In the Matter of:
Petitions for Rulemaking and Clarification Regarding the Commission's Rules Applicable to Retirement of Copper Loops and Copper Subloops

RM Docket No. 11358

COMMENTS OF VERIZON ON COPPER RETIREMENT PETITIONS

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COMMENTS OF VERIZON\(^1\) ON COPPER RETIREMENT PETITIONS

INTRODUCTION AND SUMMARY

The Commission should deny the petitioners' requests to revisit the unbundling rules adopted in the Triennial Review Order\(^2\) concerning the obligations of incumbent local exchange carriers (ILECs) with respect to copper facilities that have been replaced by fiber.\(^3\)

The issues presented by the petitions – the scope of ILECs' unbundling obligations with respect to facilities used to provide broadband services – were already settled by the Commission in the TRO. The Commission made a considered judgment in that order, later confirmed by the D.C. Circuit, to withhold most unbundling obligations from fiber or other broadband facilities. The Commission concluded that this approach would create the appropriate incentives for both

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\(^1\) The Verizon companies participating in this filing ("Verizon") are the regulated, wholly owned subsidiaries of Verizon Communications Inc.


ILECs and other providers to invest in next-generation broadband facilities, thus increasing broadband deployment and encouraging true, facilities-based competition.

In fact, the Commission also expressly addressed in the TRO the more narrow issue that is the focus of the petitions – the retirement of legacy copper facilities that have been replaced with fiber. Consistent with its other broadband policies, the Commission determined that ILECs are permitted to retire copper facilities after deploying fiber, subject only to the obligations to comply with the Commission's network disclosure rules and to provide competitive providers with access to narrowband capabilities. Here too the Commission determined that this approach, which allows legacy copper networks to be replaced with more efficient and robust fiber networks, would best encourage all parties to invest in broadband infrastructure.

The CLEC petitions now seek to upset each of the Commission’s express determinations and re-embroil the Commission in the unbundling wars of the past. Notably, the petitioners seek this expansion of unbundling requirements without even acknowledging – much less satisfying – the legal standards governing the imposition of invasive unbundling requirements. For example, the petitioners do not show – nor could they – that they are impaired without unbundled access to ILEC facilities for purposes of providing broadband. For the reasons already addressed by the Commission in the TRO, no such impairment exists with respect to broadband. In fact, given the proliferation of intermodal broadband competitors, any case for impairment is even weaker today than it was four years ago. Furthermore, the petitioners do not attempt to square their arguments with the rule that unbundling obligations only apply to an ILEC’s existing network facilities, not to facilities kept in service solely for the benefit of other providers.

Only one thing has changed since the Commission reached its decisions on broadband unbundling in the TRO. Previously, the Commission assumed that refraining from imposing
unbundling obligations would encourage broadband investment and deployment. Now, the subsequent facts prove that this is true. In fact, the Commission’s broadband policies have worked exactly as intended, and broadband providers of all types are investing heavily and engaging in a massive deployment of broadband facilities.

The Commission should reject the invitation to slow down or derail the current progress in broadband investment by expanding the scope of unbundling requirements to require ILECs to maintain a redundant copper network for use by other providers after ILECs deploy fiber. Such a requirement, imposed solely for the benefit of non-facilities-based competitors, would impose additional costs on ILECs — and no other providers — that would undermine the incentive to invest in the more efficient and advanced fiber networks. Such a rule also would allow and encourage those competitors to avoid making their own investment in broadband infrastructure. In short, the Commission got it right the first time, and there is no reason to backtrack on the broadband policies that are now yielding enormous benefits to the public.

**BACKGROUND**

A. **The Commission Decided in the TRO to Limit Unbundling Obligations to Spur Investment in Broadband Infrastructure by both ILECs and Other Providers.**

The XO and BridgeCom Petitions squarely take aim at one of the Commission’s central conclusions in the TRO — that facilities-based broadband competition and investment would be better encouraged by strictly limiting the reach of unbundling rules to broadband networks and the legacy copper facilities that those advanced networks replace. The Commission concluded that its “decision to refrain from unbundling incumbent LEC next-generation networks . . . will stimulate facilities-based deployment” of broadband. TRO ¶ 272. With reduced unbundling obligations, the FCC concluded ILECs would “have the opportunity to expand their deployment of these networks, enter new lines of business, and reap the rewards of delivering broadband
services to the mass market,” which would “promote investment in, and deployment of, next-
generation networks.” \textit{Id.} As for other providers, the Commission said that “with the knowledge
that incumbent LEC next-generation networks will not be available on an unbundled basis,
competitive LECs will need to continue to seek innovative network access options to serve end
users and to fully compete against incumbent LECs in the mass market.” \textit{Id.} The Commission
predicted that the “end result is that consumers will benefit from this race to build next
generation networks and the increased competition in the delivery of broadband services.” \textit{Id.}

In order to accomplish this goal, the Commission strictly limited the reach of unbundling
obligations to new facilities, both with respect to fiber-to-the-premises loops\textsuperscript{4} and hybrid
copper/fiber loops, and at the same time recognized that ILECs could retire old facilities replaced
by fiber.\textsuperscript{5} In each case, the Commission recognized that both ILECs and other providers faced
similar obstacles to broadband deployment, but also faced “substantial revenue opportunities”
that follow from broadband deployment and alleviate any impairment. \textit{See, e.g., id. \S 274.}

Specifically in the context of FTTP loops being built “parallel to or in replacement of . . .
copper plant,” the Commission concluded that other providers were not impaired except with
respect to narrowband, voice-grade services, and were not entitled to broad unbundled access for

\textsuperscript{4} In the \textit{TRO}, the Commission referred to FTTP facilities as “fiber-to-the-home” or “FTTH”
loops. Because FTTP loops are not used solely to serve residential customers or customers in
single family houses, Verizon uses the more accurate term, “fiber-to-the-premises.”

\textsuperscript{5} More generally, the Commission also concluded that “[t]he rules we adopt herein do not require
incumbent LECs to unbundle any transmission path over a fiber transmission facility between
the central office and the customer’s premises (including fiber feeder plant) that is \textit{used to}
transmit packetized information.” \textit{TRO \S 288} (emphasis added). The Commission subsequently
clarified “that incumbent LECs are not obligated to build TDM capability into new packet-based
networks or into existing packet-based networks that never had TDM capability,” and that
converting a packet-based signal into TDM format to be handed off to the customer does not
give rise to an unbundling obligation. \textit{Order on Reconsideration, Review of the Section 251
Unbundling Obligations on Incumbent Local Exchange Carriers, CC Docket No. 01-338, 19
FCC Rcd 20,293, \S 20} (Oct. 18, 2004) (“\textit{FTTC Order”).}
purposes of providing broadband.\textsuperscript{6} \textit{Id.} ¶ 276. The Commission acknowledged that “[b]y its nature, an overbuild FTT[P] deployment enables an incumbent LEC to replace and ultimately deny access to the already-existing copper loops,” but determined that its goals of encouraging investment would be best served by permitting that result except as to narrowband services. \textit{Id.} ¶ 277. Therefore, the Commission concluded that “in situations where the incumbent LEC elects to retire the copper loop, it must provide unbundled access to a 64 kbps transmission path over its FTT[P] loop,” but no more. \textit{Id.} (emphasis added). The Commission emphasized that “this is a very limited requirement intended only to ensure continued access to a local loop suitable for providing narrowband services.” \textit{Id.} ¶ 277 (emphasis added).

Similarly, in the context of hybrid loops, the Commission sought to adopt an approach that “addresses impairment, but also aligns business incentives with the explicit congressional goal of promoting the rapid deployment of advanced services.” \textit{Id.} ¶ 285. Here again, the Commission “adopt[ed] a national approach that relieves incumbent LECs of unbundling requirements for the next-generation network capabilities of their hybrid loops.” \textit{Id.} ¶ 286.

The Commission also addressed the specific issue presented in the current petitions – the retirement of copper loops that have been overbuilt by fiber. Just as do the petitions here, several parties urged the Commission at that time to limit ILECs’ ability to retire copper facilities that have been replaced by fiber. And the Commission specifically rejected the “propose[d] extensive rules that would require affirmative regulatory approval prior to the retirement of any copper loop facilities,” concluding, in the context of FTTP loops, that these proposals were “not necessary” and that a modified version of the Commission’s network disclosure rules would

\textsuperscript{6} The FCC separately addressed FTTP in “greenfield” situations, and similarly found no impairment justifying unbundling obligations, either with respect to narrowband or broadband services. \textit{Id.} ¶ 275.
provide “adequate safeguards.”\(^7\) *Id.* ¶ 281. Likewise, the Commission recognized, in the non-FTTP situation, the importance of allowing ILECs to retire copper facilities that have been replaced, stating: “Notwithstanding our prohibition against disrupting or degrading unbundled access to the TDM capabilities of hybrid loops, incumbent LECs may remove copper loops from their plant so long as they comply with our Part 51 network disclosure requirements, as amended by this Order, and any applicable state law.” *Id.* ¶ 294 n. 847 (emphasis added).

As these rules illustrate, the Commission’s overriding concern was to encourage all providers, including non-ILECs, to invest in broadband facilities, and the Commission made a considered policy judgment that competitive providers would be permitted unbundled access to legacy copper facilities only until such time as ILECs elected to retire those facilities.

On appeal, the D.C. Circuit affirmed the investment-incentives rationale underlying the Commission’s broadband unbundling rules, *i.e.*, that “unbundling would pose excessive impediments to infrastructure investment.” *See United States Telecom Assoc. v. FCC*, 359 F.3d 554, 580 (D.C. Cir. 2004) (“USTA II”). With respect to FTTP loops, the Court agreed with the Commission that “[a]n unbundling requirement under these circumstances seems likely to delay infrastructure investment, with CLECs tempted to wait for ILECs to deploy FTT[P] and ILECs fearful that CLEC access would undermined the investments’ potential return,” and concluded that the “[a]bsence of unbundling, by contrast, will give all parties an incentive to take a shot at this potentially lucrative market.” *Id.* at 584. Likewise, in the case of hybrid loops, the court affirmed the Commission’s reasoning that both ILECs and other providers would be encouraged to invest in broadband infrastructure as a result of its rules, including specifically the

\(^7\) The Commission modified its network disclosure rules to permit providers to object prior to the retirement of copper, but also provided that those objections would be deemed denied after 90 days. *See id.* ¶¶ 282-83.
Commission's “conclusion that unbundling hybrid loops would deter CLECs themselves from investing in deploying their own facilities, possibly using different technology.” *Id.* at 581 (citation omitted).

B. The Rules Limiting Application of Unbundling to Broadband Have Since Been Extended.

Since the *TRO*, the Commission has on several occasions reaffirmed and extended its approach to spurring broadband by focusing on investment incentives. For example, the Commission extended its relief from unbundling to fiber loops serving MDUs, and then to fiber-to-the-curb (FTTC) loops. In response to several forbearance petitions to remove Section 271 obligations from broadband facilities and elements, the Commission again concluded that unbundling obligations would have “disincentive effects ... on BOC investment.”

Subsequently, in the Commission’s *Wireline Broadband Order*, the Commission again removed network sharing obligations, noting that such regulations “constrain technological advances and deter broadband infrastructure investment by creating disincentives to the deployment of facilities capable of providing innovative broadband Internet access services.” The Commission explained:

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8 *Order on Reconsideration, Review of the Section 251 Unbundling Obligations on Incumbent Local Exchange Carriers*, CC Docket No. 01-338, 19 FCC Rcd 15,856, ¶ 4 (Sept. 9, 2004).

9 *FTTC Order* at ¶ 2.

10 *Memorandum Opinion and Order, Petition for Forbearance of the Verizon Telephone Companies Pursuant to 47 U.S.C. § 160(c)*, WC Docket No. 01-338, 19 FCC Rcd 21,496, ¶ 21 (Oct. 27, 2004). The D.C. Circuit again affirmed the Commission’s conclusion that “any short-term effects on competition [from denying unbundled access to broadband facilities] are offset by the prospect of additional intermodal competition and the benefits that forbearance will provide: incentives for both ILECs and CLECs to invest in and deploy broadband facilities.” *Earthlink, Inc. v. FCC*, 462 F.3d 1, 7 (D.C. Cir. Aug. 15, 2006).

The record shows that the additional costs of an access mandate diminish a carrier's incentive and ability to invest in and deploy broadband infrastructure investment. We find this negative impact on deployment and innovation particularly troubling in view of Congress' clear and express policy goal of ensuring broadband deployment, and its directive that we remove barriers to that deployment, if possible, consistent with our other obligations under the Act. It is precisely this negative impact on broadband infrastructure that led the Commission to eliminate other broadband-related regulation over the past two years.12

ARGUMENT

The XO and BridgeCom Petitions strike at the core of the pro-investment broadband policy adopted by the Commission in the TRO and expanded in subsequent orders. In those orders, the Commission made a considered policy judgment that both ILECs and their competitors would be more likely to invest in and deploy next-generation broadband facilities in the absence of unbundling obligations. In particular, the Commission decided that providers are not entitled to unbundled access to broadband elements, whether in the context of all-fiber facilities like FTTP loops or in the context of hybrid loops, and that ILECs may retire legacy copper facilities that have been replaced by fiber, subject only to limited network disclosure requirements.

The petitioners seek to turn the Commission's approach on its head and reignite the UNE wars by locking in a situation where (1) ILECs that have built new fiber networks are required to maintain legacy copper to enable other providers' broadband offerings, thus requiring ILECs to incur the costs and inefficiencies of maintaining dual networks rather than moving over entirely to more efficient and robust fiber networks, and (2) other providers would have essentially unlimited and indefinite access to that copper, thus preventing those carriers from ever needing to invest in their own broadband networks. The petitions would require an ILEC to obtain

12 Id. ¶ 44 (citations omitted).
affirmative approval from the Commission prior to the retirement of copper, and establish elaborate procedures for obtaining such approval, including strict standards – such as a showing of undue hardship or that fiber could not be deployed absent the retirement of copper – limiting the grant of such approvals.\footnote{The \textit{XO Petition} would go so far as to create a presumption that the retirement of copper is against the public interest. \textit{XO Petition} at 6.} \textit{See XO Petition} at 6; \textit{BridgeCom Petition} at 11-12. These proposals would require ILECs, like Verizon, that are heavily investing in next-generation broadband facilities to maintain indefinitely a redundant copper network – and incur the associated costs and inefficiencies perpetually – solely for the benefit of their competitors. Moreover, such requirements would not exist for ILECs’ numerous intermodal competitors. The Commission should reject these retrograde proposals that seek to resuscitate the failed network-sharing model for encouraging broadband, rather than encouraging facilities-based investment.

A. The Commission’s Broadband Policies Are Working Exactly as Intended.

In assessing whether to revisit the Commission’s broadband decisions from the \textit{TRO}, an appropriate starting point is consideration of whether the Commission’s policy is working. By any measure, it is.

As Chairman Martin noted in his recent testimony to the Senate Commerce Committee, “[m]arkets and companies are investing again, job creation in the industry is high, and in almost all cases, vigorous competition – resulting from free-market deregulatory policies – has provided the consumer with more, better and cheaper services to choose from.”\footnote{Written Statement of the Honorable Kevin J. Martin before the Committee on Commerce, Science & Transportation U.S. Senate, at 3 (Feb. 1, 2007) ("Martin Statement").} In particular, “[a]lmost all of today’s innovation is enabled by broadband deployment. Broadband technology is a key driver of economic growth. The ability to share increasing amounts of information, at greater
and greater speeds, increases productivity, facilitates interstate commerce, and helps drive
innovation.” Id.

The statistics on broadband deployment and investment bear out this broadband
“revolution” prompted by the “deregulatory environment that fueled private sector investment.” Id. In fact, the total number of high-speed connections increased by more than two-and-a-half
times in the three years after the TRO went into effect – from less than 23 million lines in June
2003 to nearly 65 million lines in June 2006.\textsuperscript{15} And those increases have been across numerous
platforms, with cable broadband connections more than doubling (from 13.68 million to 28.51
million lines), DSL increasing by 265\% (from 8.89 million to 23.52 million), and fiber
connections increasing more than 6-fold (from 111,386 to 700,083 lines). Id. Moreover, there
is no indication that this broadband deployment is slowing – the Commission’s most recent High
Speed Data Report indicates that broadband connections increased by 26\% in the first half of
2006 alone and by 52\% in the full year ending June 2006. Id. at 4.

Underlying this progress is a tremendous amount of private investment in broadband
infrastructure. As the Wall Street Journal recently noted, broadband providers have responded
to the “deregulatory environment” established by the Commission: “Verizon’s capital
investments since 2000 exceed $100 billion, and such competitors as Cingular, T-Mobile, and
Sprint are following suit. So are the cable companies.” Broadband Breakout at A14. “North
American telecom companies are projected to spend $70 billion on new infrastructure this year,
which is up 67\% from 2003.” Id. (quotations omitted).

\textsuperscript{15} High-Speed Services for Internet Access: Status as of June 30, 2006, Report of the Industry
Analysis and Technology Division, at Table 1; available at www.fcc.gov/web/stats. ("High
Speed Data Report").
Perhaps the most impressive increases have been in fiber deployment. As the Chairman noted in his statement to the Senate, "[f]rom March of 2005 to the end of last year, the number of homes passed by fiber increased from 1.6 million to 6.1 million." *Martin Statement* at 4. At the time the *TRO* was adopted in 2003, the number of homes passed by FTTP was closer to 110,000. See Martin Statement, "FTTH Homes Passed" slide. Verizon, in particular, is leading the charge on fiber deployment. Verizon is in the process of deploying its FiOS network that runs fiber all the way to the premises. In light of the Commission's current rules, Verizon has already passed over 6 million homes with FiOS, and currently plans to pass 18 million homes (over half of all homes in its service area) by the end of 2010 - a project that will cost nearly $23 billion in private investment dollars. The FiOS network already allows 50 mbps service in some areas, and will allow 100+ mbps offerings in the future.

At the same time, Verizon continues to extend the reach of its DSL, including deploying fiber feeder facilities deeper into its network to reach more homes. Moreover, Verizon’s wireless EV-DO network is already available to 200 million people. As a result of these investments in next-generation broadband networks, Verizon is spending more on capital expenditures than any other company in America. See Attachment 1.

While Verizon is the leader in broadband investment, it is not alone. Other traditional telephone companies likewise are pursuing aggressive strategies for expanding their broadband offerings. AT&T, for example, is spending $4.6 billion to deploy fiber-to-the-node serving 19 million homes. The cable industry has also invested heavily in broadband – reportedly over
$100 billion since 1996\textsuperscript{16} and Comcast recently announced that it will invest $5.7 billion in capital expenditures in 2007.\textsuperscript{17}

In addition, "wireless service is becoming increasingly important as another broadband platform," and "the number of consumers who receive their broadband connection through satellite or wireless will continue to increase, as new satellite services are launched, rural wireless Internet service providers continue to grow, and Wi-Fi hotspots continue to sprout up across the country." Martin Statement at 5. For example, Sprint has announced that it will invest $3 billion to build a nationwide WiMAX network by the end of 2008 that will permit access at 2-4 mbps. And companies like Clearwire-Intel and TowerStream are deploying WiMAX in many major metropolitan areas throughout the country. Martin Statement at 4-5.

Other broadband platforms are also still coming online. With Broadband over Powerline (BPL) technology, for example, there are "at least 38 trial deployments and 7 commercial trials" currently underway. Martin Statement at 5. Google-backed Current Technologies is rolling out BPL in Texas and Ohio. Current speeds are up to 3 mbps, with the next-generation offerings speeds considerably faster.

In short, the Commission's deregulatory broadband policies are working well, and billions of private investment dollars are being poured into a wide variety of next-generation broadband networks - just as the Commission intended. The result of this investment is widespread and growing intermodal competition from a variety of facilities-based competitors. Given these results, it would be a serious mistake for the Commission to retreat from its current broadband policies by imposing additional restrictions and costs on those parties who are

building next-generation broadband facilities. And applying additional costs and network sharing requirements only to one subset of broadband providers – the ILECs – when their intermodal competitors face no similar obligations, further illustrates the problem with the petitioners’ proposals. Accordingly, the Commissions should summarily deny the petitions.

B. No New Facts Warrant A Reversal of Course.

A second consideration in reviewing the petitions is whether there are new facts that justify a departure from the course charted by the TRO. In fact, given that the petitions ask the Commission to reverse the specific decisions reached by the Commission in the TRO and upheld by the D.C. Circuit, the petitioners are required to demonstrate such changed facts or circumstances. See 47 C.F.R. § 1.106(b)(2). The petitioners try several different tacks in an effort to show why ILECs should be forced to maintain a redundant copper network for other providers’ benefit, but each fails.

1. No Facts Justify a Retreat from the Commission’s Rationale for Encouraging All Parties to Invest in Broadband Infrastructure.

First, the petitions support their request by extolling the supposed virtues of the legacy copper network, suggesting that it may have more promise than previously expected and could in fact be the “third broadband pipe” into the home. But regardless of the potential uses for copper, the petitioners provide no justification for the expansive new rules they propose.

As an initial matter, the petitioners’ argument ignores one of the central policies embodied in the TRO’s unbundling rules. As discussed above, the Commission decided that the best way to encourage investment in the broadband infrastructure of tomorrow was to limit unbundling obligations for purposes of broadband. In fact, the Commission concluded that while

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competing providers may have been impaired with respect to narrowband services, the revenue opportunities associated with broadband obviated any need for unbundling relief. See, e.g., TRO ¶ 276. For that reason, the Commission held that ILECs are only required to provide unbundled access to a narrowband 64 kbps channel after it replaces copper with FTTP, and that it does not need to provide unbundled access to any broadband elements over hybrid loops. The Commission correctly reasoned that this approach would encourage both ILECs and other providers to invest in new broadband infrastructure. In light of this reasoning, it is irrelevant how many megabits the petitioners argue they may be able to squeeze out of a twisted pair of copper – the Commission has determined that competing providers are not entitled to unbundled access to legacy copper facilities after an ILEC elects to retire them.

In any event, regardless of any improvements in technologies using copper, there is no doubt that copper will never offer the capacity or robustness of fiber. While copper may permit the transmission of data at higher speeds (the petitioners suggest 100 mbps) for a short distance over a pristine strand of copper in a laboratory setting, copper has inherent limitations as compared to fiber that will limit its performance. For example, like all forms of DSL, the new technologies pointed to by the petitioners, like VDSL2 and 10 Gigabit/second Ethernet, are variable speed (bit rate) technologies, meaning that the ultimate throughput is greatly affected by numerous factors, including distance, network architecture, interference/cross-talk from other services, and copper quality. Thus, in real world conditions – particularly when using legacy copper facilities not designed for these purposes – the expected capacity is likely to be much lower than the petitioners suggest and far below the capacity of fiber facilities. Moreover, all of these advanced copper technologies are less robust than fiber given many active components involved in a copper network, the multiple termination points on the network, and the required
network management to achieve higher throughput. Perhaps the best evidence of the limits of copper is the billions of dollars currently being spent by Verizon and other ILECs to deploy fiber deeper into their networks and to move away from the legacy copper facilities.

In contrast, as the Commission itself recognized in the TRO, fiber networks provide numerous benefits, including greatly enhanced capacity and reliability. For example, Verizon’s FiOS network uses passive optical network (PON) technology that involves a laser running over a strand of glass all the way from the central office to the customer’s home. This approach requires no mid-span equipment or electronics (e.g., repeaters, terminals, remotes, etc.) and is itself less susceptible to environmental risks (e.g., lightning). This simple structure also eliminates most potential points of failure that exist with copper, thus translating into substantial operational cost savings. Fiber also is much less sensitive to distance limitations, and is not affected by electromagnetic radiation electrical noise (noise ingress/egress), or crosstalk.

In addition to, and partly as a result of, these advantages, fiber is capable of transmitting substantially more throughput than copper. For example, Verizon’s network is currently using the Broadband PON (BPON) platform, which provides 622 mbps downstream, and 155 mbps upstream capacity for voice, data, and video services. Moreover, after FiOS is in place, future upgrades are possible by changing the terminal equipment in the central office or the equipment at the customer premises to add additional wavelengths or capacity without engaging in expensive upgrades to the distribution network.

In fact, the primary downside to fiber is the significant expense of deploying a whole new network — nearly $23 billion to pass 18 million homes with FiOS. And for that reason, the petitioners’ proposal poses a substantial threat to investment in next-generation broadband infrastructure like FiOS. An important part of the business case for deployment of fiber is the
cost savings from the operation of a network that is much more simple, efficient, and reliable and that is supported by more efficient operational support systems. For example, Verizon has disclosed that the reported rates of maintenance dispatches for outside plant problems is approximately 80% lower for its FiOS network than for the copper network. In fact, out of the $6 billion in Verizon’s annual network expenses (e.g., maintenance, installation, call centers, etc.) for its wireline network, Verizon has estimated that it has the opportunity to save up to $1 billion annually after it completes its FiOS deployment (and that even though FiOS will only pass 50-60% of the homes on the network). Id. at Slide 42.

On the other hand, many of these advantages and efficiencies will be lost if Verizon is required to maintain indefinitely an entirely duplicate and parallel network for the benefits of its competitors. In that case, even if Verizon does not use the copper itself, it would have to maintain and service the copper plant itself, as well as the other electronics and equipment no longer needed for the fiber network. This would include, for example, load coils, terminals, service wires, pedestals, and feeder distribution interface cabinets. In many cases, Verizon would have to continue to pay for pole attachments for the facilities associated with the copper network (including cable and guy wires). Verizon would also have to maintain and update all of the legacy service order, inventory, assignment and billing systems for FiOS areas, even though none of those legacy systems are used in connection with FiOS services. Moreover, Verizon would be required to do all of this even in areas where other providers are not using Verizon’s facilities to provide service.

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19 Restricting ILECs’ ability to retire copper facilities could also limit their ability to manage their in-service copper network more efficiently. For example, after deploying fiber, an ILEC
Many of the same considerations apply in the hybrid loop context when ILECs like Verizon deploy fiber feeder to remote terminals in order to expand the availability of DSL – another situation in which the petitions seek to restrict copper retirement. In that context, however, petitioners have even less basis for complaining, given the additional available options to them in light of their continued ability to access the copper subloop on an unbundled basis. See TRO ¶ 291. In this situation, other providers only need to build their facilities to a remote terminal – or contract with Verizon or another party for transport to that point – in order to make use of the legacy copper network running to customers’ homes.

As the Commission recognized in the TRO, imposing these burdens on an ILEC reduces the incentives for investment in, and deployment of, fiber in the first place by denying an ILEC many of the cost savings and efficiencies made possible by that deployment. Moreover, the resources required to maintain the duplicate copper network and associated legacy operating systems could be spent on new broadband infrastructure and deployment. At the same time, as the Commission also previously recognized, such obligations also make it less likely that other providers will invest in their own broadband infrastructure, when they may instead use a legacy copper network maintained by the ILEC and available at regulated rates.

It is no answer that providers using ILEC copper facilities would be required to pay below-cost TELRIC rates, assuming that is the petitioners’ intent, for the copper facilities that they choose to use. TELRIC never fairly compensates an ILEC for use of its facilities, and applying that framework in the context of legacy facilities that the ILEC itself has no intent to use and that are maintained solely for the benefit of other providers would be particularly inappropriate. Among other things, TELRIC assumes an evolution to an efficient and fully
scaled network, which is inconsistent with a requirement to maintain a duplicate, outdated
network serving a smaller and more irregular demand base. Therefore, the current TELRIC
approach would make no sense in this context, and would not fairly compensate ILECs.

Finally, existing, robust intermodal competition further demonstrates the problems with
the petitioners' proposed rules. The costs that petitioners now seek to impose on ILECs would
not be faced by other facilities-based competitors, whether providing service over cable, fiber,
copper, WiMAX, Wi-Fi, 3G Wireless, or BPL. Placing ILECs at this type of competitive
disadvantage would further undermine their incentives to invest in broadband infrastructure by
raising their costs relative to competitors. For precisely these reasons, the Commission already
considered and rejected the types of proposals put forth by the petitioners here.

2. Retirement of Unnecessary, Duplicate Facilities Is An Efficient and Well-
Accepted Business Practice.

Next, the petitioners seek to support their requests to expand unbundling obligations by
attributing anticompetitive motives to any ILEC decision to retire redundant, copper facilities,
arguing that there is "no rational basis for BOCs to retire copper except to assure that it is no
longer available to CLECs" and that leaving the copper in service costs less than retiring it. See,
e.g., BridgeCom Petition at 4, 6. The petitions also suggest that the Commission adopt a
restrictive interpretation of the term "retirement," limiting it to cases where facilities have been
physically removed or made inoperable. See XO Petition at 20, BridgeCom Petition at 10. Such
assertions ignore well-accepted, efficient business practice.

Contrary to the petitioners' suggestion, there is nothing nefarious about the practice of
retiring facilities that have been replaced by newer, more efficient facilities. In fact, the ability to
do just that is one of the important bases driving investment in new facilities in the first place.

to relieve other areas where copper is still in service but is reaching capacity limits.
This is true for all industries. For example, if a manufacturer were to purchase a piece of equipment that could produce 100 widgets per hour, it would hardly be surprising—much less anticompetitive—if the manufacturer chose to retire an older machine that could only make 50 widgets per hour, particularly if the older machine required considerably more maintenance and was more expensive to operate. And this would make all the more sense—in an analogy more similar to the comparison of new fiber networks to legacy copper ones—if the same machine had the capability not only to make more and better widgets but also was able to efficiently produce a variety of other products at the same time.

The same is true in the context of legacy copper facilities that ILECs may decide to retire. As explained above, copper facilities, and the associated legacy systems, are more expensive to operate, run less efficiently, and have considerably less capacity than fiber. Also, as explained in more detail below, operating parallel networks entails substantial costs and creates inefficiencies that undermine the investment in fiber. For example, the ILEC would have to maintain separate equipment, both in the central office and in the field, to operate each network and would have to maintain and update the separate operation systems associated with the two networks. Avoiding such inefficiencies and costs explains, in part, ILECs’ willingness to invest billions of dollars deploying fiber, as well as their motivations for wanting to retire the legacy copper facilities when it is efficient to do so. In order to take full advantage of their investment in a more efficient network, it would be perfectly rational for ILECs to take that step, and doing so could hardly be seen as anticompetitive. To return to the example above, the logic of the petitioners’ position would require the manufacturer to keep the older, less efficient widget machine available in case other competing manufacturers decided that they might want to use it, and also
keep employees and parts around to fix the old machine if it breaks. The manufacturer’s decision not to do so could hardly be considered anticompetitive or irrational.

For similar reasons, the petitioners’ request that the Commission re-define “retirement,” for these purposes, to require the physical removal of copper facilities or other steps to physically disable those facilities is itself irrational and contrary to accepted business practices. The petitioners suggest this approach not because it would be consistent with the usual understanding of the “retirement” of physical assets by a business, but precisely because it is not. As the petitioners acknowledge, the physical removal of copper facilities, or other similar steps, will in many cases be prohibitively expensive, and therefore would be inefficient business conduct. For example, much of the copper plant is buried in the ground, and physical removal therefore would entail excavation costs. Also, in the case of aerial copper, the newly-deployed fiber sometime is lashed to the old copper lines, and removal would therefore be costly and potentially disruptive of the new network. Therefore, in many cases and consistent with industry standards, the most efficient practice may be to retire the copper in place, and the petitioners know that if this practice is not considered “retirement” the copper network could remain available to them forever.

The fact that copper may not be physically removed or disabled, however, does not make copper any less “retired,” if the ILEC has made the decision to take the copper out of service and to stop maintaining and keeping inventory of the facilities. The petitioners’ proposal to the contrary is inconsistent with the term “retirement’s” standard usage. For example, the Commission’s Part 32 accounting rules define “plant retired” to “mean[] plant which has been removed, sold, abandoned, destroyed, or otherwise withdrawn from service.” 47 C.F.R. § 32.9000; see also id. § 32.2000(d)(1) (requiring plant to be treated as retired when “worn out,
lost, sold, destroyed, abandoned, surrendered upon lapse of title, [made] permanently unserviceable, ... withdrawn or for any other reason ... retired"). Likewise, the Financial Accounting Standards Board recognizes that “the term retirement is defined as the other-than-temporary removal of a long-lived asset from service,” including through “sale, abandonment, recycling, or disposal in some other manner.”20 Similarly, the dictionary definition of “retire” – “[t]o withdraw from use or active service” – is not nearly as restrictive as the petitioners’ proposed definition.21 The Commission should reject the petitioners’ attempt to expand unbundling obligation by retreating from the standard and accepted definition of “retirement.”

3. The Petitioners Do Not Demonstrate Copper Retirement Is Widespread or That They Lack Time to Develop Other Approaches.

Next, the petitions make dire statements concerning the negative impact of copper retirement on competition – asserting that “the permissive rules currently in place for incumbent LEC retirement of copper loops and copper subloops have resulted in the elimination of network competition and broadband alternatives, which has caused decreased broadband availability and fewer service choices, to the detriment of competitive LECs,” and that “[t]hree years’ experience indicates ... the Commission’s current rules clearly have failed to protect the public interest, and need reexamination.” XO Petition at 3. Beyond these bold conclusions, however, the petitions are devoid of any evidence demonstrating that copper is even being retired on a widespread basis, much less that any copper retirement is happening inappropriately or that other providers lack the opportunity to develop or seek out other access alternatives.

In particular, in the context of FTTP loops – the principal focus of the petitions – the petitioners do not point to a single instance of copper plant being retired. And for good reason. As discussed above, Verizon is far and away the largest current investor in FTTP loops, yet Verizon is not currently retiring copper loops anywhere in the country as a result of the deployment of its FiOS network. Instead, at this stage in Verizon’s rollout of FiOS, it is understandably focusing on deploying fiber to more areas, and to switching over those customers who order FiOS services, rather than retiring legacy facilities. And given the large embedded base of customers currently being served by Verizon’s copper network, retirement of those facilities on any large scale is likely still some time away. Therefore, any suggestion that Verizon is ripping out copper as it deploys FiOS in order to disadvantage other providers is categorically false. Nonetheless, for the reasons explained above, Verizon needs the flexibility to determine in the future when it makes good business sense to retire legacy copper facilities and switch completely to its more efficient and robust fiber network. And notwithstanding the petitioners’ cries that the sky is falling, Verizon and other ILECs should not be shackled with the indefinite obligation to maintain parallel networks, thus undermining an important part of the business case for fiber deployment.

In the context of hybrid loops, the petitioners again overstate the incidence of copper retirement. One petition states that BellSouth has retired copper feeder cable in some instances after deploying fiber feeder to remote terminals (and makes even more vague allegations concerning Verizon’s retirement of copper). See BridgeCom Petition at 6-7.

22 Although Verizon is not currently retiring copper loops in FTTP overbuild situations, in some instances Verizon does remove the copper drop line running to the side of a customer’s home when it installs fiber. If a customer subsequently orders service from another provider that seeks unbundled access to Verizon’s facilities, Verizon replaces the copper drop line at no cost to
Here again, the facts on the ground do not illustrate a problem that needs to be addressed, but instead reflect the fact that Verizon and other ILECs are investing in broadband infrastructure, precisely as the Commission had hoped to encourage. This investment is taking fiber deeper into the network, and enabling the provision of broadband services where it was previously unavailable. In the vast majority of cases, these network changes are taking place in areas where other providers are not using ILEC facilities to provide their own broadband services—in large part because of the same distance limitations that would prevent ILECs from doing so in the absence of network upgrades. Therefore, restricting Verizon and other providers from upgrading copper to fiber in these circumstances would directly undermine the Commission’s broadband policies.

Finally, even if copper retirement were widespread, that would be more of a sign of the success of the Commission’s policies rather than a problem to be addressed, and would indicate that consumers have broader access to networks enabling robust broadband offerings. And as the Commission sought to encourage in the TRO, the prospect of such retirement should create incentives for other providers to invest in their own facilities or seek out other innovative access options, either from the ILECs or from the many other facilities-based competitors—such as cable, WiMAX, Wi-Fi, or BPL providers—who are investing in broadband infrastructure.


Finally, in a desperate attempt to justify the intrusive rules the petitioners propose, one of the petitions invokes homeland security, and argues that the country would be safer if ILECs are required to maintain a redundant network. See XO Petition at 15-17. This argument ignores the customer or the provider. Therefore, this practice in no way denies customers access to services offered by other providers.
limited benefits of retaining a parallel network and the investment-deterring effect of such a requirement. Instead, maintaining policies that encourage investment in diverse broadband networks would better serve homeland security interests.

The focus of the petitioners' argument is that homeland security would be enhanced by requiring ILECs to keep the legacy copper network in service given the resulting redundancy. One problem with this suggestion, however, is that it ignores how redundant these facilities really are. As mentioned above, new fiber facilities generally run parallel to the existing copper, often even lashed to it. As a result, any instances negatively impacting the fiber network – such as extreme weather events, line cuts, etc. – are likely to also impact the copper. In fact, because copper is less robust than fiber – given copper's dependence on mid-span electronic elements, distance limitations, susceptibility to interference, etc. – the old copper network is less likely than fiber to withstand any particular event. This is particularly true because Verizon and others deploying fiber take steps to build more meaningful redundancy into their advanced fiber networks in ways not possible with copper precisely in order to ensure reliability. Therefore, the existence of a parallel copper network would be of little practical benefit in the case of a homeland security event. And for the same reasons, policies that encourage investment in diverse broadband networks and facilities – as the Commission's current policies do – are much more likely to yield homeland security benefits.

The petitioners have provided no basis for revisiting the issues previously decided in the TRO, and expanding unbundling obligations by further restricting the retirement of copper would undermine the Commission's successful broadband policies. The Commission should promptly deny these petitions.
C. **The Petitioners Do Not Even Address Applicable Legal Standards That Must Be Satisfied Before Requiring Unbundling.**

While the petitions take aim at the Commission’s *TRO* decision in an effort to expand the unbundling obligations with respect to broadband, they fail to even acknowledge the governing legal standards that limit the Commission’s ability to order unbundling. The petitioners cannot satisfy the legal requirements for unbundling of the copper network for purposes of broadband services.

First, unbundling may only be ordered when the Commission determined that “the failure to provide such network elements would *impair* the ability of the telecommunications carrier seeking access to provide services that it seeks to offer.” 47 U.S.C. § 251(d)(2)(B). The petitioners do not show – nor could they – that they are impaired without unbundled access to ILEC facilities for purposes of providing broadband. For the reasons already addressed by the Commission in the *TRO* and discussed above, no such impairment exists with respect to broadband. In fact, given the proliferation of intermodal broadband competitors, any case for impairment is far weaker today than it was when the Commission previously rejected the requests to expand unbundling obligations for broadband. *See USTA II*, 359 F.3d at 572 (noting that “impairment” analysis, among other things, “cannot ignore intermodal alternatives”).

Likewise, the Commission and the courts have expressly held that ILECs are not required to construct and maintain network facilities solely for the purpose of unbundling them to competing providers. As the Eighth Circuit has explained, “[s]ubsection 251(c)(3) implicitly requires unbundled access only to an incumbent LEC’s *existing* network.”23 This limitation

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23 *Iowa Util. Bd. v. FCC*, 120 F.3d 753, 813 (8th Cir. 1997) (emphasis in original), aff’d in part and remanded in part, *AT&T v. Iowa Util. Bd.*, 525 U.S. 366 (1999). The Eighth Circuit reaffirmed this holding on remand from the Supreme Court, and this aspect of its decision has
defeats any claim that unbundled access could be required to a network that an ILEC no longer plans to keep in service. Such a requirement would, in effect, require the ILEC to maintain and operate a network solely for the benefit of other providers – something that Section 251 does not require.

D. The BridgeCom Petition’s Other Proposals to Restrict ILEC Flexibility in Retiring Copper Would Undermine Commission Policy.

In addition to the proposals for the Commission to directly raise barriers to the retirement of legacy copper plant, the BridgeCom Petition raises several additional issues, each of which runs directly contrary to the Commission’s broadband policies and to good public policy.

1. States Should Not Be Permitted to Undermine the Commission’s Policies.

First, the BridgeCom Petition asks the Commission to “clarify” that ILECs must comply with “any applicable state requirements governing copper loop retirement.” Id. at 13. By this, the petitioners mean states should be permitted to “prohibit or restrict copper loop retirements.” Id. at 14. But as the Commission has already recognized, states cannot and should not be permitted to circumvent the Commission’s reasoned judgments concerning unbundling requirements – particularly in the case of broadband policy.

To be sure, the Commission recognized in the TRO that it was “not preempting the ability of any state commission to evaluate incumbent LEC’s retirement of its copper loops to ensure such retirement complies with any applicable state legal or regulatory requirements.” TRO ¶ 284. In the very next sentence, however, the Commission “stress[ed]” that it was “not establishing independent authority based on federal law for states to review incumbent LEC copper loop retirement policies.” Id. The Commission clearly did not intend to permit states to

exercise broad oversight that would restrict ILECs’ decisions to retire copper. And that is particularly true where, as here, states could reach a directly contrary result to that adopted by the Commission, such as any action that would “prohibit or restrict copper retirement.” BridgeCom Petition at 14. The BridgeCom proposal would create a state exception clearly capable of – and intended to – swallow the federal rules.

In fact, the Commission has already held that states may not impose unbundling obligations for broadband that exceed those adopted in the TRO – precisely what BridgeCom is asking the Commission to permit here. In the BellSouth DSL Unbundling Order, BellSouth challenged several state regulations that sought to expand the scope of BellSouth’s unbundling obligation with respect to broadband elements.\(^\text{24}\) Recognizing the “primacy of federal authority” with respect to unbundling rules, the Commission rejected these state efforts to impose restrictions on ILECs beyond those set out in the TRO. BellSouth DSL Unbundling Order ¶ 22. The Commission concluded that under the challenged state regulations, “incumbent LECs and competitive LECs would face a decidedly different set of incentives for the deployment of broadband facilities” than established in the TRO and that “these state requirements undermine the effectiveness of the incentives for deployment, including the advancement of section 706 goals that were at the heart of the Commission’s mass market loop unbundling rules.” Id. ¶ 30.

The same is true here, and the Commission should again ensure that states are not permitted to go their own route in a way that would contravene the pro-investment approach adopted in the TRO.

\(^{24}\) Memorandum Opinion and Order and Notice of Inquiry, BellSouth Telecommunications, Inc. Request for Declaratory Ruling that State Commissions May Not Regulate Broadband Internet Access Services by Requiring BellSouth to Provide Wholesale or Retail Broadband Services to Competitive LEC UNE Voice Customers, WC Docket No. 03-251, 20 FCC Rcd 6830 (March 25, 2005) (“BellSouth DSL Unbundling Order”).
2. The Commission Should Reject the Notion of Forced Sale of Facilities.

Next, the BridgeCom Petition asks the Commission to “explore in this proceeding the feasibility and potential advantages of requiring that ILECs be required to offer for sale loops that they might otherwise choose to retire.” *Id.* at 14. The forced sale approach – presumably at regulated rates – would be extremely complicated and would undermine investment incentives. To the extent that the sale of copper plant is appropriate – the Commission should leave that determination to the market.

As an initial matter, there is nothing today that would prohibit an ILEC from selling facilities to other providers, if the parties reached mutually agreeable terms for such sale. But forcing an ILEC to sell would almost necessarily prevent ILECs from receiving fair compensation for its facilities. In particular, it is unlikely that regulated, fire-sale rates would fairly compensate for the complicated and invasive relationship that would necessarily accompany this type of sale. For example, as mentioned above, copper and fiber facilities generally occupy the same conduit, pole connections, cabinets, manhole vaults, and remote terminals, and may even be physically attached to each other. Therefore, the parties would have to reach terms to govern this physical cohabitation, including addressing such as complex issues as maintenance and repair of commingled facilities that are owned by different parties and the splitting of pole attachment costs or other similar fees. Moreover, the continued operation of the copper network would presumably require the ILEC to maintain equipment and electronics in the

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25 *See generally Travelers Int'l A.G. v. Trans World Airlines, Inc.*, 134 F.3d 188, 194 (3d. Cir. 1998) (“Logic and common sense inform us that the amount that can be realized from the sale of an asset varies as a function of the time period over which the asset must be sold. If a company must sell its assets in a short time period, it may be forced to accept a relatively low price; if it can sell the assets over a longer period, it will be able to hold out for the possibility of a higher price.”).
central office – such as terminal blocks, mainframes, equipment to cross-connect, and loop electronics – that the ILEC would otherwise not need for its fiber facilities.

The complexity of such forced-sale arrangement also could grow exponentially if the ILEC were required to sell individual copper loops serving particular customers, as opposed to selling the entirety of a copper feeder loop and all associated lines. For example, it is not clear how the desired lines could be isolated from other parts of the copper network. Therefore, any fair compensation would have to take into account the costs associated with such a complex arrangement.

The Commission should leave such issues to commercial negotiation rather than imposing any forced sale requirement on ILECs. If ILECs were required to sell copper facilities at rates that fail to take into account all of the associated costs and the true value of the copper facilities – as would likely be the case in any forced-sale scenario – then these costs would undermine the incentives to invest in fiber in the first place, just as with other unbundling requirements. And even if the fiber facilities were deployed in the face of such a requirement, it would impose costs on ILECs not borne by its other facilities-based broadband competitors.

Accordingly, the Commission should decline the invitation to explore this alternative, and should instead leave the possibility of sale subject to market negotiations.

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26 The petitions seem to assume that ILECs will retire entire copper loops for an area all at once – something that may not always be true. For example, an ILEC could decide to retire a relatively small section of its copper facilities in an area, such as portions of a neighborhood distribution cable, rather than retiring entire copper loops from the central office to customer homes. And at the same time, ILECs could decide to rededicate some or all of a portion of copper facilities for other purposes, such as to provide relief to areas where the existing copper facilities have been exhausted, rather than taking them out of service altogether. Such possibilities further illustrate the problems with the forced sale approach or with other restrictions on the retirement of copper or network management more generally.
3. **The Commission Should Not Alter Forbearance Standards.**

Finally, BridgeCom suggests that the Commission alter the legal standards for parties seeking forbearance from unbundling requirements in order to require the continued availability of copper even where other unbundling requirements are removed. *See BridgeCom Petition at 14-16.* But in the context of any particular forbearance petition, the Commission is obligated to consider the statutory standards in order to determine whether the public interest would be served by forbearance. The Commission cannot and should not alter the governing rules in the manner suggested by the petitioners by creating a carve-out for unbundled access to copper facilities.

Moreover, in any case in which an ILEC has shown that it is entitled to forbearance from unbundling requirements, it would be particularly inappropriate to impose additional unbundling requirements because the grant of relief itself would illustrate the competition facing the ILEC from other, facilities-based competitors. In that situation, it would be bad policy and fundamentally unfair to impose such costs on ILECs not faced by their competitors.
CONCLUSION

The XO and BridgeCom Petitions are directly contrary to, and would undermine, the Commission’s reasoned decisions in the TRO and subsequent orders concerning the best way to encourage investment in broadband infrastructure by all providers. Because the Commission’s broadband policies are working well, the Commission should reject the petitions.

Respectfully submitted,

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March 1, 2007

Attorneys for the
Verizon telephone companies
Attachment 1
Verizon’s Capital Expenditures Lead the Nation

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*Excludes Verizon. Data for JPMorgan & Chase are not available.

**Companies in the Dow Jones Industrial Average:** 3M, AIG, Alcoa, Altria, American Express, AT&T, Boeing, Caterpillar, Citigroup, Coca-Cola, DuPont, Exxon Mobil, GE, GM, Hewlett-Packard, Home Depot, Honeywell, IBM, Intel, Johnson & Johnson, JPMorgan & Chase, McDonald's, Merck, Microsoft, Pfizer, Procter & Gamble, United Technologies, Verizon, Wal-Mart, and Walt Disney.

**Companies in the Fortune 10:** Exxon Mobil, Wal-Mart, GM, Chevron, Ford, ConocoPhillips, GE, Citigroup, AIG, and IBM.

Sources: Reuters data; company reports.