

Customer Specified Signaling - 2-Wire	<u>Density Cell:</u> 1 - \$13.54/Month 2 - \$16.26/Month 3 - \$19.36/Month 4 - \$28.11/Month
2 Wire ADSL/HDSL/IDSL/SDSL Loop	<u>Density Cell:</u> 1 - \$11.00/Month 2 - \$11.00/Month 3 - \$12.39/Month 4 - \$22.39/Month

Unbundled Loops - Pennsylvania (Verizon North Inc.)

<u>Service or Element Description:</u>	<u>Recurring Charges:</u>
2 Wire Analog (POTS) Loop	<u>Density Cell</u> 3 - \$12.39/Month 4 - \$22.39/Month
2 Wire Digital Loop	<u>Density Cell:</u> 3 - \$12.39/Month 4 - \$22.39/Month

Unbundled Loops - Rhode Island

<u>Service or Element Description:</u>	<u>Recurring Charges:</u>
2 Wire Analog (POTS) Loop	<u>Density Cell</u> 1 - \$11.19/Month 2 - \$15.44/Month 3 - \$19.13/Month
ISDN BRI Loop	<u>Density Cell:</u> 1 - \$24.92/Month 2 - \$31.74/Month 3 - \$28.73/Month
Customer Specified Signaling - 2-Wire	<u>Density Cell:</u> 1 - \$11.19/Month 2 - \$15.44/Month 3 - \$19.13/Month

2 Wire ADSL/HDSL/IDSL/SDSL Loop	<u>Density Cell:</u> 1 - \$11.19/Month 2 - \$15.44/Month 3 - \$19.13/Month
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Unbundled Loops – South Carolina

<u>Service or Element Description:</u>	<u>Recurring Charges:</u>
2 Wire Analog (POTS) Loop	<u>Density Cell</u> 1 - \$18.00/Month
2 Wire Digital Loop	<u>Density Cell:</u> 1 - \$18.00/Month

Unbundled Loops – Texas

<u>Service or Element Description:</u>	<u>Recurring Charges:</u>
2 Wire Analog (POTS) Loop	<u>Density Cell</u> 1 - \$13.63/Month 2 - \$35.45/Month 3 - \$78.77/Month
2 Wire Digital Loop	<u>Density Cell:</u> 1 - \$13.63/Month 2 - \$35.45/Month 3 - \$78.77/Month

Unbundled Loops – Virginia (Verizon Virginia Inc.)

<u>Service or Element Description:</u>	<u>Recurring Charges:</u>
2 Wire Analog (POTS) Loop	<u>Density Cell</u> 1 - \$11.89/Month 2 - \$15.26/Month 3 - \$28.43/Month
ISDN BRI Loop	<u>Density Cell:</u> 1 - \$14.15/Month 2 - \$17.09/Month 3 - \$30.42/Month

Customer Specified Signaling - 2-Wire	<u>Density Cell:</u> 1 - \$16.76/Month 2 - \$19.69/Month 3 - \$32.98/Month
2 Wire ADSL/HDSL/IDSL/SDSL Loop	<u>Density Cell:</u> 1 - \$11.89/Month 2 - \$15.26/Month 3 - \$28.43/Month

Unbundled Loops - Virginia (Verizon South Inc.)

<u>Service or Element Description:</u>	<u>Recurring Charges:</u>
2 Wire Analog (POTS) Loop	<u>Density Cell</u> 1 - \$14.99/Month 2 - \$17.94/Month 3 - \$24.44/Month
2 Wire Digital Loop	<u>Density Cell:</u> 1 - \$14.99/Month 2 - \$17.94/Month 3 - \$24.44/Month

Unbundled Loops - Vermont

<u>Service or Element Description:</u>	<u>Recurring Charges:</u>
2 Wire Analog (POTS) Loop	<u>Density Cell</u> 1 - \$11.00/Month 2 - \$11.00/Month 3 - \$21.63/Month
ISDN BRI Loop	<u>Density Cell:</u> 1 - \$13.27/Month 2 - \$16.08/Month 3 - \$51.60/Month
Customer Specified Signaling - 2-Wire	<u>Density Cell:</u> 1 - \$11.00/Month 2 - \$11.00/Month 3 - \$21.63/Month

QSI STUDY



QSI Consulting

Impact Study

AN ANALYSIS OF VERIZON'S PETITION FOR FORBEARANCE

A Quantification of the Impact of Forbearance

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EXECUTIVE SUMMARY

On September 6, 2006, Verizon filed six separate petitions requesting that the Federal Communications Commission (“FCC”) forbear the application of certain obligations to Verizon in the Boston, New York, Philadelphia, Pittsburgh, Providence, and Virginia Beach Metropolitan Statistical Areas (“MSAs”).¹ Verizon requested in its forbearance petitions “relief that is parallel to the relief granted in the [Qwest] Omaha Forbearance order...”² Verizon’s requested relief relates to a number of its obligations under the FCC’s rules,³ one of which is forbearance from loop and transport unbundling regulation pursuant to Section 251(c)(3) of the Communications Act of 1934, as amended (“Act”).⁴ Granting Verizon’s Petitions as they relate to unbundling obligations means that loop and transport facilities would no longer be required to be made available at Total Element Long Run Incremental Cost (“TELRIC”)-based rates, which are the rates designed to replicate a competitive market for these wholesale services and produce conditions that promote competition in retail markets.

A grant of Verizon’s Petitions would impact telecommunications markets in the six MSAs in a number of ways. Not only would Verizon itself be impacted but so would other market participants, such as the various competitive local exchange carriers (“CLECs”) which rely in whole or in part on Verizon’s loop and transport unbundled

¹ See Petition of the Verizon Telephone Companies for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Boston Metropolitan Statistical Area, WC Docket No. 06-172 (filed Sept. 6, 2006) (Verizon Boston Petition); Petition of the Verizon Telephone Companies for Forbearance Pursuant to 47 U.S.C. § 160(c) in the New York Metropolitan Statistical Area, WC Docket No. 06-172 (filed Sept. 6, 2006) (Verizon New York Petition); Petition of the Verizon Telephone Companies for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Philadelphia Metropolitan Statistical Area, WC Docket No. 06-172 (filed Sept. 6, 2006) (Verizon Philadelphia Petition); Petition of the Verizon Telephone Companies for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Pittsburgh Metropolitan Statistical Area, WC Docket No. 06-172 (filed Sept. 6, 2006) (Verizon Pittsburgh Petition); Petition of the Verizon Telephone Companies for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Providence Metropolitan Statistical Area, WC Docket No. 06-172 (filed Sept. 6, 2006) (Verizon Providence Petition); Petition of the Verizon Telephone Companies for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Virginia Beach Metropolitan Statistical Area, WC Docket No. 06-172 (filed Sept. 6, 2006) (Verizon Virginia Beach Petition) (collectively, “Verizon Petitions”).

² Verizon New York Petition, at 30.

³ Verizon seeks forbearance from (1) loop and transport unbundling obligations pursuant to Section 251(c) of the Telecommunications Act; (2) Part 61 dominant carrier tariffing requirements; (3) Part 61 price cap regulations; (4) *Computer III* requirements including CEI and ONA requirements; and (5) dominant carrier requirements arising under Section 214 of the Act and Part 63 of the FCC’s rules concerning the processes for acquiring lines, discontinuing services, assignment or transfers of control, and acquiring affiliations.

⁴ 47 U.S.C. § 251(c)(3).

network elements (“UNEs”) and interconnection services, other competitors, such as cable companies, and retail/end-user customers of telecommunications services. Further, because a grant of forbearance would affect regional businesses, due to results ranging from a direct negative impact on regional CLECs (affecting employment and investment in the wholesale telecommunications market) and induced effects of higher overall price levels in retail telecommunications and non-telecommunications markets, the regional economies of the affected MSAs would experience a decrease in their competitiveness relative to the competitiveness of other regions in the United States and the world.⁵

The *QSI Study* focuses on the direct and quantifiable impact of granting Verizon’s Petitions as they relate to loop and transport unbundling obligations under Section 251 of the Act. More specifically, if Verizon is no longer required to make available loop and transport facilities at TELRIC-based rates, wholesale prices – *i.e.*, the cost of doing business for Verizon’s competitors – would increase. Because the ability of competitive entrants to buy essential network facilities at economic cost has created a disciplining force for retail telecommunications prices, forbearance would, in turn, cause an increase in prices for telecommunications services to consumers in the six MSAs at issue. Current pricing trends and Regional Bell Operating Company (“RBOC”) proposals indicate that absent the TELRIC pricing standard, prices of Verizon’s network elements would be at least at the level of its special access prices. This follows from experience with the incumbent local exchange carriers’ (“ILECs”) reactions to previous changes in unbundling requirements. Competitors that currently rely on Verizon’s loop and transport UNEs can expect to pay Verizon’s special access rates for the same facilities if the Petitions are granted.⁶ Because special access prices are significantly higher than

⁵ While some may argue that making UNEs available harms broadband availability and lowers investment incentives, the Phoenix Center studied that issue and concluded, “This study adds to the mounting work showing that wholesale network access requirements (like unbundling) do not dampen broadband availability or investment incentives more generally. To the contrary, the analysis contained herein strongly shows that states that have established relatively lower rates for unbundled loop access have enjoyed *more* consumer choice and have seen more deployment of broadband technology within their borders.” Phoenix Center Policy Paper Series, *Phoenix Center Policy Paper Number 19, The Positive Effects of Unbundling on Broadband Deployment*, September, 2004, at 12.

⁶ For example, in Maine PUC Docket No. 2002-682, Verizon took the position that its Section 271 obligation is fulfilled by making Section 271 checklist items available at special access rates. See *Opposition to Verizon’s Petitions of ACN, Alpheus, ATX, Broadwing, Cavalier, CityNet, CloseCall, CTSI, DSLnet, InfoHighway, Globalcom, ITC^DeltaCom, McLeodUSA, Mpower, Norlight, Penn Telecom, RCN, RNK, segTEL, Talk America, TDS Metrocom, and Telepacific*, WC Docket No. 06-172 (filed Mar. 6, 2007), at 39 (“ACN, *et al.*, *Opposition*”). Further, special access loop and transport products became a substitute for high-capacity UNE loops and transport in wire centers that were given a status of non-impaired under the FCC’s Triennial Review Remand Order (“TRRO”). See, *e.g.*, Qwest’s proposal for Section 271 pricing in Minnesota. *In the Matter of a Potential Proceeding to Investigate the Wholesale Rate Charged by Qwest*, Docket #P-421/CI-05-1996.

TELRIC-based prices, higher wholesale rates would impair the ability of competitors – and potential entrants – to discipline retail rates.

Furthermore, as observed by a recent U.S. Government Accountability Office (“GAO”) Report,⁷ ILECs are increasing special access prices in MSAs where they have been granted full pricing flexibility for these services. The GAO Report examined 16 major metropolitan markets for dedicated transport facilities, such as DS1/DS3 loops and transport. The 16 MSAs examined by the GAO include some of the same MSAs for which Verizon is seeking forbearance.⁸ The GAO Report concluded:

[I]n areas where the FCC granted full pricing flexibility due to the presumed presence of competitive alternatives, list prices and average revenues *tend to be higher* than or the same as list prices and average revenues in areas still under some FCC price regulation.⁹

While the issues of special access pricing flexibility and forbearance from UNE pricing rules are not identical, the competitive dynamics of telecommunications markets, especially in light of the GAO’s findings, demonstrate that a predictable increase in wholesale prices will necessarily place upward pressure on retail/end user prices. Further, given that our analysis is predicated on current special access rates, the GAO’s findings also show that our results are conservative for MSAs in which Verizon has been granted special access pricing flexibility, since in the absence of TELRIC-based UNE pricing, those special access rates are likely to go up in the near future if the FCC grants Verizon’s Petitions.¹⁰ That is, we have not captured the effects of these second-round price increases, which would lead to further increases in retail telecommunications expenditures.¹¹

To determine the impact of a grant of forbearance for loop and transport unbundling obligations, we built a “bottoms up” model to capture the competitive dynamics (*e.g.*, supply and demand responses) of the telecommunications markets in the six MSAs at issue based on the assumption that loop and transport facilities are no longer available at TELRIC rates in the six MSAs and must be purchased out of Verizon’s special access

⁷ United States Government Accountability Office, Report to the Chairman, Committee on Government Reform, House of Representatives, *Telecommunications: FCC Needs to Improve Its Ability to Monitor and Determine the Extent of Competition in Dedicated Access Services*, November 2006 (“GAO Report”).

⁸ These markets are the New York, New York and Pittsburgh, Pennsylvania MSAs. *See GAO Report*, at 10.

⁹ *GAO Report*, at cover page (emphasis supplied).

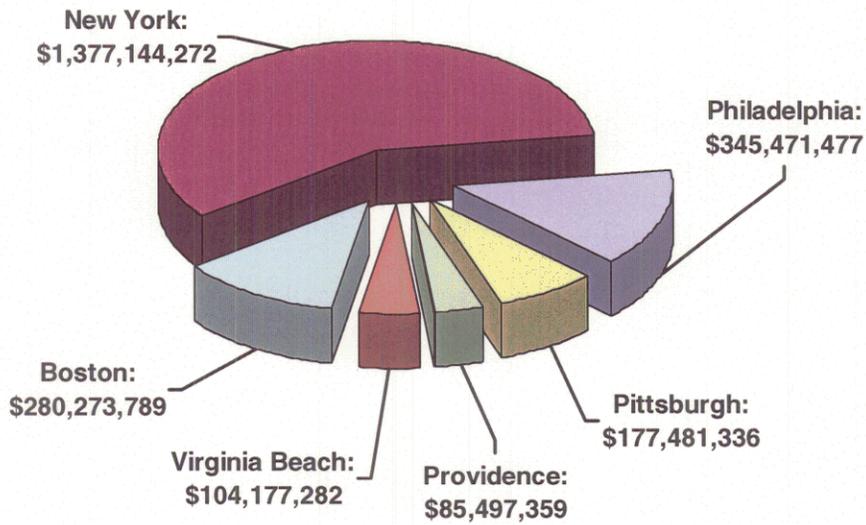
¹⁰ Verizon has special access pricing flexibility for transport in all six MSAs and pricing flexibility for loops in two of the six MSAs (*i.e.*, Pittsburgh and Virginia Beach).

¹¹ We have not reflected the impact of likely increases in Verizon’s non-recurring charges for network elements. This is another reason why our impact analysis is conservative.

tariffs. The impact of this change was then quantified as the absolute increase in annual telecommunications outlay incurred by retail telecommunications customers in the six MSAs. We have estimated this impact by MSA and by product market (including mass market voice, enterprise, and broadband Internet markets). The charts below summarize the estimated increases in annual retail wireline expenditures by MSA for each of these market segments.

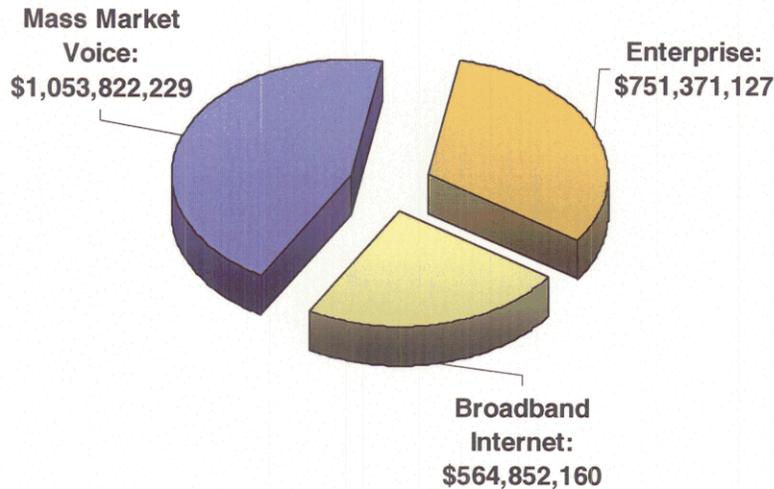
INCREASE IN ANNUAL RETAIL WIRELINE EXPENDITURE BY MSA

Total Increase for Six MSAs: \$2.4 Billion



**INCREASE IN ANNUAL RETAIL WIRELINE
EXPENDITURE BY MARKET**

Total Increase for Six MSAs: \$2.4 Billion



Based on reasonable, conservative assumptions regarding pricing strategies, demand responses, and market dynamics, we estimate that if the FCC grants Verizon its requested forbearance in the six MSAs at issue, then the annual impact in terms of increased telecommunications expenses incurred by customers for retail mass market, enterprise, and broadband Internet services would be \$1,054 million, \$751 million, and \$565 million, respectively – or a combined impact of \$2.4 billion *annually*.¹² This translates into a rate increase of \$114 annually for an average household.

¹² One may also consider the offsetting benefits associated with the *increased profits* that Verizon will be able to extract from these MSAs. In such an analysis, increased profits would be counted on the plus side of an impact analysis. But, while in general corporate profits are a positive event, in the current context it is more appropriate to not recognize an increase in Verizon's corporate profits because those profits would be achieved simply by regulatory fiat – at the expense of end user customers – and would not signify improved efficiencies or other advances generally viewed as genuinely positive and desirable for society. Our approach is further justified by the fact that Verizon makes no demonstration in its Petitions that forbearance is required because of inadequate earnings.

I. DESCRIPTION OF VERIZON'S FORBEARANCE PETITIONS

In its six Petitions, Verizon seeks the same forbearance granted by the FCC to Qwest: “Verizon requests that the Commission grant relief that is parallel to the relief granted in the *Omaha Forbearance Order* and forbear from loop and transport unbundling regulation pursuant to 47 U.S.C. § 251(c) and dominant carrier regulation for switched access services” in the six MSAs.¹³ More specifically, Verizon is seeking forbearance from the following:

1. Loop and transport unbundling obligations pursuant to Section 251(c) of the Act;
2. Part 61 dominant carrier tariffing requirements;
3. Part 61 price cap regulations;
4. *Computer III* requirements including CEI and ONA requirements; and
5. Dominant carrier requirements arising under Section 214 of the Act and Part 63 of the FCC’s rules concerning the processes for acquiring lines, discontinuing services, assignment or transfers of control, and acquiring affiliations.

This paper will focus on the ramifications of forbearance from the first item: loop and transport obligations pursuant to Section 251(c)(3) of the Act.

Under the *Omaha Forbearance Order*, Qwest is no longer required to provide unbundled access to loop and transport UNEs pursuant to Section 251(c)(3) in nine wire centers located in the Omaha, Nebraska MSA.¹⁴ Our analysis assumes that if Verizon’s Petitions are granted as they relate to Section 251(c)(3) unbundling obligations, Verizon, like Qwest in certain wire centers within the Omaha MSA, would no longer be required to provide unbundled access to loops and transport facilities in the six MSAs.

II. FORBEARANCE WILL IMMEDIATELY INDUCE UPWARD PRESSURE ON WHOLESALE PRICES

Wholesale prices for unbundled loop and transport facilities purchased from Verizon pursuant to Section 251 of the Act are based on the TELRIC pricing standard. If Verizon’s Petitions, as they relate to unbundling obligations, are granted, the same loop and transport facilities will no longer be available at TELRIC-based prices; rather,

¹³ Verizon New York Petition, at 30.

¹⁴ *Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Omaha Metropolitan Statistical Area*, Memorandum Opinion and Order, 20 FCC Rcd 19415 (2005) (“*Omaha Forbearance Order*”), at ¶ 2, *aff’d Qwest Corporation v. Federal Communications Commission*, Case No. 05-1450, (D.C. Cir. Mar. 23, 2007) (“*Qwest Omaha*”).

carriers will be forced to purchase these facilities under different terms, conditions, and rates, most likely those of Verizon's special access tariff.

A. Pricing Provisions for Loops and Transport Offered Under 47 U.S.C. Section 251(c)(3)

Under the FCC's TELRIC methodology, prices are to be set at the forward-looking economic cost. The economic reason – as expressed by the FCC – for setting the prices for loops and transport offered under Section 251(c)(3) at cost (*i.e.*, TELRIC) is to emulate competitive markets (which tend to drive prices to economic cost) and to provide the appropriate price signals to all market participants.¹⁵ The FCC has concluded that prices based on cost (in particular, forward-looking economic costs) are consistent with this public policy objective.

As will be discussed below, the availability of wholesale facilities at TELRIC-based rates plays a critical role in disciplining retail markets. An increase in wholesale rates, which forbearance would bring about, is certain to impair this disciplining function of competitors – *and would-be competitors* – and fundamentally alter the competitive dynamic in retail markets.

B. Verizon Will Increase Wholesale Prices If Forbearance is Granted

1. Overview

As discussed above, if the FCC grants Verizon's Petitions, Verizon will no longer be required to make its loop and transport network elements available at TELRIC-based UNE rates. Verizon, like other RBOCs, has advocated that CLECs obtain these network elements out of Verizon's special access tariffs instead. Because there are few if any economically-viable alternatives to Verizon's loop and transport facilities, this means that CLECs will face the higher wholesale prices that Verizon's tariffed special access offerings constitute.

¹⁵ *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, First Report and Order, 11 FCC Rcd 15499 (1996), at ¶ 360 (“*Local Competition Order*”), aff'd in part and vacated in part sub nom. *Comp. Tel. Assoc. v. FCC*, 117 F.3d 1068 (8th Cir. 1997) and *Iowa Utils. Bd. v. FCC*, 120 F.3d 753 (8th Cir. 1997), aff'd in part and remanded, *AT&T v. Iowa Utils. Bd.*, 525 U.S. 366 (1999); on remand *Iowa Utils. Bd. v. FCC*, 219 F.3d 744 (8th Cir. 2000), reversed in part sub nom. *Verizon Communications, Inc. v. FCC*, 535 U.S. 467 (2002), at ¶ 679.

2. CLECs Have Few, If Any, Economically-Viable Alternatives to Verizon's Wholesale Facilities

CLECs' extensive use of Verizon's facilities today is driven by the fact that, particularly in the short and intermediate run, CLECs have no economically-viable alternatives.

To economically justify self provisioning facilities, CLECs must consider the demand and the anticipated rate of utilization of the facilities for a specific route. For example, a CLEC must typically expect at least 9 to 12 DS3 transport circuits on a route in the near term to economically justify self provisioning a route.¹⁶ This means that construction of interoffice facilities by multiple CLECs will generally be found only on the very densest traffic routes. The economics of building one's own loop facilities are even more challenging. Specifically, a CLEC will generally require traffic demand requiring approximately three DS3 loops under contract at a particular location before it can economically justify the substantial investment in construction of its own loop facility to that business location.¹⁷ Customers with this level of demand are very rare. Very few business customers are served with even one DS3 loop, much less three. Thus, while CLECs do own and operate their own loop and transport facilities in some circumstances, these limited facilities are location-specific and do not represent substitutes for the Verizon facilities that CLECs continue to rely upon. Further, since there are very few CLEC loops to commercial buildings (relative to the number of commercial buildings served), CLECs' ability to utilize loop facilities deployed by other CLECs is scarce.

To the extent CLECs have their own transport facilities, there are a number of problems that limit the viability of these CLEC facilities for use by other CLECs. A third-party carrier is unlikely to be able to provide all of the routes a CLEC would need in a metro area. Therefore, the decision to use a third-party carrier likely would require a CLEC to obtain and manage services obtained from multiple suppliers and the CLEC may have to build into the third-party carriers' locations in order to connect to its own switch site. When a CLEC decides to obtain facilities from multiple suppliers, it becomes more difficult to monitor and maintain service quality and maintenance and repair issues may pose problems. Also, the CLEC must establish and maintain cross-connects between the collocation arrangements to access the third party services/facilities, which may be expensive and obviate any perceived advantages of obtaining facilities from a third party. Finally, even if another CLEC has interoffice transport services available, it typically will not be willing to offer these facilities on a wholesale basis to a would-be competitor.

¹⁶ See, e.g., Declaration of Ajay Govil on behalf of XO Communications, LLC, *Minnesota Public Utilities Inquiry Regarding Petition of Qwest Corporation, Filed with the Federal Communications Commission, for Forbearance Pursuant to 47 U.S.C. Section 160(c) in the Minneapolis-St. Paul Minnesota Metropolitan Statistical Area*. MPUC Docket No.: P421/CI-07-661 (filed Aug. 16, 2007).

¹⁷ *Id.*

Importantly, cable operators do not present an economically-viable alternative to Verizon's wholesale loop and transport network elements for a variety of reasons. First, cable television systems are not typically designed to provide these types of services, and cable companies do not offer a wholesale loop or transport product to CLECs over cable television plant.¹⁸ Second, the traditional cable networks and the needs of most CLECs do not necessarily overlap. CLEC customers often are businesses and, consequently, the CLECs' fiber optic backbones are found in business districts. By contrast, most cable television systems are built to serve residential customers in suburban areas. This means that the cable networks typically do not reach or connect to many of the CLECs' target business customers.¹⁹ Lastly, even if a cable network were to reach the CLECs' business customers, the cable network is not necessarily constructed to reliably serve most business customers.²⁰

Likewise, wireless services are not yet a viable wholesale alternative for either residential or business customers. This is in part because, overall, fixed and, particularly, commercial mobile wireless wholesale services do not today consistently provide the bandwidth, functionalities, or reliability at a comparable price to the wireline services that typically are required by CLECs serving residential customers, and most certainly for businesses customers. While this may change in the future, today wireless loop technology is clearly not a close substitute to Verizon's wireline DS-1 and DS-3 loop facilities.

In sum, there is no functioning wholesale market sufficiently robust to curtail Verizon's incentive and ability to raise wholesale prices for loop and transport network elements if its Petitions are granted.

3. The GAO Report Demonstrates that RBOC Pricing Flexibility Causes Upward Pressure on Prices

As noted, the GAO recently examined price movements in special access markets after the FCC granted pricing flexibility to the RBOCs based on the assumption that these

¹⁸ See, e.g., Letter from Chris MacFarland, McLeodUSA, to the Marlene H. Dortch, Secretary, Federal Communications Commission (Dec. 15, 2006), attached as Exhibit D to Opposition of Cavalier Telephone Subsidiaries, WC Docket No. 06-172 (Mar. 5, 2007) ("*Cavalier Opposition*") ("McLeodUSA has approached Cox Communications on at least two occasions regarding its willingness to entertain a commercial arrangement for McLeodUSA to lease from Cox last mile network facilities. McLeodUSA was rebuffed on both occasions.").

¹⁹ See, e.g., Comments of Cox Communications, Inc., WC Docket No. 06-172 (filed Mar. 5, 2007), at 6 (explaining that although it is a facilities-based company, Cox needs to lease Verizon's sub-loops to reach customers in Multiple Tenant Environments).

²⁰ The cable networks may be constructed to support infrequent bursts of high speed data associated with cable modems as opposed to more continuous demand of high capacity business services.

markets were sufficiently competitive to restrain RBOC market power.²¹ The GAO's analysis goes well beyond any analysis performed by the FCC or by any other entity. As such, the market dynamics and the pricing trends identified in the GAO Report are reliable guideposts for what is most likely to transpire if the FCC were to grant Verizon's requests for forbearance and the additional pricing flexibility inherent therein.

Specifically, the GAO Report concluded:

Available data suggest that incumbents' list prices and average revenues for dedicated access services have decreased since 2001, resulting from price decreases due to regulation and contract discounts. *However, in areas where FCC granted full pricing flexibility due to the presumed presence of competitive alternatives, list prices and average revenues tend to be higher than or the same as list prices and average revenues in areas still under some FCC price regulation.* According to the large incumbent firms, many large customers needing service in areas with pricing flexibility purchase dedicated access services under contracts that provide additional discounts. However, GAO found that contracts do not generally affect the differential cited previously, and that contracts also contain various conditions or termination penalties competitors argue inhibit customer choice. Government agencies, to the extent that they purchase dedicated access off of General Services Administration contracts, are generally shielded from price increases due to pre-negotiated rates. However, not all agencies purchase off of these contracts.²²

These and other findings and conclusions in the GAO Report indicate loops and transport, the services subject to Verizon's Petitions, are offered in markets that remain highly concentrated; *i.e.*, these markets are dominated by a few large players that continue to be able to push prices upward above competitive (reasonably cost-based) levels.

In sum, and for purposes of the analysis at hand, the GAO Report is a clear and definitive demonstration that Verizon's requested relief from the TELRIC pricing requirements would generally translate into upward pressure on wholesale prices for network elements used by competing CLECs. If there is not sufficient competitive pressure to keep Verizon from increasing its special access prices when it has the regulatory flexibility to do so, there is no reason to believe that there is sufficient competitive pressure to prevent

²¹ In this context, the term market power is used to indicate that a firm has the ability to profitably raise prices above competitive levels for a sustained period of time.

²² GAO Report, at 1 (emphasis supplied).

Verizon from increasing the prices for its loop and transport facilities to, at a minimum, its special access prices with a grant of forbearance.²³

C. Comparison: Verizon's Special Access versus TELRIC-Based UNE Rates

As noted above, the *QSI Model* underlying the *QSI Study* is driven by the increases in Verizon's wholesale rates from TELRIC-based UNE rates to current special access rates. To model these rate increases, QSI accounted for a number of complicating factors such as the rate variance across rate/density zones; term discounts; distance/mileage sensitive rates and the unavailability of high-capacity UNE loop and transport elements in certain wire centers as a result of the *TRRO*.²⁴

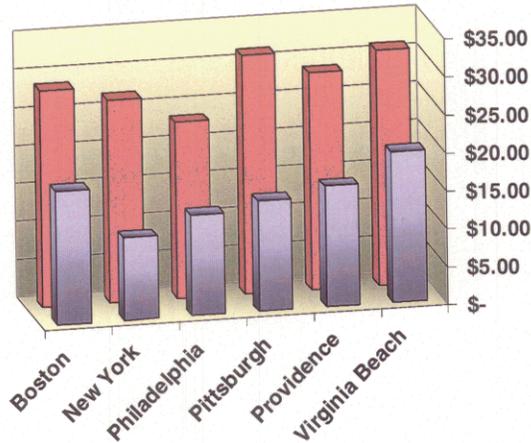
The following charts illustrate the difference between Verizon's recurring UNE and special access rates by MSA.²⁵

²³ It is important to note that special access pricing has been kept in line by the availability of TELRIC-priced UNEs and in the absence of UNEs special access prices are very likely to rise.

²⁴ *Unbundled Access to Network Elements; Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Order on Remand, 20 FCC Rcd 2533 (2005) ("*TRRO*"), *affirmed Covad Communications v. FCC*, 450 F.3d 528 (D.C. Cir. 2006).

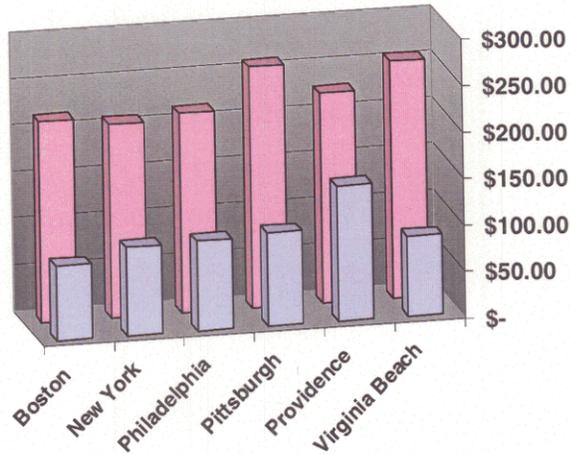
²⁵ For rates that vary by rate zone or band, the charts depict an average of the highest and lowest banded/zoned rates. For MSAs that span more than one state, state-specific rates were weighted by relative demand shares. Special access rates account for the specific pricing flexibility status of each MSA. Transport rates include per termination and mileage-sensitive components aggregated via an assumption of a 10 mile transport. For special access rates with term discounts month-to-month rates were utilized because they present a closer substitute to UNEs (for which no term discounts apply) than term rates.

2 Wire Analog Loops:
UNE Cost and Cost if Forbearance is Granted
(Recurring per Month)



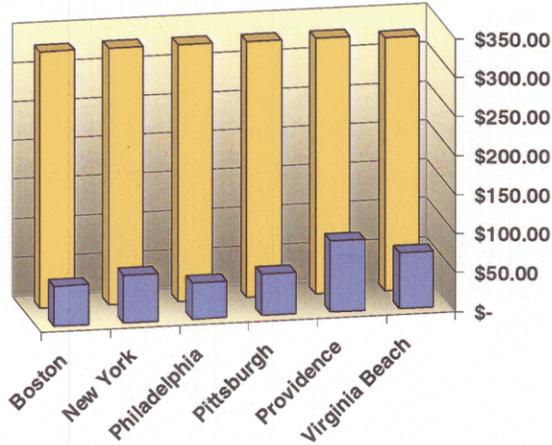
	Boston	New York	Philadelphia	Pittsburgh	Providence	Virginia Beach
UNE Cost	\$17.65	\$10.90	\$13.36	\$14.58	\$15.97	\$19.88
Cost if Forbearance is Granted	\$28.58	\$26.76	\$23.28	\$31.45	\$28.58	\$31.01

DS1 Loops:
UNE Cost and Cost if Forbearance is Granted
(Recurring per Month)



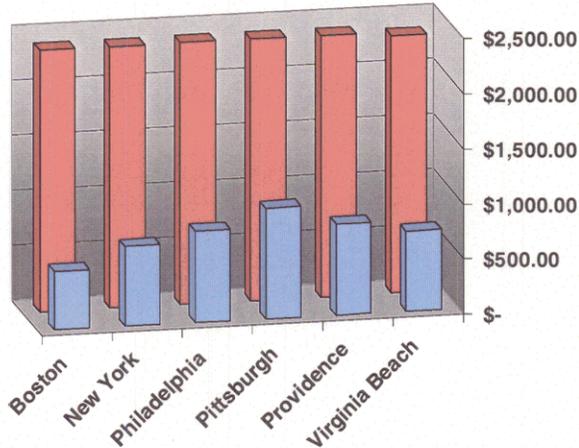
	Boston	New York	Philadelphia	Pittsburgh	Providence	Virginia Beach
UNE Cost	\$80.17	\$94.65	\$96.00	\$99.71	\$145.11	\$85.47
Cost if Forbearance is Granted	\$215.85	\$207.71	\$214.25	\$259.35	\$225.68	\$255.69

DS1 Transport:
UNE Cost and Cost if Forbearance is Granted
(Recurring per Month)



	Boston	New York	Philadelphia	Pittsburgh	Providence	Virginia Beach
UNE Cost	\$51.30	\$60.57	\$47.23	\$53.48	\$91.44	\$71.04
Cost if Forbearance is Granted	\$328.70	\$328.70	\$328.70	\$328.70	\$328.70	\$324.07

DS3 Transport:
UNE Cost and Cost if Forbearance is Granted
(Recurring per Month)



	Boston	New York	Philadelphia	Pittsburgh	Providence	Virginia Beach
UNE Cost	\$527.12	\$722.14	\$832.24	\$1,005.78	\$827.69	\$730.76
Cost if Forbearance is Granted	\$2,375.30	\$2,375.30	\$2,375.30	\$2,375.30	\$2,375.30	\$2,341.85

As seen in the above charts, the differences between Verizon's recurring UNE and special access rates for the loop and transport network elements is significant. On average across the six MSAs, current special access rates for 2-wire and DS1 loops are *more than two times higher* than UNE rates. The increase is even more pronounced for transport, with special access rates being *more than 5 times higher* than UNEs for DS1 transport, and *more than 3 times higher* than UNEs for DS3 transport on average across the six MSAs.

III. WHOLESALE PRICE INCREASES INDUCE RETAIL PRICE INCREASES

A. Overview

As discussed in the previous Sections, one effect of a grant of forbearance will be an increase in Verizon's wholesale prices charged to its retail competitors, the CLECs. In response to these wholesale price increases, CLECs may seek to flow through these cost increases to their end user customers in order to maintain their levels of profitability. To the extent that market conditions may prevent them from fully and proportionately raising end user/retail rates (either immediately or over time), CLECs will have to absorb some (or all) of the wholesale price increases. CLECs that operate on the narrow edge of profitability and are unable to either flow through or absorb wholesale price increases may be forced to exit the market, either by shrinking their operations and exiting one or more MSAs or by ceasing operations altogether.²⁶ Be that as it may, the increases in wholesale rates will induce significant upward pressure on the end user/retail rates of virtually all CLECs.

In what follows, we will discuss in more detail the CLECs' pricing responses and the responses from other market participants, such as Verizon, the cable companies, and others. We will discuss why the high degree of concentration in telecommunications markets and the limited ability and interest of intermodal competitors will permit the general level of retail prices to move upward as a result of CLEC-initiated price increases.

²⁶ Of course, there are many variations in the scenarios that may occur. Nevertheless, the permutations involve combinations of three basic responses: the CLEC either (1) absorbs the wholesale price increase; (2) flows through the wholesale price increase to end users; or (3) withdraws from the market.

B. Wholesale Price Increases Lead to CLECs Exiting Markets and/or Increasing Retail Prices

If the FCC grants Verizon's Petitions as they relate to unbundling obligations pursuant to Section 251 of the Act, a series of interrelated actions by telecommunications market participants would be set into motion. First and foremost, Verizon would increase its wholesale prices to CLECs.

To fully understand the effects of this change, it is important to understand the *initial* predicament of CLECs when Verizon increases wholesale prices for its network elements.²⁷

The predicament in which a grant of forbearance will place CLECs is traditionally known as a "price squeeze."²⁸ To defeat the detrimental impact of wholesale price increases on their bottom line, CLECs will seek to increase their end-user rates. It is this initial impetus to raise prices in response to Verizon's increase in wholesale rates that will cause ripple effects by inducing other market participants to raise their prices in turn. While in well functioning markets, such efforts would be penalized by customers migrating to lower-priced competitors, this is unlikely to occur in the six MSAs at issue for a number of reasons. First, the GAO Report conclusively demonstrated that these markets lack the competitive dynamics for curtailing the RBOCs', in this instance, Verizon's, market power. Further, as will be discussed, the upward movement in end user/retail prices is made possible by the high degree of concentration in telecommunications markets and the fact that intermodal competition is not predominantly price-oriented competition.

Of course, as the CLECs increase their retail rates, Verizon could respond by keeping its retail rates constant in order to expand its market share at the expense of the CLECs. However, there are a number of reasons why Verizon will opt to increase its retail rates in tandem with other market participants. We have already discussed the GAO Report finding that pricing flexibility for local network facilities translates into higher rates. Further, as will be discussed below, in highly concentrated markets such as telecommunications markets, dominant firms generally are able to increase their profits by raising prices and forfeiting larger market shares.

²⁷ Of course, not all CLECs use Verizon's facilities to the same degree, but virtually all CLECs operating in Verizon territory use some Verizon facilities. The QSI Model reflects the various degrees to which CLECs may be impacted.

²⁸ For a more formal definition, see Jean Tirole, "The Theory of Industrial Organization," The MIT Press, Cambridge, Massachusetts, 1988, at 186 ("Considering a situation in which a monopoly supplier is integrated downstream, a price squeeze [is] the situation in which the monopoly input supplier charges a price for the input to its downstream competitors that is so high they cannot profitably sell the downstream product in competition with the integrated firm.").

C. Granting Verizon Forbearance from TELRIC-Based Pricing of UNEs would Create a Qualitative Change in the Nature of the Retail Market

Even more important than a simple increase in the wholesale cost of CLECs is the qualitative change in the retail market structure that would occur if Verizon is relieved of the TELRIC pricing obligation for loop and transport network elements. In the current marketplace, CLECs provide a disciplining force to retail prices. Even though CLECs' actual market share may not be large, the potential for CLEC entry through purchase of TELRIC-based UNEs creates downward pressure on retail telecommunications prices because a new entrant may obtain bottleneck network elements at economic cost, and is thus capable of pricing retail services at economic cost. This situation is similar to the economic concept of contestable markets in which the presence of potential competition (not necessarily actual competition) constrains prices of a single producer and results in market prices similar to those of a competitive market. If the requirement of TELRIC-based pricing for network elements is eliminated, the retail markets would not be constrained by the threat of quick competitive entry. If Verizon's Petitions are granted, Verizon would have the means (*i.e.*, essential facilities) and the opportunity (*i.e.*, elimination of competitors who obtain network elements at economic cost) to dominate the retail stage of the wireline market, with the surviving CLECs acting as a competitive fringe that follows the price leader, the dominant firm. Even assuming the presence of another facilities-based provider (*i.e.*, a cable company) in certain market segments such as the high-end residential market,²⁹ the resulting retail market structure would be an oligopoly, in which few dominant suppliers extract above-normal profits through their ability to charge prices that are higher than prices in a competitive market.

D. Firms with Market Power – Such as Verizon – Are Willing and Able To Increase Profits by Raising *Retail* Prices and Forfeiting Larger Market Shares

Basic economic theory suggests that Verizon has strong incentives to increase retail prices. A dominant firm, such as Verizon, does not generally seek to price its services so as to achieve – or maintain – a market share that is as large as possible. Rather, it will seek to raise prices to the greatest extent possible so as to maximize profits and it will do so even if this means forfeiting market share to competitors. In seeking to maximize its

²⁹ We distinguish here high-end (high-revenue) residential telephone markets from low-end (low revenue) residential market because cable companies typically offer bundled packages, in which features are bundled with local and long-distance telephone service and, often, with cable and/or Internet access, and lack an affordable basic plan. See, e.g., *Comments of the City of Philadelphia*, WC Docket No. 06-172 (filed Mar. 5, 2007), at 10-12, pointing out that Comcast voice services are only available with the purchase of both a cable modem and replacement telephone equipment, making it costly to switch providers and requiring high discretionary income.

profits, a dominant firm, such as Verizon, will balance the gains in revenues (and profits) associated with higher prices against the loss of revenues (and profits) associated with a diminished demand and market share (caused by the higher prices). The incentives for Verizon's responses to CLECs' retail price increases are meaningfully captured by the Dominant Firm – Competitive Fringe Pricing Model.³⁰ Under this general pricing model, there exists some optimal and sustainable market share for Verizon depending on the magnitude of Verizon's cost advantages over its "fringe" competitors. The greater the cost advantage of Verizon over its fringe competitors, the larger will be the optimal market share that Verizon will be able to sustain at prices above competitive levels. To the extent that a grant of forbearance eliminates the requirement that network elements be priced at TELRIC, Verizon is given the discretion to select the desired level of cost advantage over its fringe competitors, the CLECs. The higher Verizon sets its wholesale prices, the greater will be its cost advantage and the larger will be its optimal market share while charging retail prices above competitive levels.

Within the current context, the implications of the Dominant Firm – Competitive Fringe Pricing Model are that when CLECs are forced to increase their retail prices, Verizon should be expected to follow suit. To summarize, if Verizon's Petitions are granted, Verizon would have the means, opportunity and incentive to increase retail market prices.

E. The Elimination of a Retail Competitors Will Facilitate Collusive Conditions and Lead to Higher Retail Rates

Some of the CLECs, however, will not be able to increase their retail rates to levels necessary to sufficiently offset increases in Verizon's wholesale prices. This may be particularly true for CLECs that are heavily dependent on Verizon's facilities. Such CLECs will face greater cost pressures than CLECs that use more of their own network facilities (and who are in part – though only in part – insulated from the wholesale cost increases). Thus, some CLECs will be forced to scale back their operations or to exit one or more of the six MSAs if Verizon is granted forbearance.

In general, one or a few relatively small competitors can be an important factor in the nature and intensity of competition in the market. The effect of these retail competitors is often disproportionate to their size or market share. As explained above, as long as the CLECs are able to purchase network elements at TELRIC rates, they provide a disciplining force on retail markets. In addition, CLECs have been responsible for many innovations in telecommunications services.³¹ A CLEC may focus on a specific end-user segment that may have been overlooked by a much larger incumbent such as Verizon.

³⁰ See Gaskins, Darius W., Jr., "Dynamic Limit Pricing: Optimal Pricing Under Threat of Entry." *Journal of Economic Theory* 3:306-22 (1971).

³¹ See, e.g., *Opposition Of Earthlink, Inc. and New Edge Network, Inc.* WC Docket No. 06-172 (filed Mar. 5, 2007), at 3-11 and 13-14 (describing CLECs' innovative offerings in broadband markets).

This behavior forces other firms to compete more aggressively and may undermine their ability to coordinate.³² Thus, the disruptive behavior of the retail competitor, or maverick, favors consumers.

Verizon's inevitable price squeeze, sanctioned by a grant of forbearance, would remove some CLECs and would significantly change the nature and intensity of retail competition. Higher retail prices would inevitably ensue as the elimination of the retail competitor, the CLEC, would diminish competition and enable the remaining competitors, Verizon and the cable companies, to more easily engage in coordinated interaction – at the expense of consumers.

In short, the elimination of retail competitors, CLECs, from the market as a result of the requested forbearance would increase the degree of Verizon's market power and, potentially, induce collusion, and is yet another reason to anticipate higher retail prices as well as diminished consumer choice if forbearance is granted.

1. The Elimination of CLECs will Facilitate Coordinated Interaction Between Duopolists

The elimination of CLECs as a disciplining force for retail prices would lead to a reduced number of competing entities in the market, which would facilitate tacit coordination or collusion between the shrinking numbers of remaining service providers.³³ The retail competitors (*i.e.*, CLECs) have been thwarting the ability of the intermodal competitors, predominantly Verizon and the cable companies, to reach consensus. That is, there may have been no coordination heretofore because of the retail competitor-led impediments to such coordination such as (1) differences in incentives to reach consensus due to the practices of retail competitors or maverick practices; (2) complexity and/or lack of transparency in market outcomes to make consensus or detection feasible; or (3) lack of credible punishment strategies.³⁴

The focus of the consequences of removing the retail competitor (*i.e.*, the CLECs) is not so much on the joint maximization of profit, but rather that of policing a collusive agreement.³⁵ In the presence of the particular factors governing the feasibility of

³² Baker, Jonathan B., "Mavericks, Mergers and Exclusion: Proving Coordinated Competitive Effects Under the Antitrust Laws," 77 *New York University Law Review* (2002), at 135.

³³ More formally, coordinated interaction consists of actions by a group of firms that are profitable for each of them as a result of the accommodating reactions of the other. This behavior may consist of tacit or express collusion. The seminal article is George Stigler, "A Theory of Oligopoly" 72 *Journal of Political Economy* (1964).

³⁴ Philips, Louis, "Oligopoly and Collusion," *The Economics of Imperfect Information* (1988).

³⁵ Roberts, K., "Cartel Behavior and Adverse Selection," 33 *Journal of Industrial Economics* (1983), at 401-413.

collusion, through repeated interaction the two companies may reach an equilibrium where prices are higher and output lower.³⁶

The consensus-punishment-detection paradigm illuminated by modern game theory requires that the market and the nature of transactions and other market outcomes be sufficiently simple and transparent. Sufficient simplicity is required in order to make consensus viable and to detect deviations from consensus. Sufficient simplicity generally also is required in order for punishment strategies to be viable. For example, if transactions typically involve very complex terms that are not standardized and vary across customers, coordinated interaction on price is likely to be very difficult. However, in such circumstances, coordinated interaction via dividing customers may still be viable. Sufficient transparency is required in order for deviations from consensus to be detected.

The existing complexities with the retail competitors, the CLECs, present cause the profitability of abiding by the terms of coordination to decrease and make coordinated interaction unlikely in the first instance.

The nature of customer orders taken by the retail competitor or maverick are frequent, regular, and small relative to the total output of a market participant and make it more difficult for the network providers to deviate in a substantial way without the knowledge of rivals and without the opportunity for rivals to react. Thus, deviations are less easy to deter.

The presence of the retail competitor disrupts key information flowing to the rival network providers, preventing them from easily reaching terms of coordination. The plausible arrival at acceptable terms of coordination are limited or impeded by the product heterogeneity cast by the independent vendor, which necessarily reduces the flow of required information about the conditions and prospects of their rivals' businesses.

The presence of competitors in the retail arena also obscures key information about specific transactions or individual price or output levels necessary for network providers to tacitly establish collusive arrangements.

Thus, absent the presence of retail competitors, possible coordination between duopolists becomes far more likely. Possible methods of coordination include: (1) coordinating on price; (2) allocating customers; or (3) coordinating on capacity. Without competitors in the retail environment, prices are transparent, rendering price coordination much more feasible. Customer allocation also is feasible because there is consistency in the customer base. In addition, good information about which competitors serve which customers and the reasons for changes can be readily ascertained.

³⁶ Church, Jeffrey & Roger Ware, Industrial Organization: A Strategic Approach (2000), at Chapter 10; Jean Tirole, The Theory of Industrial Organization (1992), at Chapter 6.

interruptions,⁴¹ and incompatibility with equipment and services (including MTAs not certified by Comcast, some home security systems, and fax machines, causal/dial around (10-10) calling, 311/511/other x11 calling). Although Verizon offers “triple play” bundles, Verizon also offers plans consisting only of telephone services not bundled with high speed Internet, TV, or wireless.⁴² The point is that cable companies *do not* directly compete with Verizon for basic telephone services on an apples-to-apples basis in which price is the dominant aspect.

In sum, given the highly concentrated and increasingly duopolistic nature of telecommunications markets, it is highly unlikely that the cable companies will have an interest in meaningfully curtailing Verizon’s ability to raise retail rates in the six MSAs at issue. More likely, cable companies will welcome the additional breathing space created by Verizon’s higher retail rates and continue to encounter Verizon in the marketplace based on factors other than price.

IV. DESCRIPTION OF *QSI IMPACT STUDY* METHODOLOGY

In the above Sections we have demonstrated that forbearance would first lead to increases in wholesale rates and then to increases in retail rates in the six MSAs at issue. The *QSI Study* quantifies the costs of forbearance by identifying the total increases in retail telecommunications expenditures in the six MSAs.

A. Study Methodology and Data

The expected estimated impact is driven mainly by Verizon’s request for forbearance from loop and transport unbundling obligations and the price increases for loop and transport facilities that would occur if Verizon was no longer required to provide those

limitations.” Comcast Digital Voice ® Phone Terms of Service – Residential Subscriber Agreement, Version 2.0, p. 1. *See*:
<http://www.comcast.com/MediaLibrary/1/1/About/PhoneTermsOfService/PDF/DigitalVoice/SubscriberAgreement/Z33T86CDV%20Agreement1103051.pdf>

⁴¹ “CDV uses the electrical power in your home. If there is an electrical power outage, 911 calling may be interrupted if the battery backup in the associated MTA... is not installed, fails, or is exhausted after several hours. Furthermore, calls, including calls to 911/E911, may not be completed if there is a problem with network facilities, including network congestion, network/equipment/power failure, or another technical problem.” Comcast Digital Voice ® Phone Terms of Service – Residential Subscriber Agreement, Version 2.0, p. 2. *See*:
<http://www.comcast.com/MediaLibrary/1/1/About/PhoneTermsOfService/PDF/DigitalVoice/SubscriberAgreement/Z33T86CDV%20Agreement1103051.pdf>

⁴² *See* Verizon Freedom Calling Plans, available at
www22.verizon.com/Residential/Phone/Unlimited+Calling+Plans/Unlimited+Calling+Plans.htm.