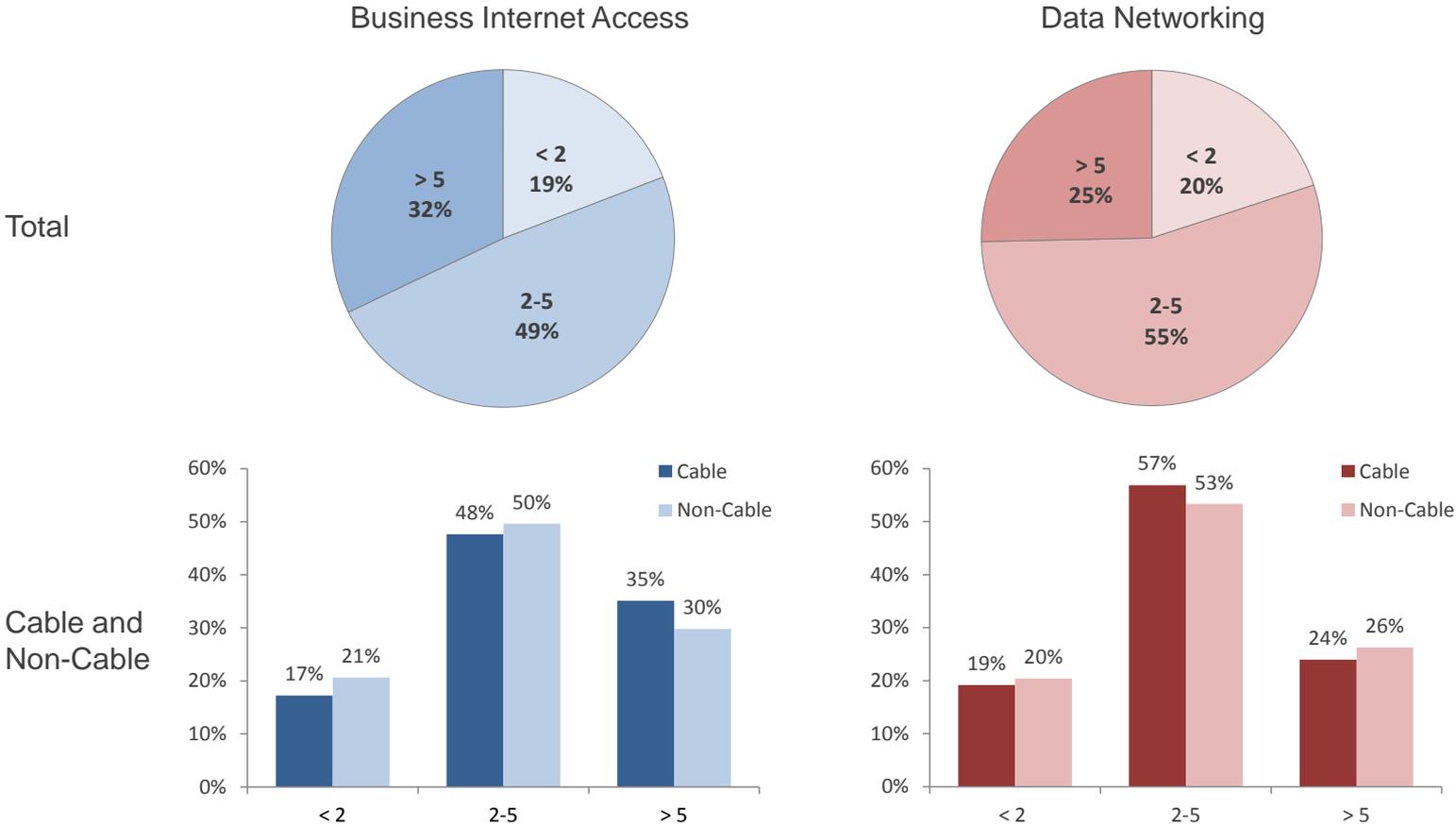
- Consultant surveyed 795 non-telecom retail businesses with 5 to 100 employees.
 - Online survey of prequalified panel took place April 28 to May 9, 2016.
 - Sample evenly distributed among firm sizes by employees: 5-9; 10-24; 25-49; and 50-100.
 - Firms with 5-100 employees represent 59% of U.S. businesses with 5 or more employees.
- Respondents were knowledgeable about communications services providers.
 - 628 (79%) were involved in decisions to select communications service providers.
 - 167 (21%) did not make the decisions but knew about providers and options.
 - Respondents who were not involved or knowledgeable were screened out of survey.
- Survey asked respondents about two types of services:
 - 702 (88%) had “Business Internet Access Services ” (BI) and 373 (47%) had BI only.
 - 422 (53%) had “Data Networking Services” (DN) and 93 (12%) had DN only.
 - 329 (41%) had both BI and DN.
- Sample included significant representation of Cable customers.
 - 319 (45%) of BI customers used Cable as primary service provider.
 - 167 (40%) of DN customers used Cable as primary service provider.
- Questions addressed switching behavior, and perceptions and preferences regarding service features such as reliability, support, performance, speed, cost, network facilities, and security.

Key Definitions

- The survey defined BI and DN for respondents as follows:
 - Business Internet Access Service (BI):* An Internet service marketed to businesses, typically with assurances of speed, quality, or 24/7 customer support. These services are usually used for basic Internet access or e-mail. They may be sold on a standalone basis or bundled with voice and video services. Examples include cable modem, DSL, or similar services.
 - Data Networking Service (DN):* Dedicated service provided over facilities such as T1/DS-1, T3/DS-3, and dedicated fiber, including carrier-grade Ethernet service. These services are typically used for large data transfers over company networks, management of services requiring high reliability such as webinars or video conferences, or high volume Internet access.
- * The BI and DN categories correspond to the Commission’s terms “Best Efforts” and “Business Data Services” (BDS), respectively. The “best efforts” services the Commission focuses on are described as mass market “residential” services, while the survey reflects comparable services used by small and medium businesses.

Customer Churn is High for All Service and Provider Types

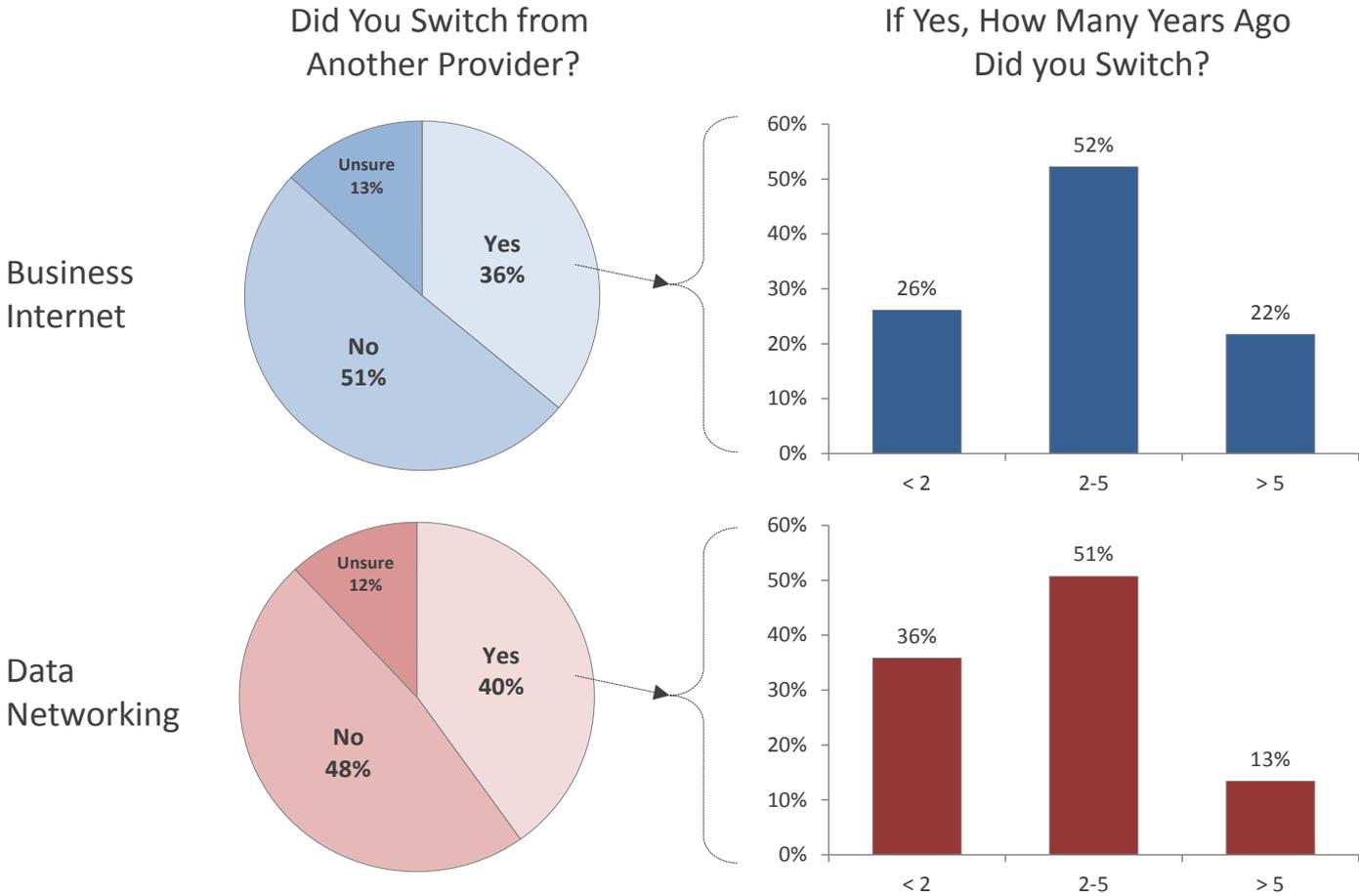
Chart 1: Years with Current Business Internet Access or Data Networking Provider



Source: USTelecom and Market Strategies. For Business Internet Access, number of respondents (n) =702. For Data Networking, n=422. For Cable Business Internet Access, n=319. For Non-Cable Business Internet, n=383. For Cable Data Networking, n=167. For Non-Cable Data Networking, n=255.

Many SMB Customers Have Switched to Cable in Recent Years

Chart 2: Customers Switching to Cable

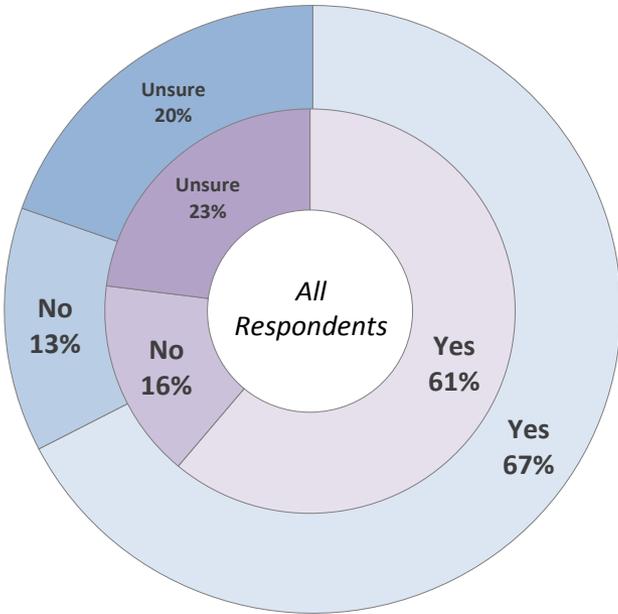


Source: USTelecom and Market Strategies. For Cable Business Internet Access customers, n=319 and for Cable Business Internet customers that switched, n=115. For Cable Data Networking customers, n=167 and for Cable Data Networking customers that switched, n=67.

Non-Cable Customers Are Willing to Switch to Cable for BI and DN

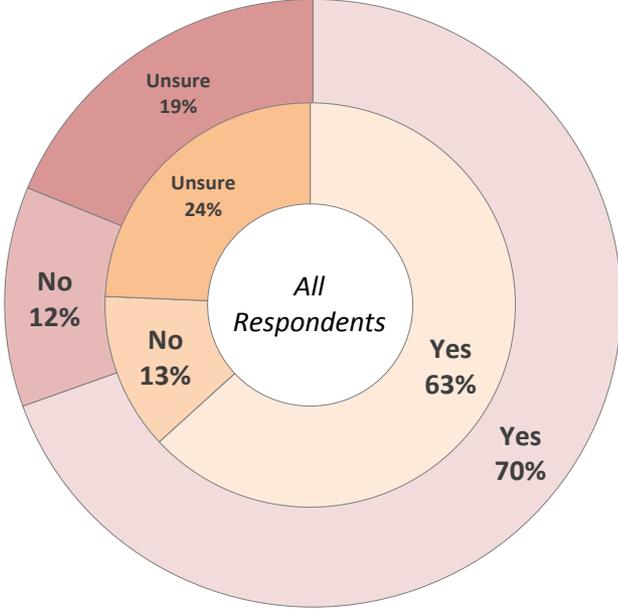
Chart 3: Willingness to Switch to Cable

Non-Cable Business Internet Customers
Willing to Switch to Cable?



Actual Decisionmakers Only

Non-Cable Data Networking Customers
Willing to Switch to Cable?



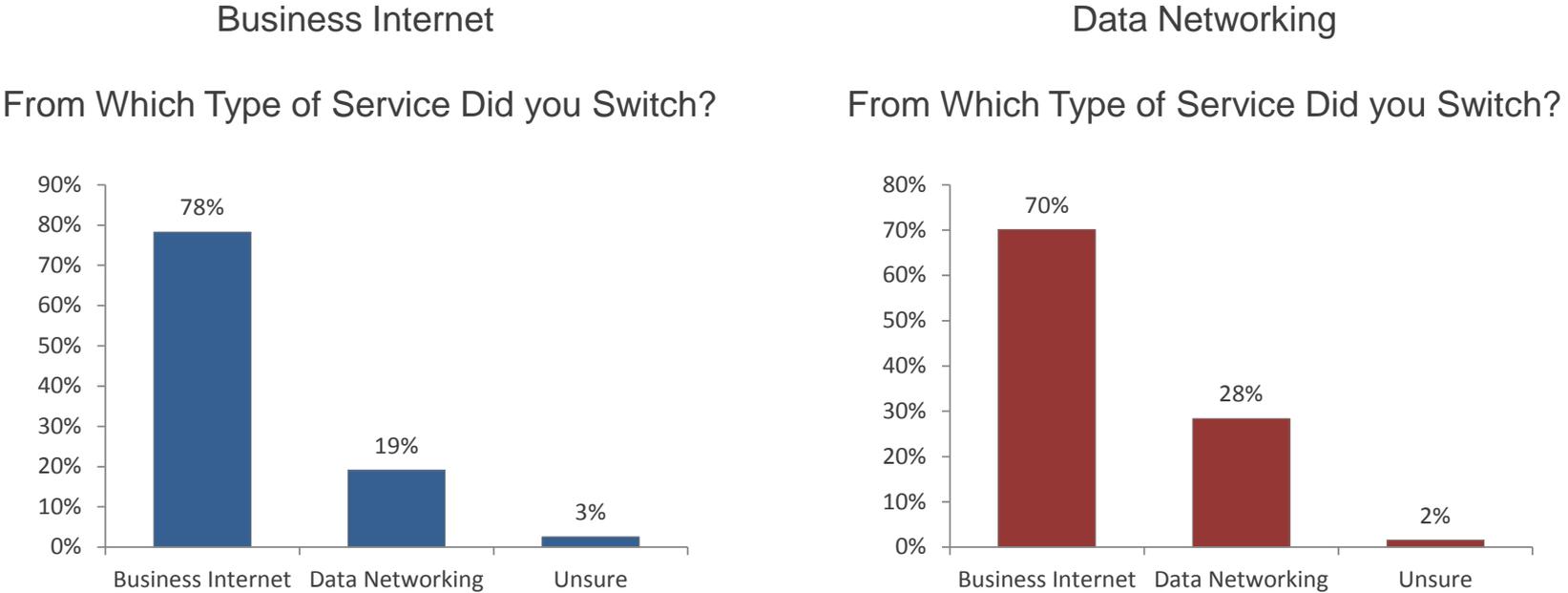
Actual Decisionmakers Only

- Only ~15 percent of respondents are unwilling to consider Cable for Business Internet Access and Data Networking.
- The portion willing to switch to Cable increases when you ask only those responsible for making the decisions.

Source: USTelecom and Market Strategies. For Non-Cable Business Internet Access, n=383 and for actual decisionmakers, n=316. For Non-Cable Data Networking, n=255. For actual decisionmakers, n=213.

SMBs are Switching Between Business Internet and Data Networking

Chart 4: Prior Service for Customers Who Switched to Cable



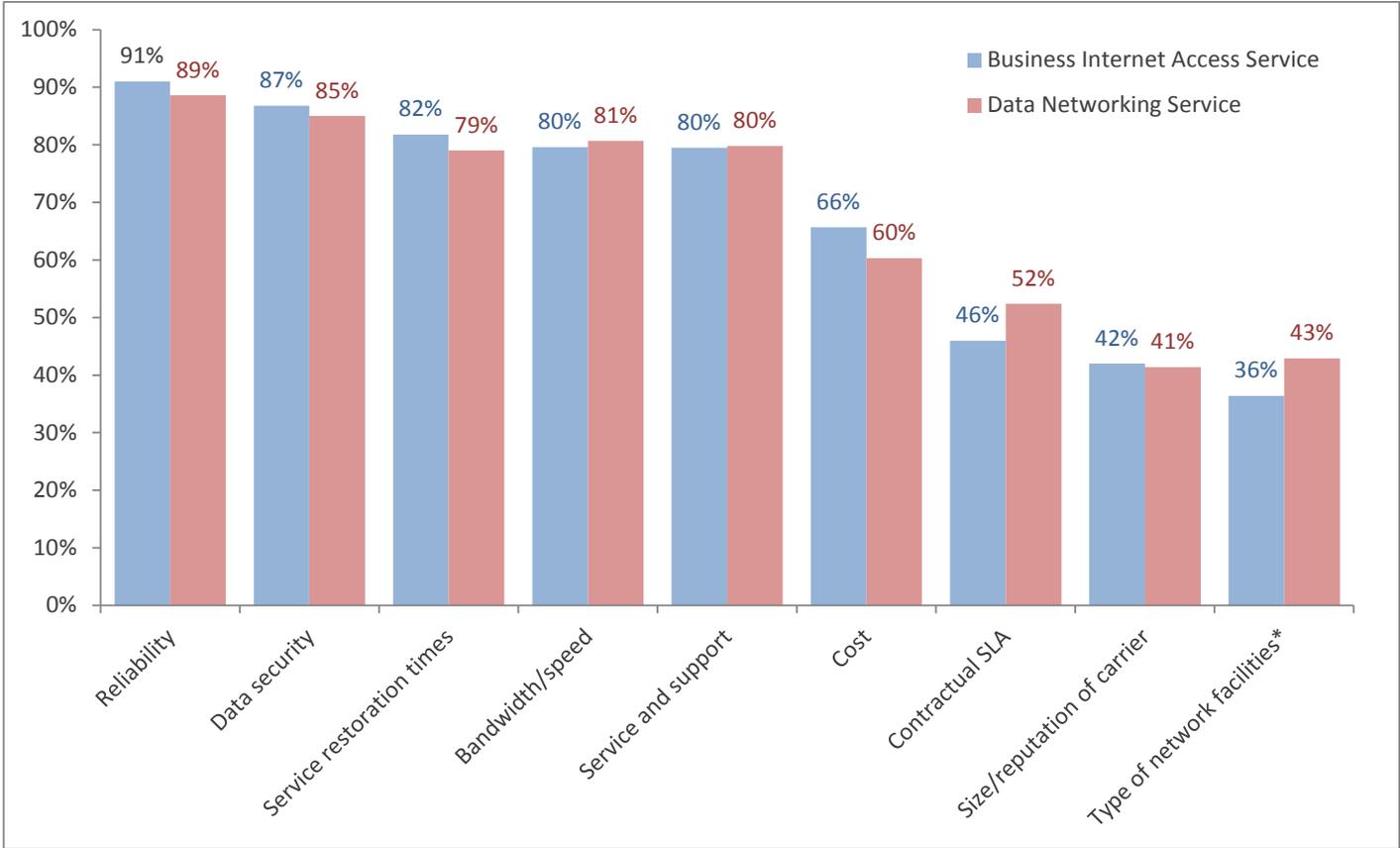
There is significant switching between Business Internet Access and Data Networking Services, in both directions.

These data refute the Commission’s key belief that BDS and “best efforts” services are in clearly separate markets that serve different types of customers.

Source: USTelecom and Market Strategies. For Cable Business Internet Access customers who switched to Cable, n=115. For Cable Data Networking customers who switched to Cable, n=67.

Business Internet and Data Networking Users Value Similar Features

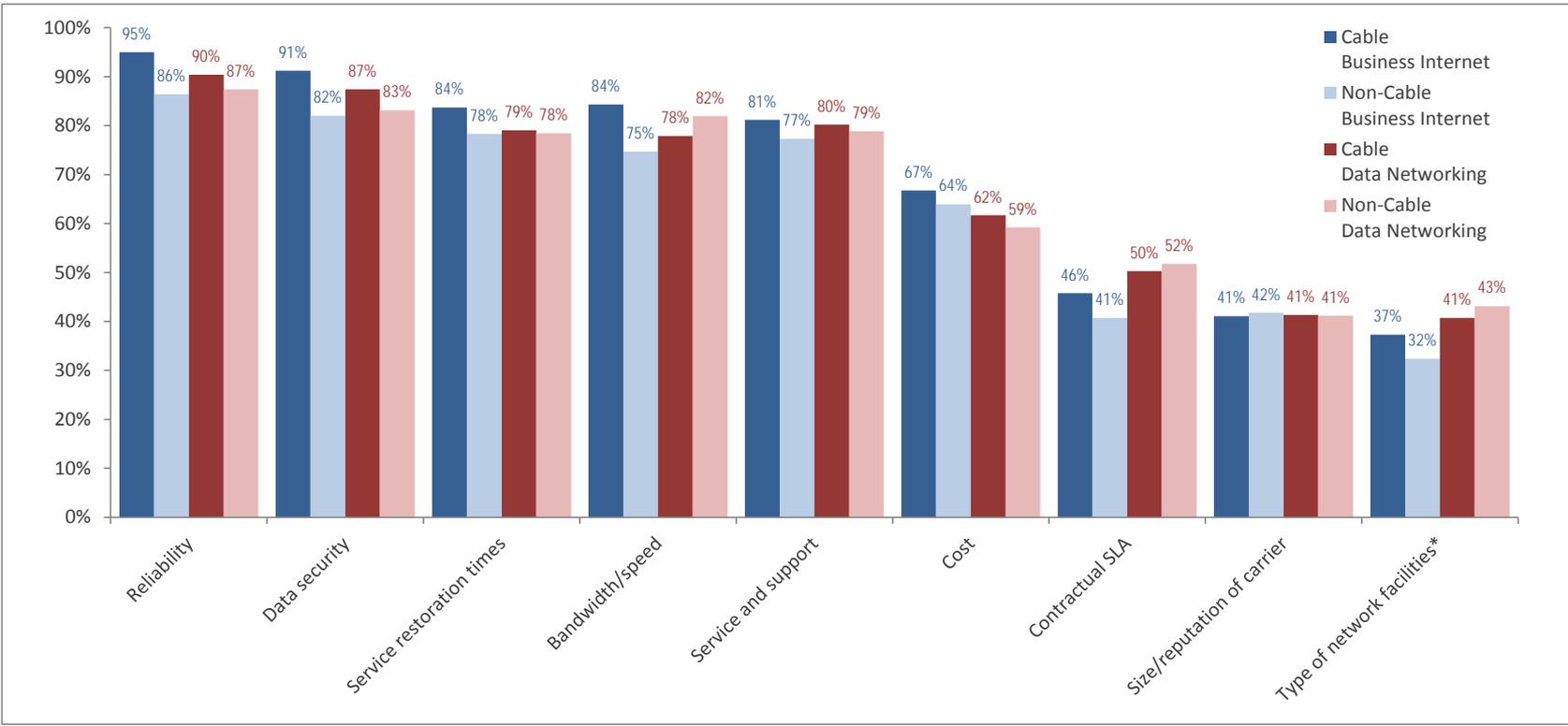
Chart 5: Portion of Respondents by Service Type Ranking Each Factor "Very Important"



Source: USTelecom and Market Strategies. For Business Internet Access, n=702. For Data Networking, n=422. * Potential types of network facilities include copper, coaxial cable, hybrid fiber-coax, and fiber.

Different Network and Service Type Customers Value Similar Features

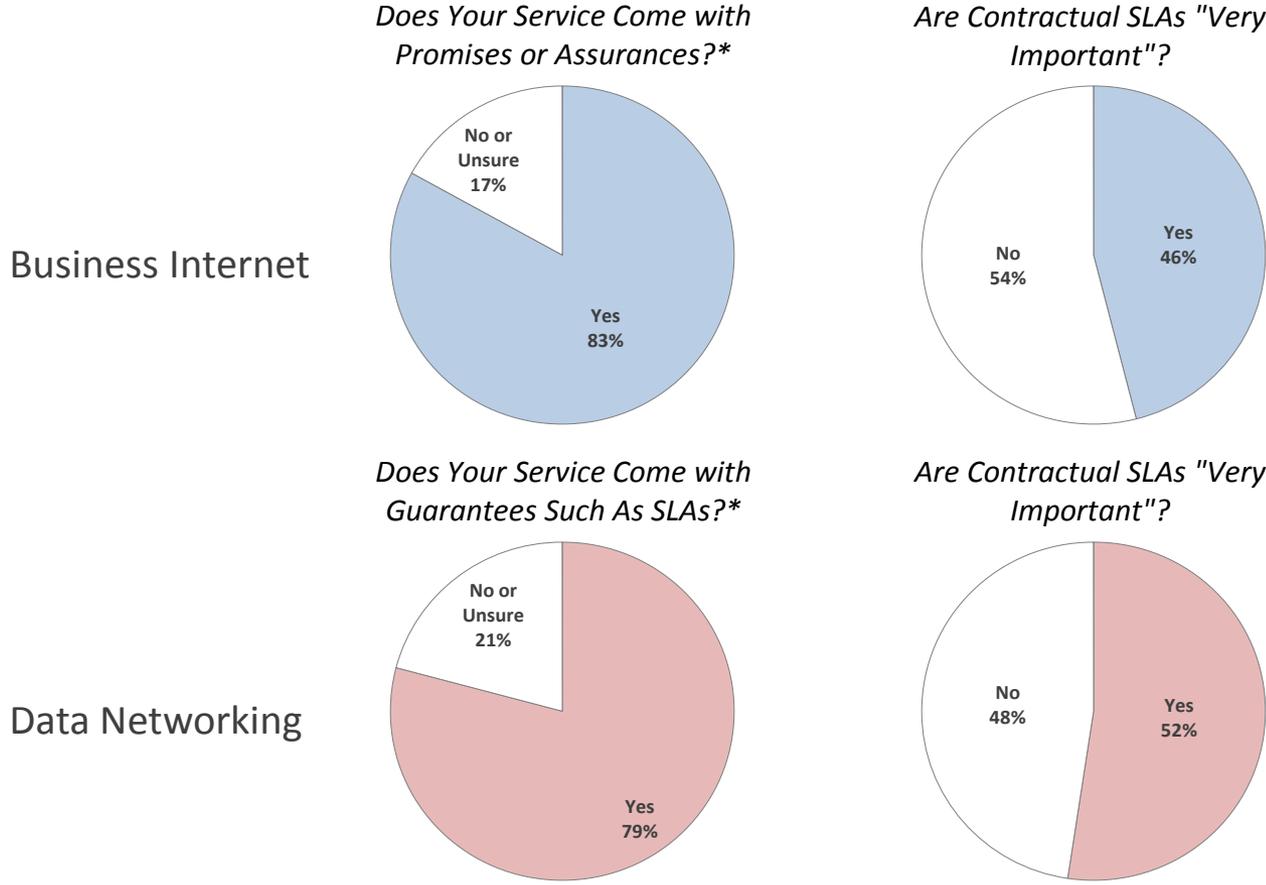
Chart 6: Portion of Users by Network and Service Type Ranking Each Factor "Very Important"



Source: USTelecom and Market Strategies. For Cable Business Internet Access, n=319. For Non-Cable Business Internet, n=383. For Cable Data Networking, n=167. For Non-Cable Data Networking, n=255. * Potential types of network facilities include copper, coaxial cable, hybrid fiber-coax, and fiber.

Most SMBs Surveyed Have Service Assurances or Other Guarantees

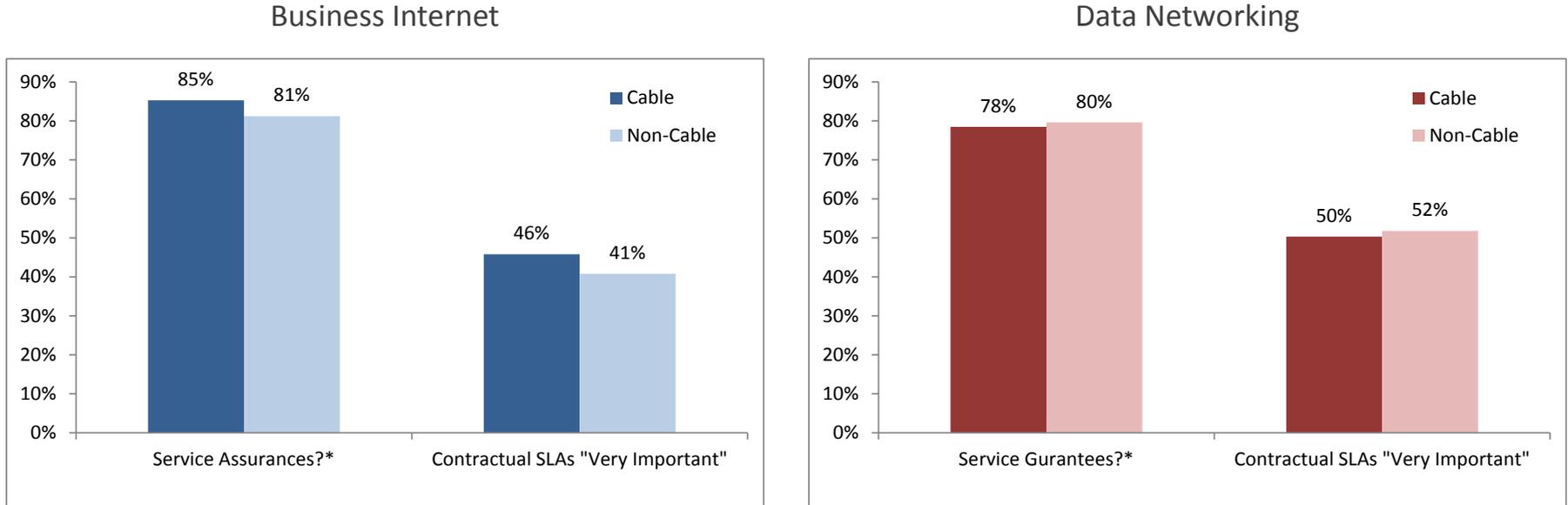
Chart 7: Customers' Views on Service Guarantees and Contractual SLAs



Source: USTelecom and Market Strategies. For Business Internet Access, n=702. For Data Networking, n=422. * Full Questions: Business Internet: "Does your business internet access service come with service promises or assurances such as speed, availability, and 24/7 customer support, commitments?" Data Networking: "Does your data networking service come with guarantees, such as contractual Service Level Agreements (SLAs) that specify speed, availability, and quality performance criteria?"

There Is Little Variation By Provider Type in Views on SLAs

Chart 8: Cable and Non-Cable Customers' Views on SLAs



Source: USTelecom and Market Strategies. For Business Internet Access, n=702. For Data Networking, n=422.

* Full Questions: Business Internet: "Does your business internet access service come with service promises or assurances such as speed, availability, and 24/7 customer support, commitments?" Data Networking: "Does your data networking service come with guarantees, such as contractual Service Level Agreements (SLAs) that specify speed, availability, and quality performance criteria?"

Survey Results Contradict FCC Assertions and Findings

- The survey results, based on direct evidence from business customers, show that customers switch between Business Internet Access services and Data Networking/BDS services.
- The survey results do not support a key role for service level agreements and do not support any clear gap among customers on the value of reliability, service or cost.
- The survey data with respect to churn and switching emphasize that the Commission's 2013 data collection does not reflect current market conditions.

Survey Results Contradict FCC Assertions and Findings (Continued)

FCC Further Notice

“Compared with BDS, best effort[s] services are less reliable, notably in terms of guaranteed uptime, and other service level guarantees” and “in some cases do not offer higher bandwidths.” (¶ 191)

USTelecom Survey

SMBs that highly value both service Reliability and Bandwidth/Speed (i.e., deem them to be “very important”) have chosen both Data Networking Service and Business Internet Access Service. (Chart 5)

- 91 percent of Business Internet Access Service customers and 89 percent of Data Networking Service customer rank Reliability as “very important” in their choice of service.
- 80 percent of Business Internet Access Service customers and 81 percent of Data Networking customers rank Bandwidth / Speed as “very important.”

Survey Results Contradict FCC Assertions and Findings (Continued)

FCC Further Notice

“[C]ustomers would be unlikely to be tempted to switch to a best efforts service even if its price were to fall by a significant amount [A] customer currently purchasing a best efforts service would not switch to a BDS with a price of several multiples of the best efforts service, even if the BDS price were to fall significantly.” (¶ 193)

- The Commission presumes price changes are not a factor driving switching, even at the margins.

USTelecom Survey

SMBs have, in fact, been switching between Data Networking Service and Business Internet Access Service in both directions over the last five years, when prices for a range of Business Internet and Data Networking services have been falling.*

- Among current Cable SMB customers, 70 percent of those who switched to Cable Data Networking switched from Business Internet while 19 percent of those who switched to Cable Business Internet switched from Data Networking. (Chart 4)
- Moreover, although our survey did not ask participants their reason for switching, it did reveal that fewer SMBs rank Cost as “very important” than rank Reliability and Bandwidth/speed as “very important.” This suggests switching occurs for reasons other than significant price reductions. (Chart 5).

* Vertical Systems @ Ethernet 2016.

Survey Results Contradict FCC Assertions and Findings (Continued)

FCC Further Notice

“[T]he characteristics of best efforts service and BDS appear to be very different. BDS comes with substantial reliability guarantees and functionality that do not accompany best efforts services, leading us to the view that the two services do not play important roles in constraining the quality-adjusted prices of each other.”
(¶ 194)

USTelecom Survey

Four-fifths of Business Internet and Data Networking customers believe they have some kind of service guarantee but few rank contractual SLAs “Very Important,” with little variation among the two types of services. This suggests that SMBs do not consider services that lack specified reliability guarantees and functionality to be inferior to BDS. (Charts 7 and 8)

- 83 percent of Business Internet and 79 percent of Data Networking customers believe their service comes with some kind of service assurance or guarantee.
- 46 percent of Business Internet and 52 percent of Data Networking Service rank Contractual SLAs as “very important” among service features.

Survey Results Contradict FCC Assertions and Findings (Continued)

FCC Further Notice

“Consistent with the observed price differences between the different types of services, some end users do not require ‘mission critical’ connectivity, and prefer best efforts services to BDS, prioritizing cost savings over reliability and specific functionality.”

(¶ 194)

USTelecom Survey

Business Internet users as well as Data Networking Service users value factors such as Reliability and Data Security over Cost and there is little variation between the different service types with respect to the features valued most highly. (Chart 5)

- 66 percent of Business Internet customers and 60 percent of Data Networking customers ranked Cost “Very Important.” For *both* service types, factors such as Reliability, Data Security, Service Restoration Times, Bandwidth / Speed, and Service and Support were ranked higher.
- If the Commission’s analysis were correct, we would see relatively greater portions of Business Internet Access Service customers ranking Cost as “Very Important” and a relatively smaller portion of Business Internet Access Service customers ranking factors such as Reliability and Data Security as “Very Important.”

Survey Results Contradict FCC Assertions and Findings (Continued)

FCC Further Notice

“2013 data provides the Commission with valuable information on the capabilities of suppliers and a solid basis for making findings as to the state of competition and the drivers of competition.” (¶ 248)

USTelecom Survey

The market, especially Cable BDS deployment, is materially different than it was in 2013. Churn is high and switching has been significant over the last two years.

- Two-thirds of Business Internet and three-fourths of Data Networking SMB customers have changed providers in the last five years and one-fifth of both Business Internet and Data Networking customers switched providers in the last two years. (Chart 1)
- 36 percent of those switching to Cable Data Networking did so in the last two years. (Chart 2)
- Only 12 percent of those who are decisionmakers were unwilling to consider Cable for Data Networking Services, with 70 percent willing to switch and the rest unsure. (Chart 3)
- Separately, USTelecom has filed data on the record at the Commission showing that Cable operators have accelerated deployment of fiber and Ethernet services since 2013.

Conclusions

- The survey found that there is high SMB churn.
- There is significant switching from Business Internet Access to Data Networking Services and vice versa ... and many SMBs use both.
- SMBs uniformly value reliability, security, speed, and support more than certain types of facilities and contractual service level agreements.
- Survey findings supply direct evidence from purchasers that conflicts with analysis in the NPRM on market definition, especially the notion that there is a clear distinction between BDS and “best efforts” customer needs and the assumption that prices are not a factor driving switching between the two types of services.
- The survey contradicts claims about customer lock-in.
- The survey supports the conclusion that the Commission’s 2013 data do not reflect material changes in the current marketplace.

APPENDIX B

Learning from Bad Technique: The *WIK-Consult Report* on Business Data Services

George S. Ford, PhD*

August 4, 2016

Introduction

Last May, the Federal Communications Commission (“FCC”) launched a Notice of Proposed Rulemaking in which it set forth a “new regulatory framework” for Business Data Services (“BDS”), formerly known as Special Access Services.¹ BDS are high-capacity circuits sold by facilities-based communications companies to other communications companies and businesses. The Commission has entertained complaints about BDS rates being “too high” for about fifteen years, in part because of a 1999 deregulatory policy allowing pricing flexibility for the services.² But it’s not just the deregulated prices that are at issue; even those prices the Commission regulates today are claimed to be “too high.” At no risk of oversimplification, the BDS proceeding is all about rate regulation.

The need for rate regulation requires first a determination that there is market power, meaning that the observed prices or rates are above some “proper” level, usually defined with reference to economic cost or competitive outcomes. Yet, no party has provided the Commission with convincing evidence that prices are not “just and reasonable.”³ Instead, the unsupported claim that BDS prices “are too damn high” pretty much sums up the economic arguments, leaving the Agency little to work with and explaining its historical reluctance to intervene.⁴

But past is past and the current Commission under Chairman Tom Wheeler has signaled its determination to address and likely lower BDS rates. The regulatory paradigm it outlines in the *BDS NPRM* is to skirt the issue of evaluating market power altogether, and instead use the simple head-count of the number of competitors as a proxy. This analytical substitution is without validity in economic theory and especially inapt for telecommunications markets where fixed costs are large relative to market size.⁵ The *BDS NPRM* provides further evidence that the Agency now operates in an “economics free zone.”⁶

...the unsupported claim that BDS prices “are too damn high” pretty much sums up the economic arguments...

As a result, the BDS proceeding has become a dumping ground for inexpert economic analysis (done mostly, but not always, by non-economists). While it’s unfortunate that such dross has been invited into the record, by studying the errors in such works it is possible for policymakers, advocates, and laypersons to obtain a better grasp of economic concepts relevant to telecommunications regulation. Earlier this year, for instance, I detailed a plethora of errors and internally-inconsistent

claims made in a report on BDS prices by the Consumer Federation of America (“CFA”).⁷

A more recent instance of unskilled economic analysis is a just-released report—prepared at the request of INCOMPAS (a trade group of BDS buyers seeking lower prices)—by J. Scott Marcus of WIK-Consult (a European consulting firm).⁸ Like the *CFA Report* before it, for reasons that are unclear the *WIK-Consult Report* claims that government-mandated price reductions will increase the revenues of the sellers of BDS. As I explain below, the *WIK-Consult Report* makes several serious errors in its analysis, including, but certainly not limited to, a focus on irrelevant factors, inaccurate computations, self-contradictory claims, and improper benchmarks. Given these errors, the Commission should accord no probative weight to the *WIK-Consult Report*, but that does not stop us from learning a few lessons about economics and its insights for regulatory action.

WIK-Consult’s Analysis

A claim that prices are “too high” requires that prices be compared to a proper benchmark, which typically is some meaningful measure of cost or competitive outcomes.⁹ No legitimate evidence on such a comparison has been entered into the record thus far, and WIK-Consult confirms this by noting that the basis for its numerical analyses are simply contentions: “[m]any have contended that the prices of Ethernet leased line equivalents are in excess of cost and in excess of the levels that could be expected in a competitive market. Likewise they contend that prices of TDM-based leased line equivalents are also well in excess of cost and competitive levels.”¹⁰

Despite offering no useful evidence that prices are, in fact, too high, WIK-Consult seeks to analyze the effects of mandatory price cuts. Further, WIK-Consult states that it “[does] not attempt to quantify what the ‘right’ reduction in price should be.”¹¹ Instead, like the *CFA Report* before it, the *WIK-Consult Report* simply assumes

that a price reduction is the right thing to do and then attempts to calculate the effect of hypothetical price cuts on the total revenues of firms selling these services (among other related effects).

... the BDS proceeding has become a dumping ground for inexpert economic analysis (done mostly, but not always, by non-economists).

To begin, I must admit that this fascination with total revenues is a mystery to me. The legal standard for evaluating whether rates are “just and reasonable” rises or falls on whether the profits these rates return are either confiscatory on the low end or excessive (i.e., “creamy”) on the high-end, not their revenue effects.¹² The Communications Act does not mandate that any regulatory price-cut lead to a rise (or fall) in total revenues. The “just and reasonable” standard of Section 201 rate regulation is focused on financial returns and Section 202’s non-discrimination mandate is somewhat an implicit rejection of revenue considerations.¹³

Why bother with an analysis of revenues? Enron had over \$100 billion in revenue the year before it declared bankruptcy.¹⁴ The only justification the *WIK-Consult Report* provides for the analysis is that “[t]here is a natural tendency to assume that a reduction in price translates into a reduction in revenue for the provider of the service.”¹⁵ For someone who lacks any formal training in economics,¹⁶ perhaps that may be true, but it unclear how clearing up this ignorance-induced error helps an expert agency (employing many economists) regulate BDS.

WIK-Consult Methodology

The method employed in the *WIK-Consult Report* is rather straightforward. Even so, WIK-Consult manages to bungle the analysis. Let me explain.

Every principles text in economics includes a discussion about the relationship of price changes to total revenues. It is a concept taught in every first course in economics in the discussion of the concept of the *own-price elasticity of demand*.¹⁷

Total revenue is price times quantity, and by the law of demand price and quantity are inversely related (i.e., demand slopes downward). So, whether total revenues rise when price falls depends on how much quantity increases, and the own-price elasticity of demand is a measure of that quantity change. The own-price elasticity of demand (E , which is a non-positive number) is the percentage change in quantity ($\% \Delta Q$) divided by the percentage change in that good or service's own price ($\% \Delta P$), or

$$E = \% \Delta Q / \% \Delta P, \quad (1)$$

which can be rearranged for present purposes as,

$$\% \Delta Q = E \cdot \% \Delta P. \quad (2)$$

If the demand curve is *elastic* ($E < -1$), then that means the percentage change in quantity is bigger (in absolute value) than the percentage change in price. If so, then a price reduction will increase revenues. If the demand curve is *inelastic* ($-1 < E \leq 0$), then that means the percentage change in quantity is smaller (in absolute value) than the percentage change in price, implying a price cut will reduce revenues. If the demand curve is unit elastic ($E = -1$), then the percentage changes in price and quantity are equal (in absolute value) and offsetting, so that a price cut has no effect on revenues.

To see the revenue effect more clearly, we can write the effect of a price change on total revenue (TR) as,

$$\% \Delta TR = (E + 1) \cdot \% \Delta P. \quad (3)$$

As noted above but seen more clearly here, if the own-price elasticity is -1 , for instance, then the change in total revenue is zero. If the demand elasticity is -0.5 (inelastic), then the percentage change in revenue is 50% of the percentage change in price and revenues decline. Or, if the demand elasticity is -2 (elastic), then the percentage change in revenues is equal to the negative of the percentage change in price (lowering price would increase revenue).

For unknown reasons, the advocates for increased regulation of BDS believe that if the regulatory price cut increase revenues, then it is legitimate regulatory action. While there is no basis for this belief, the desire to claim revenues will rise (or not fall) points to the obvious analytical solution: like the *CFA Report* before it, WIK-Consult argues that the own-price demand elasticity is elastic, meaning that a regulatory mandated price cut will increase quantity by an amount large enough to make revenues rise. WIK-Consult considers only elasticity values in the elastic region of demand (or, at least an attempt is made to do so, as explained later).¹⁸

What does this say about proper rate regulation? Absolutely nothing – and WIK-Consult offers no explanation. In fact, most rate regulation is applied to goods with highly inelastic demand curves, like traditional phone services (with an elasticity approaching zero).¹⁹ Nevertheless, INCOMPAS, who contracted with WIK-Consult to produce the report, seems to believe the revenue effects are relevant, so let's study the analysis to see if it is done properly.

Below, I will address four key errors in the *WIK-Consult Report*, which may be categorized as follows: (a) an improper focus on revenue effects and resulting self-contradictory claims; (b) computational errors; (c) improper benchmarks

caused by an apparent ignorance of the basic economics of telecommunications; and (d) the analysis of a demand curve that is presumed out of thin air.

Irrelevance of Total Revenue

The effect of a price cut on total revenues has nothing to do with the regulation of BDS services. Rate regulation is justified only when prices are well-above costs and some plausible regulatory solution exists that doesn't do more harm than good. No professional analysis of regulation considers the revenue effects of a price cut, absent some "revenue neutrality" mandate or rate-of-return requirement. Neither are relevant to BDS.

What is odd about this focus on revenue is that it actually supports deregulation rather than the regulatory activity proponents of aggressive BDS regulation desire. Consider a simple example. Say we have Monopolist A with an elasticity of -1.5 and Monopolist B with an elasticity of -3.0. Based on the Lerner Index of Market Power,

$$L = (P - MC)/P = 1/|E|, \quad (4)$$

where MC is marginal cost.²⁰ Monopolist A has twice as much market power as Monopolist B. Yet, an equivalent price cut will lead to significantly larger revenues increases for Monopolist B.

Thus, looking at revenue changes sends exactly the wrong signal about the need for regulation. It is well-understood in regulatory and antitrust economics that the more elastic is demand, the less is the need for regulation or antitrust action. As observed by Kaserman and Mayo in their book *GOVERNMENT AND BUSINESS*, discussing the seminal works by Saving (1970) and Landes and Posner (1981):

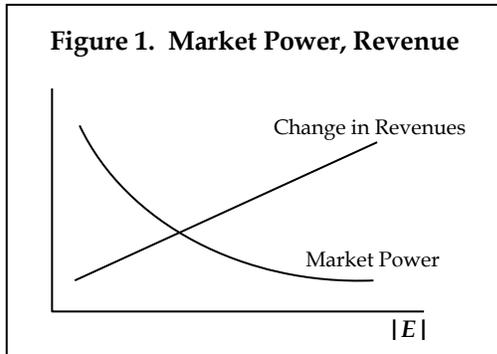
... the degree of market power enjoyed by the dominant firm will be inversely related to the price elasticity of total market demand []. Thus, in markets where consumers are highly

sensitive to price changes, the ability of any firm to increase price by withholding supply will be restricted, even if that firm is the sole supplier.²¹

Even the Commission's *BDS NPRM*, which is no example of clear thinking, recognizes the economic principle that a "highly elastic demand [eliminates] the ability to raise price over competitive levels."²²

[L]ooking at revenue changes sends exactly the wrong signal about the need for regulation. It is well-understood in regulatory and antitrust economics that the more elastic is demand, the less is the need for regulation or antitrust action.

So, the more elastic is the demand curve, the less need for regulation. Yet, the more elastic is demand, the larger the revenue increase for a price cut. Figure 1 illustrates the relationship. On the horizontal axis is the (absolute value of the) own-price elasticity of demand. Two curves are provided, one is the Lerner Index of Market Power and the other is the percentage change in revenue for a price cut (of constant magnitude). This figure clearly demonstrates that the larger the increase in revenues from a price cut, the less market power there is (defined as the relationship between price and marginal cost).



Apparently not grasping this concept, and not realizing the self-contradiction, WIK-Consult asserts, “[t]here is good reason to believe that the price elasticity of demand for these services is high.”²³ But if this is true, then there is no reason to believe that BDS regulation is needed. WIK-Consult’s elasticity analysis provides a regulatory implication that is precisely backwards from that desired by its sponsor, INCOMPAS.

WIK-Consult asserts, “[t]here is good reason to believe that the price elasticity of demand for these services is high.” But if this is true, then there is no reason to believe that BDS regulation is needed.

Bad Math

WIK-Consult states that “[f]or ease of exposition, we treat price elasticity here as a constant (as is often done).”²⁴ Then, an example is provided,

.. when the percentage change in price is fairly small, and at [an own-price elasticity of demand] of -1, the overall change in gross revenue is minimal. For example, a reduction of 10% in price leads to a reduction of only 1% in total revenue.²⁵

Obviously, this example is incorrect. If the elasticity is -1 and constant, then revenues are unchanged by a change in price.

There are two sources for this most basic error. First, WIK-Consult says it is holding the elasticity constant across all prices, yet the formula it uses is incompatible with that assumption.²⁶ The formula used assumes a linear demand curve—one that cannot mathematically support a constant elasticity. This fact is plain from Figure 2 of the *WIK-Consult Report* since all elasticities considered in the figure are assumed to be less than or equal to -1 yet revenues sometimes decline. Also, the revenue effect changes with the size of the price change, again indicating the elasticity is not being held constant.

Second, the formula WIK-Consult uses is valid only for infinitesimal price changes. For instance, with an elasticity of -1, a price change of -0.01 percent leads to revenue change of 0.01%, which is still not equal to zero. The formula used requires infinitesimally small price changes to be valid. Yet, WIK-Consult contemplates prices change of no less than 5% and as large as 25%.²⁷ In fairness, it’s a common mistake made by laypersons (including students) doing economic analysis. (In fact, I’m sensitive to the error because I recall making it as an undergraduate student in my first economics course.)

Irrelevant Benchmarks

WIK-Consult is principally but not solely interested in revenue effects; an analysis of surplus is also included, but this work is likewise botched.²⁸ Here, WIK-Consult, in an effort to “review the basic economics,” provides the familiar supply-demand figure (with constant marginal cost) to illustrate the concept of deadweight loss.²⁹

Since WIK-Consult proposes to explain “basic economics,” I’ll risk the accusation of being a bit persnickety to point out a number of gaffes

committed by WIK-Consult in discussing the figure. For instance, WIK-Consult describes the demand curve as the “consumer demand curve,” when it is intended to be market demand curve. Also, the *WIK-Consult Report* says that “higher prices” lead to “lower consumption” and this is “due to the price elasticity of demand.” In fact, the inverse relationship is true due to the law of demand (demand slopes downward); the elasticity of demand describes (in a dimensionless manner) the particular relationship of price and demand at any given point along the demand curve. Finally, while WIK-Consult never asserts BDS are sold under monopoly conditions, its client does, and this is important because there is no supply curve under monopoly.

More substantively, WIK-Consult states that “the supply curve ... is usually not critical to the discussion.”³⁰ The claim is demonstrably false. In discussing the deadweight loss, WIK-Consult relies on the assumption that marginal cost is the “optimal pricing point in an ideal competitive market.”³¹ Yet, it is well-established that the “ideal competitive market” is not relevant to telecommunications services. Telecommunications requires massive fixed and sunk costs leading to increasing returns. In fact, as is well known by economists, in the presence of “decreasing average cost[,] a competitive equilibrium does not exist.”³² Thus, WIK-Consult’s depiction of the “ideal competitive market” is not even an equilibrium in telecommunications markets.

The irrelevance of the “ideal competitive market” for telecommunications policy is well established in the literature. For instance, economists Roger Blair and Christine Piette, in *ANTITRUST BULLETIN*, observe:

The production of local telephone service is marked by substantial economies of scale, which means that average cost declines with increases in output and marginal costs are below average cost. As a result, textbook competition, which involves marginal cost

pricing, is infeasible as all firms would have negative profits.³³

Quotes like these are in abundant supply. Marginal cost and perfect competition are not relevant cost or price benchmarks for BDS or nearly any other telecommunication service. A reliance on an irrelevant benchmark dooms the WIK-Consult analysis.

Since WIK-Consult proposes to explain “basic economics,” I’ll risk the accusation of being a bit persnickety to point out a number of gaffes committed by WIK-Consult in discussing the figure.

There is No Market Demand Curve

WIK-Consult’s analysis, as well as the analyses by the Commission and many of the advocates for and against BDS regulation, is based on reference to a market demand curve. Yet, WIK-Consult never defines the market for BDS. The Commission and those calling for more regulation the market for BDS as “location” or “customer” specific.³⁴ That is, BDS customers are buying connectivity at specific locations. Thus, there is no centralized market for BDS, so there is no market demand curve for BDS, and consequently there is no price elasticity of market demand.³⁵ All the calculations in the *WIK-Consult Report* (and the studies it relies on) are based on a market that does not exist; WIK-Consult is studying a fantasy.³⁶

As shown in Beard, Ford and Spiwak (2014), customer-specific markets for BDS—a definition chosen by the Commission and the advocates for regulation—implies countervailing market power.³⁷ As a result of this bilateral monopoly and the purchase of connectivity (a single thing), regulating BDS serves only to transfer wealth from sellers to buyers. It’s a pure transfer,

except for the fact the regulation imposes cost. As a result, regulating BDS must reduce social surplus and is ill-advised.

Conclusion

At the risk of naivety, we might view the BDS proceeding as a regulator doing its assigned task – protecting consumers against a monopolist earning excessive profits by charging high prices. More realistically, I think, the BDS proceeding is about a number of large, politically-favored communications firms using the regulatory system to their advantage to extract economic surplus from other communications firms. It's the typical stuff predicted by the private-interest and interest-group theories of regulation.

I submit that my take on the BDS proceeding is well-supported by the evidence. First, no evidence has been presented to or crafted by the Commission providing a legitimate economic basis for intervention. Second, the advocates for more regulation have turned to fantasy and misdirection. A media campaign has been launched by the buyers of BDS to distract the public with flowery promises (e.g., lower prices, competition, innovation, investment, and so forth), while in fact they are merely requesting a massive wealth transfer they have been unable to justify based on sound economic analysis and empirical work. The *WIK-Consult Report* in just another entry into this charade.

NOTES:

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¹ *In the Matter of 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*, FCC 16-54, TARIFF INVESTIGATION ORDER AND FURTHER NOTICE OF PROPOSED RULEMAKING, 31 FCC Rcd. 4723 (rel. May 2, 2016) (hereinafter “BDS NPRM”).

² *In re Access Charge Reform*, FIFTH REPORT AND ORDER AND FURTHER NOTICE OF PROPOSED RULEMAKING, 14 FCC Rcd. 14221, FCC 99-206 (rel. 27 Aug. 1999) (*Pricing Flexibility Order*).

³ G.S. Ford and L.J. Spiwak, *The Need for Better Analysis of High Capacity Services*, 28 JOHN MARSHALL JOURNAL COMPUTER & INFORMATION LAW 343-384 (2011) (available at: <http://phoenix-center.org/JCILSpecialAccess.pdf>).

⁴ Quote is attributed to Jimmy McMillan, perennial candidate for multiple federal and state offices (<http://www.rentistoodamhigh.org>).

⁵ G.S. Ford, *The Road to Nowhere: Regulatory Implications of the FCC’s Special Access Data Request*, PHOENIX CENTER POLICY PERSPECTIVE NO. 16-02 (February 23, 2016) (available at: <http://www.phoenix-center.org/perspectives/Perspective16-02Final.pdf>).

⁶ L.G. Crovits, ‘Economics-Free’ Obamanet, WALL STREET JOURNAL (January 31, 2016) (available at: <http://www.wsj.com/articles/economics-free-obamanet-1454282427>).

⁷ G.S. Ford, *Cost or Benefit? A Review of the Consumer Federation of America’s Report on Regulating Special Access Services*, PHOENIX CENTER POLICY PERSPECTIVE No. 16-04 (April 18, 2016) (available at: <http://phoenix-center.org/perspectives/Perspective16-04Final.pdf>).

⁸ J. Scott Marcus, *Welfare Effects of Reductions in the Price of Leased Line Equivalents in the U.S.*, WIK-Consult GmbH (July 16, 2016) (available at: <https://ecfsapi.fcc.gov/file/1072827487959/WIK-Consult%20Report.pdf#viewer.action=download>) (hereinafter “WIK-Consult Report”) at p. 1, filed by INCOMPAS in FCC Docket Nos. 16-143 and Docket No. 05-25 (July 28, 2016) (available at: <https://ecfsapi.fcc.gov/file/1072827487959/Cover%20Letter%20for%20WIK%20Report.pdf#viewer.action=download>). It should be noted that Mr. Marcus makes many of the same errors I highlighted in the CFA Report, *id.*

⁹ G.S. Ford and L.J. Spiwak, *The Need for Better Analysis of High Capacity Services*, 28 JOHN MARSHALL JOURNAL COMPUTER & INFORMATION LAW 343-384 (2011) (available at: <http://phoenix-center.org/JCILSpecialAccess.pdf>).

¹⁰ *WIK-Consult Report*, *supra* n. 8 at p. 1.

¹¹ *Id.* at p. 8.

¹² Section 201 and 202 of the Communications Act requires the commission to set just and reasonable and non-discriminatory rates. See 47 USC §§ 201-202. See, e.g., *In re Permian Basin Area Rate Cases*, 390 U.S. 747, 792 (1978); *Farmers Union Cent. Exch. v. FERC*, 734 F.2d 1486, 1497 (D.C. Cir.), *cert denied sub nom., Williams Pipe Line Co. v. Farmers Union Cent. Exch.*, 469 U.S. 1034 (1984).

¹³ Total revenues are expected to rise when a firm price discriminates in a manner that is welfare improving.

¹⁴ *Enron Annual Report 2000* (available at <http://picker.uchicago.edu/Enron/EnronAnnualReport2000.pdf>).

¹⁵ *WIK-Consult Report*, *supra* n. 8 at p. 8.

¹⁶ <http://www.scottmarcus.de> (“I am best known as an economist, but my academic training is as a political scientist (with a specialty in public administration) and as an engineer.”).

NOTES CONTINUED:

¹⁷ See, e.g., R.B. Ekelund Jr., and R.D. Tollison, *ECONOMICS* (1994), at pp. 125-126, or any other principles-level textbook. A basic description of the own-price elasticity of demand is available at: <http://www.investopedia.com/university/economics/economics4.asp>.

¹⁸ WIK-Consult also makes no attempt to verify whether demand for BDS actually is elastic or not, choosing instead to rely on a report issued in 2003 and based on data collected between 1993 and 2001 to support its assumptions. See P.N. Rappaport, L.D. Taylor, A.S. Menko, and T.L. Brand, *Macroeconomic Benefits from a Reduction in Special Access Price* (2003). Given the significant changes that have occurred in BDS prices, market size and nature of demand over fifteen to twenty years, the validity of this assertion is highly questionable. And, as detailed later, there is no market demand curve for BDS, so the results from this study cannot quantify the elasticity of demand. WIK-Consult also refers to the claimed experience of one INCOMPAS member, but no econometric data are offered to support a claim that all of BT's volume increases are attributable to the alleged price reductions—or that the competitive situation of the United Kingdom matches that for BDS in the United States.

¹⁹ L. Taylor, *TELECOMMUNICATIONS DEMAND IN THEORY AND PRACTICE* (1993).

²⁰ Marginal cost is the cost standard used by WIK-Consult for its analysis. As any student of telecommunications economics understands, marginal cost is not a meaningful benchmark for telecommunications markets. This index of market power has no relevance in markets with increasing returns (scale economies), and thus has no relevance for telecommunications regulation. For coverage of the literature on this point, see, e.g., *Road to Nowhere*, *supra* n. ___; G.S. Ford and L.J. Spiwak, *The Impossible Dream: Forbearance After the Phoenix Order*, PHOENIX CENTER PERSPECTIVE No. 10-08 (December 16, 2010) (available at: <http://www.phoenix-center.org/perspectives/Perspective10-08Final.pdf>); T.R. Beard, G.S. Ford, L.J. Spiwak, and M. Stern, *Wobbling Back to the Fire: Economic Efficiency and the Creation of a Retail Market for Set-Top Boxes*, 21 *COMMLAW CONSPECTUS* 1-58 (2012), at pp. 38-48.

²¹ D.L. Kaserman and J.W. Mayo, *GOVERNMENT AND BUSINESS: THE ECONOMICS AND ANTITRUST AND REGULATION* (1995), at p. 107; T.R. Saving, *Concentration Ratios and the Degree of Monopoly*, 11 *INTERNATIONAL ECONOMIC REVIEW* 139-146 (1970); W.M. Landes and R.A. Posner, *Market Power in Antitrust Cases*, 94 *HARVARD LAW REVIEW* 937-996 (1981).

²² *BDS NPRM*, *supra* n. 1 at ¶ 157.

²³ *WIK-Consult Report*, *supra* n. 8 at p. 8.

²⁴ *Id.* at ft. 17.

²⁵ *Id.* at p. 15.

²⁶ *Id.* at pp. 14-15.

²⁷ WIK-Consult's analysis is not as bad as the CFA's in at least one respect - it does not make computations based on a constant elasticity demand curve. Yet, WIK-Consult assumes a constant elasticity demand curve, so it's mistake of a different but still telling nature.

²⁸ *WIK-Consult Report*, *supra* n. 8 at pp. 9-10.

²⁹ *Id.* at Figure 1. When a monopolist raises price above marginal cost, surplus is lost in the sense neither the seller nor the buyers get it. This lost surplus is labeled a deadweight loss.

³⁰ *Id.*

³¹ *Id.*

³² O. Shy, *INDUSTRIAL ORGANIZATION* (1995) at p. 67.

³³ R. Blair and C. Piette, *The Interface of Antitrust and Regulation: Trinko*, 50 *ANTITRUST BULLETIN* 665-685 (2005).

³⁴ T.R. Beard, G.S. Ford, and L.J. Spiwak, *Market Definition and the Economic Effects of Special Access Price Regulation*, 22 *COMMLAW CONSPECTUS* 237-266 (2014) (available at: <http://scholarship.law.edu/commlaw/vol22/iss2/10>).

NOTES CONTINUED:

³⁵ This fact does not imply that an inverse relationship between aggregate quantities and prices cannot be observed, but this relationship is not a demand curve. *Market Definition, id.* at pp. 263-4.

³⁶ See, e.g., Rappaport, *et al.*, *supra* n. 18.

³⁷ *Market Definition, supra* n. 34.