

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 69

[WC Docket Nos. 16–143, 15–247, 05–25 and RM–10593; FCC 16–54]

Developing a New Regulatory Framework for Business Data Services (Special Access)

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: In this document, the Federal Communications Commission seeks comment on replacing the existing, fragmented regulatory regime applicable to business data services (BDS) (*i.e.*, special access services) with a new technology-neutral framework, the Competitive Market Test, which subjects non-competitive markets to tailored regulation, and competitive markets to minimal oversight.

DATES: Comments are due on or before June 28, 2016; reply comments are due on or before July 26, 2016. Written comments on the Paperwork Reduction Act proposed information collection requirements must be submitted by the public, Office of Management and Budget (OMB), and other interested parties on or before August 2, 2016.

ADDRESSES: You may submit comments, identified by WC Docket Nos. 16–143, 15–247, 05–25 and RM–10593, by any of the following methods:

- *Federal Communications Commission's Web site:* <http://apps.fcc.gov/ecfs/>. Follow the instructions for submitting comments.

- *People With Disabilities:* Contact the FCC to request reasonable accommodations (accessible format documents, sign language interpreters, CART, etc.) by email: FCC504@fcc.gov or phone: 202–418–0530 or TTY: 202–418–0432.

For detailed instructions for submitting comments and additional information on the rulemaking process, see the **SUPPLEMENTARY INFORMATION** section of this document. In addition to filing comments with the Secretary, a copy of any comments on the Paperwork Reduction Act information collection requirements contained herein should be submitted to the Federal Communications Commission via email to PRA@fcc.gov and to Nicole Ongele, Federal Communications Commission, via email to Nicole.Ongele@fcc.gov.

FOR FURTHER INFORMATION CONTACT: Christopher Koves, Pricing Policy Division, Wireline Competition Bureau,

202–418–8209 or Christopher.Koves@fcc.gov. For additional information concerning the Paperwork Reduction Act information collection requirements contained in this document, send an email to PRA@fcc.gov or contact Nicole Ongele at (202) 418–2991.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Further Notice of Proposed Rulemaking (FNPRM), WC Docket Nos. 16–143, 15–247, 05–25 and RM–10593, FCC 16–54, released May 2, 2016. The summary is based on the public redacted version of the document, the full text of which is available here: https://apps.fcc.gov/edocs_public/attachmatch/FCC-16-54A1.pdf. To request alternative formats for persons with disabilities (*e.g.* accessible format documents, sign language, interpreters, CARTS, etc.), send an email to fcc504@fcc.gov or call the Commission's Consumer and Governmental Affairs Bureau at (202) 418–0530 or (202) 418–0432 (TTY). Pursuant to Sections 1.415 and 1.419 of the Commission's rules, 47 CFR 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998), <http://www.fcc.gov/Bureaus/OGC/Orders/1998/fcc98056.pdf>.

- *Electronic Filers:* Comments may be filed electronically using the Internet by accessing the ECFS: <http://apps.fcc.gov/ecfs/>.

- *Paper Filers:* Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St. SW., Room TW–A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of *before* entering the building.

- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.

- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street SW., Washington, DC 20554.

People with Disabilities: To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an email to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202–418–0530 (voice), 202–418–0432 (tty).

I. Introduction

1. Business data service (BDS) is critical to the delivery of innovative broadband services for businesses and government institutions and is a major contributor to the nation's economy. Incumbent LECs and competitive providers reported revenues of almost \$45 billion for 2013 for the sale of dedicated services. It is, however, important to recognize that BDS is an important input (sometimes self-supplied) in the broader market for enterprise services, which include voice, Internet, private network, web-security, cloud connection, and other digital services. Available information suggests that the annual revenues for the broader enterprise services industry could exceed \$75 billion annually.

2. In this FNPRM, we provide our analysis to date of the 2015 Collection. We then seek comment on a number of proposals to establish a new regulatory paradigm for BDS to more appropriately address the technological changes occurring today and to facilitate the continued evolution of the type of robust competition that will result in ever-improving services for American businesses and consumers. To that end, the FNPRM seeks to develop a technology-neutral framework that no longer classifies BDS through the legacy prism of traditional services and company classifications. Rather, the Commission seeks to enter a new era where regulatory determinations are made based on whether a market is competitive and the concomitant regulatory obligations apply to all providers, looking to legitimate differences in products, places, and customers. The goals of this FNPRM are supported by the joint principles recently announced by INCOMPAS and Verizon urging the Commission to “adopt a permanent framework for regulating all dedicated services in a technology neutral manner.” That two of the entities who were once

diametrically opposed have joined together urging the Commission to adopt such principles is further evidence of the evolution in the BDS market today and the need for this new paradigm to harmonize regulation with the changing technology.

II. Further Notice of Proposed Rulemaking

A. Competition Analysis

1. Our Approach

3. We analyze the data collected and the evidence submitted in this proceeding to reach preliminary evaluations as to the degree of competitiveness in BDS markets. Our public interest evaluation necessarily encompasses the “broad aims of the Communications Act,” which include, among other things, a deeply rooted preference for preserving and enhancing competition in relevant markets with increased private sector deployment of advanced services. In conducting this analysis, we take a forward-looking view of technological and market changes.

4. We examine the effectiveness (and likely effectiveness) of competitive restraints, to identify where market power exists in BDS markets. We focus our analysis on BDS prices, and terms and conditions, and consider the effectiveness of current competitive restraints and whether market power, where it exists, has enabled unreasonable pricing or other practices or an ability to unlawfully exclude competition.

5. To distinguish product markets, we generally look to include products in the same market if they are reasonably interchangeable, with differences in price, quality, and service capability being relevant. In the case of geographic markets, we look to supply, rather than demand substitution. For both product and geographic markets, we do not believe it is necessarily required to engage a formal hypothetical monopolist test considering likely consumer substitution if a hypothetical monopolist imposed at least a small but significant and non-transitory increase in price (SSNIP), taking a more direct approach to demonstrate the use of market power.

2. Product Markets

6. In our data collection we defined BDS as a dedicated end-to-end telecommunications service. Leading technologies of this type are DS1s and DS3s, typically carried over copper pairs, which account for the majority of the BDS revenue in 2013 according to these data. DS3 lines carry about 30

times the bandwidth of a DS1 line, which is a symmetric 1.5 Mbps service. It is also possible to achieve higher bandwidth levels over other circuit-based technologies. An alternative to circuit-based technology is packet-based service, more commonly delivered over fiber optic cable or HFC cable using a standard called DOCSIS. Fiber can deliver higher bandwidth and service levels, and most new investment is in fiber optic and coaxial cable, and in next generation DOCSIS 3.1 electronics. Cable companies also provide BDS at competitive rates over the coaxial-fiber hybrid technology, commonly referred to as “Ethernet over DOCSIS,” that have characteristics of BDS carried over fiber: It can be used to provide access to the Internet and point-to-point communications (such as a virtual private network); it is generally available at symmetric bandwidths up to 10 Mbps; and is often supplied with service reliability guarantees, even if not at the same level as what is typically offered over fiber. We agree with several commenters recognizing that since this proceeding began in 2005, there has been significant innovation, investment and deployment of IP-based technologies, and DOCSIS relied on by cable companies, and that increasingly business customers purchase these technologies instead of TDM services. However, many business customers continue to rely on TDM services.

7. We described best efforts services above. Several commenters, including certain competitive LECs, claim that best efforts Ethernet over DOCSIS provided by cable companies does not provide the requisite dedicated access needed by certain, notably mid-sized and larger business customers and carriers, even if it meets other demands. Other commenters contend the Commission should include best efforts DOCSIS cable service within a broader product market definition.

8. We believe it is likely that best effort services may not be in the same product market or markets as BDS. The prices of best efforts services are considerably lower than the prices of roughly comparable BDS. Compared with BDS, best effort services are less reliable, notably in terms of guaranteed uptime, and other service level guarantees; in some cases do not offer higher bandwidths; and characteristically lack upload/download symmetry. Although fit for many customer purposes, best efforts services do not meet the requirements of all BDS purchasers, nor is it offered by sellers as a product intended for all customers. Sellers generally distinguish best effort services from other BDS products to

meet customer needs at the right price point, and organize sales efforts accordingly. Finally, underlying characteristics of the way best efforts services are supplied can make it hard for certain higher quality BDS to be supplied on the same network as best efforts services. We seek comment on this view.

9. If two readily available services have substantially different prices, then they are likely dissimilar (otherwise buyers would prefer the cheaper service which would constrain the price of the other service). Best efforts services are uniformly the least cost alternative offered by carriers, with the lowest functionality. Prices for best efforts services typically start at levels consistent with residential broadband service, increasing as service speed, capacity and reliability increase. For example, “Comcast’s Business Internet service is available for purchase online starting at \$69 per month for its 16/3 Mbps service.” Verizon similarly offers a variety of best efforts services under \$100, beginning with a “Starter” package with speeds up to: 1 Mbps download/384 Kbps upload (“Best for: Single—person business, Light Internet use”) to the “Fastest” with speeds up to 10–15 Mbps download/1 Mbps upload (“Best for: Multiple employees, Online-based business eCommerce with orders”), with prices ranging from \$39.99 to 94.99 per month. Verizon’s Fios ranges from 50/50 Mbps to 500/500 Mbps, with prices from \$49.99 to 269.99 per month. TWC offers six best efforts products online, ranging from \$14.99 for (“up to”) 2 Mbps download/1 Mbps upload to \$64.99 for (“up to”) 50 Mbps download/5 Mbps upload. In contrast to these best efforts services, TWC’s average monthly BDS pricing ranges from [REDACTED].

10. That demand exists for symmetric [REDACTED], and customers do not switch to available best efforts services with at least as much bandwidth in both directions that are priced at approximately one tenth of that level (compare with the FiOS 50/50 price of \$49.99), implies some customers must value certain characteristics of BDS highly relative to best efforts service. This suggests such customers would be unlikely to be tempted to switch to a best efforts service even if its price were to fall by a significant amount. It also suggests 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.

11. In fact, the 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. 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. Other end users are willing to pay considerably more for services that include greater (particularly upload) speeds, are more reliable, and come with more rigorous guarantees. Sprint, for example, [REDACTED]. Best efforts services do not satisfy these requirements.

12. BDS uptime reliability is also generally higher than with best efforts services. For example, Windstream on its Web site contrasts an Ethernet Internet service with a 99.99% uptime guarantee with cable (presumably) best efforts services, while best efforts services do not typically come with such guarantees. AT&T’s best efforts Broadband SLA applicable to its High Speed Internet Business Edition family of services (AT&T U-verse® HSI-Business Edition; AT&T High Speed Internet Business Edition; and FastAccess® Business DSL) comes with a guarantee of 99.9% uptime. The AT&T “three nines” service (99.9%) service permits approximately 8.76 hours of downtime a year, plus disclosed allowances for many other downtime events, which are material to the offering and, as discussed immediately above, would not be acceptable for many users. “Comcast best efforts Business Internet service is sold without SLAs or contractual performance objectives.” Comcast best effort offers include seven Internet packages online ranging from a 3 Mbps, “Economy Plus” service to a 2000 Mbps, “Xfinity Gigabit Pro” service; each of the seven Comcast services include a disclaimer, “Actual speeds vary and are not guaranteed.” And in contrast Comcast BDS, like those of Windstream and AT&T, come with considerably greater reliability guarantees. Comcast “business class data services come with a variety of performance metrics and assurances,” which for Ethernet transport services include an SLA “committing to [REDACTED] for fiber-based service and [REDACTED] for HFC-based service, with penalties for failure to meet those service levels.” Similarly, without a guaranteed throughput speed, “Time Warner Cable offers six Internet speed

options, up to 50 Mbps in most locations and up to 300 Mbps in select areas.” Time Warner Cable guarantees for its Business Internet Access (BIA) service vary slightly from Comcast, “[w]hile TWC’s BIA service may be just as [REDACTED], leading certain customers to choose one service over the other.” Moreover, as discussed above, the price differences for these services are large, suggesting customers highly value the product differential BDS has over best effort services.

13. We seek comment on these analyses. We ask whether the Commission should consider alternative factors or aspects of the market and invite parties to submit alternative evidence in the record.

14. Some commenters argue that packet BDS place competitive pressure on TDM BDS. TDM BDS offers point-to-point connectivity in essentially the same way that packet BDS does. Since each technology can be used for the same purposes, this suggests that they are in the same product market. This is not to say that there are no differences between packet and TDM services. For example, while both perform similar roles, Ethernet is more easily scaled.

15. But Existing Customers Can Face High Switching Costs. Record evidence suggests that once a customer has installed a business data service, it faces high costs in switching. Consequently, switching most commonly occurs when a customer outgrows its service, for example, requiring a demand not available on their current service, or because they need the functionality of a different technology (most usually leading to a switch from TDM to packet BDS). In particular, high switching costs can both slow the transition from TDM to packet BDS and limit the potential market for packet BDS which could in turn limit investment.

3. Customer Markets

16. Carriers organize how they market around distinct fairly similar customer groups. These customer groups also have their own distinct characteristics, and hence distinct service requirements. As Comcast explains, “although all of Comcast’s business class data services may be used by various types of customers, the unique needs of certain customers may make one service more appropriate than others.” Put together these facts suggest the possibility of separate customer markets. In particular, if supply to a first customer group cannot be readily extended to supply to a second, then supply to the first customer group may not place material competitive constraints on supply to the second. We seek comment

on whether such customer markets are possible in the supply of business data services, and if so, what these are. We are particularly interested in the extent that multisite customers may fall into such a category as we propose below.

17. At a high level, possible customer categories are retail purchasers of business data services and carrier purchasers. These groups, in turn, could be further subdivided. Retail purchasers of business data services come in all shapes and sizes, and include retail businesses, governmental and educational institutions, and other enterprises that require dedicated enterprise services. Their needs vary depending on, among other factors, the number of employees and locations they have, the volume of their traffic, and the technological sophistication of the services they require. Many call for a competitive wholesale BDS access market. Large businesses are especially likely to require “high quality phone and Internet services” that “depend upon special access services as the building blocks of their corporate networks, from workhorse DS1s to the growing number of Ethernet connections to the highest capacity OCns.” Medium-sized and small businesses also require “advanced IP and fiber connections,” which are “mission critical.” Retail banks, for example, “rely heavily on broadband service” to enable “financial transactions and provide [customer] support in a timely fashion.” Reliable broadband connections also allow brick and mortar companies to meet customer needs “as efficiently and effectively as possible” and to “enhance the customer shopping and buying experience.”

18. Most larger, sometimes called enterprise, customers require connections to more than one site, and some, such as retail banks, and large retail sales outlets, may require many sites in diverse locations, often in areas with limited business density. Moreover, at many of these locations such large customers may only have low bandwidth requirements, even if each connection must have a high degree of reliability (for example, in the case of a retailing outlet, to ensure rapid credit card processing) and/or be highly secure (in the case of a retail bank). Larger customers are typical users of dedicated fiber-based, symmetric services; some have service demands for a limited geographic area while others require service for any number of locations within the country. Multi-location customers are often provisioned by BDS providers that “have a broad regional footprint without significant gaps in coverage to serve large enterprises with

multiple sites across given geographic regions effectively.” Such providers may be relatively rare. We seek comment on our implicit finding below that such “spread-out” multi-site customers may be sufficiently distinct from other customers to constitute a separate market (below we find that competitive supply to other customers may not place a competitive constraint on supply to these “spread-out” multi-site customers), especially to the extent that such customers require lower bandwidth, highly reliable, services in areas with lower business densities, may not face the same competitive choices as other customers.

19. Carrier purchasers are different again. They are typically large and sophisticated buyers, with substantial capacity to leverage scale, for example, in seeking tenders to supply. Wireless carriers rely on business data services to connect their radio towers to their mobile switching centers. Mobile carriers purchase business data services often with bandwidths of around 50 Mbps and greater, but small cell demands, which look set to grow, may generally require lower bandwidths, and may require backhaul to many locations with low levels of business density. Sprint, a purchaser of wireless backhaul transit services, explains that it requires a specific BDS capable of more than traditional copper twisted pair and coaxial cable can support. Even where next-generation HFC is available, it is more suitable for mid-range demands. Sprint, for example, describes Ethernet over HFC as a poor substitute for fiber-based services because [REDACTED]. Sprint specifically notes that its macrocell sites [REDACTED] and a service level guarantee not available for generally best efforts or mid-tiered products.

20. Competitive LECs purchase BDS wholesale to sell retail services to end users. They do this where the purchasing competitive LEC does not currently have network and where extending their networks would not be profitable. While competitive LEC demand reflects end-user demand and so is highly diverse, competitive LECs again have the ability to leverage scale. We seek comment on whether carrier purchasers have countervailing power even when dealing with an entity that may otherwise have market power, and whether they need different protections than end users.

4. Geographic Markets

21. In this section, we express the view that the likely BDS geographic market, even for lower bandwidth services, likely extends beyond the area

of the average Census block in which there is BDS demand. We come to this assessment by focusing on supply-side substitution, and seek comment on how we might refine this definition.

22. Relevant geographic markets are often determined by estimating demand side response if a hypothetical monopolist in a specified region, facing competition from beyond that region, tried to set prices above competitive levels. In this industry, given that most BDS customers would not shift their location to purchase special access from a different carrier, we focus on the supply response, that is—under what circumstances, if any, will nearby suppliers geographically extend their existing facilities distances to obtain new consumers. If suppliers were generally willing to extend their networks to meet nearby demand, then they would place a degree of competitive pressure on the prices nearby customers would face.

23. Geography also impacts product substitution. In certain areas, higher bandwidth services are not available due to the lack of technical capability. Available service could be limited in speed and capability to best efforts and similar, lower-level service levels that are provisioned over copper and coaxial lines. Increased service speeds, capacity, and guarantees are not available unless and until a BDS provider builds or extends new facilities (such as fiber or a hybrid technology) in a range close enough to the customer to readily extend a service that replaces best effort. Sprint points out, for example, that Ethernet over HFC “is not yet available in all business locations served by ILEC special access—nor at most cellular tower sites.”

24. We consider it unlikely that BDS supply in one part of an MSA would constrain the provision of BDS where it is demanded everywhere in the MSA. However, we also see good evidence that the presence of fiber competition not only could be expected to impact, but actually can impact, supply of lower bandwidth services over the whole Census block in which that fiber is located. This suggests a geographic market definition for lower bandwidth BDS lies somewhere above the average area of the Census block with BDS demand and below the MSA. We seek comment on these assessments and how to refine them. We seek this information for the purpose of developing an administratively feasible test for determining where we can replace regulation with market forces.

25. In the *Suspension Order*, the Commission explained that “demand varies significantly within any MSA,

with highly concentrated demand in areas far smaller than the MSA” and some areas with little or no demand. Our record reinforces that view. The Commission stated that competitive entry is considerably less likely to occur in areas of low demand, regardless of whether other areas within the MSA contain sufficient demand to warrant competitive entry. The Commission also observed that “competitors have a strong tendency to enter in concentrated areas of high business demand, and have not expanded beyond those areas despite the passage of more than a decade since the grant of Phase II relief.”

26. The distances competitive LECs are generally willing to extend their facilities to reach potential customers beyond the locations they currently reach are quite short. These distances, which vary among competitive LECs and business opportunities, typically range from [REDACTED]. In fact, the distance Comcast will generally build within [REDACTED]. Similarly, TDS Metrocom estimates the average length of its competitive LEC’s fiber laterals is [REDACTED]. Most [REDACTED]. If an end point of a “transport facility is outside a [central business district], and perhaps the first ring of suburbs . . . the competitive presence is far less. . . . As a result, these non-[central business district] areas are largely served only by ILEC facilities.” Buildouts of [REDACTED] and farther occur, but variables, including cost and demand factors, entailing traditional return-on-investment calculations, become increasingly determinative as the distance from a cost-effective and viable fiber junction point increases, which “are often collocated at or housed near ILEC central offices.” Incumbent LECs have similar buildout criteria. AT&T, for example, “engineering guidelines demonstrate that AT&T engineers its network to maintain lateral distances at or below about [REDACTED].

27. Responses to the data request indicate that competitive buildout to customers becomes increasingly less likely with a potential customer at a location [REDACTED] or farther away. Narrative descriptions of how far competitive carriers will buildout broadly align with observations of data submitted. For example, Cbeyond reported its “maximum build distance” is a “distance of [REDACTED] from existing lit fiber of a competitive fiber provider.” TDS METROCOM explained, “If the location is beyond [REDACTED] experience has shown us that customers are not willing to pay the extra monthly cost that would be required to pay for such an expensive build.” Cablevision

Lightpath reported [REDACTED] buildout parameters, requiring a potential customer “be within [REDACTED] of a splice point in [its] core network,” excluding certain areas of density, and “[i]f [REDACTED] from splice point, no business case is required [while] [b]uild[ing] [REDACTED] from splice point involves ROI [analysis].” XO similarly notes that “[REDACTED] or less from its existing fiber infrastructure” is most attractive, while “buildings that are 200 feet or less from exiting fiber assets are of particular interest.” The distances and build criteria reported by Submitting Parties are generally in-line with that the Department of Justice in 2006. Beyond these general distances (and to a lesser extent within these distances), carriers typically rely on long-term loyalty agreement to guarantee a return-of-investment.

28. These buildout distances, which rarely exceed [REDACTED] are orders of magnitude less than those encountered in an MSA. For example, the smallest MSA, Carson City, Nevada has a land area of 144.7 square miles. If competitive fiber is deployed in the center of Carson City, it will be 6.9 miles from Mound House, Nevada, or 5.8 miles from Indian Hills, Nevada. Moreover, the Carson City MSA is quite small. The land area of the average MSA, 2,494.5 square miles, is 17.2 times larger than the Carson City MSA. In fact, the largest MSA, Riverside-San Bernardino-Ontario, California, has a land area of 27,263.4 square miles. If competitive fiber is deployed in the center of Riverside, it would be 20.6 miles from Chino, California. Indeed, MSAs are large geographic areas that “often contain smaller geographic areas across which competitive conditions are widely disparate.” As the Commission has observed, “MSAs are comprised of communities that share a locus of commerce, but not necessarily common economic characteristics as they relate to telecommunications facilities deployment Due to the wide variability in market characteristics within an MSA, MSA-wide conclusions would substantially over-predict the presence of actual deployment, as well as the potential ability to deploy.”

29. Census tracts are large relative to the deployment distances discussed immediately above. If the median Census tract in which we observe BDS demand were a circle, it would be approximately 1.5 miles across. Moreover, the geography of Census tracts vary significantly. A circular tract at the 75th percentile would be around 2.6 miles across. In contrast, if the median Census block were a circle, then

it would be approximately 0.2 miles across. Again Census blocks can be significantly larger than the median. If the Census block at the 75th percentile were circular, then it would be around 0.4 miles across. This analysis suggests that a supplier’s presence anywhere in most, if not all, Census blocks could have a material competitive effect on other suppliers. It also suggests that a supplier’s presence anywhere in smaller Census tracts could have a material competitive effect on other suppliers. This is consistent with the analysis contained in the Rysman White Paper, and in the Baker Declaration, which suggests that the presence of a fiber competitor can have material competitive effects on lower bandwidth services in Census blocks in which we see BDS demand.

30. We seek comment on how close competition must be to place material competitive pressure on supply at a given location, and whether this distance might vary with the nature, most notably the bandwidth, of the BDS in question. We also seek comment on how such analysis might be developed, and call for that analysis to be undertaken. For example, recognizing that Census tracts and Census blocks vary in size, we recently placed in the secure data enclave information on the distance from all locations with BDS demand to the nearest competitive providers’ fiber networks. Consequently, regression analysis might be used to identify the range over which distant networks no longer have material competitive effects.

5. Concentration by Any Measure Appears High in This Industry

31. In this section, we report several measures of geographic concentration, including at the national level. What these measures show are uniformly high levels of concentration. While we remain agnostic as to what the right unit or units of geography are for measuring concentration (noting these might also vary for different services and customer groups), we expressly reject the idea that many, if any, BDS markets are national in scope (it is unlikely that a supplier’s presence in Miami constrains prices in Seattle). To the extent that markets are not national, national measures of concentration likely understate both market concentration measures and the shares of incumbent LECs. While national revenue shares make sense from the perspective of incumbent LECs, whose territories do not overlap, and which, in aggregate, cover all price cap territories, national shares greatly exaggerate competitive LEC presence, since there are many

geographically diverse, and in some cases very small, competitive LECs, none of which competes across all the incumbent price cap LECs’ footprints.

32. As part of our data collection, carriers reported their aggregate BDS revenues. These provide an approximate indication of the revenue shares of different provider types supplying sophisticated services to end users, that is, of revenue shares in the supply of BDS and more complex managed services. As the pie chart below shows independent competitive LECs, that is, competitive LECs not affiliated with incumbent LECs, only capture 18% of BDS revenues. However, this estimate is subject to three biases, which in aggregate overstate the shares of independent LECs. First, a greater proportion of incumbent LECs’ sales of BDS and managed services are BDS as compared with competitive LECs, a bias that likely overstates incumbent LEC revenue shares. Second, because a valid measure of concentration would measure facilities-based revenues, rather than resale revenues, and because a substantial proportion of incumbent LEC BDS sales are to competitive LECs who then resell those services, the preceding bias is likely to be more than offset (managed service revenues earned on the resale of incumbent LEC BDS will be greater than the LEC BDS sales to the resellers). Third, there is the bias identified immediately above from measuring national shares.

33. In 2013, cable companies reported nearly two billion in BDS sales (or less than 5% of all sales). However, because cable BDS revenues have been growing at around 20 percent per year, by the end of 2016 cable BDS revenues will be close to \$3.5 billion (likely still less than eight percent of BDS revenues).

34. This section considers the extent to which in 2013 there was competition, as indicated by various measures of the number of rivals (for example, by counting or excluding competition based on UNEs and/or HFC with DOCSIS 3.0) at the level of the unique location, Census block and ZIP code. We take this broad approach because, as discussed above, we are agnostic as to the exact geographic range of BDS markets. In particular, we do not yet know is how much competitive pressure different forms of supply place on other suppliers, or how many suppliers, accounting for their differences, are sufficient to make prices effectively competitive (matters we have sought comment on above). Moreover, the Rysman White Paper suggests that competitive effects may occur at the level of the building, even when there are additional competitive effects from

more distant competition. Under all these measures, market concentration is large. For example, when counting fiber, and DOCSIS 3.0 over HFC and UNE supply as forms of competition, we find more than ten percent of unique locations with BDS demand are supplied by one provider, and that slightly over half of such locations are only supplied by two providers (so $\frac{2}{3}$ of such locations have only a choice of one or two suppliers).

35. Table 3 considers how many unique locations have one through six suppliers in the location, under two measures of competition. In both cases, the incumbent LEC is considered ubiquitous, and ILEC-affiliated supply is counted as competitive, but in the first case (the left side of the table), only competitors with fiber in the building are counted, while in the second, competition over UNEs is also counted. Under both cases, more than half of all unique locations only have one supplier, and less than five percent have three or more.

36. In 2013, cable companies reported being able to serve something just over 150,000 unique locations (or less than 15 percent of unique locations with BDS demand), almost entirely on their own facilities (cable companies make limited use of UNEs). Looking forward, if cable adds 20 percent more lines every year (in line with historic BDS revenue growth), then at the end of 2016 cable would be able to serve over 260,000 unique locations. However, in 2013, cable provision of BDS was much more limited than it is today. In particular, BDS was not typically supplied over HFC. Looking forward, it may already be or soon will be the case that cable companies are able to supply BDS everywhere they have deployed DOCSIS 3.0. We seek comment on this. Counting cable supply as being capable of reaching every unique location with BDS demand in every Census block that cable reports as being able to serve greatly increases the extent of competition at the level of unique location. Table 4 shows the resulting number of providers that can supply one through six buildings. More than half of unique locations are only supplied by one or two providers, and more than ten percent have only one supplier.

37. Firm concentration falls as the square areas of the geographic region under examination increases. Table 5 provides the number of Census blocks with BDS demand that have one through six fiber suppliers (so is similar to the left half of Table 3 in that it excludes UNE competition). It shows that around 16 percent of Census blocks

with BDS demand are only served by an incumbent LEC (compared with more than 75 percent in Table 3), while more than half of such Census blocks have a choice of two suppliers (compared with more than 20 percent in Table 3). It remains true that nearly 70 percent of Census blocks with BDS demand have two or fewer competitors capable of serving a unique location in the block.

38. Table 5 also gives an indication of the strength of different classes of providers. For example, incumbent-affiliated competitive LECs have very few facilities indeed. This is true even if competition over UNEs is added in (not shown in the table) and is indicative of the extent to which incumbent-affiliated competitive LECs rely on other incumbent LECs' BDS.

6. Entry and Entry Barriers

39. Similar to the antitrust enforcement agencies, we consider entry by competitors to be an important part of our analysis of competition. The viability of potential competition is significantly affected by barriers to entry, which are "cost[s] of production that must be borne by competitors entering a market that is not borne by an incumbent already operating in the market," as well as conditions that impact entry. Both costs and conditions exist in the BDS market with enough significance in any measure of a geographic market to deter rapid competitive entry or expansion, including "high capital expenditures, large sunk costs, long lead times, scale economies, and cost disadvantages." High barriers to entry at local levels may particularly affect competitive entry or expansion to service customers with national and multi-region demand that requires "an extensive network footprint to be able offer services widely." The competitive provider's footprint most often includes a combination of locally-based facilities owned by the competitor and network access purchased from the regional incumbent or other competitors, which may be available at a regulated UNE- (by the incumbent LEC) or unregulated wholesale-basis (by a LEC or, in some instances, a cable company or other competitive LEC). Although there is evidence of potential competitors becoming increasingly relevant, commenters assert substantial barriers limit the timelines, likelihood, and sufficiency of entry to counteract anticompetitive effects in BDS markets.

40. The passage of the 1996 Act increased the Commission's focus on how barriers to entry impact competitive buildout. Like incumbent LECs, competitive LECs build facilities to meet consumer demand. Deploying

facilities requires incurring costs that vary, "among other things, on the length of the laterals and fiber rings built, the nature of the electronics added, whether the lines are buried, and local regulations (e.g., a city may require replacement of cobblestones on scenic streets)." In addition to deploying facilities, a provider frequently needs to obtain building access and/or rights of way to reach the building.

41. The barriers to entry do not materially differ whether the technology being deployed is TDM- or Ethernet-based. As Ad Hoc notes, "[t]he underlying transport facilities for Ethernet services are the same as the underlying transport facilities for TDM services," which is consistent with AT&T's observation that "Ethernet is simply a service that can be provided over many different types of transport facilities, including copper, fiber, coaxial, and wireless facilities." BT adds that it is reasonable to conclude that the main Ethernet access cost elements—duct, fiber, and electronics—do not vary much across service speeds up to 1 Gbps." Legacy TDM services require the same transport facilities and, in most geographic areas, the incumbent already provides TDM service and therefore has an advantage over a new entrant. That historical incumbent advantage allows the incumbent LEC to lower its costs through its "initial control of all customers" and "us[ing] the same rights of way, trenches, conduit, wires, poles, building access, riser, truck rolls, employees, outside plant, central office equipment, administrative expenses, and other legacy inputs that they use when the provision TDM-based special access services."

42. One recent study asserts that current barriers are sufficient to deter new construction in most business locations. Certain issues cannot be easily overcome, such as "when the building owner refuses to grant the CLEC access or charges a high access fee, or when it is difficult or costly to obtain rights of way to a specific building (e.g., pole access or costs of burying lines)." Also, competitive carriers can connect their networks to "customer locations that are near to their fiber transport facilities, where the customer at the location is suitable for the competitive carrier's service offerings, and where the revenues associated with the location are sufficient to make loop deployment profitable." Areas of low BDS demand, which would include most suburban and rural areas, present additional issues for those considering an extension of facilities, principally a lack

of a timely potential for a positive return on investment. Charter, for example, notes how in its [REDACTED]. Cablevision Lightpath also faced issues outside of its traditional, denser, region because [REDACTED]. Many simply avoid higher-cost areas, such as, [REDACTED].

43. In addition to deploying their own facilities, competitive LECs extend their network reach by purchasing incumbent LEC facilities at a regulated price on an unbundled basis or at non-regulated wholesale prices. Obtaining UNEs often is the most economical way to reach a new customer for a competitive LEC, and it is important to account for the effects of UNE competition. However, UNE competition has its limits. UNEs are not always available “because of insufficient or insufficiently-conditioned facilities, regulatory or contractual constraints.” And even with significant investment in facilities in an area, competitors “must depend heavily access to on the incumbent LECs’ facilities and services to serve its customers.” When purchasing from the incumbent LEC, proximity to a collocation point near the customer lowers cost, meaning costs increase the farther the competitor’s facilities are located from the potential customer. UNE reliance, therefore, is successful “only in some locations, only for some customers, and only to some extent.”

44. Competitive LECs also lease dedicated, non-regulated, wholesale services to connect to commercial buildings over non-UNE facilities from incumbent LECs or other competitive LECs. Even competitive LECs with well-developed regional fiber rings rely on an incumbent or competitive LEC wholesale inputs for last-mile connections. Leasing last-mile dedicated services from the ubiquitous incumbent LEC oftentimes is the only option due to a lack of competitive build-out. Level 3, for example, explains that it “usually has no choice but to lease dedicated services from the incumbent LEC in order to reach locations that Level 3 cannot reach with its own network.”

45. While wholesale access can be a cost effective means for a competitive LEC to expand its reach, such a wholesale purchaser cannot place competitive pressure on supply of the underlying facility that it purchases, but rather can only compete by being more efficient at retailing. Thus, we do not consider competition over resold lines as a material competitive restraint on any facility-based supplier with market power. Moreover, we are told that in some cases an incumbent LEC’s wholesale prices can be near or above retail levels (sometimes referred to as a

“price squeeze”). Similarly, we are told that rates below retail, available through many incumbent LEC purchase agreements, also can create barriers to entry when they include “penalty clauses and loyalty discount provisions in their wholesale contracts” that are not related to a competitive efficiency and simply have the effect of raising the rival’s cost. XO, for example, generally declines to build facilities when doing so will increase its risk of falling short of a minimum purchase requirement under an incumbent LEC commitment plan. Level 3 similarly reports added costs due to incumbent LEC loyalty agreements, which forecloses an opportunity to purchase from other lower-priced wholesale inputs. In the end, competition is constrained. A motivated and efficient competitive LEC, such as Level 3—the largest competitive LEC and the third largest provider of fiber optic internet access (based on coverage area) in the United States—only “deploys[] new loops to approximately 3,000 to 4,000 commercial buildings in the U.S. each year.”

46. Cable providers encounter similar barriers to entry, even within their incumbent franchise areas, although their in-region networks present economies of scale, similar to incumbent LECs, and present lower barriers for in-region expansion, compared to other competitive LECs. Nevertheless, for traditional competitive LECs and cable companies alike, “loop deployment costs are distance-sensitive,” limiting competitive reach, even if cable companies would likely have “lower loop deployment costs in areas where they have deployed extensive transport networks.” As CenturyLink notes, even cable companies must incur significant investment costs and rely on the networks of others to expand their footprints.”

47. Efforts to enter and expand in markets are being made with success, however, which has required investment and new networking initiatives to address barriers to entry. Comcast, for example, has recently established a new business unit to target Fortune 1000 businesses. But to reach Fortune 1000 companies, and satisfy their varying and broad geographic requirements, Comcast could not rely on its own facilities alone. To compete, “[i]t struck wholesale agreements with other cable companies including Charter, Time Warner Cable, Cox, Cablevision, and Mediacom, and it acquired Contingent Network Services—a managed services firm with “aggregation or wholesale relationships

with many other CLECs, ILECs, [and] small cable providers.” Some companies are more risk-adverse or sensitive to barriers than others, however. Charter, for example, notes that a “partner model creates high transaction costs, as multiple networks and personnel must be coordinated, and these costs impact the price at which these services can be offered.”

48. Incumbent LECs face lower overall barriers within region and barriers similar to independent competitive LECs out-of-region. Within region, the Commission has recognized that incumbents can “increase capacity on many special access routes at a relatively low incremental cost (relative to the total cost of trenching and placing poles, manholes, conduit, fiber, and copper, and securing rights and access) by adding or upgrading terminating electronics.” Carriers with incumbent LEC and competitive LEC affiliated entities confirm the lower incumbent LEC barriers to entry. For example, TDS, which operates both incumbent LEC and competitive LEC subsidiaries, has explained that “it is generally far less expensive and more efficient for TDS ILEC to deploy new fiber to business customer locations than is the case for TDS CLEC.” Windstream, which also operates both incumbent LEC and competitive LEC businesses, has found that “ILECs continue to enjoy a dramatic advantage over CLECs in the average cost per building of new last-mile fiber deployment—an advantage that is largely attributable to the incumbents’ much larger market shares, which is 6+ a direct result of the ILEC first mover advantage rooted in the monopoly era.” As TDS explains, this is because (1) “business customer locations are, on average, located much closer to TDS ILEC’s existing fiber plant than TDS CLEC’s”; (2) “TDS ILEC possesses many advantages due [to] its operation of a preexisting network along potential fiber routes”; and (3) “TDS CLEC must incur much higher equipment and fiber splicing costs than TDS ILEC when deploying new fiber.”

49. High barriers to entry and carrier agreements that have the effect of preventing switching over an extended time create “low elasticities of demand for the incumbent and low elasticities of supply for competitors.” Such low elasticities respectively mean few customers switch away from a supplier due to an increase in price, and few suppliers are able to switch away from resale to reliance on new network deployment. If the service had lower barriers of entry, customers would be more able to switch carriers when faced with higher prices or unfavorable or

inefficient supply agreement terms and conditions. Level 3, for example, reports that it must purchase “a large percentage of its overall dedicated services requirements” under what it terms “lock-in” agreements, which mean it cannot switch to purchasing from a lower-priced competitive providers when a lower rate is available. The resulting higher downstream prices, therefore, offset any claimed efficiencies brought by the so-called lock-in requirements.

50. It would be a mistake to assume, however, that all barriers to entry are insurmountable, or that they exist to the same degree everywhere. The record and our data collection support the view that competition is growing, and that potential competition, appropriately defined, is important. When investments are made to self-provision facilities to customers, competitors typically first look to a region, such as a metropolitan region, and then focus on deploying facilities, such as fiber construction, to reach specific buildings. “[U]rban centers where costs are low (e.g., zero or low mileage) and demand is significant” are attractive to competitive LECs. For many competitive LECs, “the reach of an embedded network can extend beyond the location of its current connections to serve additional customers in the surrounding region.” XO, for example, “entered initially by building metro rings in dense areas of major cities, since these could aggregate traffic from more users and hence were more economical.” Many competitor carriers prefer to provide services over their own network facilities because it allows greater efficiency and permits flexibility to control the type and quality of the competitor’s service offerings. After deploying a “core fiber network . . . extending laterals requires significantly smaller capital expenditure per unit of bandwidth” resulting in a lower-cost expansion. Relying solely on independent lateral facilities without a core fiber presence, in contrast (by carrying traffic from a single location), limits scale of economies and requires significant customer spend to justify investing in facilities. Other advantages with a region-first approach include familiarity with local marketplace, which can be useful for a local sales force.

51. The great entry success story has been that of cable. Less than a decade ago cable largely provided no businesses services of any kind that were materially different from the services marketed to residential customers. Yet, for more than half a decade cable business revenues have experienced compound

annual growth rate of 20 percent, starting with the smallest business customers and working their way up to the largest. More recently, cable began offering BDS services over HFC, as well as fiber, and has forced even the largest incumbent LECs to focus on maintaining market share. In addition, Israel et al., estimate, based on our data collection, that over the course of 2013, competitive LECs’ “bandwidth grew at six times the growth of the rate of the ILECs”.

7. Evidence of Market Power in the Delivery of DS1 and DS3 Services and Lack Thereof for Higher Bandwidth Services

52. Our own analysis, the Rysman White Paper, and the Baker Declaration, provide direct evidence of market power in the supply of various services. We seek comment on validity of these analyses, on how they might be extended, or tested. At the same time, we recognize that no analysis is ever perfect, and look for comments on what the broad evidence available to us ultimately says about competition and market power, even if alternative theories cannot be entirely ruled out. Key pieces of evidence before us are regression analyses that show price effects due to the presence of competition, which imply that in the absence of competition prices are higher than they otherwise would be; the fact the price capped incumbent LECs have no headroom under our price caps, and have been in that situation for at least several years; that competition in areas with pricing flexibility lowers prices more than in price cap areas; and that incumbent-affiliated competitive LECs do not appear to be focused on facility-based or UNE competition (with some interesting exceptions). We also note that the Rysman White Paper concludes that there may not be market power in the supply BDS at bandwidths in excess of approximately 50 Mbps and seek comment on this analysis.

53. A central finding in the Rysman White Paper is that, in regressions controlling for a range of other factors, competitive supply in a unique location is correlated in both statistically and economically significant ways with lower ILEC prices for DS1s and DS3s at that location. Similarly, the Rysman White Paper finds that competitive supply in a unique location anywhere in a Census block, and competitive supply anywhere in the Census tract, is correlated in both statistically and economically significant ways with lower prices within the Census block. Analysis in the Baker Declaration comes to similar conclusions, though others

have criticized the Baker Declaration. We seek comment on these analyses, on how such analyses might be extended, further verified or disproved, and indeed for additional analysis from interested parties.

54. As a result of the *CALLS Order*, the price cap indices for BDS services have been frozen (outside of exogenous cost adjustments) since 2004. Over the period since then, there has been no evidence that the price caps have been a source of any kind of financial stress to the incumbent LECs. Yet, at the same time, the price capped incumbent LECs have essentially raised prices up to the maximum allowed by the price caps. In our view, this does not suggest that over the last decade or more our caps were too harsh, and rates as constrained by the caps were too low, and this was the reason the price capped incumbent LECs kept their prices at the top of the cap. Consequently, it is our view that the fact that the price capped incumbent LECs have kept their prices at the top of the cap is additional evidence of market power.

55. Price cap incumbent LECs file their respective annual access charge tariff filings to become effective on or around July 1st of each year. In that filing, price cap incumbent LECs file Tariff Review Plans (TRPs) to demonstrate that the carrier’s Actual Price Index (API) does not exceed its Price Cap Index (PCI). To the extent that a carrier’s API is less than its PCI, the difference, often referred to as “head room,” is a measure of the extent to which such a carrier is able to increase its rates under the price cap rules. By calculating the average ratio of the API to the PCI, based on the APIs and PCIs in each carrier’s TRPs, we can determine how close each carrier is to the maximum prices it is permitted to charge overall. The ratios, based on the TRPs, demonstrate that the six largest price cap incumbent LECs have been charging close to maximum prices for the last four tariff years. This also implies that if the price capped carrier had any headroom in previous years, then in or prior to 2012 took advantage of that headroom and raised its prices effectively eliminating that headroom.

56. As demonstrated from the table above, the APIs of the six largest price cap incumbent LECs are more than 99 percent of their PCIs. Therefore, the largest carriers have almost zero headroom under the price caps; even a small rate increase would likely cause the carriers’ APIs to exceed their PCIs.

57. The Rysman White Paper finds evidence that prices in areas granted pricing flexibility respond more to competition than prices in pure price

capped areas. We seek comment on the validity of this finding, and whether it might be evidence that granting incumbent LECs the ability to offer contract tariffs allows them to respond more effectively to competitive pressures in pricing flexibility areas, and if so, does this support allowing contract tariffs throughout areas we might designate in a future order as non-competitive. We also seek comment on the Rysman White Paper finding that in price cap only areas competitive effects are smaller than in pricing flexibility I and II areas. Is that a valid finding, and if so does it indicate less competition in pricing flexibility areas, or something else?

58. The Approach to Competition of Competitive LECs Affiliated with Incumbent LECs. Competitive LECs affiliated with incumbent LECs have engaged in limited facilities-based investment relative to certain other competitive LECs and in some cases have avoided the use of UNEs. In particular, the [REDACTED].

59. The Rysman White Paper finds little statistical relationship between the presence of local fiber-based competition and lower incumbent LEC prices for BDS above 45 Mbps. At least three possibilities could account for this observation: (1) Competition broadly exists for these services, (2) to the extent any competition existed, it was too little competition to produce material competitive effects, or (3) there are too little data and/or too many uncontrolled for variables for a statistical relationship to emerge. However, given limited complaints in the record about higher bandwidth services, and evidence that competitive LEC market share of fibered buildings is much higher than its general share, we recognize that supply of higher bandwidth services may often be more competitive than supply of lower bandwidth services. We, however, seek comment on this assessment. Is it correct generally? If so, could it be incorrect in particular cases that are sufficiently important that the Commission should consider action specific to those cases? How should any conclusion reached in the future about the nature of higher bandwidth services be applied, given the data on geographic areas, different categories of customers, and other factors?

B. New Technology Neutral Regulatory Framework for Business Data Services

60. The BDS market has changed substantially since this proceeding was initiated, both in terms of technology and providers. While the price cap LECs maintain substantial market power in some areas for some services, it is clear

the market will continue to evolve and that market power and market positions are likely to shift over the next ten to fifteen years and beyond. The Commission's prior adoption of bright line rules based on what turned out to be a poor measure of the presence of competition led to some of the problems we start to solve today.

61. Some parties to the proceeding have raised objections to being fully included in the new framework. We note that business data services are telecommunications services, regardless of the provider supplying the service. BDS providers are therefore common carriers. And as such, with the unique exception of Verizon's forbearance, the providers are subject to Title II in the provision of their services, including packet-based BDS services such as Ethernet. Sections 201 and 202 of the Act require that the rates, terms, and conditions under which common carriers provide telecommunications services, such as the broadband data services we address herein, must be just, reasonable, and not unjustly or unreasonably discriminatory. These requirements are enforced through section 208 of the Act, which permits any person to file a complaint against any common carrier for acts or omissions in violation of the Act or a Commission rule or order.

62. The presence, and use, of market power can inhibit the evolution of a competitive market, both through prices and terms and conditions. For example, we examine certain terms and conditions in the *Tariff Investigation Order* and prescribe changes to address terms we found to be unreasonable and, in some cases, anticompetitive. This Order and its findings in this and other areas will provide substantial precedent to guide the Commission in its consideration of any section 208 complaints challenging the reasonableness of conduct in the provision of business data services. Likewise, the Commission seeks comment in this FNPRM on significant issues such as the basis for determining the presence of material competitive effects that would support the removal of direct rate regulation in some areas for some services. Such analysis will provide further guidance for resolving the threshold question whether the services are offered in a non-competitive area, in any complaint asserting unreasonable conduct under sections 201 and 202.

63. While a case-by-case adjudication under section 208 is one option to provide guidance for what is reasonable conduct in light of the market analysis conducted in this proceeding, we find

clear rules of the road will be valuable to all broadband data service providers as the market evolves. Accordingly, in this FNPRM, we propose a new regulatory framework for broadband data service that distinguishes between broadband data service providers based on market circumstances, rather than technology or the happenstance of prior Commission action and inaction.

64. The proposed technology-neutral framework will apply depending on the classification of a specific market as either competitive or non-competitive. This framework will depend on the adoption of a new Competitive Market Test to then determine whether market power is present and we additionally seek comment on such test below. As another significant piece of the technology neutral framework, we additionally propose actions to change the regulatory structure for the historically dominant price cap LECs. These proposed rules will establish a path towards technology-neutral regulation for broadband data services, while protecting against harm from lack of competition where it continues to exist.

C. Statutory Authority for New Regulatory Framework

65. Sections 201 and 202 of the Communications Act are foundational requirements for all telecommunications services, designed to ensure that such services are offered to the public on just and reasonable rates, terms and conditions, and that services are not offered on an unreasonably discriminatory basis.

66. These sections have served as the statutory basis for a wide range of rules and other actions over the years. In addition to providing the substantive authority for various rules and requirements, section 201(b) states that the Commission "may prescribe such rules and regulations as may be necessary in the public interest to carry out the provisions of this Act."

67. We propose that sections 201 and 202 of the Act serve as an adequate basis of statutory authority for actions that the Commission would take to create and implement the Technology-Neutral Framework that we propose to apply to BDS going forward. We have forborne from tariffing provisions for many BDS providers over the years. In this FNPRM, the Commission proposes to transition away from tariffing requirements for the last portion of BDS (incumbent LEC TDM), and to establish benchmarked prices for non-TDM services. We note that the Verizon/INCOMPAS Joint Letter urges that the Commission should make clear "that all

providers offering dedicated services are subject to Title II of the Communications Act, including Sections 201 and 202 of the Communications Act.” The Commission seeks comment on whether its authority to ensure just and reasonable prices, terms and conditions under sections 201 and 202, and its explicit rulemaking authority in section 201(b), is adequate to require price cap filings for TDM services and benchmarked prices for non-TDM services.

68. Commenters have noted that the Commission’s existing price cap regime was adopted with reference to section 204. If the Commission were to forbear from tariffing provisions for incumbent LEC TDM services, as it has with respect to the incumbent LECs’ non-TDM services and all BDS telecommunications services of competitive providers, could it continue to require price cap filings for incumbent LEC TDM services in non-competitive markets based solely on the statutory authority in section 201(b)? Likewise, could the Commission use benchmarked prices to ensure that non-TDM services in non-competitive markets are offered on just and reasonable prices, as required by section 201? If not, why not, and what additional authority or action would be needed?

69. The Commission’s proposed Technology-Neutral Framework also would place certain limits on terms and conditions of BDS to ensure that they are offered on just, reasonable, and not unreasonably discriminatory terms, especially in non-competitive markets. We seek comment on whether sections 201 and 202 provide the Commission with the statutory authority to take such actions. If not, why not, and what additional authority or action would be needed?

70. A fundamental aspect of the new Technology-Neutral Framework for BDS would be the adoption of new triggers to determine whether markets are competitive or non-competitive. We seek comment on whether sections 201 and 202 are themselves sufficient to support the adoption of such triggers, which could be used to determine whether (and if so, where) regulations are required to ensure that rates, terms and conditions of BDS services are just and reasonable. We note that such triggers have been tied in the past to the Commission’s authority under sections 201–205, and we seek comment on whether the Commission should rely on additional sources of authority.

71. Some entities have suggested that the Commission address certain issues such as wholesale pricing under section

251, where Congress has imposed specific resale requirements. However, section 251 has an explicit savings clause, which states: “Nothing in this section shall be construed to limit or otherwise affect the Commission’s authority under section 201.” Does the savings clause indicate that the Commission has ample statutory authority to address resale issues for BDS under section 201 authority, notwithstanding that the statute imposes particular resale requirements on certain types of providers in sections 251(b) (local exchange carriers) and 251(c)(4) (incumbent local exchange carriers)? If not, why not, and what additional authority or action would be needed?

72. Are there any other statutory provisions that the Commission should consider invoking to support a Technology-Neutral Framework for BDS? For example, section 706 of the 1996 Act provides that the Commission “shall encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans (including, in particular, elementary and secondary schools and classrooms) by utilizing, in a manner consistent with the public interest, convenience, and necessity, price cap regulation, regulatory forbearance, measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure investment.” Does that section have any particular applicability to the actions proposed in this FNPRM, such as promoting competition for BDS and removing obstacles to technology transitions?

73. Finally, we seek comment on whether any transitional or incremental policy actions are appropriate as the Commission considers and moves to comprehensively reform the BDS regulatory framework. Are there incremental changes the Commission could take as it evaluates broader reforms and a Competitive Market Test that furthers our goals? Should we adopt any transition to a new Competitive Market Test and, if so, how should we structure the transition?

D. Competitive Market Test

74. We propose to replace the 1999 pricing flexibility regime with a new regulatory framework for BDS. The new framework, as proposed, builds on the analysis of the 2015 Collection to establish a comprehensive Competitive Market Test to determine whether a relevant market is competitive or non-competitive. Where competition is sufficient in a relevant market, based on objective criteria to measure competitive

effects, the Commission is proposing to rely upon market forces to constrain rates, terms, and conditions. That is, we propose to subject markets determined competitive to minimal regulation to protect consumers as proposed in Part V.E. The Commission would subject relevant markets, determined non-competitive, to specific rules as proposed in Part V.F on the ground that customers in those markets are being harmed. A separate question concerns the scope of regulation in a non-competitive market, and whether it should apply to all or some providers and, if some, which ones and on what basis (such as market power)—and we seek comment on these questions below. The ultimate goal going forward is to apply regulatory obligations on a technology and provider neutral basis where it is necessary to protect and promote competition.

75. On the criteria for the Competitive Market Test, we invite comment. Initially, we are proposing a test, which focuses on multiple factors, including bandwidth, different customer classes, business density, and the number of providers in areas consisting of census blocks where each block in the relevant market meets the specified criteria. As described above, the data and our analysis suggests that competition is lacking in BDS at or below 50 Mbps in many circumstances, and that competition is present in BDS above 50 Mbps in many circumstances. Such evidence will guide how the Commission uses product market characteristics in applying the Competitive Market Test to a relevant market. We seek comment on the appropriate factors to include in the test and, in particular, the appropriate weight to attribute to the various factors in application of the test. With any test criteria and for application of the test as a whole, we seek comment on how to create a test that is simple to administer and, to this end, ask about the commercial practicalities and administrative feasibility of any particular approach. We also seek comment on how any approach would further our goals of promoting competition and investment.

76. We propose to apply the Competitive Market Test across all geographic areas served by price cap carriers. The Commission would use publicly available information, the 2015 Collection, and other information in the record to apply the test to create a list of geographic areas that are deemed competitive and non-competitive by relevant product market. To provide certainty but also ensure accuracy of the data, we seek comment on whether the

Commission should reapply the test every three years for example, with updated data to reflect changes in business density or the number of providers in a geographic area. Once the initial competitive/non-competitive determination is made, we seek comment on a process to address instances where a provider or purchaser disagrees with the determination finding and suggestions for the appropriate standards and procedures to govern that process.

77. The pricing flexibility framework adopted in 1999 based regulatory relief on the presence of third-party collocations in the incumbent LEC's wire centers, which were considered proxies for competition in the marketplace. In 2012 the Commission concluded after a substantial review that, despite the many administrative benefits to reliance on the triggers, collocations are a poor proxy for predicting the entry of facilities-based competition and suspended, on an interim basis, further automatic grants of pricing flexibility. The Commission found the 1999 regime retained unnecessary regulation in areas that were very likely to be very competitive and deregulated over large areas where competition was unlikely to occur.

78. Our review of the 2015 Collection supports the Commission's earlier findings that the existing triggers do not reflect the existing competitive nature of the market. Specifically, in 97.9 percent of the wire center territories where a cable competitive LEC has reported locations—where the connection to the location is not a UNE obtained from an incumbent LEC, a cable company has not collocated in the wire center. Of these wire centers, 62 percent remain subject to price cap regulation without pricing flexibility for channel terminations. If we include census blocks where a cable company reported having DOCSIS 3.0 coverage for 2013 for the National Broadband Map, the percentage of wire center territories without any collocations from the cable company increases to 98.4 percent. Of these wire centers, 66 percent remain subject to price cap regulation without pricing flexibility for channel terminations. This strongly shows the collocation triggers are substantially underestimating the entry of facilities-based competition from cable companies for last-mile facilities and hindering deregulation.

79. When we look at all competitive providers and remove locations with UNEs, in 32.3 percent of the wire center territories where the Commission has granted the incumbent LEC pricing flexibility for channel terminations,

competitive providers have reported no locations where they own or lease, pursuant to an indefeasible right of use (IRU), a connection to a location. If we expand the inquiry to include census blocks where a cable company reported having DOCSIS 3.0 coverage for 2013 for the National Broadband Map, this percentage decreases to 24.7 percent. This shows that collocations at a substantial percentage of wire centers do not accurately predict the entry of facilities-based competition for last-mile connections.

80. We now believe it is appropriate to modernize our triggers to ensure we capture all competitive entrants. Therefore, we propose to abandon the collocation-based competition showings for channel terminations and other dedicated transport services for determining regulatory relief for incumbent LECs. Instead, we propose to apply a new Competitive Market Test. Our intent, discussed in more detail below, is to create a framework that is provider and technology neutral. Our goal is also to create a framework that is simple and minimizes regulation only to the extent necessary to ensure rates are just and reasonable.

1. Business Data Service Definition

81. A definition for BDS is critical to any new regulatory framework. We suggest below a definition similar to the definition used for dedicated services in the 2015 Collection. Specifically, we would define BDS as a telecommunications service that: Transports data between two or more designated points at a rate of at least 1.5 Mbps in both directions (upstream/downstream) with prescribed performance requirements that typically include bandwidth, reliability, latency, jitter, and/or packet loss. BDS does not include "best effort" services, e.g., mass market BIAS such as DSL and cable modem broadband access.

82. We seek comment on this definition and ask whether the definition should include minimum performance guarantees, such as 99.99 percent reliability. Also we seek comment on whether we should reduce the minimum symmetrical speed to 1 Mbps to account for dedicated service offerings below 1.5 Mbps.

2. Multi-Factor Competitive Market Test—Relevant Market(s) and Test Criteria

83. We are guided by traditional economic principles in identifying relevant market(s) and the competition criteria for a Competitive Market Test. We also consider, and seek comment on, the administrative feasibility and

commercial practicalities of any particular approach both for providers as well as the Commission. A proposal under consideration, as discussed in more detail below, is to define the relevant market for applying a test along customer classes and varying bandwidths in geographic areas consisting of census blocks, including groupings of census blocks. The proposed criteria for the test would focus on business density and the number of providers in the relevant market area.

84. The Commission has traditionally applied the pricing flexibility competitive showings to two different BDS segments, channel terminations and other dedicated transport services. There is little discussion in the *Pricing Flexibility Order* as to why the Commission chose these two particular service categories. Historically, incumbent LECs tariffed these services separately, and the charges reflected different traffic sensitivities. The Commission explained in the *Pricing Flexibility Order* that a lower competitive showing was required for other dedicated transport services because these services, which move traffic from one point of concentration to another, require "less investment per unit of traffic," than channel terminations. The Commission found that competitors were more likely to enter the market to provide other dedicated transport services than channel terminations. Looking at how non-cable competitive LECs have deployed their networks, we find this approach holds true today for those types of providers (and as discussed above, appears as much driven by bandwidth demand as it does by the channel termination/transport distinction).

85. Developing a new framework, however, gives us the opportunity to re-evaluate the triggers and product markets used in the application of a competitive test to ensure that they reflect technology transitions and the current market. Today, competitors, and even incumbent LECs with their forborne services, do not typically offer consumers BDS by charging a customer separately for transport, last-mile access, and channel mileage. They instead offer connectivity at certain bandwidth levels and performance guarantees and packaged communications solutions that include a transmission component to meet the demands of different types of customers. Our framework should reflect how the market operates today.

86. Moreover, the needs of the customer dictate the service offerings. As discussed in our competition

analysis and as providers have told us, different types of customers have different needs. A small business with less than 20 employees at one location is unlikely to need the multi-office networking connectivity, or even the same level of bandwidth capacity, as would a large enterprise customer. The needs of a mobile operator to backhaul aggregated traffic from cell sites are different than the needs of a retail chain wanting to securely process credit transactions. The needs of competitive LECs, as wholesale customers, for last mile access as an input for their own service offerings differ from the needs of retail end users. And as the needs change by customer class so do the service substitutes, the economics of providing service, and the likelihood of facilities-based entry by competitors.

87. We therefore seek comment on whether to apply our Competitive Market Test based on different BDS customer classes at varying bandwidths and ask for comment on whether, and if so how, the Commission should separate the product market by customer type and bandwidth. For example, should the customer classes consist of the following categories: Small business with less than 20 employees, mid-sized businesses with 20–500 employees, national/enterprise businesses with 500+ employees that typically require service at multiple locations? And should we adopt a separate product market to address the cell site backhaul needs of mobile providers and another one for sales to wholesale customers? We seek comment on the benefits of segmenting product markets by customer class and whether the data supports such an approach. In lieu of customer classes by size of retail customers, should we instead have fewer customer classes, such as just wholesale, mobile backhaul, and retail? Or are the benefits of using customer classes outweighed by the burdens due to the complexity and practicality of implementing such a framework?

88. To the extent the Commission adopts such an approach, we seek comment on whether we should also subdivide the relevant product markets by bandwidth to capture the varying demand and competition levels within each customer class. For example, we could divide the wholesale segment into BDS ≤ 50 Mbps and >50 Mbps. In developing the appropriate bandwidth overlay, we can look to evidence in the record and our own analysis of the 2015 Collection as to the level of competition at different bandwidth levels. To what extent, should evidence indicating that the supply of BDS above 50 Mbps tends to be more competitive than the supply

of BDS at lower bandwidths factor into this overlay? We seek comment on whether 100 Mbps or some other bandwidth level is better supported by the evidence in particular market segments? Should we recognize different tiers of products (or distinct product markets) based on differences in speed? Should the bandwidth overlay levels vary depending on a particular customer class? Should the relevant bandwidth level(s) be static or evolve over time? For example, should product market re-evaluation be made part of the review conducted in light of future data collections?

89. We seek comment on these issues and encourage commenters to suggest other alternatives for consideration. Commenters should address whether a customer class/bandwidth approach would appropriately capture the nature of competition in these markets, whether the approach is administratively feasible, the appropriate bandwidth and/or product-feature categories, and whether we should include additional customer classes or make other modifications to the classes identified. For example, is it correct to base a product market identification on speed or do we need to factor in as well additional performance features and, if so, which ones should be used and how should multiple product features be used to identify different product markets? We also seek comment on how various approaches would further our goal of promoting competition and investment for BDS services.

90. In 1999, the Commission chose to grant pricing flexibility on an MSA and non-MSA basis with the intent of defining “geographic areas narrowly enough so that the competitive conditions within each area are reasonably similar, yet broadly enough to be administratively workable.” The Commission in the *Suspension Order* concluded “MSAs have generally failed to reflect the scope of competitive entry.” In reaching this conclusion, the Commission found “that business demand can vary significantly across an MSA” and that competitive entry tends to occur in smaller areas with the highest density of business establishments. The GAO reached a similar conclusion in 2006.

91. Our analysis of the 2015 Collection further confirms these findings. According to our analysis, the price regressions of incumbent LEC rates for DS1 and DS3 lines show consistent negative effects for the presence of competition in the building, and the census block, much of which is both economically and statistically

significant. In addition, the regressions show some effects for the presence of competitive fiber in the census block, even if that fiber is not connected to any buildings in the block.

92. Given our analysis, we seek comment on using census blocks as the geographic area for applying the Competitive Market Test. We also ask whether using a more granular area, e.g., the building or cell site location as the relevant geographic market, or whether a larger geographic area is appropriate. For example, if the geographic area were the building location, the provider’s regulatory obligations could change building-by-building, which could make it difficult not only for regulators but also for providers trying to offer services to customers at multiple locations. Could a building approach reduce the challenges to determining the necessary proximity to fiber, thereby simplifying administration? A census block or even census tract approach would create a similar patchwork of geographic areas with different regulatory treatment. Census blocks in metropolitan areas are also often very small in size. For example, according to AT&T, “[t]he average size of census blocks in MSAs with demand for special access services is only about one-seventh of a square mile.” However, we anticipate that areas adjacent to a census block will often have similar business density and facilities-based competitor characteristics resulting in a similar determination as to the level of competition.

93. Our goal is to learn from past experiences and to not repeat the errors of the 1999 pricing flexibility regime by granting relief too broadly to cover areas where competition is not present or unlikely to occur.

94. We seek comment on these proposals. Commenters should address the administrative feasibility of the proposals and how each option would impact the goal of promoting competition and investment in the BDS market. We also invite commenters to suggest alternative geographic units and ask commenters to explain how any alternative is supported by the data and furthers our goals.

95. Our intent, as with any of the proposals under consideration, is to focus regulation on areas where actual or potential competition is insufficient to ensure rates, terms and conditions are at just and reasonable levels. We believe that bright-line criteria are best suited to meet these goals. Based on our review, we have identified two possible criteria for determining whether or not a market is competitive, i.e., business density and the number of providers in the relevant

geographic area. We seek comment on these criteria below and whether alternative or additional criteria should be incorporated into the test.

96. Our analysis shows there is a significant correlation between business density and the presence, or likelihood, of competition. We therefore seek comment on the appropriate business density metric for the Competitive Market Test. Should we use the number of businesses establishments in a defined geographic area, the number employees, the level of payroll, or some other variable that is readily available and shown to be a good proxy for business demand? For example, should we look to any census block with more than some number of businesses establishments per square mile? Also to what extent should a different density standard apply when evaluating mobile backhaul? The deployment of cell sites may not necessarily correspond to business density and may more likely relate to population density or public travel areas. Should the Commission instead focus on the density of existing cell sites in a census block area when evaluating a mobile backhaul market? If so, what is the appropriate cell site density metric?

97. Our analysis further shows that the competitive effect on pricing increases as the number of competitors in the area increases. How should we incorporate this into a bright-line trigger? The Commission in the *Qwest Phoenix Order* found a market with only two competitors, a duopoly, not sufficiently competitive. Should we require more than two facilities-based competitors in any area for a competitive trigger? Are there instances where having just one or two competitors is sufficient given the bandwidth level and business density in a given area? There is also the question of whether the type of competitor in the market makes a difference? Should we weight competition from a cable company differently than a non-cable competitive LEC or vice versa? If so, should this different weighting vary with bandwidth levels? There is also the question of how we identify the presence of a competitor in the area. Is it enough for a competitor to have one served location in the area? Is it enough for a cable company to just have DOCSIS 3.0 coverage over their HFC network in the area or should we weight an HFC network differently based on the presence of Metro-E capable nodes in the area? Should we also base the presence of a competitor on the presence of their fiber in the area or is it the presence of a competitor's fiber node in the area? For each customer

class and bandwidth level, should we only count competitors in the area that are currently offering such services to that customer class within the stated bandwidth level?

98. We seek comment on the administratively feasibility of using the above test criteria, and encourage commenters to suggest alternative test metrics.

99. Our goal in creating the Competitive Market Test is to adopt a formula using available data, e.g., publicly available business density information and information provided in the 2015 Collection, and information from the National Broadband Map on the presence of facilities-based providers in a given geographic area, to determine whether or not a relevant market in areas served by price cap carriers is competitive.

100. The Competitive Market Test matrix would generate lists of census blocks or whatever geographic area the Commission adopts for each relevant market determined competitive and non-competitive. The corresponding regulatory obligations would then apply to markets within the relevant geographic area going forward, e.g., census block areas. We seek comment on how to ensure that this information is disclosed in a transparent, easily accessible format. For example, should the Commission create a central repository for information on its Web site that could contain an interactive map, which reviewers could filter by product class like the National Broadband Map? Or alternatively or in addition to a map, should the Commission simply create a publicly available database, which simply contains lists of relevant geographic areas by product market as competitive and non-competitive? Commenters should address which approach would be the easiest to administer and simplest for providers.

101. To provide certainty but also ensure that data are accurate and updated, we seek comment on re-applying the Competitive Market Test across all areas served by price cap carriers every three years to account for changes in business density and the presence of facilities-based providers in geographic areas. This periodic reassessment could coincide with our separate proposal discussed in Part V.J to collect data from providers on their supply capabilities every three years starting in 2018. The re-application of the Competitive Market Test matrix using updated data would likely result in changes to the market delineation established by its prior application. For example, the

Commission could subsequently determine a relevant market area, previously considered non-competitive, as competitive based on the updated data. And the opposite might also be true.

102. A periodic reassessment reduces burdens on providers as well as the Commission and balances the need to ensure accurate data. We generally seek comment on the administrative feasibility of this approach, both as a whole and as to its individual parts. We also welcome suggestions for alternative approaches. We additionally seek comment on whether we should provide some implementation period to allow providers to conform operations following the application of the Competitive Market Test before any new regulatory obligations resulting from the determination of a relevant market as competitive or non-competitive are effective? If so, how long of a period should we provide? Commenters should also address the commercial practicalities of changing the regulatory treatment of a relevant market area every few years? For example, how could this impact contractual obligations with customers and to what extent could commercial providers adjust or account for a potentially changing regulatory environment every few years? Should the Commission re-apply the Competitive Market Test less frequently, like every five years?

3. Post-Determination Process

103. We ask to what extent and how the Commission should give providers and purchasers an opportunity to challenge the determinations rendered. We seek comment on how best to structure such a process to minimize administrative burdens on providers, purchasers, and the Commission.

104. We seek comment on the timing and frequency of such post-determination challenges. Should the Commission open a window to permit challenges within a specified period of time after the Competitive Market Test determinations are rendered, e.g., 30 or 60 days? If commenters believe that challenges should be permitted on a rolling basis, how would that impact market certainty and the transactions between providers and purchasers of BDS services?

105. We also seek comment on how to build upon lessons learned from the Connect America Fund challenge process. Based on the Connect America Fund experience, we believe a specific, bright-line test is appropriate to ensure that the Commission has data necessary to evaluate the merits of any challenges. We propose that parties seeking to

challenge an area determined non-competitive to be designated as competitive should have the burden of proof to provide data demonstrating that the given area satisfies the Competitive Market Test. Should the same hold true of a challenge that a competitive market is non-competitive? What standards or showing should the challenger have to make to overcome a Competitive Market Test determination? For example, should challengers be required to submit new maps of fiber? In addition to providing challengers with access to data collection results subject to confidentiality restrictions, should the Commission give challengers a limited right of discovery to obtain information from providers to help make their requisite showing? If so, should the petitioner be required to meet a threshold evidentiary burden to initiate discovery and what should that be?

106. Should there be a different process if a provider challenges that an area determined competitive is non-competitive? What standard should apply? Is pricing data relevant or just the number of providers? Should the burden shift upon a prima facie showing? If so, what should constitute a prima facie case?

107. To the extent the Commission adopts product markets, how should such product markets factor into a challenge process? For example, what evidence would be necessary to show that a certain class of business customers face competition but smaller businesses do not?

108. In evaluating any challenges, should we limit filings to an affirmative case and a response? Should all challengers be required to submit certifications from officers attesting to the accuracy? We seek comment on how the Commission could build upon lessons from the Connect America Fund challenge processes to improve the implementation and reduce burdens for providers and the Commission.

109. We also seek comment on the how the Commission should implement the results of a post-determination challenge. If a challenge were successful, we propose that any determination for the relevant market changed from competitive to non-competitive as a result of the challenge (thereby changing the regulatory treatment of the relevant market area) would apply prospectively. If a successful challenge resulted in the change of a determination in 2017 to competitive, hypothetically, how should the Commission treat this relevant market area when it comes time to reapply the Competitive Market Test in a later year, like 2018? Should the

Commission just reapply the test at that time, which could then trigger another round of challenges for that relevant market depending on the outcome of the determination?

110. Any post-determination process that allows for challenges or even a request for waiver raises serious administrative feasibility and burden concerns for the agency. The Commission must weigh the equitable benefits of allowing such a process to prevent undue harm to providers and customers in the relevant markets against these concerns. We seek comment on the above questions and invite commenters to suggest alternatives balancing benefit and burden.

4. Regulation for Provider(s) in Areas Determined Non-Competitive

111. Once the Competitive Market Test is applied, we ask which provider(s) should be subject to the specific rules that apply to markets determined non-competitive. Should such rules only apply to the largest BDS provider in the non-competitive market as measured by network coverage, locations served, revenues or some other metric or metric combinations? If so, how would we define the appropriate measure of "largest" (e.g., share of customers, share of revenue)? If we borrow upon antitrust principles and Commission precedent that focused on dominance, should we focus on the provider with the largest market share and therefore market power? Should we focus on the provider with the largest market share? If so, what is the appropriate measure of market share?

112. Alternatively, should we apply specific rules to any firm in the non-competitive market that has a near ubiquitous network in the local territory and rights of way? This could result in specific rules applying to more than one firm in the non-competitive area. Another approach is to apply this framework to all BDS providers in the non-competitive area. However, such an approach could apply additional regulation to new entrants with little or no market share. Given our desire to promote new competitive entry, should new entrants or providers with market share below a certain threshold not be subject to all or some of the proposed rules applicable to non-competitive markets? If so, what is the appropriate market share where providers should be exempt from such framework and why? Is there a better way to encourage new entrants?

113. We seek comment on these questions. Commenters should consider the regulation that would apply, as

proposed in Part V.F where the Competitive Market Test resulted in a finding of a non-competitive service area. For example, if it were merely that our proposed benchmarks would apply to disputes about whether a price is just and reasonable, this may not impact providers that currently price below the benchmark. Other proposals, such as limitations on terms and conditions, may be more onerous.

114. Commenters should specifically address the potential impacts on infrastructure investment, innovation, administrative feasibility, and commercial practicalities of any particular approach. We also ask commenters to explain how each approach minimizes regulation to where necessary to ensure that rates, terms and conditions are just and reasonable in the absence of competitive pressures to do so. Commenters should also address the Commission's ability to implement any particular approach given the previous grants of forbearance authority to incumbent LECs for packet-based and optical carrier transmission services.

E. Rules Applying to All Markets

115. We first propose limited requirements that would apply to the provision of BDS in all markets, both competitive and non-competitive. All BDS providers are common carriers and, are subject to sections 201 and 202 of the Act. The Commission has long relied on these provisions to ensure just, reasonable and non-discriminatory conduct by competitive telecommunications service providers and we do so here. We have, however, identified an area for which a general prohibition could be valuable in our effort to facilitate the evolution of competitive markets. The proposed rule would limit the use of NDAs to block providers from sharing, subject to appropriate protective orders, the terms of business data services commercial agreements with the Commission and other government entities with oversight responsibilities. Such agreements have restricted competitive LECs from providing information that we believe would have been useful in the course of this proceeding and we find that they could inhibit the Commission's oversight of the business data services market going forward. We additionally seek comment on certain terms and conditions we found unlawful in the *Tariff Investigation Order* and whether such provisions should be prohibited in connection with the provision of BDS either generally or more narrowly in non-competitive markets. These proposed requirements would be technology neutral in nature and would

form a part of our proposed overarching framework for the regulation of BDS generally.

1. Non-Disclosure Agreements

116. We seek comment on prohibiting the use of NDAs or their functional equivalents in business data service commercial agreements that restrict providers' and purchasers' ability to disclose information to the Commission or other government entities with oversight responsibilities. Competitive LECs have asserted that such requirements preclude them from sharing information with the Commission that would inform the Commission's oversight of the business data services market. We recognize that such agreements contain commercially sensitive information and underscore our continuing commitment to ensure the protection of confidential information submitted to the Commission through our protective orders.

117. We acknowledge the important role NDAs play in ensuring the protection of confidential information in commercial agreements. Parties to a commercial agreement have the right to seek protection of their confidential information and would be unlikely to enter into such commercial agreements without reasonable assurance that their sensitive business information would not be compromised. The Commission is fully cognizant of this need and ensures confidential data submitted by parties is accorded all necessary protections, principally through the use of protective orders. Protective orders have almost universally fulfilled their purpose. In the rare cases that confidential information has been misused by a party, the Commission has undertaken appropriate steps to ensure the protective orders are enforced.

118. While we respect the importance of protecting parties' confidential information, the Commission must also ensure its access to the information necessary to discharge its core statutory duties. NDAs that obstruct this access may unreasonably interfere with the core oversight functions of the Commission and undermine the public interest in a full and complete record on which the Commission can base its decisions. We therefore propose several alternative prohibitions and restrictions on NDAs for business data service commercial agreements. First, we seek comment on adopting a prohibition on NDAs for commercial agreements that bar the provision to the Commission of any information regarding a commercial agreement. While such NDAs may be uncommon, should any such NDAs be

permitted? We seek comment on the effect allowing such NDAs would have on the Commission's fact finding efforts and on its ability to base its decisions on all relevant information. We also seek comment on whether there are any circumstances which would justify precluding parties' ability to share any information in such a blanket fashion.

119. Second, we seek comment on whether the Commission should prohibit NDAs that effectively require the Commission's legal compulsion before parties are able to produce information from a business data service commercial agreement. Do NDAs that require parties to disclose confidential information only when required to do so by the Commission unduly restrict the Commission's access to information necessary to discharge its statutory functions? To what extent does this kind of constraint in practice restrict the Commission's ability to access information to the small number of cases where it is both aware of the existence of a commercial agreement and can devote the time and resources necessary for issuing an express direction for the production of information from the agreement? To what extent do such NDAs place the Commission in a quandary where it can only access information it specifically seeks, the existence and substance of which the parties are bound not to disclose?

120. Finally, we seek comment on whether we should prohibit NDAs that limit parties to disclosing information subject to an NDA only in response to a request by the Commission (in a notice of proposed rulemaking, a public notice or otherwise). Such a prohibition would allow parties to disclose information to the Commission on a voluntary basis at their own initiative and apart from any express request by the Commission. We note that the Commission has previously imposed rules effectively requiring a prior request from the Commission before parties could disclose information subject to an NDA. Section 51.301(c)(1) of the Commission's rules states that "a nondisclosure agreement that precludes [a] party from providing information requested by the Commission" is a violation of the section 251 duty to negotiate in good faith. Should the Commission adopt similar restrictions on NDAs in business data services commercial agreements? Would such an approach to NDAs impact parties' advocacy before the Commission? Would it still constrain the Commission's access to important information from commercial agreements? As with NDAs that require

legal compulsion prior to disclosure, how would the Commission know to request disclosure of information in commercial agreements that it may have no way of knowing existed?

121. Eliminating the requirement of a prior request for information would effectively enable parties to disclose information from a commercial agreement on a voluntary basis. We seek comment on whether this is an appropriate approach for the Commission to take. TDS Metrocom notes that NDAs impact parties' ability to fully participate in the rulemaking process. It states that the "practice of subjecting the rates, terms, and conditions of commercial Ethernet agreements to confidentiality restrictions impedes TDS CLEC's ability to advocate in support of new rules and detect unreasonable and discriminatory rates." Would allowing parties to disclose voluntarily information from a commercial agreement enable fuller and freer advocacy by those parties? Would it also assist the Commission in identifying issues that it otherwise would be unaware of? We also seek comment on how the Commission would ensure the confidentiality of such information once disclosed to the Commission. To the extent the information was related to an existing proceeding, the Commission would presumably either have already adopted a suitable protective order or would be able to do so in response to such a submission. What steps should the Commission take to ensure the protection of such information if the information was not related to an existing proceeding? Are there any other steps the Commission should take to ensure the protection of confidential information voluntarily submitted by a party?

122. Additionally, we seek comment on whether there are other types of NDAs or confidentiality provisions that may inhibit the Commission's discharge of its core oversight and fact finding functions. If so, we seek comment on whether the Commission should also prohibit these or take some other action to modify them. We seek comment on how any rules the Commission adopts related to NDAs or other confidentiality provisions should affect existing contracts? Finally, how would the Commission implement a prohibition on NDAs that restrict its access to information contained in commercial agreements?

2. Scope of Application of Terms and Conditions Requirements Adopted in the Tariff Investigation Order

123. In this section of the FNPRM, we seek comment on the scope of application of the three requirements we adopt in the accompanying *Tariff Investigation Order* to other tariff pricing plans not subject to the tariff investigation and to commercial agreements for IP based business data services such as Ethernet. We also seek comment on whether such requirements should be applied in non-competitive markets or more generally in all markets.

124. In the *Designation Order*, the Bureau designated for investigation “all-or-nothing” provisions in certain incumbent LEC tariff pricing plans that required customers that participate in one of the plans to make all of their TDM purchases out of that single plan. In the *Tariff Investigation Order*, we determined that all-or-nothing provisions are unreasonable and anti-competitive because they restrict a customer’s purchase options from both incumbent LECs and other providers.

125. We seek comment on whether we should extend the *Tariff Investigation Order’s* prohibition on all-or-nothing provisions in the plans under investigation to a general prohibition on all-or-nothing provisions in all business data services, including both tariffed offerings and commercial agreements, and whether such a prohibition should be imposed in noncompetitive markets or in all markets. We seek comment on whether other pricing plans or other providers use all-or-nothing provisions or provisions that have materially similar effects for purchasers of TDM or packet business data services. How common are such provisions in TDM tariffs or Ethernet commercial agreements? If all-or-nothing provisions are used in other tariffs or in commercial agreements, what is the business justification for using them? What impact do all-or-nothing restrictions have on the transition to IP business data services? How, if at all, are such requirements different for Ethernet than TDM business data services? Do Ethernet commercial agreements raise any special considerations that would merit unique consideration? Do these provisions help providers lower costs or create efficiencies? If so, we seek quantification of these costs and whether there is any rational relationship between these costs and efficiencies generated by all-or-nothing provisions? Additionally, we seek comment on whether we should impose

such a prohibition on noncompetitive markets or all markets.

126. We also seek comment on potential issues regarding the implementation of a prohibition on all-or-nothing requirements. To the extent there are other tariffed incumbent LEC pricing plans or contract tariffs that contain all-or-nothing provisions, how should the Commission implement this proposed prohibition? Should such a prohibition be effective immediately upon publication in the **Federal Register**? Should it consider a transition period to allow parties to implement this rule? If so, what would be an appropriate transition period for phasing out these provisions? Should the Commission institute a fresh look opportunity to enable customers of existing pricing plans with all-or-nothing restrictions to remedy the effects of these restrictions prior to the expiration of their current, often long term, pricing plans.

127. Multiple purchases under a single plan. We also seek comment on whether we should find unreasonable restrictions on customers’ ability to participate in an incumbent tariff pricing plan more than one time concurrently. In other words, should customers be restricted from splitting their purchases under one pricing plan into two or more separate agreements and managing those separately? Some incumbent LEC tariff pricing plans address this issue and expressly restrict customers to participating in a single version of a pricing plan at any one point in time. For example, the RCP in the CenturyLink Tariff F.C.C. No. 11 states: “A customer can have only one RCP in effect at a time.” We seek comment on whether other pricing plans impose a similar requirement in this or other ways.

128. We seek comment on whether these restrictions on customers are reasonable. Should incumbent LECs effectively force customers to aggregate all their purchases into a single purchase under a pricing plan? Would eliminating such restrictions and allowing customers to split their overall purchases under a pricing plan into separate purchases under that plan provide them with greater flexibility in managing their purchases? Would it allow competitive LECs to better manage increasing shortfall penalty liability in a declining TDM market that is transitioning to packet business data services? We also seek comment on the business rationale for such a requirement. What additional management or tracking burdens would this impose on incumbent LECs and how significant would they be? Can

such costs or burdens be quantified? How would any such administrative burdens compare with the benefits of added flexibility for customers in the business data services market?

129. We also seek comment on whether such restrictions are used in Ethernet commercial agreements. If so, commenters should cite examples and discuss the impact they have on customers’ flexibility in managing their Ethernet purchases. Would allowing customers to treat their purchases under one Ethernet commercial agreement as separate purchases impose any burdens on providers of business data services? Would the benefits of increased flexibility outweigh any such burdens? Should the Commission prohibit such restrictions solely in noncompetitive markets or should it prohibit them in all markets?

130. Shortfall penalties are fees that are imposed for violations of percentage-based commitments, which competitive LECs assert require them to maintain a large proportion of their total spend with an incumbent LEC provider to obtain discounts and circuit portability typically necessary for wholesale providers. In the *Tariff Investigation Order*, we found shortfall penalties that provided compensation beyond a price cap LEC’s expectation damages were unreasonable and directed certain price cap LECs to remove such provisions from their tariffs under investigation and directed them to make tariff revisions consistent with the terms of the order. We seek comment in this FNPRM on whether we should prohibit the assessment of shortfall penalties that provide compensation beyond expectation damages. Should we prohibit such penalties both in tariff pricing plans and in commercial agreements and should any such prohibition be imposed only on noncompetitive markets or also on competitive markets?

131. We now seek further comment on the reasonableness of shortfall penalties that are contained either in tariff pricing plans that were not the subject of the Bureau’s tariff investigation or are contained in commercial agreements for the sale of IP-based business data services. We seek comment on whether shortfall penalties should reflect the economic costs of breaching an agreement or whether they should be set at some other level. Would unreasonable and excessive penalties impair providers’ ability to transition to IP based business data services? Could such penalties negatively affect wholesale competition and end-user customers in the form of higher prices,

reduced innovation, and reduced investment in broadband services?

132. We seek comment on whether the standard for assessing the reasonableness of shortfall penalties that we adopted in the *Tariff Investigation Order* should be applied more broadly to all providers of TDM and packet-based BDS through either tariff pricing plans or commercial agreements and either in noncompetitive markets or in all markets. We propose that any action we take in this regard should be applied on a technology neutral manner. Would such a standard allow providers to recover from their customers in the event of a breach sufficient, insufficient or excessive damages? We seek comment on the wide variety of methodologies for calculating shortfall penalties both in tariff provisions and commercial agreements. Commenters advocating for other measures of reasonableness for shortfall penalties should explain their concerns with the proposed standard and identify an alternative standard and provide examples.

133. We seek comment on what approach would best ensure that both parties to a contract, whether through a tariff or a commercial agreement, receive the benefit of their bargain. Would a higher ceiling on reasonable penalties distort market incentives and lead to a windfall for providers? Would a lower ceiling be sufficient to compensate providers? We note that some incumbent LEC plans assess shortfall penalties that are a fraction of full expectation damages for DS1 and DS3 services. Would it be reasonable to require incumbent LECs to apply these lower penalty calculation methods to all plans? If providers currently have shortfall penalties that are a fraction of expectation damages in some of their plans or agreements, should they be allowed to adopt higher penalties without first substantiating a reasonable basis for an increase? What showing should such providers have to make? For example, if carriers claim shortfall penalties are necessary to recover their risks and costs, should they be required to make a cost showing or some other financial demonstration to justify the level of the shortfall penalty?

134. We also seek comment on the impact of shortfall provisions in tariff pricing plans on customers' Ethernet purchase and construction decisions. The record shows that, if these penalties are not set equitably and reasonably, they can provide incumbent LECs with economic leverage that may cause competitive LEC customers to forgo purchasing IP-based business data services and other services from

potential competitors or self-provisioning these services over their own networks. For example, competitive LECs have provided evidence that the decline in TDM sales has exposed wholesale buyers to ever-increasing shortfall penalties, which in concert with high purchase commitments and the need for circuit portability, have "left them no choice but to commit to purchasing large volumes of Ethernet from incumbent LECs in return for relief from the penalties." Would ensuring the reasonableness of shortfall penalties provide relief for competitive LECs that claim to experience pressure to make most if not all Ethernet purchases from price cap LECs where a shortfall liability is present?

135. Finally, we seek more specific comment on the framework that should be applied to ensure the reasonableness of shortfall penalties in commercial agreements for the provision of IP-based business data services both in noncompetitive and competitive markets. Competitive LECs have provided evidence of the use of shortfall fees in Ethernet commercial agreements. We seek comment on the use of shortfall fees in commercial agreements generally. How common is the use of shortfall fees in commercial agreements, overlay agreements, and other agreements for the provision of Ethernet service? How are such fees calculated and by what methodology are they set? How do they impact the dynamics of the market for Ethernet services? What are the economic costs that providers and purchasers face in the event of a breach? What is the best way to structure shortfall penalties in Ethernet commercial agreements so that they reasonably compensate providers while not excessively penalizing purchasers?

136. Early termination fees, as distinguished from shortfall or other fees, are charges assessed on a purchaser under business data services tariff pricing plans if a purchaser exits the plan prior to the expiration of the purchaser's term commitment. In the *Tariff Investigation Order*, we found early termination fees to be unreasonable when they allow the incumbent LEC seller to recover damages that exceed the lesser of either: (1) The revenues the incumbent LEC would have received if the purchaser had retained the circuit or circuits through the end of the term commitment; or (2) the revenues the incumbent LEC would have received if the purchaser had paid the lesser discount corresponding to the shorter term the purchaser actually used the circuit or circuits. We also found that

certain tariffs at issue contained early termination provisions in excess of this measure of damage, concluded such provisions are unjust and unreasonable practices under section 201(b), and directed the incumbent LECs to revise their tariffs accordingly. We now seek comment on whether and how the Commission should consider imposing constraints on early termination fees beyond the plans subject to the tariff investigation and what the scope of such constraints should be.

137. We first seek comment on imposing limits on early termination fees in other price cap LEC tariff pricing plans and contract tariffs for the provision of TDM based services. Competitive LECs assert that incumbent LECs failed to provide cost justification or other support for the early termination fees they charge. For example, in the tariff investigation, the Joint CLECs argue that incumbent LECs did not attempt to "quantify [their] fixed and incremental costs or the extent to which both have already been recovered over many years of charging customers for DS1 and DS3 services." Sprint also asserts that incumbent LECs are "unable to explain why it is reasonable to impose penalty amounts that bear no relationship to the costs of [] early termination, and that frequently exceed even the amount the customer would pay if it met its commitment level." On the other hand, incumbent LECs assert that early termination provisions are necessary to enforce term commitments and that they are calculated reasonably. For example, AT&T argues that early termination provisions in its tariffs are "lower than what the customer would have paid if they had held the circuit to term." CenturyLink contends that "[e]arly termination fees help ensure that at least a portion of the expected revenue stream on which CenturyLink's investment was premised will continue over the life of the customer's commitment, and to provide some compensation to CenturyLink if it does not."

138. We seek comment on the use of early termination fees more generally and on their potential impact on the development of competition and the technology transitions. Are early termination fees that penalize customers beyond the full cost of the term plan they agreed to reasonable? We seek comment on whether we should extend and apply the framework we adopted in the *Tariff Investigation Order* to other providers of TDM and Ethernet-based business data services either solely in noncompetitive markets or in all markets. That framework entailed capping early termination fees at the

lesser of either: (1) The revenues the incumbent LEC would have received if the purchaser had retained the circuit or circuits through the end of the term commitment; or (2) the revenues the incumbent LEC would have received if the purchaser had paid the lesser discount corresponding to the shorter term the purchaser actually used the circuit or circuits.

139. In commenting on this proposal, commenters should address the following questions. Do these two measures adequately compensate providers without excessively penalizing customers? Are there other ways to calculate a reasonable early termination penalty? Would a cost-based calculation be appropriate? Are there any circumstances where a penalty that compensates providers beyond their opportunity cost is reasonable? If so, please describe such circumstances and what evidence a provider could use to establish that such a penalty is reasonable? What showing should the Commission require if a provider seeks to raise its existing early termination fees? Commenters are invited to discuss factors that the Commission might take into consideration in calculating reasonable early termination penalties, such as cost studies, revenue expectations, avoided maintenance and administrative costs, and any alternative means of valuing parties' expectations.

140. A number of existing tariff pricing plans set early termination fees lower than this proposed standard. Some assess fees that represent only a fraction of the incumbent LEC's revenue expectations under the plan. These penalty amounts were filed as part of the incumbent LECs' tariffs and therefore presumably provide reasonable compensation to the incumbent LEC in the case of a customer's breach of its term commitment. We therefore seek comment on whether we should impose an upper bound on what we would consider a reasonable early termination fee that is lower than the incumbent LEC's revenue expectations under its plan. To the extent commenters suggest lower limits for early termination fees, they should provide business and cost justification for their recommendations.

141. Further, we seek comment on whether, in the case of the retirement of a copper network, to require providers to eliminate any early termination fee liability where the termination is caused by the provider electing to discontinue the plan or service that is the subject of the term commitment. In such cases, where it is the provider's decision to cancel the service, is eliminating early

termination fees appropriate so as not to penalize the customer? Are there any circumstances under which providers could reasonably assess early termination fees in this situation?

142. We also seek comment on any unique issues that would arise in applying this prohibition on early termination fees in commercial agreements for Ethernet-based business data services, either solely in noncompetitive markets or in all markets. Do overlay or other commercial agreements for the provision of Ethernet-based service assess early termination penalties? At what level are these penalties set? How are early termination penalties calculated in these commercial agreements? What are the economic costs that providers and purchasers face in the event of a breach? What is the best way to structure early termination fees in Ethernet commercial agreements to ensure that such fees reasonably compensate providers while not excessively penalizing purchasers?

F. Rules Applying to Non-Competitive Markets

143. We next propose requirements that would apply to the provision of business data services only in those markets that are characterized as non-competitive. These rules are intended to provide clear guidance as to what conduct is just and reasonable in a non-competitive market and thereby facilitate the resolution of disputes through commercial negotiations and we seek comment generally on what actions should be taken to ensure that conduct is just and reasonable in a non-competitive market. Providers with market power are able to exercise such market power to the detriment of their customers. Recognizing that the market is evolving and competition may develop in many markets not currently subject to material competitive effects, these rules are intended to constrain potentially anti-competitive conduct while also providing the flexibility to allow all providers to respond to competition. Like the limited rules that would be applicable in all markets, these proposed requirements would be technology neutral in nature and would form a part of our proposed overarching framework for the regulation of BDS generally.

1. Price Cap Regulation

144. We believe that we should continue to apply price caps to business data services now subject to price cap regulation to the extent an application of our proposed Competitive Market Test determines that such price regulation is necessary or such services

are not otherwise made subject to an alternative pricing mechanism. The principal price cap services are TDM business data services (*i.e.*, DS1 and DS3 services). Elsewhere in this order, we propose a number of actions that will impact how and to which services price caps will continue to apply. As described above, we propose to adopt a Competitive Market Test as a basis for determining which broadband data services are competitive or non-competitive. And, as described below, we propose to remove competitive TDM services from price cap regulation. We further propose to subject non-competitive TDM services to price cap regulation and allow for providers to enter into individually negotiated agreements for such services. Finally, we propose and seek comment on maintaining price caps for non-competitive TDM services consistent with these proposals on a non-tariffed basis. While we seek comment on our view and each of these proposals individually, we ask commenters to keep all these proposed actions in mind and address advantages or concerns with their collective impact as appropriate in their comments.

145. We also seek comment on the scope of the application of rate regulation in non-competitive markets to packet-based BDS (and, as well, to TDM BDS). At some point in the future, there may be non-competitive BDS markets in which TDM is no longer available. In such a case, how would we regulate the non-competitive business data services? How do we ensure the regulation we adopt here is technology-neutral and sufficient to permit it to be applied to such a non-competitive BDS market?

146. As discussed above, the record makes clear that the market for lower-bandwidth TDM business data services such as those currently subject to price caps is non-competitive in significant measure. Firms with market power do not have incentives to price services at just and reasonable levels consistent with section 201 of the Act. We believe that the price cap system, as modified by any measures we adopt in this proceeding, will limit the extent to which price cap LECs can exercise their market power over non-competitive TDM BDS rates. When properly applied, price cap regulation replicates the beneficial incentives of competition in the provision of business data services while balancing ratepayer and stockholder interests. The price cap indices provide benchmarks of price cap LEC cost changes that encourage them to become more productive and innovative by permitting them to retain

reasonably higher earnings. Those indices are designed to limit the prices price cap LECs charge for service to just and reasonable levels. By establishing limits on prices carriers can charge for business data services, and placing downward pressure on those limits or “caps,” price caps creates a regulatory environment that incentivizes carriers to become more productive and forces them to pass a portion of their cost savings to ratepayers.

147. We are not aware of any other presently available alternative to price cap regulation that more effectively balances the interests of ratepayers and carriers. For instance, extending Phase II pricing flexibility relief to services presently under price caps would be inconsistent with our findings that these services are provided in non-competitive areas. Applying rate of return regulation, in contrast, would entail overcoming daunting administrative challenges and would dampen firms’ incentives to become more productive. And consistent with our proposal below to apply a technology-neutral anchor or benchmark pricing system to all business data services, we also propose to use TDM BDS rates as the benchmark for establishing reasonable packet-based BDS rates. Accordingly, we believe we should continue applying price cap regulation to BDS, including TDM DS1 or DS3 services, to the extent an application of our proposed Competitive Market Test determines such services are non-competitive. We invite comment on the above analysis and on these views.

148. We invite comment on extending price cap regulation to business data services presently subject to Phase II pricing flexibility to the extent an application of our proposed Competitive Market Test determines such services are non-competitive consistent with our proposal below. We believe that we should not take that step—or indeed apply any sort of ex ante pricing regulation—where our analysis shows that the market is competitive. We invite comment on this approach.

149. A productivity-based X factor and a corresponding inflation measure had been a fundamental feature of the Commission’s price cap system from the system’s inception in 1987 until the adoption of the CALLS plan. This balance reflected two propositions that we believe are essential to any effort to ensure reasonable rates in non-competitive markets: (a) That the service provider have an opportunity to recover its costs of service; and (b) that the ratepayer benefit from any decrease in those costs in much the same way as a

customer in a competitive market benefits from cost decreases. We believe we should restore this balance between ratepayer and price cap carrier interests by incorporating a productivity-based X factor into our price caps system for business data services on a forward-going basis. We invite comment on this view. We also ask whether we should make any adjustments to current price caps to reflect any past productivity gains that were not reflected in our past regulatory regimes. Below, we propose corresponding action to regulate the rates of IP-based BDS in non-competitive markets.

150. The goal of price cap regulation is to have rates and output levels roughly mirror rates and output levels in a competitive market, at least on average over an extended period of time. If inflation outpaces productivity growth, price cap rates may become unreasonably low. Conversely, if productivity growth outpaces inflation, companies with market power will be able to charge unreasonably high rates. Our current system, in which the X-factor equals its inflation measure, implicitly assumes that changes in business data services productivity perfectly offset inflation in the general economy. We think such a perfect offset likely did not occur in the business data services industry during the period since the expiration of the CALLS plan. Given the rapid growth in business data services output, and the ever-increasing economies of scale with respect to providing business data services, per unit costs likely have decreased significantly since that time. We seek comment on whether this analysis is correct and, if so, whether this productivity trend will continue.

151. Over the period since the expiration of the CALLS plan, as technology has evolved and for other business reasons, price cap LECs, like other LECs, have been consolidating TDM switches, placing soft-switches, increasing fiber deployments, and decreasing maintenance costs. We believe that, as a consequence, business data services productivity growth has significantly outpaced inflation and therefore that the price cap LECs are likely charging unreasonably high rates. In a regulatory environment where prices fail to reflect productivity gains and, consequently, carriers set prices too high, end users will purchase less of the services produced, and the quantity of output will be lower than if prices were set at a competitive level. The productivity of which the plant is capable will not be realized.

152. We note that some price cap LECs assert that their costs have risen

and the fact that the X factor has been set equal to the GDP-PI has forced them to charge below-cost prices. We are skeptical of this claim: These price cap LECs have not provided any evidence to support their claim that business data services productivity increases have departed from historical patterns and now lag behind productivity increases in the economy as a whole. Additionally, we note that no price cap LEC has filed any request that we examine the frozen productivity factor in light of their claimed increased costs. But even if we were to accept the price cap LECs’ claim, that would only prove that we need to restore the fundamental balance between carriers and ratepayers inherent in the Commission’s price cap system.

153. Competitive LECs, in contrast, maintain that price cap LECs have been reaping the benefits of cost-saving productivity gains and have not passed these cost savings to customers. If the competitive LECs are correct—as our analysis strongly suggests, prices are higher than an appropriate X-factor would have produced. We therefore believe we should incorporate a productivity-based X factor into our price caps system for business data services. We invite comment on the above analysis and this approach.

154. We agree with Sprint that we should explore all available methodologies for determining a productivity-based X-factor for business data services. Accordingly, we seek comment on several methodologies and ask the parties to suggest additional alternatives that they believe will lead to reasonable rates for those business data services regulated under price caps.

155. We believe that we should balance potential precision with administrative feasibility in deciding how to set a productivity-based X-factor. Measuring past productivity and predicting its future trajectory are inexact sciences; we are not required “to enter precise predictive judgments on all questions as to which neither [our] staff nor interested commenters [are] able to supply certainty.” On the contrary, we believe that we may properly rely on available data to estimate productivity growth in the provision of business data services and use that estimate to calculate a reasonable productivity-based X factor. We invite comment on this analysis and on how we should balance potential precision with administrative feasibility in setting a productivity-based X-factor.

156. We invite comment below on three methodologies for calculating a productivity-based X-factor and corresponding price cap indices

adjustments. We think these methodologies capture cost-reduction incentives while mimicking competitive-market outcomes by using projections of productivity gains, rather than actual values, based on historical trends. They calculate possible productivity-based X-factors by taking the difference between an economy-wide rate of inflation and the growth rate of industry input prices and the projected growth rate of a firm's productivity level.

157. Our calculations rely on three data sources: (a) The U.S. Bureau of Labor Statistics' (BLS's) Capital, Labor, Energy, Materials, and Services (KLEMS) data; (b) data from the peer review process in connection with the deployment of the Commission's Connect America Cost Model (CACM); and (c) those data in combination with cost data that TDS submitted in this proceeding. We seek comment on whether data from these sources provide a reasonable basis for calculating a productivity-based X factor. Do they properly balance potential precision with administrative feasibility? Are there alternative sources of data that would more precisely calculate productivity increases in the provision of business data services? If so, would the additional precision associated with obtaining those data and using them to calculate a productivity-based X-factor outweigh the associated burdens?

158. The KLEMS data used in our calculations are publicly available, annual industry-level data on industry-level measures of input prices and total factor productivity (TFP) for the telecommunications and broadcasting industries. We seek comment on any adjustments to the KLEMS data that we should make to improve its utility as a measure of business data services productivity. We seek comment on the relevant years for which we should use KLEMS data.

159. In response to a peer review of the CACM, the CACM was used to generate cost share data for ten cost categories. Are there other cost categories that we should include or should we exclude some of these cost categories from our calculations? Does combining CACM peer review data with company-specific data, such as the TDS data used in calculating the proposed X factor and corresponding adjustments to price cap indices, provide a more precise estimate of business data services productivity growth? Are there other sources of available company-specific cost data that would increase that precision?

160. We invite comment on whether we should require price cap LECs to

submit their expense matrix data from 2005 to 2015? If so, should we require that these data be reported using the categories previously required under the Commission's rules and, if not, what categories should we specify? Would the benefits from these data outweigh the burdens?

161. We ask whether we should require the price cap LECs to submit cost studies, as Sprint suggests, to help us determine business data services productivity growth. If so, what methodology should we specify for those cost studies? Would the benefits from relying on company-specific data from these cost studies, as opposed to economy-wide or industry-wide KLEMS and CAPM data, outweigh the burdens?

162. We invite comment on whether and, if so, how we may use the pricing data collected in this proceeding to supplement our other calculations. Would regressions comparing prices for DS1 and DS3 services in competitive and non-competitive areas provide proxies for the minimum amount that prices should have fallen in non-competitive areas and, if so, how we should use those proxies in setting an X-factor and price cap indices adjustments? We seek comment on the pros and cons of using regressions to supplement other X-factor calculations. We ask the parties to submit their own regressions.

163. We seek comment on whether we should incorporate a consumer productivity dividend into our price cap system. If so, how should we calculate that dividend? Should we incorporate a dividend component into any X-factor that we set? Should we include such a dividend in a price cap indices adjustment if we decide to take that approach?

164. GDP-PI (*i.e.*, the gross domestic product price index) is a measure of inflation incorporated into the Commission's price cap index formula as one of three basic components in addition to the X-factor and exogenous cost adjustments.

165. The Commission currently uses the BEA chain-weighted GDP-PI to measure inflation. We find that this measure accurately reflects cost changes that carriers face without being susceptible to carrier influence or manipulation. We propose that we should continue to use GDP-PI as the inflation measure in the price cap index formula consistent with BEA's measure for purposes of setting the X Factor. We seek comment on this proposal.

166. In the *2005 Special Access NPRM*, the Commission invited comment on a series of additional issues relating to price caps. These issues

included: (a) Whether the price cap index formula for business data services should include a growth or "g" factor to account for any demand growth effects that are not reflected in an X factor; (b) whether the Commission should require price cap LECs to share a portion of their business data services earnings with ratepayers through adjustments to the price cap indices; (c) whether the Commission should retain a low-end adjustment mechanism for price cap LECs that have not implemented pricing flexibility; and (d) whether the Commission should subdivide its special access price cap basket into additional or different categories and subcategories.

167. We ask the parties to update the record on each of these issues. We also ask whether there are any additional issues we should resolve to help ensure that our price cap system produces reasonable rates for business data services in non-competitive markets.

168. A growth or "g" factor would allow ratepayers to benefit from at least a portion of any business data services demand growth effects that are not reflected in a productivity-based X-factor. We invite comment on whether we should adopt a "g" factor and, if so, how we should calculate it. We also ask how we should measure demand growth and how we can ensure that any "g" factor does not double count growth already reflected in a productivity-based X-factor. We ask, in particular, whether demand growth benefits not reflected in an X factor should be shared between business data services providers and their customers. Should any "g" factor we adopt be applied only on a going-forward basis, or should we also adjust the price cap indices to account for prior demand growth?

169. Earnings sharing allows ratepayers to benefit from business data services profitability and was a feature of the Commission price cap regime until 1997. In abolishing sharing, the Commission found that it blunted price cap LECs' efficiency incentives and that eliminating it would remove vestiges of rate of return regulation from the price cap system. We find these reasons persuasive and therefore believe that we should not reinstate sharing. We invite comment on this approach.

170. The low-end adjustment permits price cap LECs that earn a rate of return 100 basis points or more below the prescribed rate of return for rate-of-return carriers to increase their price cap indices in the next year to a level that would allow them to earn 100 basis points below that rate of return. This mechanism is available to all price cap

LECS that have not implemented pricing flexibility. In the *2005 Special Access NPRM*, the Commission tentatively concluded that, if it were to continue to apply price caps to business data services, it should retain a low-end adjustment mechanism for price cap LECs that have not implemented pricing flexibility.

171. In this FNPRM, we propose below to replace the current pricing flexibility framework with a new technology-neutral framework. Under the proposed framework, price cap LECs' TDM BDS in non-competitive markets will be subject to price caps and can be offered through individually negotiated agreements, a regime that parallels in most practical respects the Phase I pricing rules. And price cap LECs' TDM BDS in competitive markets will be removed from price cap regulation and offered pursuant to commercial agreements. We invite comment on how our action on this proposed paradigm should affect our consideration of whether we should retain a low-end adjustment as part of our price cap system. In particular, should we allow business data services providers that provide their TDM services under these varying regimes to seek low-end adjustments? If so, how can we assure that the providers' claimed earnings on services provided under price caps accurately reflect their costs of providing those services?

172. In March 2016, the Commission reduced the prescribed rate of return for rate-of-return carriers from 11.25 percent to 9.75 percent, subject to a transition. Effective July 1, 2016, this transition will reduce the 11.25 percent rate of return by 25 basis points per year until it reaches the represcribed 9.75 percent on July 1, 2021. We ask that the parties address whether we should use this reduced rate of return to measure eligibility for a low-end adjustment in the event we retain that mechanism. If so, how, if at all, should we adjust the percentage that determines eligibility for a low-end adjustment and the level to which price cap indices are retargeted as this transition proceeds? Specifically, should we use the 9.75 percent prescribed rate of return in considering low-end adjustments when it is effective or should the applicable rate of return track the rate of return transition?

173. A price cap basket is a broad grouping of services, such as TDM services. Prices for services in a given basket are capped by its price cap index. Placing services together in the same basket limits the LEC's pricing flexibility and incentives to shift costs. Within the special access service basket, services currently are grouped into

service categories and subcategories. Similar services are grouped together into service categories within a single basket to act as a substantial bar on the LEC's ability to engage in anticompetitive behavior.

174. In the *2005 Special Access NPRM*, the Commission sought comment on the categories and subcategories the Commission should establish in a special access basket if we continued to apply price cap regulation to business data services. In response, commenters proposed a number of changes to the categories and subcategories for the special access basket. We ask interested parties to update their comments with respect to the special access basket categories and subcategories in light of technological and operational changes that have occurred in the business data services marketplace since 2005.

175. We seek comment on whether the special access basket should be subdivided into more than one basket, and whether the baskets should be further subdivided into categories and subcategories. We ask whether should use a single basket or multiple baskets and the advantages and disadvantages of each approach. What categories and subcategories should we establish in a BDS basket if we adopt a price cap method to regulate BDS prices? Should we retain without modification for BDS the existing special access category and subcategories? If not, parties should identify the specific categories and subcategories of BDS that they contend we should adopt.

176. We ask parties to discuss the advantages and disadvantages of having a BDS basket with relatively few categories or subcategories compared to one with many. We also seek comment on what criteria and data we should examine to determine which services to place in which categories or subcategories. We ask parties proposing categories or subcategories, to explain in detail the bases for their proposed categories or subcategories, and to support their proposals with data and studies.

177. Should we establish separate categories or subcategories based on BDS line densities? For example, channel termination services extending between a LEC end office and a customer premise in areas where there are more than 10,000 special access lines per square mile could be placed in a particular subcategory.

178. For the same reasons that the Commission eliminated the lower pricing bands, we believe that there should be no lower band for service categories or subcategories to restrict the

price cap LECs' downward pricing flexibility. We seek comment on this approach. We likewise seek comment on the upper band value to limit the price cap LECs' upward pricing flexibility for the categories or subcategories. Should we retain five percent as the value? Should we use different values for different categories or subcategories? What criteria and data should we use to determine these values?

179. We invite comment on whether business data services productivity gains have outpaced inflation during the period since June 30, 2005, the date the CALLS plan expired. We ask that the parties support their position on this issue with detailed data and economic analysis. We seek comment on whether in the event we conclude that business data services productivity gains outpaced inflation during that period, we should adjust the baseline price cap levels to capture those gains for ratepayers. As noted above, we propose that a new forward-looking productivity factor should be applied to TDM services in non-competitive markets (with corresponding rate regulation for IP-based BDS in non-competitive markets).

180. As indicated above, our X-factor and price cap indices adjustment calculations rely on BLS's KLEMS data; the Commission's CACM peer review data; and CACM peer review data in combination with TDS cost data. We think our X-factor calculations capture cost-reduction incentives while mimicking competitive-market outcomes by using projections of productivity gains, rather than actual values, based on historical trends. We use a proxy for the growth rate of input prices, a measure of economy-wide rate of inflation based on a national price index (*i.e.*, GDP-PI) adjusted to account for systematic difference between the growth rates of national prices and telecommunications industry-specific input prices. To adjust the price cap index to account for the historic productivity X-factor, this estimation of X is subtracted from the annual change in the GDP-PI to determine the annual change in the price cap index.

181. We calculate the X-factor by subtracting from the change in GDP-PI, the change in industry prices and add the change in industry total factor productivity (TFP). The change in industry TFP is the difference between the change in TFP for price cap LECs and the change in TFP for the overall U.S. economy. We calculate an input price differential reflecting the historical difference in the average annual rate of change in price cap LEC input prices as

compared with the historical average annual rate of change in the economy as a whole. These two factors are then added together for each year and subtracted from the measure of the change in the rate of inflation (*i.e.* the change in GDP-PI).

182. Applying this basic calculation, we apply various data sources and models for estimating the inputs in the X-factor equation. From these calculations, we develop a forward-looking X-factor adjustment to the price cap index applied annually.

183. *Method One—KLEMS Model.* Our first set of calculations rely on KLEMS from BEA and the U.S. Department of Labor's Bureau of Labor Statistics (BLS). The BLS maintains yearly KLEMS statistics on Broadcasting and Telecommunications. These industry-level measures of input prices and total factor productivity (TFP) are publically available. This is the most granular level of industry detail for which KLEMS data is available on a regular and consistent basis. Input price indexes are available for each of the five components of KLEMS—capital (K), labor (L), energy (E), non-energy materials (M), and services purchased from other businesses (S).

184. Commission staff computed three X-factor estimates using KLEMS data: (1) The first estimate uses growth rates that are averaged over all years for which we have data, 1997 through 2013; (2) the second considers only the years for which data would have been available in 2005, 1997 through 2003; and (3) the third considers data from 2005 (the year in which the CALLS plan ended) through 2013. The year 1997 provides a helpful starting point as the last year in which the Commission prescribed a productivity-based X-factor and 2013 represents the year for which the business data services data was collected. The results are as follows:

185. *Method Two—Connect America Cost Model.* Our second set of calculations uses data from the CACM peer review process. In the 2011 *USF/ICC Transformation Order*, the Commission adopted CACM to provide a forward-looking estimate by census block of the costs of providing a voice and broadband-capable network for use in determining Connect America Fund support for broadband necessary to serve price cap areas. The Commission's response to a peer review of the CACM set forth data, including shares and estimates of changing prices, for ten cost categories. Relying on cost models and industry financial accounts, the Commission staff determined the key cost components of business data services supply, estimated their shares,

and estimated changes in the input prices of each key component. These calculations relied on the following input categories and estimates of the cost shares of each of these categories: Labor, fiber, poles, conduit, drop, optical net terminal, fiber pedestals, splitters, electronics, and land/buildings.

186. The CACM methodology provides base information about the key costs of supplying business data services. The CACM was developed to estimate the costs of a mass market residential broadband fiber-to-the-premise network that also is used to provide telephone service, and was built to also provide business data services. Consequently, it is essentially a model of the costs of an incumbent LEC supply, but with a focus on residential rather than business data services. Despite this, there are no reasons to think that either (1) the underlying cost categories of the CACM or (2) the rates of change in input prices of these cost categories would be significantly different for business data services than for residential data services. The CACM peer review response provides at least a very rough indication of shares even though its modeling is not limited to business data services.

187. For each category, Commission staff calculated low and high estimates for changes in input prices. Two measures, one high and one low, were used for changes in total factor productivity. The low estimate for net impact on costs applies the low estimate for input prices and the high estimate for productivity. The high estimate for net impact on costs applies the high estimate for input price and the low estimate for productivity. Weighted averages were computed for both low and high estimate, where the weights were the cost category shares. Commission staff calculated the net impact on costs which equals the change in industry input prices plus the change in industry TFP. The results are as follows:

188. *Method Three—TDS and Connect America Cost Model.* Our third set of calculations is a modification of method two, relying on CACM calculation supplemented with data provided by TDS Telecom (TDS). The TDS data consist of booked financial data on TDS's incumbent LEC operations. Commission staff used these data as an alternative set of input categories. However, the TDS categories, other than those for labor and real estate, were not at the same level of detail as in the same CACM calculations. This required that the TDS categories for switching and

transmission be mapped to the remaining eight CACM categories. The results are as follows:

189. We invite comment on whether these methodologies provide a reasonable basis for assessing industry productivity for use in X-factor and price cap indices adjustment and whether we should use them for such purpose. How precise are they? Are there alternative methodologies that would provide comparable or greater precision at comparable, or lower, cost? If so, we ask the parties to describe those methodologies in detail and to explain how we should apply them.

190. Are the data used in our calculations reliable? Are other, more detailed data available that would more accurately portray productivity trends? Do data that provide broad measures of large economic sectors, like the KLEMS data, provide the most reliable data for measuring BDS productivity trends in relation to production trends in the overall economy? Or are telecommunications-specific data, like the CAPM data, or company-specific data, like the TDS data, preferable? We ask the commenters to address the relative merits of each of these categories of data and to suggest additional sources of reliable data within each category.

191. The calculations present three different time periods that we could use to determine a productivity-based X-factor and, if we decide to take that course, price cap indices adjustments. We ask whether these time periods accurately capture BDS productivity trends for such purposes and, if not, which other time periods would provide increased accuracy and why.

192. Finally, we ask the parties to recommend, based on our analysis or their proposed alternative, whether we should make adjustments to the X factor and price cap indices. We also seek comment on capping existing price cap indices and ask whether this should be done in all areas or just certain areas with pricing flexibility. We ask commenters to explain the basis for their recommendation and explain how such approaches would impact competition and the technology transitions.

193. We seek comment below in this FNPRM on applying the substance of the current Phase I pricing flexibility requirements to TDM BDS offered in non-competitive areas. To implement such proposal, we also seek comment above on extending price cap regulation to TDM BDS offered in non-competitive areas that presently are subject to Phase II pricing flexibility. We now seek comment on how we would move such

services back into price caps. Because the services we now consider currently are subject to Phase II pricing flexibility, their rates have been moved out of price cap constrained tariffs and are, in some cases, higher than they would have been had they been consistently constrained by the price caps. What, if any, changes to the currently applicable rates should be made as part of a transition back into price caps and why? If so, how should such changes be implemented? Does this transition raise any special considerations? We seek comment on these questions.

194. We propose that if the Commission adopts a new X-factor or otherwise requires adjustments to the price cap indices, price cap carriers would implement the associated rate decreases by submitting TRPs (*i.e.*, Tariff Review Plans) and special access tariff revisions for all rate elements associated with special access. Such TRPs would set forth the calculations underlying the API, and demonstrate that the revised API for the special access basket does not exceed the revised price cap index. We seek comment on this proposal.

195. How shall we adjust the price cap indices if the Commission adopts a new X-factor or otherwise requires adjustments to the price cap indices? Should the rate decreases that result from these actions apply to all rate elements associated with special access services, or should carriers be permitted to choose the manner in which the decreases are made as long as the revised API for the special access basket does not exceed the revised price cap index? What process should the Commission employ for purposes of implementing a new X-factor or any required adjustments to the price cap indices? In this regard, we invite comment on implementation issues such as the timing for complying with the required rate reductions, what should be included in related TRP submissions and tariff filings, and carrier certification requirements.

2. Anchor or Benchmarking Pricing

196. In non-competitive markets, absent guidance as to the range of rates that would be considered reasonable, a provider could exercise market power through the charging of supracompetitive rates. As discussed above, TDM BDS rates currently are constrained to some extent by price caps. In this section, we propose and seek comment on a methodology to ensure that, in non-competitive markets, rates for Ethernet business data services not subject to price cap regulation are just and reasonable. We emphasize that

the proposed mechanism described below would be used in those markets where the Commission determines, based on an application of the Competitive Market Test, the market is non-competitive such that it is likely competition is not constraining rates to just and reasonable levels. That said, the proposed methodology is not prescriptive, and is intended to facilitate providers and customers negotiating reasonable commercial agreements.

197. We first took action to protect against concerns regarding Ethernet pricing during the transition to IP in the *Emerging Wireline Order* by adopting an interim rule to ensure that incumbent LEC BDS providers that are discontinuing legacy TDM services offer Ethernet services, used as wholesale inputs by competitive carriers, at reasonably comparable rates, terms, and conditions. This interim rule applies to two categories of services: (1) BDS services at DS1 speed and above; and (2) commercial wholesale platform services such as AT&T's Local Service Complete and Verizon's Wholesale Advantage. The interim reasonably comparable wholesale access requirement is a condition to a grant of an incumbent LEC's discontinuance application imposed under our authority pursuant to section 214(c) of the Act, and helps "bridge the gap" between the current competitive situation and the completion of the BDS rulemaking. The condition that the rule imposes expires when "all of the following have occurred: (1) The Commission identifies a set of rules and/or policies that will ensure rates, terms, and conditions for special access services are just and reasonable; (2) the Commission provides notice such rules are effective in the **Federal Register**; and (3) such rules and/or policies become effective." The rules and policies that we propose establishing from this FNPRM are intended to meet the first prong of the *Emerging Wireline Order's* standards governing expiration of the condition. Once we adopt permanent rules subsequent to this FNPRM, we will provide the **Federal Register** notice called for in the second prong, which will announce the effective date called for in the third prong. We anticipate that the condition the interim rule imposes will expire as of the effective date of our permanent pricing rules for BDS, absent action staying or overturning our rules and policies. We further discuss our various methods for considering a permanent pricing methodology below.

198. In this FNPRM, we propose an anchor pricing or benchmarking approach to replace, as it applies to BDS, the interim rule currently in effect.

We consider three options below. The first option is to rely on regulated TDM service prices to anchor the prices of similar packet services. This option would be effective only where TDM prices could be expected to reasonably constrain the rates for higher speed packet-based services. In that case, we could decline to otherwise regulate packet-based BDS rates. If, however, we were unable to determine that regulated TDM prices would provide a reasonable constraint on packet-based BDS, a second option would be to establish one regulated price for packet-based BDS, for example, establish a regulated rate for a 10 Mbps Ethernet service, which could serve as an anchor for nearby-bandwidth packet-based BDS, and could arguably constrain those rates. Our third option is to initially use reasonably comparable prices for regulated TDM services as a benchmark to help the Commission determine whether rates for various packet-based BDS are just and reasonable, but over time using, as a benchmark, the packet-based BDS prices established under this approach. Price cap TDM rates do not have a single rate for a particular TDM service but a series of rates that, when combined, create a rate. How should we account for differences in rate structures between price-capped TDM rates and packet-based BDS?

199. We seek comment on which option we should use and how such a pricing regime should operate. We believe we should adopt the third option—using regulated TDM prices, but over time using the packet-based BDS prices established under this approach as a benchmarking tool in determining whether packet-based BDS rates are just and reasonable, similar to the interim rule adopted in the *Emerging Wireline Order*. We believe this option would be most effective in constraining rates and most consistent with the Commission's goals of promoting facilities-based competition and facilitating technology transitions. We question whether, under the first option, TDM services could effectively constrain the prices for higher speed packet-based services in the current environment of increasing demand for high-bandwidth services. In addition, such reliance may create incentives at odds with our goal of facilitating the technology transitions. We also question the desirability of the second option, establishing rates for one tier of packet-based BDS, for two reasons. First, because it is doubtful that such an approach could reasonably constrain a relatively wide range of bandwidths (for example, it is unlikely that a 25 Mbps

anchor price would effectively constrain prices for 2 Mbps and 50 Mbps services). Second, for reasons similar to our hesitation to bring such services under price cap regulation, any price regulation where the Commission would be establishing rates for carriers to charge (even for just one service) would still add reporting and monitoring burdens on carriers, which could inhibit innovation. In contrast, we believe the third option would be the least burdensome and most effective in encouraging competition through commercial negotiation. We seek comment on these various options and our views.

200. Certain parties have suggested we could use a cost model to establish benchmarks for packet-based BDS Ethernet services. For instance, as noted above, the CACM was used to provide a forward-looking estimate by census block of the costs of providing a voice and broadband-capable network for use in determining Connect America Fund support for broadband necessary to serve price cap areas. We seek comment on whether we could either establish a new cost model or modify an existing cost model to provide a basis for establishing Ethernet rate benchmarks within price cap incumbent LEC service areas to the extent that price regulation might otherwise apply? What would be the benefits of a model-based approach in contrast to the anchor or benchmarking approaches described above? Is there a particular model that we should consider? What would be the benefits of establishing a new model instead of modifying an existing model?

201. Although packet-based BDS have largely been provided outside of price cap regulation, we expect adoption of an anchor or benchmarking pricing mechanism would provide many of the advantages of price caps and other forms of pricing regulation without some of the disadvantages. Through the adoption of price cap regulation, the Commission attempted to encourage incumbent LECs to innovate and increase efficiencies in providing service. However, bringing more services under our price caps would entail reporting and monitoring costs which we can avoid under our proposed anchor or benchmarking approach (since such an approach, in part by its expression, and in part through setting of precedents in adjudications, will encourage parties to negotiate reasonable terms and conditions). We seek comment on this approach. Would our proposed approach work effectively to constrain prices and increase innovation? Would one of the

alternative forms be more effective than our proposed approach?

202. We note that the *Verizon/INCOMPAS Joint Letter* suggests that the Commission should rely on ex ante rate regulation in relevant markets with insufficient competition. We seek comment on the principles in the *Verizon/INCOMPAS Joint Letter*. How would we implement ex ante pricing regulation that would further the goals of constraining prices and ensuring just and reasonable rates and be imposed on a technology neutral basis? How would such regulation be implemented on an operational basis?

203. As described above, we propose to use as a benchmark for reasonable packet-based BDS rates the price of the most comparable legacy TDM technology and base the reasonableness of the price on that service level, even if the services are provided using a new or different technology. Over time, as TDM benchmarks are discontinued, packet-based BDS rates established as being fair and reasonable under this approach would serve as a continuing benchmark. We seek comment on this proposal. How would this methodology be implemented? Should this price be a ceiling for the rates of various packet-based services or should it merely be used as a tool to determine whether rates are reasonable? Would this method be a workable solution to ensure that packet-based BDS rates are just and reasonable? If not, what alternative solutions should the Commission consider?

204. We believe we should impose anchor or benchmarking pricing only in non-competitive markets. Is that the correct determination? Why or why not? Would there be reasons to impose anchor or benchmarking pricing in competitive markets? We believe that in effectively competitive markets, anchor or benchmarking pricing would not be necessary because competition would be sufficient to constrain prices to just and reasonable levels. We also believe that anchor or benchmarking pricing would not be appropriate where we find sufficient material competitive effects under the Competitive Market Test, even where that means competition is not necessarily driving prices to effectively competitive levels. This is because we must account for limitations on our ability to establish what a competitive price is, the harms of unintended consequences from regulatory action (for example, to the extent regulatory action encourages waste through rent-seeking), as well as its administrative costs. Is that a reasonable approach? If not, what impact would anchor or benchmarking

pricing have on areas that already have material competitive effects?

205. We seek comment on the scope of the application of rate regulation in non-competitive markets to packet-based BDS (and, as well, to TDM BDS). In non-competitive areas, should all providers be subject to rate regulation or should only some providers be so impacted? If the latter, how should we determine which providers? So, for example, should rate regulation apply only to the largest providers (and how would such an outcome be implemented as market shares change over time)? Conversely, should we consider adopting a rule that providers with less than a certain percentage of market share would not be subject to rate regulation on the ground that smaller providers likely represent new entrants? Or should we use another factor than market share were we to adopt this approach, such as the ubiquity of infrastructure capable of delivering BDS service in a relevant geographic market, or the effective ability of a provider to reach some percentage of potential BDS customers? We seek general comment on the scope of rate regulation in non-competitive markets.

206. We propose above to evaluate the reasonableness of rates for packet-based BDS by benchmarking them against the incumbent LEC's TDM price for the most comparable level of service available, and over time, as TDM services are discontinued, benchmarking them against packet-based BDS rates established as being just and reasonable under this approach. For example, the anchor price for a particular market for a 5 Mbps Ethernet service would be the cost of the closest TDM equivalent offered by the incumbent LEC, which, for example, might be a DS1. This would not imply that the price of the Ethernet service should be the same as that of the nearest equivalent service, but only that the Commission would judge whether the 5 Mbps service price was just and reasonable in the light of the DS1 price. In this example, the Commission could determine that the 5 Mbps service price should not exceed the price of the DS1 multiplied by 3.3 (= 5 / 1.5), given the prices of higher bandwidth services usually fall more than proportionately with bandwidth, and that Ethernet services are considered to have a lower cost in supply than legacy TDM services. Would this anchor price approach be workable? If not—what method should the Commission utilize? If it is workable, would the proposed upper bound, that the ratio of the price of a packet-based BDS with a bandwidth

in excess of a regulated TDM service to the price of the TDM service should not exceed the ratio the packet-based BDS bandwidth to the TDM service bandwidth, be reasonable? What about for packet-based BDS for which the nearest comparable TDM service has a higher bandwidth?

207. We seek comment on this proposal. Does it adequately cover situations in which an obvious comparable TDM service does not exist in a given market? We welcome comment on any alternative or additional ways for providers to address the situation where it is difficult to find a comparable TDM service offering on which to base the anchor price.

208. In addition to the bandwidth of the service offering, should the rates differ based on the technology, service tier, geographic location, quality of service, or any other factors? How should these differences be accounted for in determining the ultimate rate ceilings that providers are permitted to charge at or below for their packet-based BDS? How would any discounts commonly provided for TDM services influence the benchmark rates? Are there any other issues that should be accounted for that may affect the ultimate rates (either higher or lower) than the benchmark set by our anchor price? If so, what are they, and why should BDS providers be entitled to adjust their rates accordingly? How do we ensure that carriers are not permitted to increase prices above the benchmark by imposing unreasonable charges on related services, such as special construction?

209. Our anchor or benchmark prices must adjust to changes in economic conditions and advancements in technology and productivity that impact the costs of providing services. Specifically, how would anchor prices be established once incumbent LECs have fully transitioned from TDM to packet-based services? To address this challenge, at least over the medium term, we propose to make permanent, after the interim rule expires, the current network transition requirement adopted in the *Emerging Wireline Order* which requires an ILEC discontinuing TDM service to offer a comparable packet service at comparable prices. We seek comment on that approach, and also on how best to establish an anchor or benchmark price for the potential situation where, due to increased bandwidth demands, sales of low bandwidth Ethernet services decline and have been replaced by broad demand for higher bandwidth BDS. Is this situation too speculative to consider regulatory approaches at this point? In

particular, would our proposal to use as a benchmark any packet-based BDS with prices that were established under this approach work? Is this approach sufficiently technology-neutral, and if not, is there a more appropriate technology-neutral alternative? Would this approach over time be likely to become unmoored as TDM services are discontinued and as the minimum bandwidth of service offerings rise? What other factors would cause the Commission to reset anchor or benchmark pricing? Should anchor or benchmark pricing be revisited on a regular, recurring basis? In any case, is it likely there will be any need for regulation of such higher bandwidth services or are there reasons to believe that, as this transition takes place, such services will take on the characteristics of low bandwidth services, including a lack of competitive supply for such services?

210. In the *Enterprise Broadband Forbearance Orders*, the Commission granted forbearance from the application of dominant carrier regulation, including tariffing, to certain of the petitioning incumbent LECs' broadband telecommunications services. The forbearance grants did not include all price cap incumbent LECs and only included certain IP services being offered at the time of the grants, resulting in some inconsistency regarding the tariffing of IP-services. Upon implementation of an anchor or benchmarking pricing methodology, we believe we should continue the forbearance from tariffing for all packet-based services currently subject to forbearance. In addition, we believe we should expand the forbearance to include all price cap incumbent LECs and all packet-based services. We believe that forbearance from tariffing will allow for greater use of commercial negotiations, which will facilitate innovative integrated service offerings designed to meet changing market conditions and will increase customers' ability to obtain service arrangements that are specifically tailored to their individualized needs. We seek comment on these views. Would this approach be consistent with the three-part test in section 10(a) of the Act? What impact would a more comprehensive forbearance from tariffing have on the development of packet-based BDS? Would greater flexibility lead to more competitive pricing and offerings? How should the increased use of forbearance from tariffing requirements be implemented? Should the detariffing be mandatory or should carriers be permitted to file permissive tariffs?

Should there be any grandfathering for services that are currently offered pursuant to tariff?

211. The success of the proposed anchor or benchmarking pricing framework will rest in part on parties having access to generally available rates that comply with the anchor or benchmarking pricing requirements. Our primary goal under anchor or benchmarking pricing would be to create a framework of technology-neutral regulation that will facilitate the emergence of competition. We want to minimize burdens on market participants and not increase barriers to market entry. Tariffing has the potential to impose burdensome obligations and may prevent more competitive offerings from being introduced by limiting flexibility and the ability to individually tailor product offerings. The disclosure tariffs require, however, is a positive aspect in non-competitive areas because it can help combat unjust and unreasonable rates, terms, and conditions. Requiring BDS providers to disclose their rates, terms, and conditions publically would provide a clear check as to whether they are compliant with our anchor pricing requirements. Do these potential transparency benefits outweigh potential benefits to competition that would arise from forbearance from tariffing requirements? Are there other potential benefits to tariffs that we should consider? We now turn to a proposed public disclosure requirement that would offset any negative impact of forbearance from tariffing requirements.

212. We believe we should require providers affected by our proposed anchor or benchmarking pricing regime to publicly disclose their generally available rates, terms, and conditions. The rates in these public disclosures should be consistent with the anchor or benchmarking pricing rules we adopt and should be available to customers on the carrier's Web site. We seek comment on these proposals. How should disclosure of rates be implemented? Is posting on a carrier's Web site sufficient?

213. Currently, the *Emerging Wireline Order's* reasonably comparable standard helps ensure that providers are offering just and reasonable rates when they seek to discontinue certain legacy TDM services. Accordingly, we have temporary policies in place that should help ease any unjust and unreasonable rates in the Ethernet BDS market where legacy TDM services are discontinued. With this in mind, what is a reasonable timeline for implementing the new anchor or benchmarking pricing methodology? Should the timeline be

linked to the determinations under the Competitive Market Test? What types of changes and preparations would providers need to undertake to switch to the anchor or benchmark prices that would justify time for a transition? If a transition is needed, how long should it last to ensure that providers are ready and customers are provided relief in as timely a manner as possible?

214. Some BDS providers and purchasers enter into contracts with terms that last for several years, especially in the context of receiving term discounts. We do not intend to intervene where sufficient material competitive effects keep rates at just and reasonable levels. However, should the Commission need to take additional action after adoption of our proposed anchor or benchmarking pricing regime, it is well-established that “[u]nder the Sierra-Mobile doctrine, the Commission has the power to prescribe a change in contract rates when it finds them to be unlawful, and to modify other provisions of private contracts when necessary to serve the public interest.” Such a need may arise, for example, when contract terms last long after adoption of our regime, which would prevent the rates from falling to just and reasonable level under our anchored prices. We note that an agency may modify or abrogate a valid contract “only if it harms the public interest.” Under what circumstances should we exercise our authority under the Sierra-Mobile doctrine to abrogate such contracts that remain inconsistent with the benchmarked rates under our anchor pricing system? In the context of the prices for BDS, under what, if any, circumstances would rates above the anchor or benchmark price justify contract abrogation?

215. We do not envision that our anchor or benchmarking pricing methodology will impose any additional reporting requirements on carriers that offer the Ethernet services falling under these new anchor or benchmark rates. We have, however, proposed to require public disclosure of generally available terms and conditions. We invite commenters to explain whether any reporting requirements should be imposed to ensure that providers comply with our rules and that those rules serve the purposes for which they were designed. If reporting requirements should be implemented, what form should they take? Should we require certification that providers are in compliance? Are there any other requirements we should consider, and what are the costs and benefits of adopting additional requirements?

216. We expect the Commission’s enforcement process and declaratory ruling process will be critical components of our proposed anchor or benchmarking pricing methodology that will help ensure our new rules prevent providers from offering packet-based BDS at rates, terms, and conditions that are unjust and unreasonable. For example, interested parties may file complaints alleging that particular BDS providers’ rates, terms, and conditions are unjust, unreasonable, or unjustly or unreasonably discriminatory. Based on these complaints, we would then evaluate the rates providers’ charge to determine whether they are just and reasonable. This determination would be made based on the facts before us in each individual circumstance. In response to complaints, providers of Ethernet BDS could make arguments about why the services at issue cost more to provide than the TDM services to which we would look to benchmark prices. BDS providers, in addition, may seek declaratory rulings that the rates they charge for services subject to our anchor pricing system are just and reasonable. Such declaratory rulings will provide BDS providers certainty that they are in compliance with our new anchor or benchmarking pricing regime. We seek comment on whether the complaint and declaratory ruling processes would be reasonable processes to utilize in enforcing the proposed pricing methodology. Should we adopt a timeframe for resolving these complaints or declaratory rulings? Where the Commission concludes that the rates for BDS services were unjust and unreasonable, should providers be found liable for refunds? Are there better approaches to meeting these goals?

3. Wholesale Pricing

217. Certain competitive LECs argue that business data services providers are charging them wholesale rates higher than the retail rates those same providers charge end user customers, and that such wholesale rates are unreasonable. These competitive LECs argue that when business data services providers price their wholesale services higher than their retail services, this can result “in a price squeeze, preventing [competitors] from competing with the RBOCs for the sale of Ethernet service to end users.” As evidence of this price squeeze, Windstream cites the fact that the “ILECs’ wholesale Guidebook rates bear little relationship to real retail prices. [REDACTED] which is below its wholesale Guidebook rate for an Ethernet at the same capacity level and term (\$1,225) as well as its DS3 three-

year rate (\$1,232.50).” TDS also argues that the “RBOCs were offering Ethernet service to wholesale customers such as TDS CLEC at a price higher than they sold the same service at retail, even though they avoided some significant costs when selling at wholesale.” Windstream adds that, [REDACTED].

218. These allegations raise concerns that are not novel. The Commission previously has recognized that incumbent LECs can “strategically manipulate the price of their direct competitors’ wholesale inputs to prevent competition in the downstream retail market.” While our proposed framework would move away from regulating providers based on their historical categorizations, we find it likely that providers in non-competitive markets have similar abilities and incentives to engage in such price manipulation. We believe that existing rules may apply to these concerns regarding wholesale pricing, and that addressing such concerns in our proposed framework may provide helpful guidance. We also note that the Verizon/INCOMPAS Joint Letter states that “[t]here should be a relationship between wholesale and retail pricing” for business data services.

219. We seek proposals for and comment on adopting rules, under sections 201 and 202(a), ensuring just and reasonable wholesale rates that would be applicable to provider(s) in non-competitive markets. Are there other sources of authority that we should consider? How do we best ensure that we employ sources of authority that operate in a technology-neutral manner?

220. We ask commenters to explain how frequently business data services providers charge wholesale customers rates that exceed the corresponding retail rate. Does the practice vary depending on bandwidth levels or other product features? Are there other examples of this practice, and if so where is such pricing taking place? Windstream argues that such practices violate “Section 251(b)(1) as an ‘unreasonable or discriminatory condition[] or limitation[]’ that results in a failure to provide carrier customers and end users services ‘subject to the same conditions,’ and violates prohibitions of sections 201 and 202 against unjust and unreasonable as well as unreasonably discriminatory practices and charges.” We invite commenters to explain whether charging higher rates for wholesale business data services than for comparable retail services would violate the Act and our rules. We also seek comment on the view that, because of

avoided costs or other factors, reasonable wholesale rates should be lower than retail. Do the services wholesale customers tend to purchase use different portions of the incumbent LECs' networks than the services retail customers purchase? Are there differences in the incumbent LECs' expenses for sales, marketing, customer service, technical support, and uncollectibles between wholesale and retail customers? If there are differences justifying a discount, how would we determine the just and reasonable discount that would apply to wholesale rates?

221. We seek comment on what if any steps should be taken to ensure that customers have a basis for determining whether wholesale rates are just and reasonable under existing or proposed rules. For example, what steps are incumbent LECs currently taking to disclose the lowest retail price to potential customers under existing rules? Are such processes effective, or should we take additional measures to ensure that potential customers are aware of the lowest retail price? For example, should we require some form of public disclosure, such as on a carrier's Web site? Would such a disclosure put purchasers in a better position to know whether the rates they are charged are just and reasonable? Are there other requirements we should adopt regarding wholesale rates?

222. Finally, we seek comment on the relationship between any requirement concerning wholesale rates and the rate regulation we have proposed for TDM and packet-based services in non-competitive markets. Should both approaches be used? One or the other? Or are there certain markets (by service, geography, customers or some combination of factors) for which the relationship between wholesale and retail rates is most salient?

4. Terms and Conditions

223. As part of the technology neutral framework for regulating business data services, we propose prohibiting tariff and other contractual arrangements that condition the sale of business data services in a non-competitive market on the sale of such services in a competitive market. Such rules would be applied on a technology neutral basis. We seek comment on both the harms such agreements may impose and on implementation of any prohibition in light of the ongoing purchase agreements for such services that may contain tying arrangements. How do we balance current business expectations of customers and providers against the long term harms such arrangements may

impose on the evolution of the competitive market for business data services? We address specifically three types of tying arrangements that have been identified in the record: IP migration provisions, typically found in incumbent LEC tariff pricing plans, provisions that leverage incumbent LEC tariff pricing plan penalty liability to induce sales of Ethernet and other services, and geographic tying. To what extent, if at all, would a prohibition on tying obviate the need to identify multi-location customers, or any other class of customers, for purposes of the application of the Competitive Markets Test or alternative regulatory approach? Are there any other actions that the Commission should consider to address issues arising from customers who are purchasing a service that spans competitive and non-competitive markets?

224. IP migration provisions are common among incumbent LEC pricing plans. These provisions allow customers to count Ethernet purchases toward fulfillment of their TDM commitments. We seek comment on whether we should prohibit such provisions as unreasonable tying arrangements. To what extent do such provisions encourage and facilitate incumbent LECs' leveraging of their dominance in the provision of TDM business data services to increase sales of their Ethernet services? How do the price cap incumbent LECs' market positions differ between the TDM and Ethernet business data services markets that are usually covered by the tariff containing such provisions? We seek comment on whether and, if so, to what extent incumbent LEC IP migration provisions advantage incumbent LECs competing for Ethernet sales. If IP migration provisions were eliminated from incumbent LEC tariff pricing plans, what would be the impact on customers of those plans? To what extent have customers relied on IP migration provisions to meet their commitments under TDM pricing plans? What volume of Ethernet purchases would be affected? If customers were unable to count such purchases toward fulfillment of their TDM commitments, what potential penalties would they incur? How would a prohibition, if adopted, best be implemented? Should customers be allowed a "fresh look" period to re-evaluate their tariff commitments or other transition period to allow customers to adapt their purchasing arrangements? Would this unreasonably deprive price cap incumbent LECs of the benefit of their bargain? How could such a prohibition best be applied in a

technology-neutral manner? What implementation questions are raised by our proposal to eliminate tariffing? What additional factors should the Commission consider?

225. As explained above, competitive LECs have more recently alleged incumbent LECs use tariff pricing plan penalty liability as leverage to induce competitive LECs to agree to large Ethernet purchases from the incumbent LECs. They claim that these practices represent unreasonable tying arrangements and could extend incumbent LECs' dominance of TDM business data services to IP services. We seek comment on prohibiting the use of provisions that offset penalty liability from tariff pricing plans in Ethernet commercial agreements. We note that such provisions appear in multiple commercial agreements submitted by the four large incumbent LECs in response to the Bureau's tariff investigation. How pervasive are these practices? What is their impact on competition for Ethernet services? What would be the impact of eliminating such provisions on buyers, sellers and the market generally? To what extent do such agreements contain change of law provisions in anticipation of changes such as this? We also seek comment on the use of other provisions in commercial agreements that tie the sale of Ethernet services to the sale of services by providers in non-competitive markets. Finally, if the Commission were to bar the use of such provisions in Ethernet commercial agreements, how should the Commission implement such a requirement? Should the Commission, as some competitive LECs have advocated, require commercial agreements that link purchases to tariffed penalties or other tariff provisions be filed with the Commission as a contract tariff? What should the parameters be of such a requirement? Would any other type of linkage require such agreement to be filed as a tariff? How could such a prohibition best be applied in a technology-neutral manner?

226. First, we recognize that in the competition analysis above we find that the competitive triggers adopted in the *Pricing Flexibility Order* were poor measures of competition. In this FNPRM, however, we propose a new framework that includes a Competitive Market Test to determine areas that are competitive and non-competitive. The assertions and arguments concerning tying across markets subject to different levels of market concentration remain relevant in the new regulatory framework. We seek additional comment on whether and to what extent

we should be concerned geographic tying could take place under the proposed technology-neutral framework and, if so, what remedial action we should take.

227. While prohibiting such tying arrangements would minimize potential harm, it would also eliminate the ability of providers and purchasers to link TDM purchases and Ethernet purchases in any way, including the use of IP migration provisions in TDM tariffed services and the use of credits to offset penalty liability conditioned on the purchase of Ethernet service from the provider. It is clear from the record that linking DSn purchases and Ethernet purchases involves material short term benefits for purchasers as they attempt to manage the effects of the decline in TDM services and the transition to IP services. Some competitive LECs advocate in favor of such arrangements and incumbent LECs generally defend their reasonableness. Considering the benefits of these arrangements may be particularly relevant given the current decline in TDM sales and the consequent penalty liabilities that decline involves.

228. The Commission has established as one of its priorities facilitating technology transitions. While we share the concerns of commenters that incumbent LECs may have the incentive and ability to leverage their market position in TDM services to increase their Ethernet sales, we also recognize that addressing the harms of tying TDM BDS to Ethernet services may require a more nuanced approach to reflect the implications of such a prohibition on the technology transition. AT&T states that such restrictions would “artificially discourage the replacement of TDM services with Ethernet services.” We seek comment on approaches that would encourage the transition to Ethernet while limiting an incumbent LEC’s ability to leverage its market position in the provision of TDM BDS to gain a similar position in the provision of Ethernet offerings. Are there other ways to provide both parties with the benefits from these arrangements while limiting the harms to competition in the market for business data services? We also seek comment on ways to allow the benefits of such arrangements during a defined period of time to facilitate the industry’s transition to IP services.

229. Finally, we seek comment on how we should implement any prohibition on tying arrangements the Commission may adopt. What effect would adopting such a prohibition have on existing tariff and contractual arrangements in tariffs and commercial

agreements? Should the Commission consider either grandfathering existing agreements or providing a transition period to allow parties to adapt their agreements to reflect such a prohibition? Should there be a “fresh” look period to allow customers to reallocate their purchases in light of the modifications or prohibitions we propose to tying arrangements?

230. Percentage commitments are requirements included in some incumbent LEC tariff pricing plans that require customers to commit to buy, over the term of the plan, a high percentage of the amount of services they elect to purchase when initiating or renewing purchases through a tariff pricing plan. Given the framework we adopted in the *Tariff Investigation Order* that addresses the special access marketplace by focusing on penalties, we declined to take action on percentage commitments in that Order. We seek comment on whether this approach is sufficient to ensure that percentage commitments will not harm competition, impede investment and deployment of facilities-based competitive networks, or hinder the transition to IP-based business data services.

231. We also seek to broaden our inquiry into minimum percentage commitments in this FNPRM and seek comment on the impact percentage commitments have on the provision of TDM based business data services. With regard to the TDM based market, how prevalent is the use of such commitments in tariff pricing plans and contract tariffs beyond those investigated in the Bureau’s tariff investigation? What impact do such commitments have systemically on the market for TDM based business data services? How do they vary? Competitive LECs claim that such commitments tend to “lock up” or foreclose significant portions of the market for TDM based business data services, impairing competition and inhibiting technology transition. Is that still the case? Incumbent LECs assert in the tariff investigation that the decline in TDM based business data services market effectively rendered the competitive LECs’ lock up arguments moot. We seek comment on whether that is in fact the case or whether percentage commitments operate differently in a declining market. What is their effect in a declining TDM market? What remedies would be appropriate to ensure that percentage commitments are reasonable and allow incumbent LECs the flexibility to manage their businesses while also minimizing the potential harms

associated with “locking in” competitive LEC customers? Should the Commission consider prohibiting the use of percentage commitments, limiting the level at which the commitment is set, or taking some other remedial step to ensure they do not negatively impact the market?

232. We also seek comment on the use of percentage commitments in commercial agreements for the sale of packet based business data services such as Ethernet. Competitive LECs cite the incumbent LECs’ use of such requirements in Ethernet commercial agreements and claim incumbent LECs are attempting to lock up or control their Ethernet purchases. Competitive LECs cite in particular the fact that their Ethernet commercial agreements with incumbent LECs typically involve large scale purchases and involve the sale of other telecommunications services such as mobile wireless and long distance service. How commonly are percentage commitments used in Ethernet commercial agreements and at what percentage levels are they set? How do they impact the market for Ethernet business data services? Should the fact that commercial agreements can involve such large scale purchases impact our analysis? If the Commission found percentage commitments were impacting the Ethernet market, what remedies should the Commission consider adopting? To the extent commenters suggest the adoption of remedies, they should also address how such remedies should be implemented.

233. Term commitments require customers that participate in a term pricing plan to commit to continue to make those purchases for a set term of months or years. Term commitments in tariff pricing plans vary considerably from one year to as long as ten years. We declined to address term commitments in the *Tariff Investigation Order*, instead addressing competitive LECs’ concerns by prohibiting penalties that exceed the incumbent LECs’ expectation damages. We seek comment on whether action on term commitments is necessary to ensure that they will not harm competition, impede investment and deployment of facilities-based competitive networks, or hinder the transition to IP-based business data services. We also seek to broaden our inquiry into term commitments in this FNPRM and seek comment on the impact term commitments have on the provision of TDM based business data services generally. How prevalent is the use of such commitments in tariff pricing plans and contract tariffs beyond those investigated in the Bureau’s tariff investigation? What impact do such

commitments have systemically on the market for TDM based business data services? In the tariff investigation, the incumbent LECs submitted data that showed that the average term lengths for agreements under the plans at issue was considerably longer than the term lengths typically reported by competitive LECs. It also showed that a very high percentage of all sales in the plans at issue—over 97 percent—occur in plans longer than three years. Are longer term agreements in any way evidence of a seller's market power? Do incumbent LEC term plans that are longer than most competitive LEC plans tend to inhibit the technology transition or otherwise impact competition in the TDM based market? What remedies would be appropriate to ensure that term commitments are reasonable and allow incumbent LECs the flexibility to manage their businesses while also minimizing the potential harms associated with the alleged "locking in" competitive providers?

234. We also seek comment on the use of term commitments in commercial agreements for the sale of IP based business data services such as Ethernet. How do term commitments in Ethernet commercial agreements compare with those in TDM tariff pricing plans and contract tariffs? To what extent do term commitments impact the Ethernet market? How does the length of term commitments offered by competitive providers in Ethernet commercial agreements compare with the length of term commitments offered by incumbent LECs? What remedies, if any, should the Commission consider adopting either to limit or condition term commitments in Ethernet commercial agreements? To the extent commenters suggest the adoption of remedies, they should also address how such remedies should be implemented. To the extent that the Commission should consider restrictions on term commitments, should such restrictions apply solely to non-competitive markets or more broadly to all markets?

235. Under upper percentage thresholds, if a buyer's purchases increase more than a set percentage above their initial volume commitment during the term of the plan, the buyer is required either to commit to an increased purchase volume or to pay an overage penalty. We did not address upper percentage thresholds in the *Tariff Investigation Order*, but instead seek comment on whether we should adopt a broad prohibition on such requirements in non-competitive areas.

236. We seek comment on whether the use of upper percentage thresholds in tariffs and contract tariffs generally is

an unreasonable practice. As discussed above, in both the *Tariff Investigation Order* and earlier in this FNPRM, the price cap LECs' all-or-nothing requirements often served to restrict customer options and inhibit the ability of competitive LEC customers to plan for their network evolution. Such unreasonable restrictions also may have contributed to the asserted lock in effect of upper percentage thresholds. We seek comment on whether the price cap LECs' arguments about their potential risk exposure when customers add large amounts of circuits to their plans with portability are more persuasive if the customer has the choice to place its demand in a term plan without portability when adding new circuits to its agreements with the price cap LEC. We seek comment on whether upper percentage thresholds are unreasonable and should be prohibited for providers of TDM business data services in non-competitive markets. Under what circumstances might upper percentage provisions be found reasonable? In the record, incumbents LECs argued they incurred risks and costs when an increase in purchases reached a certain point; however, they failed to provide any financial information on what these costs are or how they are related to actual upper percentages or overage penalties that are used. We seek comment on what showing a carrier should be required to make if it supports such a provision. Will removing the all-or-nothing requirements from the providers' tariffs provide the flexibility customers need to make different choices if they do not want to increase their spend under an upper percentage threshold? If we were to adopt a prohibition on upper percentage thresholds, what is an appropriate transition period for phasing out these provisions?

237. We seek comment on the extent to which commercial agreements for the provision of Ethernet-based service assess upper percentage thresholds. We also seek comment on whether these provisions are found elsewhere in the telecommunications industry or offered by other carriers other than in incumbent LEC tariffs. Are upper percentage thresholds in Ethernet commercial agreements unreasonable and, if so, should the Commission prohibit them in this context as well? Should such a prohibition apply solely to non-competitive markets or more broadly to all markets?

238. Overage penalties effectively function as the enforcement mechanism for the upper volume thresholds addressed in the previous section of this FNPRM. We did not address overage

penalties in the *Tariff Investigation Order*, but instead seek further comment here. We seek comment on the use of overage penalties to enforce upper percentage thresholds in TDM based tariffs and contract tariffs. If the Commission does not eliminate upper percentage thresholds, we seek comment on the circumstances under which the Commission should find overage penalties to be unreasonable. For example, in the *Tariff Investigation Order*, we determined that shortfall penalties that exceeded the seller's revenue expectations were unreasonable. We seek comment on whether this is an appropriate approach to assessing overage penalties as well. How would such a measure work in the case of an overage? How should the Commission determine a seller's revenue expectations in an overage situation? Are there alternative approaches to determining the outer bound of reasonableness for overage penalties? Commenters advocating for the use of a different measure of reasonable overage penalties should explain their reasons for not applying the standard used to assess shortfall penalties and identify an alternative standard using examples. What is the best way to structure overage penalties to ensure that the fees reasonably compensate providers while not excessively penalizing purchasers?

239. We also seek comment on whether and to what extent overage penalties are contained in commercial agreements for the provision of Ethernet business data services. Is it reasonable to include such penalties in agreements for Ethernet business data services in non-competitive areas? If so, how do these contracts calculate these penalties? If the Commission decides to eliminate overage penalties or impose limitations on them, how should it implement those decisions? Would there be any need for the Commission to consider adopting any transitional rules to facilitate implementation? Should such a prohibition apply solely to non-competitive markets or more broadly to all markets?

240. Competitive LECs have asserted certain provisions in incumbent LEC tariff pricing plans that apply upon expiration of a purchaser's agreement to buy services tend to lock purchasers into re-committing to purchase under those plans under essentially the same prices, terms and conditions of their previous agreements. These provisions include requirements for automatic renewal of subscription agreements under the same terms and conditions as a previous agreement and requirements that force buyers to pay higher,

undiscounted month-to-month rates immediately upon expiration of an agreement. Competitive LECs claim these provisions impair competition and inhibit technology transitions. We seek comment on the reasonableness of such provisions in tariffs and commercial agreements in areas where competition is not present. We also seek comment on existing so-called “evergreen” provisions in some tariff pricing plans that allow customers to extend service under the same prices, terms and conditions for certain periods of time following the expiration of an agreement, including whether we should require such provisions in tariffs and commercial agreements in non-competitive markets.

241. Incumbent LEC tariff pricing plans commonly contain provisions related to the expiration of a purchaser’s agreement. It is inherent in the relatively long-term nature of the need for and provision of business data services that parties generally must renegotiate their agreements at the expiration of an agreement in order to continue the service arrangement. Parties typically negotiate the terms and conditions of a subsequent agreement as they approach the end of the term of an existing agreement. The provisions we seek comment on—automatic renewals and requirements to revert to undiscounted, month to month rates—may impose unreasonable constraints on purchasers whose agreements have expired in light of the long term nature of broadband data services agreements and the substantial logistics required to move purchases to other providers or construct facilities to self-provision.

242. Provisions requiring automatic renewal of agreements are included in certain incumbent LEC tariff pricing plans. For example, the Commitment Discount Plan (CDP) in Verizon Tariff No. 1 states “[i]f the CDP Customer does not notify the Telephone Company of its choice during the two (2) month extension, a new CDP will begin based on the previously effective commitment period.” We propose to prohibit automatic renewal provisions in tariff pricing plans and contract tariffs for the provision of TDM based broadband data services in non-competitive areas as an unreasonable constraint on purchasers’ ability to modify their commitments or seek alternative providers to supply their needs. We seek comment on whether automatic renewal provisions are unreasonable. We also seek comment on how common they are and how frequently they are invoked in practice. What is the practical impact of such provisions on purchasers’ options at the expiration of an agreement? How

do they impact the dynamics between the parties as they renegotiate their arrangements? How do they impact the flexibility and the timeframe customers have to negotiate or to develop alternative sources of supply? Do competitive LECs also impose automatic renewal provisions in their business data service sales agreements? We also seek comment on whether such provisions are used in commercial agreements for Ethernet business data services? Additionally, are such provision included in agreements for managed services sold to retail end users? Finally, we seek comment on whether such a prohibition should apply solely to non-competitive markets or more broadly to all markets?

243. Given the comments in the record, we are particularly concerned that incumbent providers have the incentive and ability to use the expiration of a contract as an opportunity to increase charges for ongoing service and use that as leverage to induce customers to recommit to their pricing plans. In areas without sufficient competition, these provisions have the potential to put increased pressure on customers to renew contracts with incumbent providers, even if the terms are unfavorable, to avoid paying higher rates for an extended period of time. We therefore believe that any provision that enables a provider to increase its rates upon the expiration of either a tariff or commercial agreement for TDM or Ethernet-based service in areas without sufficient competition is unreasonable under section 201 of the Act.

244. We seek comment on our view and on the following additional questions. How do such provisions constrain purchasers’ options at the end of an agreement? Could the reversion to month to month rates be understood as, in effect, a penalty enforcing the re-subscription to a subsequent agreement? How reasonable is it to assess month to month rates, after a purchaser has already fulfilled its commitments under a previous agreement which presumably compensated the incumbent LEC for the circuits involved? Do competitive LECs also impose such a requirement at the expiration of their sales agreements? If we were to require the modification of such provisions, should the Commission determine that evergreen provisions are a more reasonable alternative?

245. We note that incumbent LECs argue that one of the benefits to a provider of offering term discount plans is that the plans allow it “to recover its costs over the life of the plan.” If the life of the plan has ended, and the

incumbent LEC has presumably recovered its costs apart from on-going maintenance costs, is there any justification for allowing the incumbent LEC to increase the price and charge higher rates upon termination? How do these higher rates compare to the shortfall penalties that customers pay if they terminate their plans early? We also seek comment on whether an automatic reversion to undiscounted rates is a feature common to IP based Ethernet commercial agreements. To the extent such provisions appear in Ethernet commercial agreements, should the Commission consider prohibiting or otherwise restricting them? Finally, should such any such prohibition or restriction apply solely to non-competitive markets or more broadly to all markets?

246. We also seek comment on so-called “evergreen” provisions that allow a purchaser to continue to purchase services under the same terms and conditions following the expiration of an agreement as it had under the expired agreement. We seek comment on whether the Commission should require the inclusion of evergreen provisions in tariff pricing plans and commercial agreements for business data services in non-competitive markets. Would requiring carriers to provide evergreen status on a monthly basis following the expiration of an agreement provide purchasers flexibility in assessing their options or transitioning their purchases to IP based services? Would it be reasonable to impose such a requirement on providers in markets without sufficient competition, which would be assured additional purchases of their services under terms they have already agreed to?

247. We also seek comment on whether Ethernet commercial agreements commonly include evergreen provisions to ensure continued service at the same rates, terms and conditions following the expiration of an agreement. Are such provisions more common in Ethernet agreements than in TDM pricing plans? With regard to applying this framework to the provision of Ethernet-based business data service, do parties face the same constraints when negotiating agreements for TDM services and Ethernet-based services after a contract’s expiration? Are there special terms and conditions that only apply when parties are negotiating a move from a provider’s TDM services to a provider’s Ethernet-based services and, if so, what impact do those terms and conditions have on the provision of Ethernet services? We also seek comment on whether a

mandate for evergreen provisions should apply solely to non-competitive markets or more broadly to all markets.

248. We seek comment on whether required evergreen status should be time limited. If so, what would be a reasonable period of time that would provide flexibility to purchasers but also not unreasonably extend uncertainty for providers in non-competitive areas? Should customers be allowed to pay monthly rates equal to those under the original agreement for up to one year past the contract's expiration? Would this provide sufficient time to account for the average length of contract negotiations and to protect the interests of both parties? Do contract renewal negotiations typically extend beyond one year, and if they do, are there examples of providers that are willing to continue offering rates at the same level as those in the expired deal? We seek comment on this time period and whether a shorter or longer term would be more appropriate.

G. Alternative Approaches To Reforming BDS That Fulfill Core Goals

249. In addition to seeking comment on the new regulatory framework outlined above, we invite commenters to suggest alternative frameworks to apply to BDS. Are there other regulatory frameworks that would minimize regulation where competition is sufficient to constrain BDS rates, terms, and conditions and focus regulatory action on circumstances in which sufficient competition is lacking? All proposals should address the commercial practicalities and administrative feasibility of applying the alternative framework and explain how it furthers the Commission's core goals of promoting investment, innovation, competition, and protecting customers in the BDS marketplace.

250. In Part V.D.2 above, we invite comment a Competitive Market Test that focuses on product markets, customer classes, business density, and the number of facilities-based providers in a given geographic area, such as the census block. In this section, we seek comment on alternative approaches and criteria for determining whether or not a market is competitive. Commenters proposing such an alternative should explain how it will further the Commission's core goals in application and address administrative feasibility.

251. In Part V.D.5 we ask for comment as to which provider(s) specific rules in a non-competitive market should apply and how the Commission should determine whether to apply specific regulation to a particular provider, including the use of market shares, in

non-competitive markets. In this section, we seek alternative proposals that would ensure that the Commission limits regulation to that which is necessary to ensure just and reasonable rates, terms and conditions within a non-competitive market while still encouraging new market entrants. Should we use a test of market power and, if so, how should market power be defined and how would such a market-power test be applied in a way that minimizes burdens on providers and the Commission? As to the scope of regulation, should we focus on the conditions in non-competitive markets and consider regulations that would apply generally or should we apply specific rules only to certain entrants, and if so, which ones? And how can we maintain and/or create incentives for new entry? How should we consider the potential presence of barriers to entry and policies that might serve to lower artificial barriers to entry? In general, what is the best form of regulation of a non-competitive market? As in Part V.D.5, we ask commenters to consider the impact of alternative new regulatory frameworks on investment and innovation.

252. For any proposed frameworks submitted in response to this section, commenters should explain how any triggers would be applied, which provider(s) would be subject to regulation and how such regulation would be implemented and enforced. For example, would there be tariffs or another mechanism? How would any alternative market test be applied, and would there be a process for challenges? Commenters submitting proposals they believe are simpler than the framework proposed above should explain why and how the administration would differ from the alternative proposals in this FNPRM.

253. While we have focused in the immediately preceding paragraphs on alternative tests of market competitiveness, we also encourage commenters to consider and suggest higher-level alternative regulatory regimes that would further the Commission's core goals.

H. Deregulation of the Pricing Process

254. In this section, we consider modifications to existing pricing mechanisms to implement the technology neutral regulatory framework for business data services proposed above. The proposed actions are intended to remove significant regulatory burdens, maintain price cap constraints where necessary to ensure just and reasonable rates, and create incentives to facilitate the technology

transitions. First, we propose to replace the current pricing flexibility regime with rules based on the results of the Competitive Market Test. Under such rules, we would move competitive services out of price caps and move non-competitive services into a structure that provides the protections of price caps while allowing providers to negotiate individual contracts. Second, we propose a path to detariff TDM business data services while maintaining price caps on a detariffed basis. Finally, we seek comment on a voluntary mechanism that would provide carriers with the flexibility to adjust price cap rates for TDM BDS when replacement packet-based business data services are available.

255. We recognize that in this FNPRM we propose a number of changes to our interrelated regulatory rules. Specifically, in addition to the proposals in this section, we propose adopting a price cap productivity factor and relying on price cap TDM rates as benchmarks for non-competitive IP rates. We seek comment on any impacts that various proposals may have on each other.

1. Replacement of Pricing Flexibility Rules

256. In this section, we seek comment on the rules that will apply to TDM services currently subject to regulation under price caps as well as the pricing flexibility rules under the new regulatory framework. Here, we propose and seek comment on changes to the existing pricing flexibility rules.

257. We propose to treat competitive TDM and packet-based BDS on a technology neutral basis and propose further to remove TDM BDS determined to be competitive under the Competitive Market Test from price cap regulation and apply the competitive regulatory framework proposed above to these services. We seek comment on these proposals. Are there any reasons to treat competitive TDM differently from other competitive business data services? Are there implementation concerns with regulating these competitive services in this manner? Why or why not? If so, we seek proposals for addressing such concerns. If we adopt these proposals, should we require mandatory detariffing?

258. The Competitive Market Test will likely find some business data services are non-competitive and draw boundaries for such findings on a level more granular than an MSA, the current pricing flexibility boundary. Accordingly, it is possible that such non-competitive business data services may currently be regulated under price

caps, Phase I pricing flexibility or Phase II pricing flexibility rules. Regardless of their current status, a non-competitive finding is a determination that we cannot rely on competition to constrain rates, terms and conditions to just and reasonable levels. We thus would need to have rules in place to constrain rates to just and reasonable levels. Our analysis of the application of the pricing flexibility rules indicates that customers have often benefited from individually negotiated contracts, and we believe that allowing such contracts will facilitate the development of a competitive market where possible. In order to constrain rates to just and reasonable levels and preserve the benefit of negotiated contracts where available, we propose to subject non-competitive TDM business data services, regardless of the currently applicable price cap and pricing flexibility rules, to a single, light-handed price cap regime that protects customers while providing flexibility to facilitate competition as it evolves. Specifically, we propose to apply the substance of the current Phase I pricing flexibility requirements to TDM business data services offered in non-competitive areas and seek comment on this proposal. Do parties support this proposal, why or why not? What concerns, administrative or otherwise, are raised by this proposal? Commenters asserting such services should be treated differently based on their current regulatory status should explain why that is consistent with the overall framework we propose in this order.

259. We seek comment on what changes to our current Phase I pricing flexibility rules are necessary to apply their substance to non-competitive TDM business data services. We propose to base our application of those rules and any necessary rule modifications on our authority under sections 201 and 202 of the Act. We seek comment on this proposal.

I. Additional Regulatory Incentives for Price Cap Carriers

260. We seek comment on potential regulatory forbearance and flexibility that will permit price cap incumbent LECs to continue to facilitate the technology transition, and to have increased incentives to develop innovative products and services.

261. We believe that implementation of our proposal for broadband data services offered in competitive markets would require that we forbear from the tariffing requirements in section 203 of the Act to the extent a BDS provider is currently subject to those requirements. We seek comment on this view and on

the benefits of detariffing to customers and carriers in a competitive area. We also seek comment on whether the Commission should forbear from sections 204 and 205 of the Act. We propose forbearing to the extent necessary to implement our proposed framework and to condition the forbearance on the continuing existence of a competitive market under the Competitive Market Test. We expressly contemplate that should a market become non-competitive, then all of the regulation of non-competitive markets would apply, including price cap regulation. We invite comment on these proposals and on whether such conditional forbearance would meet the statutory forbearance criteria.

262. We propose the Commission make a similar finding for BDS in non-competitive areas, including TDM services under the section 10(a) standard, allowing forbearance from the tariffing requirements of section 203 of the Act, but continuing to require price cap regulation. We seek comment on this proposal, including the costs and benefits of tariffing in a non-competitive market or a market in which competition may be evolving over time. How would such a regulatory approach work to meet the goals of our proposed framework? How should the Commission consider the effect of any such forbearance on competition as set forth in section 10(b)? If the Commission decides to forbear from section 203, should it require mandatory detariffing as it did with interstate interexchange services or should it allow permissive tariffing? What would be the benefits of either approach? Should the Commission consider forbearing from sections 204 and 205 for these services? Would relief from tariffing and other provisions meet the statutory forbearance criteria? Would such relief provide additional incentives for innovation and development of new services? How would such relief benefit consumers and businesses? If providers continue to file similar information with the Commission as a tariff, we ask whether this impacts commenters' views on the benefits and burdens of such approach.

263. While we find above that TDM and packet-based BDS are in the same product market, these services are not identical and we also recognize significant switching costs in the market. We believe our regulatory framework can and should take account of legitimate differences in the provision of these services. We seek comment on how to do so and how to harmonize our goal of technological neutrality with the application of price cap regulation? Are

there other methods of regulation that we should consider applying to these services or packet-based BDS to achieve our goals?

264. We note that without tariff filings, carriers would not receive the protection pursuant to section 204(a) of the Act of deemed lawful status for filing tariffs on a streamlined basis. This status immunizes carriers from damages liability for the periods in which the streamlined tariffs are in effect. We seek comment on how removing this protection would impact carriers and customers and the remedies available for rate challenges, including potential retroactive refunds. Should we provide carriers the option of permissive tariffing that would allow incumbent LECs to retain the "deemed lawful" protections of section 204(a) if the carrier should choose that option?

265. How, if at all, should the Commission modify its price cap filing rules in light of any forbearance from tariffing requirements? Under current rules, price cap incumbent LECs are required to submit a yearly filing to demonstrate that the carrier's API does not exceed its PCI. Would any additional rules be necessary to provide for adding new services? We seek comment on how any such filing should occur. Should the Commission maintain the yearly annual access charge filing requirement for this showing? Are there other alternatives that would ensure compliance with the price cap rules? Without tariff filings, how should the Commission best ensure that price cap incumbent LECs are offering rates consistent with their price cap filings? How should the Commission address a violation? Absent tariff filings, how would the Commission examine the newly filed rates or require the price cap incumbent LEC to modify its rates, to the extent appropriate, in the event of a violation? Would the Commission need to take formal action against the carrier and, if so, what form would that take? Are there other means for the Commission to review changes to a carrier's rates without the tariff filing requirement? Would the public disclosure requirement discussed below be sufficient?

266. What additional rules or procedures would be necessary to address rate or discount plan changes that would have resulted in a tariff filing absent forbearance? For example, under our current rules, a price cap LEC that grandfathers or otherwise discontinues a rate discount plan would be reducing the rate options for that service, which would constitute a rate restructure pursuant to section 61.49(e) of our rules, requiring the carrier to file supporting

materials sufficient to make the adjustments to each affected API and SBI. Such a change may or may not impact the price cap, depending on the impact such a change will have on customer choices going forward. For example, if the price cap LEC grandfathers a service that has no customers, it potentially will have no impact on the carrier's API or SBI. The same is not true when a carrier grandfathers a pricing plan with substantial customers. We seek comment on what, if any, new requirements are necessary to ensure effective operation of the price cap as carriers begin to discontinue various discount plans.

267. Even if the Commission decides to forbear from tariffing requirements, we understand the importance of transparency for the price cap incumbent LEC's TDM rates. Accordingly, we propose to require price cap incumbent LECs to publicly disclose the rates, terms, and conditions for services currently subject to tariffing requirements. We seek comment on this proposal. How should disclosure of rates be implemented? Is posting on a carrier's Web site sufficient? Should the public disclosure requirement be limited to non-competitive markets?

268. As the technology transition continues to progress, one option for promoting an efficient move from TDM services to packet-based business data services is to allow BDS providers, on an entirely voluntary basis, the option to place some or all of their packet-based services under price cap regulation by including them in the special access basket. Moving these services into the basket would create flexibility for the provider to make rate adjustments to services within the confines of the cap. This would allow carriers flexibility to set prices for both packet-based services and TDM services based on the relative cost of and demand for these services, as would be the case in a competitive market. At the same time, the price cap would minimize the carriers' ability to charge non-competitive prices. We seek comment on this voluntary option. If the Commission were to permit this option, how should it be implemented? Would it incentivize technology transitions? Should packet-based services be placed in a separate service category and/or subcategories within the special access basket? If so, should pricing flexibility within the packet-based service category and/or subcategories be limited to an annual increase of five percent, relative to the percentage change in the PCI, the same percentage that applies to existing special access service categories and subcategories? Should providers be able

to utilize this option at any time, or should there be a window or multiple windows of opportunity for when it would be available?

J. Forbearance Grants and Deemed Grants

1. Verizon Deemed Grant

269. As discussed above, in 2006 Verizon's Enterprise Broadband Forbearance Petition was deemed granted by operation of law after the Commission did not act on that petition within the statutory time limit. Consistent with Enterprise Broadband Forbearance Orders and with the Commission's unanimous commitment to apply the *AT&T Forbearance Order* to Verizon, we propose to reverse the Verizon deemed grant to the extent it encompasses forbearance relief not granted other carriers. We additionally propose that this decision would extend to Hawaiian Tel and to the legacy Verizon portions of FairPoint and Frontier, which were "Verizon telephone companies" at the time of the deemed grant. We invite comment on these proposals and ask whether such action would be consistent with the statutory forbearance criteria.

2. Other Forbearance Actions

270. In this FNPRM, we propose a number of interrelated changes to our regulation of business data services, many of which would allow or require carriers to detariff business data services that are presently provided subject to the tariffing requirements in section 203. Implementing those proposed changes would require that we expand the prior forbearance from section 203 to additional business data services providers and additional business data services. We believe we should expand that forbearance to the extent necessary to implement any regulatory changes we adopt in this proceeding. We invite comment on this view and on whether such forbearance would be consistent with the statutory forbearance criteria.

3. Legal Standard and Procedure

271. We believe that we have statutory authority to reverse a forbearance grant and a forbearance "deemed grant" by the failure of the Commission to act within the deadline of section 10(c). As the D.C. Circuit has observed, the Commission's forbearance actions—and the forbearance relief "deemed granted" to Verizon—are "not chiseled in marble." Instead, the Commission may "reassess" that forbearance as it "reasonably see[s] fit based on changes in market conditions, technical, capabilities, or policy

approaches to regulation" of business data services. We invite comment on the legal standard we would need to meet to reverse forbearance that has been deemed granted. Where, as here, Verizon does not oppose reversal of its deemed granted forbearance to place it on the same footing with other carriers as part of our proposed new framework, we believe that this standard is met. We invite comment on this analysis.

272. While we choose to address potential forbearance reversal in this rulemaking proceeding, we do not here consider whether rulemaking procedures are required for a reversal of forbearance. Nor are we, in taking this procedural approach here, classifying forbearance proceedings as necessarily requiring rulemaking procedures. The Commission has previously declined to classify forbearance as either adjudication or rulemaking. Rather, we find only that it is appropriate to address the proposed reversal here through a rulemaking proceeding.

K. Monitoring the Marketplace Going Forward

273. To update the analysis of the BDS industry going forward, we propose to conduct a periodic collection of data every three years, starting with the collection of year-end 2017 data. We seek comment on this proposal and alternative mechanisms that would assure our market definitions and competition analysis are updated on a regular basis.

1. Mandatory Periodic Collection

274. We propose to require BDS providers to submit information similar to what was collected previously for 2013, starting in 2018 and submitting 2017 data. In light of our experience with the data collection and analysis conducted, significantly paring down the number of providers required to report and the amount of reported information to those data categories most relevant to our analysis is appropriate. As with the earlier collection, we plan to focus on obtaining data on market structure, pricing, demand, and responses to competitive pressures. We propose, however, to eliminate many of the questions directed at providers related to terms and conditions, coverage footprints for "best efforts" services, marketing materials, disconnection policies, and short term and long-range promotional and advertising strategies. Our prior experience shows that the burden on filers of collecting such information going forward is not justified by the corresponding benefits of having this information for our core

market analysis. We do not underestimate the importance of best efforts service, however, but can account for this service by using the information already collected by the Commission annually pursuant to the FCC Form 477 (Local Telephone Competition and Broadband Reporting). We also propose to not collect data from BDS purchasers on a mandatory basis and to instead use voluntary survey sampling of purchasers as discussed below. These changes would substantially decrease the burden on filers while providing the Commission with the data necessary to periodically update its analysis.

2. Providers Covered by the Periodic Collection Requirement

275. We propose to narrow the scope of our collection to minimize burdens on smaller providers where possible without compromising our analysis. While we would require all price cap incumbent LECs to provide data, we are considering excluding from the periodic collection those competitive providers below a set threshold based on either location with connection, number of BDS customers, or BDS revenues.

276. We continue to analyze whether the exclusion of providers below various thresholds will significantly impact the results of our price regressions and other methods of analysis. We seek comment on this proposal generally and ask for commenters to suggest appropriate thresholds and to quantify the potential impact of any exclusion on our analysis of the BDS industry.

3. Required Data and Information

277. Based on what we have learned, the most valuable data to our analysis is on the providers' locations with connections and billing information. Accordingly, we propose to require incumbent LECs to report locations where they have connections and provided BDS over the applicable period consistent with the information collected for questions II.B.2–3 in the *2015 Collection*. Competitive providers would report locations where they have in-service or idle connections consistent with the reporting requirements for questions II.A.3–4 in the *2015 Collection*. The reported locations would include all locations to which the competitive provider has a fiber connection (whether idle or in-service). Providers would also submit monthly billing information for the applicable period to the billed circuit element and linked to the served location consistent with the reporting requirements for questions II.A.12–14 for competitive

providers and II.B.4–6 for incumbent LECs in the *2015 Collection*.

278. Other categories of information required from providers as taken from the *2015 Collection* would include the reporting of:

- BDS revenues for applicable period separated by customer and technology as required by questions II.A.15–16 for competitive providers and questions II.B.8–9 for incumbent LECs;
- Wire centers subject to price cap regulation by incumbent LECs for the applicable period as required by question II.B.7;
- Fiber network maps and information on fiber nodes by competitive providers as required by question II.A.5; and
- Information on recent RFPs from competitive providers as required by question II.A.11.

279. During the course of the Bureau's review of the collected 2013 data and ex parte discussions with stakeholders, we have also identified additional categories of questions or variations of previous categories of questions for which we propose to collect from all covered providers to assist with updating the Commission's analysis. These categories are as follows:

- A report on the different categories of BDS offered, including the different bandwidth speeds offered and the performance level guarantees offered with each type of service;
- Descriptions of how the provider structures its market operations to focus on particular classes of customers and the package of services marketed to each customer class;
- Information on BDS customer churn data, wins and losses over the applicable period, and the provider type to whom they are winning or losing customers to the extent known;
- Internal business documents assessing competitive pressures in the marketplace and changes to business operations in response to competitive pressures;
- Information to better track customer purchases across providers;
- Data on managed services purchased, which include a BDS component; and
- Information specific to the sale of leased lines to, and use by, carrier customers.

280. We believe this additional information would help the Commission further assess BDS demand by different classes of customers, the needs of those customer classes, and the level of competition in the marketplace. These changes would also address recommendations for improvements by our outside economic consultant. We

seek comment on the proposed data points discussed above. In addition, depending on the ultimate criteria adopted for a Competitive Market Test, we seek comment on alternative data points for collection so the Commission can better measure the effectiveness of the Competitive Market Test criteria and reevaluate and update its market definitions.

4. Voluntary Survey of Purchasers

281. We propose to not require BDS purchasers to submit data on a mandatory basis as with the previous collection given the burdens associated with such reporting compared to the value of the data for our analysis. The Commission instead proposes to conduct, with the assistance of a third-party, a voluntary survey of BDS purchasers, starting in 2017. The survey would include a sampling of wholesale and retail customers, a sampling of businesses of different sizes: small, medium, and large, and a sampling of mobile wireless providers.

282. The survey would collect information on, but not limited to, the BDS needs of the customer (*e.g.*, establishing virtual or private networks, accessing data centers or cloud-based services, accessing the Internet, and processing credit card transactions, among other information), the number of business locations requiring service, the performance levels required by the customer (*e.g.*, the service guarantees required on reliability, latency, packet loss, jitter, and mean time to repair), the purchaser's bandwidth requirements (symmetrical and/or asymmetrical), the BDS provider(s) they purchase from, the purchase and substitutability of "best efforts" services to meet their BDS needs, the extent to which they purchase BDS using fixed wireless, other potential BDS substitutes, number of available providers to fulfill BDS needs in a given area, types of BDS typically purchased by the customer (*e.g.*, Ethernet at certain speeds or DS1s and DS3s), prices typically paid for each type of BDS, any problems encountered with obtaining BDS (availability, timing, problematic terms and conditions, and the like), total BDS expenditures over the prior calendar year, the extent to which purchaser buys TDM products and plans to purchase such legacy services over the next three years. We seek comment on this proposal and on other potential categories of information to include in the survey.

5. Timing of the Collection

283. We believe that a periodic collection every three years is reasonable for our oversight needs. We

seek comment on this view. This collection period would minimize the burden on filers while still allowing the Commission to timely gather data to update its analysis and monitor competition. The BDS industry is changing and significant developments can occur from year-to-year. By collecting data every three years, the Commission can effectively take stock of these changing trends. That said, we propose to conduct the first periodic collection in 2018, for year-end 2017 data. This would mean more than a three-year gap from the 2013 data but is reasonable to give covered providers time to update their systems to better track the information requested.

III. Procedural Matters

A. Ex Parte Requirements

284. This proceeding shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s ex parte rules. Persons making ex parte presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral ex parte presentations are reminded that memoranda summarizing the presentation must (1) List all persons attending or otherwise participating in the meeting at which the ex parte presentation was made, and (2) summarize all data presented and arguments made during the presentation. Memoranda must contain a summary of the substance of the ex parte presentation and not merely a list of the subjects discussed. More than a one or two sentence description of the views and arguments presented is generally required. If the oral presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter’s written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during ex parte meetings are deemed to be written ex parte presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written ex parte presentations and

memoranda summarizing oral ex parte presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (e.g., .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission’s ex parte rules.

B. Paperwork Reduction Act Analysis

285. This FNPRM contains proposed new information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the OMB and other Federal agencies to comment on the information collection requirements contained in this document, as required by the PRA, Public Law 104–13. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107–198, see 44 U.S.C. 3506(c)(4), we seek specific comment on how we might further reduce the information collection burden for small business concerns with fewer than 25 employees.

C. Initial Regulatory Flexibility Analysis

286. As required by the Regulatory Flexibility Act of 1980 (RFA), the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) for this FNPRM, of the possible significant economic impact on small entities of the policies and rules addressed in this document. The IRFA is set forth as Appendix D. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the FNPRM provided on or before the dates indicated on the first page of this document. The Commission’s Consumer and Governmental Affairs Bureau, Reference Information Center, will send a copy of this FNPRM, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).

IV. Ordering Clauses

287. *Accordingly, it is ordered* that, pursuant to sections 1, 2, 4(i)–(j), 10, 201(b), 202(a), 203, 204(a), 205, 303(r), and 403 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 152, 154(i)–(j), 160, 201(b), 202(a), 203, 204(a), 205, 303(r), and 403 this *Tariff Investigation Order* and FNPRM is adopted.

288. *It is further ordered* that, pursuant to the applicable procedures set forth in sections 1.415 and 1.419 of the Commission’s Rules, 47 CFR 1.415, 1.419, interested parties may file

comments on the FNPRM and the application of the prohibition on all-or-nothing provisions in the tariff pricing plans subject to the tariff investigation to existing agreements on or before June 28, 2016, and reply comments on or before July 26, 2016.

289. *It is further ordered* that the Commission’s Consumer & Governmental Affairs Bureau, Reference Information Center, shall send a copy of this FNPRM, including the Initial Regulatory Flexibility Analyses to the Chief Counsel for Advocacy of the Small Business Administration.

Initial Regulatory Flexibility Act Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA), the Commission has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities from the policies and rules proposed in this FNPRM. The Commission requests written public comment on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the FNPRM provided in the item. The Commission will send a copy of the FNPRM, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA). In addition, the FNPRM and IRFA (or summaries thereof) will be published in the **Federal Register**.

A. Need for, and Objectives of, the Proposed Rules

2. *Technology-Neutral Framework*. In the FNPRM the Commission proposes to replace the existing, fragmented regulatory regime applicable to business data services (BDS) (i.e., special access services) with a new technology-neutral framework—the Competitive Market Test—which subjects non-competitive markets to tailored regulation, and competitive markets to minimal oversight. The pricing flexibility framework adopted in 1999 based regulatory relief from dominant carrier regulations on the presence of third-party collocations in the incumbent local exchange carrier’s (LEC’s) wire centers, which were considered proxies for competition in the marketplace. The Commission’s review of the 2015 Collection data supports the Commission’s earlier findings that collocations are a poor proxy for predicting the entry of facilities-based competition and the 1999 regime retained unnecessary regulation in areas that were likely competitive and deregulated over large areas where

competition was unlikely to occur. The Commission therefore proposes to abandon the collocation-based competition showings for determining regulatory relief for incumbent LECs and, instead, proposes to apply a new Competitive Market Test and seeks comment on a regulatory framework going forward.

3. *Competitive Analysis.* The Commission sets forth its analysis of the extent of competition in the supply of BDS, based on its analysis of the *2015 Collection*, and stakeholders' comments, and seeks comment on these findings. As far as the BDS product market, the Commission finds that "best efforts" BIAS do not appear to be a substitute for BDS whereas packet-based BDS, including HFC, is a substitute for TDM-based BDS, and product markets are subdivided by customer requirements and BDS performance characteristics. As far as the BDS geographic market, geographic concentration on any measure is high. The Commission found that supply of BDS with a bandwidth in excess of 50 Mbps tends to be more competitive than supply of BDS with lower bandwidths and allowing ILECs to offer contract tariffs benefits BDS purchasers and suppliers. The Commission seeks comment on how many competitive choices are necessary to ensure a competitive market, how important is potential competition, whether facility-based supply beyond half a mile has a material effect on prices and whether prices vary by the type of supply. Finally, the Commission seeks comment on a white paper prepared by an outside econometrician engaged by the Commission, Dr. Marc Rysman, conducting an independent competition analysis of the BDS market.

4. *Competitive Market Test.* As a replacement to the pricing flexibility rules, the Commission proposes a Competitive Market Test to determine the extent to which particular geographic areas and customer classes are subject to sufficient competition. In the FNPRM, the Commission proposes to define "business data services" (BDS) as a telecommunications service that transports data between two or more designated points at a rate of at least 1.5 Mbps in both directions (upstream/downstream) with prescribed performance requirements that include bandwidth, reliability, latency, jitter, and packet loss. The Commission, however, proposes excluding "best effort" services, e.g., mass market broadband Internet access service (BIAS) such as DSL and cable modem broadband access. The Commission is considering a test, which focuses on bandwidth, different customer classes,

business density, and the number of providers in areas consisting of census blocks where each block in the relevant market meets the specified criteria. The Commission asks about applying the Competitive Market Test across all areas served by price cap carriers every three years to account for changes in business density and the presence of facilities-based providers in geographic areas. The Commission asks to what extent and how the Commission should give providers and purchasers an opportunity to challenge the determinations rendered.

5. *Rules Applicable to All Markets.* The Commission proposes limited requirements applicable to all competitive and non-competitive BDS markets. First, the Commission seeks comment on prohibiting the use of nondisclosure agreements (NDAs) in BDS commercial agreements that restrict parties ability to provide information to the Commission, effectively require legal compulsion to produce information, and limit parties disclosure to a response to a request by the Commission (e.g. Notice of Proposed Rulemaking). Second, the Commission asks for comment on the appropriate treatment of the three types of tariff terms identified as unreasonable in the accompanying Tariff Investigation Order— "all-or-nothing" provisions, shortfall penalties, and early termination fees—as well as other contractual terms and conditions that have been subject to public comment. The Commission seeks comment on whether these provisions should be applied in non-competitive markets or more generally in all markets.

6. *Non-Competitive Markets.* The Commission proposes a tailored set of rules to safeguard customers in non-competitive markets, including the use of price regulation. In the FNPRM, the Commission proposes to continue to apply price cap regulation to time-division multiplexing (TDM)-based BDS in non-competitive markets, including non-competitive areas subject to pricing flexibility. The Commission also seeks comment on the application of rate regulation in non-competitive markets to packet-based BDS. The Commission proposes to incorporate into its price cap system a productivity-based "X-factor"—an adjustment to the price ceiling carriers can change reflecting the extent to which carriers overall outperform economy-wide productivity to ensure they are passing these gains to ratepayers while recovering their costs of service. We seek comment on the methodologies and data sources we should use to calculate the X-factor, including a staff-produced productivity

study, and the corresponding price cap adjustments as well as the components of the price cap system.

7. *Anchor Pricing and Benchmarking.* In the FNPRM, the Commission proposes to adopt an anchor pricing or benchmarking approach for BDS in non-competitive markets to replace the interim rule adopted in the Emerging Wireline Order. We likewise believe that that anchor or benchmark pricing would not be appropriate in competitive markets. The Commission considers three options: (1) Relying on regulated TDM-based services pricing to anchor prices for similar packet-based services, (2) establishing a price for packet-based BDS which could serve as an anchor for similar packet-based services, and (3) initially using reasonably comparable prices for TDM-based services as a benchmark for packet-based services to determine whether those rates are just and reasonable. The Commission proposes to adopt the third option but seeks comment on this proposal and any associated implementation issues. Upon implementation of anchor pricing or benchmarking, we propose to continue forbearing from tariffing all packet-based services and to expand forbearance to include all price cap carriers and all packet-based services because this will allow for greater commercial negotiation and innovation. For carriers subject to these requirements, we propose to require them to publically disclose their generally available rates, terms and conditions and seek comment on this proposal. The Commission seeks comment on whether any reporting requirements should be imposed and whether the complaint and declaratory ruling process is reasonable to ensure compliance with the proposed framework. The Commission also seeks proposals for ensuring just and reasonable wholesale rates applicable in non-competitive markets such as whether providers are charging higher rates for wholesale than retail BDS, whether we should require public disclosure of these rates.

8. *Terms and Conditions.* The Commission proposes generally prohibiting tariff and other contractual "tying" arrangements that condition the sale of BDS in a non-competitive market on the sale of such services in a competitive market. The Commission also proposes prohibiting automatic renewal provisions in tariff pricing plans and contract tariffs for the provision of TDM-based broadband data services in non-competitive areas. The Commission proposes to find unreasonable any provision that enables a provider to increase its rates upon the

expiration of either a tariff or commercial agreement for TDM-based or Ethernet-based service in non-competitive areas. Finally, the Commission seeks comment on tariff or commercial agreements containing percentage commitments to increase commitments if they reach a percentage threshold, overage penalties for going over volume commitments, automatic renewal provisions, undiscounted month-to-month pricing, and “evergreen” provisions that allow a purchaser to continue under same terms and conditions as under an expired agreement. In addition to seeking comment on the new regulatory framework, the Commission invites comment on alternative frameworks to apply to BDS.

9. *Pricing Deregulation.* The Commission proposes a set of deregulatory rules to govern competitive markets, using the Act’s statutory authority to ensure that the provision of telecommunications services is just and reasonable. The Commission proposes that tariffs should not be used as part of the regulation of any BDS. The Commission proposes removing TDM-based BDS determined to be competitive from price cap regulation and apply a competitive regulatory framework, proposing a path to detariff time-division multiplexing (TDM)-based services while maintaining price caps. The Commission proposes forbearing from tariffing requirements to the extent necessary to implement our proposed framework, conditioned on the continuing presence of competition. The Commission proposes a similar finding for BDS in non-competitive areas, including TDM-based services but continue to require price cap regulation. The Commission seeks comment on how the Commission should modify its filing rules if it forbears from tariffing requirements. The Commission proposes to apply Phase I pricing flexibility requirements to TDM-based BDS in non-competitive areas and seeks comment on this proposal and any necessary changes to this approach.

10. *Forbearance Grants and Deemed Grants.* In order for the new regulatory framework be applied in a technology-neutral manner, the Commission proposes to eliminate the current exemption for certain Verizon services from the basic provisions of the Act governing just and reasonable offerings of telecommunications services. The Commission invites comment on the legal standard we would need to meet to reverse Verizon’s forbearance that has been deemed granted, stating its belief that this standard is met in a rulemaking proceeding. Additionally, the

Commission proposes extending this decision to reverse forbearance to Hawaiian Telecom and to the legacy Verizon portions of FairPoint and Frontier and invites comment on these proposals. At the same time, the Commission proposes to expand forbearance to the extent necessary to implement any regulatory changes adopted in this proceeding, many of which would allow or require carriers to detariff BDS, and invites comment on this proposal.

B. Legal Basis

11. The legal basis for any action that may be taken pursuant to the FNPRM is contained in sections 1, 2, 4(i)–(j), 10, 201, 202(a), 203, 204(a), 205, 208, 251, 303(r), and 403 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 152, 154(i)–(j), 160, 201(b), 202(a), 203, 204(a), 205, 208, 251, 303(r), and 403.

C. Description and Estimate of the Number of Small Entities To Which the Rules Would Apply

12. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted. The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.” In addition, the term “small business” has the same meaning as the term “small-business concern” under the Small Business Act. A small-business concern” is one which: (1) Is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).

1. Total Small Entities

13. Our proposed action, if implemented, may, over time, affect small entities that are not easily categorized at present. We therefore describe here, at the outset, three comprehensive, statutory small entity size standards. First, nationwide, there are a total of approximately 28.2 million small businesses, according to the SBA, which represents 99.7% of all businesses in the United States. In addition, a “small organization” is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.” Nationwide, as of 2007, there were approximately 1,621,215 small organizations. Finally, the term “small governmental jurisdiction” is defined generally as “governments of cities, towns, townships, villages, school

districts, or special districts, with a population of less than fifty thousand.” Census Bureau data for 2011 indicate that there were 90,056 local governmental jurisdictions in the United States. We estimate that, of this total, as many as 89,327 entities may qualify as “small governmental jurisdictions.” Thus, we estimate that most governmental jurisdictions are small.

2. Broadband Internet Access Service Providers

14. The rules adopted in the Order apply to broadband Internet access service providers. The Economic Census places these firms, whose services might include Voice over Internet Protocol (VoIP), in either of two categories, depending on whether the service is provided over the provider’s own telecommunications facilities (e.g., cable and DSL ISPs), or over client-supplied telecommunications connections (e.g., dial-up ISPs). The former are within the category of Wired Telecommunications Carriers, which has an SBA small business size standard of 1,500 or fewer employees. These are also labeled “broadband.” The latter are within the category of All Other Telecommunications, which has a size standard of annual receipts of \$32.5 million or less. These are labeled non-broadband. According to Census Bureau data for 2007, there were 3,188 firms in the first category, total, that operated for the entire year. Of this total, 3144 firms had employment of 999 or fewer employees, and 44 firms had employment of 1,000 employees or more. For the second category, the data show that 2,383 firms operated for the entire year. Of those, 2,346 had annual receipts below \$32.5 million per year. Consequently, we estimate that the majority of broadband Internet access service provider firms are small entities.

15. The broadband Internet access service provider industry has changed since this definition was introduced in 2007. The data cited above may therefore include entities that no longer provide broadband Internet access service, and may exclude entities that now provide such service. To ensure that this FRFA describes the universe of small entities that our action might affect, we discuss in turn several different types of entities that might be providing broadband Internet access service. We note that, although we have no specific information on the number of small entities that provide broadband Internet access service over unlicensed spectrum, we include these entities in our Final Regulatory Flexibility Analysis.

3. Wireline Providers

16. *Incumbent Local Exchange Carriers (Incumbent LECs)*. Neither the Commission nor the SBA has developed a small business size standard specifically for incumbent LEC services. The closest applicable size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 1,307 carriers reported that they were incumbent LEC providers. Of these 1,307 carriers, an estimated 1,006 have 1,500 or fewer employees and 301 have more than 1,500 employees. Consequently, the Commission estimates that most providers of incumbent LEC service are small businesses that may be affected by rules adopted pursuant to the Order.

17. *Competitive Local Exchange Carriers (Competitive LECs), Competitive Access Providers (CAPs), Shared-Tenant Service Providers, and Other Local Service Providers*. Neither the Commission nor the SBA has developed a small business size standard specifically for these service providers. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 1,442 carriers reported that they were engaged in the provision of either competitive local exchange services or competitive access provider services. Of these 1,442 carriers, an estimated 1,256 have 1,500 or fewer employees and 186 have more than 1,500 employees. In addition, 17 carriers have reported that they are Shared-Tenant Service Providers, and all 17 are estimated to have 1,500 or fewer employees. In addition, 72 carriers have reported that they are Other Local Service Providers. Of the 72, seventy have 1,500 or fewer employees and two have more than 1,500 employees. Consequently, the Commission estimates that most providers of competitive local exchange service, competitive access providers, Shared-Tenant Service Providers, and other local service providers are small entities that may be affected by rules adopted pursuant to the Order.

18. We have included small incumbent LECs in this present RFA analysis. As noted above, a “small business” under the RFA is one that, inter alia, meets the pertinent small business size standard (e.g., a telephone communications business having 1,500 or fewer employees), and “is not dominant in its field of operation.” The

SBA’s Office of Advocacy contends that, for RFA purposes, small incumbent LECs are not dominant in their field of operation because any such dominance is not “national” in scope. We have therefore included small incumbent LECs in this RFA analysis, although we emphasize that this RFA action has no effect on Commission analyses and determinations in other, non-RFA contexts.

19. *Interexchange Carriers*. Neither the Commission nor the SBA has developed a small business size standard specifically for providers of interexchange services. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 359 carriers have reported that they are engaged in the provision of interexchange service. Of these, an estimated 317 have 1,500 or fewer employees and 42 have more than 1,500 employees. Consequently, the Commission estimates that the majority of interexchange carriers are small entities that may be affected by rules adopted pursuant to the Order.

20. *Operator Service Providers (OSPs)*. Neither the Commission nor the SBA has developed a small business size standard specifically for operator service providers. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 33 carriers have reported that they are engaged in the provision of operator services. Of these, an estimated 31 have 1,500 or fewer employees and two have more than 1,500 employees. Consequently, the Commission estimates that the majority of OSPs are small entities that may be affected by rules adopted pursuant to the Order.

21. *Prepaid Calling Card Providers*. Neither the Commission nor the SBA has developed a small business size standard specifically for prepaid calling card providers. The appropriate size standard under SBA rules is for the category Telecommunications Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 193 carriers have reported that they are engaged in the provision of prepaid calling cards. Of these, an estimated all 193 have 1,500 or fewer employees and none have more than 1,500 employees. Consequently, the Commission estimates that the majority of prepaid calling card providers are

small entities that may be affected by rules adopted pursuant to the Order.

22. *Local Resellers*. The SBA has developed a small business size standard for the category of Telecommunications Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 213 carriers have reported that they are engaged in the provision of local resale services. Of these, an estimated 211 have 1,500 or fewer employees and two have more than 1,500 employees. Consequently, the Commission estimates that the majority of local resellers are small entities that may be affected by rules adopted pursuant to the Order.

23. *Toll Resellers*. The SBA has developed a small business size standard for the category of Telecommunications Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 881 carriers have reported that they are engaged in the provision of toll resale services. Of these, an estimated 857 have 1,500 or fewer employees and 24 have more than 1,500 employees. Consequently, the Commission estimates that the majority of toll resellers are small entities that may be affected by rules adopted pursuant to the Order.

24. *Other Toll Carriers*. Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to Other Toll Carriers. This category includes toll carriers that do not fall within the categories of interexchange carriers, operator service providers, prepaid calling card providers, satellite service carriers, or toll resellers. The closest applicable size standard under SBA rules is for Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 284 companies reported that their primary telecommunications service activity was the provision of other toll carriage. Of these, an estimated 279 have 1,500 or fewer employees and five have more than 1,500 employees. Consequently, the Commission estimates that most Other Toll Carriers are small entities that may be affected by the rules and policies adopted pursuant to the Order.

25. *800 and 800-Like Service Subscribers*. Neither the Commission nor the SBA has developed a small business size standard specifically for 800 and 800-like service (toll free) subscribers. The appropriate size standard under SBA rules is for the

category Telecommunications Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees. The most reliable source of information regarding the number of these service subscribers appears to be data the Commission collects on the 800, 888, 877, and 866 numbers in use. According to our data, as of September 2009, the number of 800 numbers assigned was 7,860,000; the number of 888 numbers assigned was 5,588,687; the number of 877 numbers assigned was 4,721,866; and the number of 866 numbers assigned was 7,867,736. We do not have data specifying the number of these subscribers that are not independently owned and operated or have more than 1,500 employees, and thus are unable at this time to estimate with greater precision the number of toll free subscribers that would qualify as small businesses under the SBA size standard. Consequently, we estimate that there are 7,860,000 or fewer small entity 800 subscribers; 5,588,687 or fewer small entity 888 subscribers; 4,721,866 or fewer small entity 877 subscribers; and 7,867,736 or fewer small entity 866 subscribers.

4. Wireless Providers—Fixed and Mobile

26. The broadband Internet access service provider category covered by this Order may cover multiple wireless firms and categories of regulated wireless services. Thus, to the extent the wireless services listed below are used by wireless firms for broadband Internet access service, the proposed actions may have an impact on those small businesses as set forth above and further below. In addition, for those services subject to auctions, we note that, as a general matter, the number of winning bidders that claim to qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Also, the Commission does not generally track subsequent business size unless, in the context of assignments and transfers or reportable eligibility events, unjust enrichment issues are implicated.

27. *Wireless Telecommunications Carriers (except Satellite)*. Since 2007, the Census Bureau has placed wireless firms within this new, broad, economic census category. Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees. For the category of Wireless Telecommunications Carriers (except Satellite), census data for 2007 show that there were 1,383 firms that operated for the entire year. Of this total, 1,368

firms had employment of 999 or fewer employees and 15 had employment of 1,000 employees or more. Since all firms with fewer than 1,500 employees are considered small, given the total employment in the sector, we estimate that the vast majority of wireless firms are small. Wireless Communications Services. This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses. The Commission defined “small business” for the wireless communications services (WCS) auction as an entity with average gross revenues of \$40 million for each of the three preceding years, and a “very small business” as an entity with average gross revenues of \$15 million for each of the three preceding years. The SBA has approved these definitions. 218–219 MHz Service. The first auction of 218–219 MHz spectrum resulted in 170 entities winning licenses for 594 Metropolitan Statistical Area (MSA) licenses. Of the 594 licenses, 557 were won by entities qualifying as a small business. For that auction, the small business size standard was an entity that, together with its affiliates, has no more than a \$6 million net worth and, after federal income taxes (excluding any carry over losses), has no more than \$2 million in annual profits each year for the previous two years. In the 218–219 MHz Report and Order and Memorandum Opinion and Order, we established a small business size standard for a “small business” as an entity that, together with its affiliates and persons or entities that hold interests in such an entity and their affiliates, has average annual gross revenues not to exceed \$15 million for the preceding three years. A “very small business” is defined as an entity that, together with its affiliates and persons or entities that hold interests in such an entity and its affiliates, has average annual gross revenues not to exceed \$3 million for the preceding three years. These size standards will be used in future auctions of 218–219 MHz spectrum.

28. *2.3 GHz Wireless Communications Services*. This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses. The Commission defined “small business” for the wireless communications services (“WCS”) auction as an entity with average gross revenues of \$40 million for each of the three preceding years, and a “very small business” as an entity with average gross revenues of \$15 million for each of the three preceding years. The SBA has approved these definitions. The Commission auctioned geographic area licenses in

the WCS service. In the auction, which was conducted in 1997, there were seven bidders that won 31 licenses that qualified as very small business entities, and one bidder that won one license that qualified as a small business entity.

29. *1670–1675 MHz Services*. This service can be used for fixed and mobile uses, except aeronautical mobile. An auction for one license in the 1670–1675 MHz band was conducted in 2003. One license was awarded. The winning bidder was not a small entity.

30. *Wireless Telephony*. Wireless telephony includes cellular, personal communications services, and specialized mobile radio telephony carriers. As noted, the SBA has developed a small business size standard for Wireless Telecommunications Carriers (except Satellite). Under the SBA small business size standard, a business is small if it has 1,500 or fewer employees. According to Commission data, 413 carriers reported that they were engaged in wireless telephony. Of these, an estimated 261 have 1,500 or fewer employees and 152 have more than 1,500 employees. Therefore, a little less than one third of these entities can be considered small.

31. *Broadband Personal Communications Service*. The broadband personal communications services (PCS) spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission initially defined a “small business” for C- and F-Block licenses as an entity that has average gross revenues of \$40 million or less in the three previous calendar years. For F-Block licenses, an additional small business size standard for “very small business” was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than \$15 million for the preceding three calendar years. These small business size standards, in the context of broadband PCS auctions, have been approved by the SBA. No small businesses within the SBA-approved small business size standards bid successfully for licenses in Blocks A and B. There were 90 winning bidders that claimed small business status in the first two C-Block auctions. A total of 93 bidders that claimed small business status won approximately 40 percent of the 1,479 licenses in the first auction for the D, E, and F Blocks. On April 15, 1999, the Commission completed the reauction of 347 C-, D-, E-, and F-Block licenses in Auction No. 22. Of the 57 winning bidders in that auction, 48

claimed small business status and won 277 licenses.

32. On January 26, 2001, the Commission completed the auction of 422 C and F Block Broadband PCS licenses in Auction No. 35. Of the 35 winning bidders in that auction, 29 claimed small business status. Subsequent events concerning Auction 35, including judicial and agency determinations, resulted in a total of 163 C and F Block licenses being available for grant. On February 15, 2005, the Commission completed an auction of 242 C-, D-, E-, and F-Block licenses in Auction No. 58. Of the 24 winning bidders in that auction, 16 claimed small business status and won 156 licenses. On May 21, 2007, the Commission completed an auction of 33 licenses in the A, C, and F Blocks in Auction No. 71. Of the 12 winning bidders in that auction, five claimed small business status and won 18 licenses. On August 20, 2008, the Commission completed the auction of 20 C-, D-, E-, and F-Block Broadband PCS licenses in Auction No. 78. Of the eight winning bidders for Broadband PCS licenses in that auction, six claimed small business status and won 14 licenses.

33. *Specialized Mobile Radio Licenses.* The Commission awards "small entity" bidding credits in auctions for Specialized Mobile Radio (SMR) geographic area licenses in the 800 MHz and 900 MHz bands to firms that had revenues of no more than \$15 million in each of the three previous calendar years. The Commission awards "very small entity" bidding credits to firms that had revenues of no more than \$3 million in each of the three previous calendar years. The SBA has approved these small business size standards for the 900 MHz Service. The Commission has held auctions for geographic area licenses in the 800 MHz and 900 MHz bands. The 900 MHz SMR auction began on December 5, 1995, and closed on April 15, 1996. Sixty bidders claiming that they qualified as small businesses under the \$15 million size standard won 263 geographic area licenses in the 900 MHz SMR band. The 800 MHz SMR auction for the upper 200 channels began on October 28, 1997, and was completed on December 8, 1997. Ten bidders claiming that they qualified as small businesses under the \$15 million size standard won 38 geographic area licenses for the upper 200 channels in the 800 MHz SMR band. A second auction for the 800 MHz band was held on January 10, 2002 and closed on January 17, 2002 and included 23 BEA licenses. One bidder claiming small business status won five licenses.

34. The auction of the 1,053 800 MHz SMR geographic area licenses for the General Category channels began on August 16, 2000, and was completed on September 1, 2000. Eleven bidders won 108 geographic area licenses for the General Category channels in the 800 MHz SMR band and qualified as small businesses under the \$15 million size standard. In an auction completed on December 5, 2000, a total of 2,800 Economic Area licenses in the lower 80 channels of the 800 MHz SMR service were awarded. Of the 22 winning bidders, 19 claimed small business status and won 129 licenses. Thus, combining all four auctions, 41 winning bidders for geographic licenses in the 800 MHz SMR band claimed status as small businesses.

35. In addition, there are numerous incumbent site-by-site SMR licenses and licensees with extended implementation authorizations in the 800 and 900 MHz bands. We do not know how many firms provide 800 MHz or 900 MHz geographic area SMR service pursuant to extended implementation authorizations, nor how many of these providers have annual revenues of no more than \$15 million. One firm has over \$15 million in revenues. In addition, we do not know how many of these firms have 1,500 or fewer employees, which is the SBA-determined size standard. We assume, for purposes of this analysis, that all of the remaining extended implementation authorizations are held by small entities, as defined by the SBA.

36. *Lower 700 MHz Band Licenses.* The Commission previously adopted criteria for defining three groups of small businesses for purposes of determining their eligibility for special provisions such as bidding credits. The Commission defined a "small business" as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$40 million for the preceding three years. A "very small business" is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for the preceding three years. Additionally, the lower 700 MHz Service had a third category of small business status for Metropolitan/Rural Service Area (MSA/RSA) licenses—"entrepreneur"—which is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$3 million for the preceding three years. The SBA approved these small size standards. An auction of 740 licenses (one license in each of the 734 MSAs/RSAs and one license in each of

the six Economic Area Groupings (EAGs)) commenced on August 27, 2002, and closed on September 18, 2002. Of the 740 licenses available for auction, 484 licenses were won by 102 winning bidders. Seventy-two of the winning bidders claimed small business, very small business or entrepreneur status and won a total of 329 licenses. A second auction commenced on May 28, 2003, closed on June 13, 2003, and included 256 licenses: 5 EAG licenses and 476 Cellular Market Area licenses. Seventeen winning bidders claimed small or very small business status and won 60 licenses, and nine winning bidders claimed entrepreneur status and won 154 licenses. On July 26, 2005, the Commission completed an auction of 5 licenses in the Lower 700 MHz band (Auction No. 60). There were three winning bidders for five licenses. All three winning bidders claimed small business status.

37. In 2007, the Commission reexamined its rules governing the 700 MHz band in the 700 MHz Second Report and Order. An auction of 700 MHz licenses commenced January 24, 2008 and closed on March 18, 2008, which included, 176 Economic Area licenses in the A Block, 734 Cellular Market Area licenses in the B Block, and 176 EA licenses in the E Block. Twenty winning bidders, claiming small business status (those with attributable average annual gross revenues that exceed \$15 million and do not exceed \$40 million for the preceding three years) won 49 licenses. Thirty three winning bidders claiming very small business status (those with attributable average annual gross revenues that do not exceed \$15 million for the preceding three years) won 325 licenses.

38. *Upper 700 MHz Band Licenses.* In the 700 MHz Second Report and Order, the Commission revised its rules regarding Upper 700 MHz licenses. On January 24, 2008, the Commission commenced Auction 73 in which several licenses in the Upper 700 MHz band were available for licensing: 12 Regional Economic Area Grouping licenses in the C Block, and one nationwide license in the D Block. The auction concluded on March 18, 2008, with 3 winning bidders claiming very small business status (those with attributable average annual gross revenues that do not exceed \$15 million for the preceding three years) and winning five licenses.

39. *700 MHz Guard Band Licensees.* In 2000, in the 700 MHz Guard Band Order, the Commission adopted size standards for "small businesses" and "very small businesses" for purposes of

determining their eligibility for special provisions such as bidding credits and installment payments. A small business in this service is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$40 million for the preceding three years. Additionally, a very small business is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for the preceding three years. SBA approval of these definitions is not required. An auction of 52 Major Economic Area licenses commenced on September 6, 2000, and closed on September 21, 2000. Of the 104 licenses auctioned, 96 licenses were sold to nine bidders. Five of these bidders were small businesses that won a total of 26 licenses. A second auction of 700 MHz Guard Band licenses commenced on February 13, 2001, and closed on February 21, 2001. All eight of the licenses auctioned were sold to three bidders. One of these bidders was a small business that won a total of two licenses.

40. *Cellular Radiotelephone Service.* Auction 77 was held to resolve one group of mutually exclusive applications for Cellular Radiotelephone Service licenses for unserved areas in New Mexico. Bidding credits for designated entities were not available in Auction 77. In 2008, the Commission completed the closed auction of one unserved service area in the Cellular Radiotelephone Service, designated as Auction 77. Auction 77 concluded with one provisionally winning bid for the unserved area totaling \$25,002.

41. *Private Land Mobile Radio ("PLMR").* PLMR systems serve an essential role in a range of industrial, business, land transportation, and public safety activities. These radios are used by companies of all sizes operating in all U.S. business categories, and are often used in support of the licensee's primary (non-telecommunications) business operations. For the purpose of determining whether a licensee of a PLMR system is a small business as defined by the SBA, we use the broad census category, Wireless Telecommunications Carriers (except Satellite). This definition provides that a small entity is any such entity employing no more than 1,500 persons. The Commission does not require PLMR licensees to disclose information about number of employees, so the Commission does not have information that could be used to determine how many PLMR licensees constitute small entities under this definition. We note that PLMR licensees generally use the

licensed facilities in support of other business activities, and therefore, it would also be helpful to assess PLMR licensees under the standards applied to the particular industry subsector to which the licensee belongs.

42. As of March 2010, there were 424,162 PLMR licensees operating 921,909 transmitters in the PLMR bands below 512 MHz. We note that any entity engaged in a commercial activity is eligible to hold a PLMR license, and that any revised rules in this context could therefore potentially impact small entities covering a great variety of industries.

43. *Rural Radiotelephone Service.* The Commission has not adopted a size standard for small businesses specific to the Rural Radiotelephone Service. A significant subset of the Rural Radiotelephone Service is the Basic Exchange Telephone Radio System (BETRS). In the present context, we will use the SBA's small business size standard applicable to Wireless Telecommunications Carriers (except Satellite), *i.e.*, an entity employing no more than 1,500 persons. There are approximately 1,000 licensees in the Rural Radiotelephone Service, and the Commission estimates that there are 1,000 or fewer small entity licensees in the Rural Radiotelephone Service that may be affected by the rules and policies proposed herein.

44. *Air-Ground Radiotelephone Service.* The Commission has previously used the SBA's small business size standard applicable to Wireless Telecommunications Carriers (except Satellite), *i.e.*, an entity employing no more than 1,500 persons. There are approximately 100 licensees in the Air-Ground Radiotelephone Service, and under that definition, we estimate that almost all of them qualify as small entities under the SBA definition. For purposes of assigning Air-Ground Radiotelephone Service licenses through competitive bidding, the Commission has defined "small business" as an entity that, together with controlling interests and affiliates, has average annual gross revenues for the preceding three years not exceeding \$40 million. A "very small business" is defined as an entity that, together with controlling interests and affiliates, has average annual gross revenues for the preceding three years not exceeding \$15 million. These definitions were approved by the SBA. In May 2006, the Commission completed an auction of nationwide commercial Air-Ground Radiotelephone Service licenses in the 800 MHz band (Auction No. 65). On June 2, 2006, the auction closed with two winning bidders winning two Air-

Ground Radiotelephone Services licenses. Neither of the winning bidders claimed small business status.

45. *Aviation and Marine Radio Services.* Small businesses in the aviation and marine radio services use a very high frequency (VHF) marine or aircraft radio and, as appropriate, an emergency position-indicating radio beacon (and/or radar) or an emergency locator transmitter. The Commission has not developed a small business size standard specifically applicable to these small businesses. For purposes of this analysis, the Commission uses the SBA small business size standard for the category Wireless Telecommunications Carriers (except Satellite), which is 1,500 or fewer employees. Census data for 2007, which supersede data contained in the 2002 Census, show that there were 1,383 firms that operated that year. Of those 1,383, 1,368 had fewer than 100 employees, and 15 firms had more than 100 employees. Most applicants for recreational licenses are individuals. Approximately 581,000 ship station licensees and 131,000 aircraft station licensees operate domestically and are not subject to the radio carriage requirements of any statute or treaty. For purposes of our evaluations in this analysis, we estimate that there are up to approximately 712,000 licensees that are small businesses (or individuals) under the SBA standard. In addition, between December 3, 1998 and December 14, 1998, the Commission held an auction of 42 VHF Public Coast licenses in the 157.1875–157.4500 MHz (ship transmit) and 161.775–162.0125 MHz (coast transmit) bands. For purposes of the auction, the Commission defined a "small" business as an entity that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed \$15 million dollars. In addition, a "very small" business is one that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed \$3 million dollars. There are approximately 10,672 licensees in the Marine Coast Service, and the Commission estimates that almost all of them qualify as "small" businesses under the above special small business size standards and may be affected by rules adopted pursuant to the Order.

46. *Advanced Wireless Services (AWS) (1710–1755 MHz and 2110–2155 MHz bands (AWS-1); 1915–1920 MHz, 1995–2000 MHz, 2020–2025 MHz and 2175–2180 MHz bands (AWS-2); 2155–2175 MHz band (AWS-3)).* For the AWS-1 bands, the Commission has defined a "small business" as an entity

with average annual gross revenues for the preceding three years not exceeding \$40 million, and a “very small business” as an entity with average annual gross revenues for the preceding three years not exceeding \$15 million. For AWS-2 and AWS-3, although we do not know for certain which entities are likely to apply for these frequencies, we note that the AWS-1 bands are comparable to those used for cellular service and personal communications service. The Commission has not yet adopted size standards for the AWS-2 or AWS-3 bands but proposes to treat both AWS-2 and AWS-3 similarly to broadband PCS service and AWS-1 service due to the comparable capital requirements and other factors, such as issues involved in relocating incumbents and developing markets, technologies, and services.

47. *3650–3700 MHz band.* In March 2005, the Commission released a Report and Order and Memorandum Opinion and Order that provides for nationwide, non-exclusive licensing of terrestrial operations, utilizing contention-based technologies, in the 3650 MHz band (*i.e.*, 3650–3700 MHz). As of April 2010, more than 1270 licenses have been granted and more than 7433 sites have been registered. The Commission has not developed a definition of small entities applicable to 3650–3700 MHz band nationwide, non-exclusive licenses. However, we estimate that the majority of these licenses are Internet Access Service Providers (ISPs) and that most of those licensees are small businesses.

48. *Fixed Microwave Services.* Microwave services include common carrier, private-operational fixed, and broadcast auxiliary radio services. They also include the Local Multipoint Distribution Service (LMDS), the Digital Electronic Message Service (DEMS), and the 24 GHz Service, where licensees can choose between common carrier and non-common carrier status. At present, there are approximately 36,708 common carrier fixed licenses and 59,291 private operational-fixed licenses and broadcast auxiliary radio licenses in the microwave services. There are approximately 135 LMDS licensees, three DEMS licensees, and three 24 GHz licensees. The Commission has not yet defined a small business with respect to microwave services. For purposes of the FRFA, we will use the SBA’s definition applicable to Wireless Telecommunications Carriers (except satellite)—*i.e.*, an entity with no more than 1,500 persons. Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees. The

Commission does not have data specifying the number of these licensees that have more than 1,500 employees, and thus is unable at this time to estimate with greater precision the number of fixed microwave service licensees that would qualify as small business concerns under the SBA’s small business size standard. Consequently, the Commission estimates that there are up to 36,708 common carrier fixed licenses and up to 59,291 private operational-fixed licenses and broadcast auxiliary radio licenses in the microwave services that may be small and may be affected by the rules and policies adopted herein. We note, however, that the common carrier microwave fixed licensee category includes some large entities.

49. *Offshore Radiotelephone Service.* This service operates on several UHF television broadcast channels that are not used for television broadcasting in the coastal areas of states bordering the Gulf of Mexico. There are presently approximately 55 licensees in this service. The Commission is unable to estimate at this time the number of licensees that would qualify as small under the SBA’s small business size standard for the category of Wireless Telecommunications Carriers (except Satellite). Under that SBA small business size standard, a business is small if it has 1,500 or fewer employees. Census data for 2007, which supersede data contained in the 2002 Census, show that there were 1,383 firms that operated that year. Of those 1,383, 1,368 had fewer than 100 employees, and 15 firms had more than 100 employees. Thus, under this category and the associated small business size standard, the majority of firms can be considered small.

50. *39 GHz Service.* The Commission created a special small business size standard for 39 GHz licenses—an entity that has average gross revenues of \$40 million or less in the three previous calendar years. An additional size standard for “very small business” is: An entity that, together with affiliates, has average gross revenues of not more than \$15 million for the preceding three calendar years. The SBA has approved these small business size standards. The auction of the 2,173 39 GHz licenses began on April 12, 2000 and closed on May 8, 2000. The 18 bidders who claimed small business status won 849 licenses. Consequently, the Commission estimates that 18 or fewer 39 GHz licensees are small entities that may be affected by rules adopted pursuant to the Order.

51. *Broadband Radio Service and Educational Broadband Service.*

Broadband Radio Service systems, previously referred to as Multipoint Distribution Service (MDS) and Multichannel Multipoint Distribution Service (MMDS) systems, and “wireless cable,” transmit video programming to subscribers and provide two-way high speed data operations using the microwave frequencies of the Broadband Radio Service (BRS) and Educational Broadband Service (EBS) (previously referred to as the Instructional Television Fixed Service (ITFS)). In connection with the 1996 BRS auction, the Commission established a small business size standard as an entity that had annual average gross revenues of no more than \$40 million in the previous three calendar years. The BRS auctions resulted in 67 successful bidders obtaining licensing opportunities for 493 Basic Trading Areas (BTAs). Of the 67 auction winners, 61 met the definition of a small business. BRS also includes licensees of stations authorized prior to the auction. At this time, we estimate that of the 61 small business BRS auction winners, 48 remain small business licensees. In addition to the 48 small businesses that hold BTA authorizations, there are approximately 392 incumbent BRS licensees that are considered small entities. After adding the number of small business auction licensees to the number of incumbent licensees not already counted, we find that there are currently approximately 440 BRS licensees that are defined as small businesses under either the SBA or the Commission’s rules.

52. In 2009, the Commission conducted Auction 86, the sale of 78 licenses in the BRS areas. The Commission offered three levels of bidding credits: (i) A bidder with attributed average annual gross revenues that exceed \$15 million and do not exceed \$40 million for the preceding three years (small business) received a 15 percent discount on its winning bid; (ii) a bidder with attributed average annual gross revenues that exceed \$3 million and do not exceed \$15 million for the preceding three years (very small business) received a 25 percent discount on its winning bid; and (iii) a bidder with attributed average annual gross revenues that do not exceed \$3 million for the preceding three years (entrepreneur) received a 35 percent discount on its winning bid. Auction 86 concluded in 2009 with the sale of 61 licenses. Of the ten winning bidders, two bidders that claimed small business status won 4 licenses; one bidder that claimed very small business status won three licenses; and two bidders that

claimed entrepreneur status won six licenses.

53. In addition, the SBA's Cable Television Distribution Services small business size standard is applicable to EBS. There are presently 2,436 EBS licensees. All but 100 of these licenses are held by educational institutions. Educational institutions are included in this analysis as small entities. Thus, we estimate that at least 2,336 licensees are small businesses. Since 2007, Cable Television Distribution Services have been defined within the broad economic census category of Wired Telecommunications Carriers; that category is defined as follows: "This industry comprises establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies." The SBA has developed a small business size standard for this category, which is: All such firms having 1,500 or fewer employees. To gauge small business prevalence for these cable services we must, however, use the most current census data that are based on the previous category of Cable and Other Program Distribution and its associated size standard; that size standard was: All such firms having \$13.5 million or less in annual receipts. According to Census Bureau data for 2007, there were a total of 996 firms in this category that operated for the entire year. Of this total, 948 firms had annual receipts of under \$10 million, and 48 firms had receipts of \$10 million or more but less than \$25 million. Thus, the majority of these firms can be considered small.

54. *Narrowband Personal Communications Services.* In 1994, the Commission conducted an auction for Narrowband PCS licenses. A second auction was also conducted later in 1994. For purposes of the first two Narrowband PCS auctions, "small businesses" were entities with average gross revenues for the prior three calendar years of \$40 million or less. Through these auctions, the Commission awarded a total of 41 licenses, 11 of which were obtained by four small businesses. To ensure meaningful participation by small business entities in future auctions, the Commission adopted a two-tiered small business size standard in the Narrowband PCS Second Report and Order. A "small business" is an entity that, together with affiliates and controlling interests, has average gross

revenues for the three preceding years of not more than \$40 million. A "very small business" is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than \$15 million. The SBA has approved these small business size standards. A third auction was conducted in 2001. Here, five bidders won 317 (Metropolitan Trading Areas and nationwide) licenses. Three of these claimed status as a small or very small entity and won 311 licenses.

55. *Paging (Private and Common Carrier).* In the Paging Third Report and Order, we developed a small business size standard for "small businesses" and "very small businesses" for purposes of determining their eligibility for special provisions such as bidding credits and installment payments. A "small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$15 million for the preceding three years. Additionally, a "very small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$3 million for the preceding three years. The SBA has approved these small business size standards. According to Commission data, 291 carriers have reported that they are engaged in Paging or Messaging Service. Of these, an estimated 289 have 1,500 or fewer employees, and two have more than 1,500 employees. Consequently, the Commission estimates that the majority of paging providers are small entities that may be affected by our action. An auction of Metropolitan Economic Area licenses commenced on February 24, 2000, and closed on March 2, 2000. Of the 2,499 licenses auctioned, 985 were sold. Fifty-seven companies claiming small business status won 440 licenses. A subsequent auction of MEA and Economic Area ("EA") licenses was held in the year 2001. Of the 15,514 licenses auctioned, 5,323 were sold. One hundred thirty-two companies claiming small business status purchased 3,724 licenses. A third auction, consisting of 8,874 licenses in each of 175 EAs and 1,328 licenses in all but three of the 51 MEAs, was held in 2003. Seventy-seven bidders claiming small or very small business status won 2,093 licenses. A fourth auction, consisting of 9,603 lower and upper paging band licenses was held in the year 2010. Twenty-nine bidders claiming small or very small business status won 3,016 licenses.

56. *220 MHz Radio Service—Phase I Licensees.* The 220 MHz service has both Phase I and Phase II licenses. Phase

I licensing was conducted by lotteries in 1992 and 1993. There are approximately 1,515 such non-nationwide licensees and four nationwide licensees currently authorized to operate in the 220 MHz band. The Commission has not developed a small business size standard for small entities specifically applicable to such incumbent 220 MHz Phase I licensees. To estimate the number of such licensees that are small businesses, we apply the small business size standard under the SBA rules applicable to Wireless

Telecommunications Carriers (except Satellite). Under this category, the SBA deems a wireless business to be small if it has 1,500 or fewer employees. The Commission estimates that nearly all such licensees are small businesses under the SBA's small business size standard that may be affected by rules adopted pursuant to the Order.

57. *220 MHz Radio Service—Phase II Licensees.* The 220 MHz service has both Phase I and Phase II licenses. The Phase II 220 MHz service is subject to spectrum auctions. In the 220 MHz Third Report and Order, we adopted a small business size standard for "small" and "very small" businesses for purposes of determining their eligibility for special provisions such as bidding credits and installment payments. This small business size standard indicates that a "small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$15 million for the preceding three years. A "very small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues that do not exceed \$3 million for the preceding three years. The SBA has approved these small business size standards. Auctions of Phase II licenses commenced on September 15, 1998, and closed on October 22, 1998. In the first auction, 908 licenses were auctioned in three different-sized geographic areas: Three nationwide licenses, 30 Regional Economic Area Group (EAG) Licenses, and 875 Economic Area (EA) Licenses. Of the 908 licenses auctioned, 693 were sold. Thirty-nine small businesses won licenses in the first 220 MHz auction. The second auction included 225 licenses: 216 EA licenses and 9 EAG licenses. Fourteen companies claiming small business status won 158 licenses.

5. Satellite Service Providers

58. *Satellite Telecommunications Providers.* Two economic census categories address the satellite industry. The first category has a small business size standard of \$30 million or less in average annual receipts, under SBA

rules. The second has a size standard of \$30 million or less in annual receipts.

59. The category of Satellite Telecommunications “comprises establishments primarily engaged in providing telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications.” For this category, Census Bureau data for 2007 show that there were a total of 570 firms that operated for the entire year. Of this total, 530 firms had annual receipts of under \$30 million, and 40 firms had receipts of over \$30 million. Consequently, we estimate that the majority of Satellite Telecommunications firms are small entities that might be affected by our action.

60. The second category of Other Telecommunications comprises, *inter alia*, “establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems.” For this category, Census Bureau data for 2007 show that there were a total of 1,274 firms that operated for the entire year. Of this total, 1,252 had annual receipts below \$25 million per year. Consequently, we estimate that the majority of All Other Telecommunications firms are small entities that might be affected by our action.

6. Cable Service Providers

61. Because section 706 requires us to monitor the deployment of broadband using any technology, we anticipate that some broadband service providers may not provide telephone service. Accordingly, we describe below other types of firms that may provide broadband services, including cable companies, MDS providers, and utilities, among others.

62. *Cable and Other Program Distributors*. Since 2007, these services have been defined within the broad economic census category of Wired Telecommunications Carriers; that category is defined as follows: “This industry comprises establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they

own and/or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies.” The SBA has developed a small business size standard for this category, which is: All such firms having 1,500 or fewer employees. To gauge small business prevalence for these cable services we must, however, use current census data that are based on the previous category of Cable and Other Program Distribution and its associated size standard; that size standard was: All such firms having \$13.5 million or less in annual receipts. According to Census Bureau data for 2007, there were a total of 2,048 firms in this category that operated for the entire year. Of this total, 1,393 firms had annual receipts of under \$10 million, and 655 firms had receipts of \$10 million or more. Thus, the majority of these firms can be considered small.

63. *Cable Companies and Systems*. The Commission has also developed its own small business size standards, for the purpose of cable rate regulation. Under the Commission’s rules, a “small cable company” is one serving 400,000 or fewer subscribers, nationwide. Industry data that there are currently 4,600 active cable systems in the United States. Of this total, all but nine cable operators are small under the 400,000 subscriber size standard. In addition, under the Commission’s rules, a “small system” is a cable system serving 15,000 or fewer subscribers. Current Commission records show 4,945 cable systems nationwide. Of this total, 4,380 cable systems have less than 20,000 subscribers, and 565 systems have 20,000 or more subscribers, based on the same records. Thus, under this standard, we estimate that most cable systems are small entities.

64. *Cable System Operators*. The Communications Act of 1934, as amended, also contains a size standard for small cable system operators, which is “a cable operator that, directly or through an affiliate, serves in the aggregate fewer than 1 percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed \$250,000,000.” The Commission has determined that an operator serving fewer than 677,000 subscribers shall be deemed a small operator, if its annual revenues, when combined with the total annual revenues of all its affiliates, do not exceed \$250 million in the aggregate. Based on available data, we find that all but ten incumbent cable operators are small entities under this size standard.

We note that the Commission neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed \$250 million, and therefore we are unable to estimate more accurately the number of cable system operators that would qualify as small under this size standard.

65. The open video system (OVS) framework was established in 1996, and is one of four statutorily recognized options for the provision of video programming services by local exchange carriers. The OVS framework provides opportunities for the distribution of video programming other than through cable systems. Because OVS operators provide subscription services, OVS falls within the SBA small business size standard covering cable services, which is “Wired Telecommunications Carriers.” The SBA has developed a small business size standard for this category, which is: All such firms having 1,500 or fewer employees. According to Census Bureau data for 2007, there were a total of 955 firms in this previous category that operated for the entire year. Of this total, 939 firms had employment of 999 or fewer employees, and 16 firms had employment of 1,000 employees or more. Thus, under this second size standard, most cable systems are small and may be affected by rules adopted pursuant to the Order. In addition, we note that the Commission has certified some OVS operators, with some now providing service. Broadband service providers (BSPs) are currently the only significant holders of OVS certifications or local OVS franchises. The Commission does not have financial or employment information regarding the entities authorized to provide OVS, some of which may not yet be operational. Thus, again, at least some of the OVS operators may qualify as small entities.

7. Electric Power Generators, Transmitters, and Distributors

66. *Electric Power Generators, Transmitters, and Distributors*. The Census Bureau defines an industry group comprised of “establishments, primarily engaged in generating, transmitting, and/or distributing electric power. Establishments in this industry group may perform one or more of the following activities: (1) Operate generation facilities that produce electric energy; (2) operate transmission systems that convey the electricity from the generation facility to the distribution system; and (3) operate distribution systems that convey electric power received from the generation facility or

the transmission system to the final consumer.” The SBA has developed a small business size standard for firms in this category: “A firm is small if, including its affiliates, it is primarily engaged in the generation, transmission, and/or distribution of electric energy for sale and its total electric output for the preceding fiscal year did not exceed 4 million megawatt hours.” Census Bureau data for 2007 show that there were 1,174 firms that operated for the entire year in this category. Of these firms, 50 had 1,000 employees or more, and 1,124 had fewer than 1,000 employees. Based on this data, a majority of these firms can be considered small.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

67. The Commission proposes to prohibit the use of non-disclosure agreements that restrict parties to a BDS tariff or commercial agreement from sharing the terms of such agreements with the Commission. In the event of detariffing, the Commission proposes on requiring price cap incumbent LECs to publicly disclose the rates, terms and conditions for services currently subject to tariffing requirements and seeks comment on this proposal.

68. In order to calculate a productivity X-factor, the Commission invites comment on whether we should require price cap LECs to submit their expense matrix data from 2005 to 2015 and, if so, whether should we require that these data be reported using the categories previously required under the Commission’s rules and, if not, what categories should we specify, and whether the benefits from these data outweigh the burdens. The Commission asks whether we should require the price cap LECs to submit cost studies to help us determine business data services productivity growth and if so, what methodology should we specify for those costs studies. The Commission asks whether the benefits from relying on company-specific data from these cost studies, as opposed to economy-wide or industry-wide data, outweigh the burdens. Furthermore, the Commission proposes that if it adopts a new X-factor or otherwise requires adjustments to the price cap indices, price cap carriers would implement the associated rate decreases by submitting Tariff Review Plans (TRPs) and special access tariff revisions for all rate elements associated with special access and seeks comment on this proposal.

69. In the FNPRM, the Commission proposes to require providers of BDS subject to anchor pricing or

benchmarking to publically disclose generally available terms and conditions. The Commission seeks comment on whether any requirements should be imposed to ensure compliance with our proposed rules and, if so, what form they should take. The Commission seeks comment on whether we should require compliance certification from providers as well as any other requirements we should consider and the costs and benefits.

70. The Commission also proposes a future periodic data collection that will allow the Commission to update periodically its identification of competitive and non-competitive markets. Beginning in 2018 (*i.e.*, year-end 2017 data), the Commission proposes collecting data every three years from incumbent LEC providers to update the Commission’s competitive analysis and monitor the BDS marketplace. The Commission proposes essentially a paired-down version of the 2015 Collection. Specifically, the Commission proposes collecting data on locations with connections, fiber routes, and monthly billing information, revenues, requests for proposals, and wire center locations by regulatory type as well as new categories of information for collection, *e.g.*, churn data, data on managed services, internal documents showing competitive pressure assessments and operational responses. Meanwhile, the Commission proposes omitting purchasers of BDS from the mandatory collection, instead proposing to hire a third-party to voluntarily survey purchaser customer classes.

E. Steps Taken To Minimize the Significant Economic Impact on Small Entities and Significant Alternatives Considered

71. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include (among others) the following four alternatives: (1) The establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities. We expect to consider all of these factors when we have received substantive comment from the public and potentially affected entities.

72. The Commission proposes to apply a Competitive Market Test to determine whether there is sufficient

competition to constrain prices for BDS. The Commission proposes two alternatives for applying the Competitive Market Test, favoring one based on bright-line triggers—business density and the number of competitors—which will offer clearer rules and be administratively less burdensome for providers to present the case.

73. The Commission seeks comment on whether data from various sources proposed in a staff study provide a reasonable basis for calculating a productivity-based X factor but seeks comment on alternative sources of data that would more precisely calculate productivity increases in the provision of business data services. The Commission seeks comment on whether the additional precision associated with obtaining those data and using them to calculate a productivity-based X-factor outweigh the associated burdens. In particular, the Commission proposes calculating the X-factor using economy-wide and industry-wide data as opposed to company-specific data from cost studies, but asks whether the added precision from company-wide data outweighs the burdens.

74. For competitive areas, the Commission proposes removing significant regulatory burdens imposed on BDS providers. Specifically, the Commission proposes removing TDM-based BDS determined to be competitive under the Competitive Market Test from price cap regulation and apply a competitive regulatory framework—proposing a path to detariff TDM-based services while maintaining price caps on a detariffed basis. The Commission also seeks comment on a voluntary mechanism that would provide carriers with flexibility to adjust price cap rates for TDM-based services when replacement packet-based services are available.

75. The Commission recognizes that applying heightened regulation to services largely unregulated previously may impose burdens on providers and purchasers. The Commission, therefore, asks commenters whether there should be an implementation period to give providers sufficient time to bring markets into compliance with the applicable regulatory obligations, and seek comment on the length of any implementation period.

76. As noted above, in the FNPRM, the Commission seeks comment on whether we should extend the Tariff Investigation Order’s prohibition on all-or-nothing provisions a general prohibition for business data services, including both tariffed offerings and commercial agreements and whether

such a prohibition should be imposed in noncompetitive markets or in all markets. The Commission asks what additional management or tracking burdens would this impose on incumbent LECs and how significant would they be, whether such costs or burdens can be quantified, and how such administrative burdens compare with the benefits of added flexibility for customers in the business data services market. The Commission also asks about whether allowing customers to treat their purchases under one Ethernet commercial agreement as separate purchases impose any burdens on providers of business data services and whether the benefits of increase flexibility outweigh any such burdens.

77. In the FNPRM, the Commission proposes to periodically collect data from incumbent LEC providers going forward to update the Commission's analysis and monitor the marketplace for BDS. The Commission took several steps to minimize the economic impact on small providers and proposes exempting purchasers from the

collection requirements. The Commission proposes narrowing the scope of the collection to minimize burdens on smaller providers while providing the Commission with the data necessary to periodically update its analysis. The Commission seeks comment on whether it is possible to exclude smaller competitive LECs from the collection without adversely affecting the Commission's analysis of the BDS market. The Commission is considering excluding competitive providers below a set threshold based on either locations with connections, number of customers, or revenues and ask commenters to suggest appropriate thresholds and to quantify the potential impact of any exclusion on the Commission's analysis. The Commission proposes a collection that is significantly less burdensome than the 2015 Collection, largely omitting questions on terms and conditions and narrative responses. The Commission proposes to omit purchasers, largely smaller entities, from the mandatory periodic collection, instead proposing to

hire a third party to conduct a voluntary survey of customer classes. Furthermore, the proposed three year periodic collection period, as opposed to annual or quarterly, would minimize the burden on filers.

78. As SBA observed, changes in special access (BDS) prices may have an impact on small carriers including small competitive carriers. In the FNPRM, the Commission proposes modifying the existing regulatory regime applicable to BDS. Any such actions will accrue to the benefit of all carriers, including small competitive carriers, as it will ensure the availability of business data services at just and reasonable rates.

F. Federal Rules That May Duplicate, Overlap, or Conflict With the Proposed Rules

79. None.

Federal Communications Commission.

Marlene H. Dortch,

Secretary.

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