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

In the Matter of	)	
	)	
Ensuring Customer Premises Equipment Backup Power for Continuity of Communications	)	PS Docket No. 14-174
	)	
Technology Transitions	)	GN Docket No. 13-5
	)	
Policies and Rules Governing Retirement Of Copper Loops by Incumbent Local Exchange Carriers	)	RM-11358
	)	
Special Access for Price Cap Local Exchange Carriers	)	WC Docket No. 05-25
	)	
AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593

COMMENTS OF THE UTILITIES TELECOM COUNCIL

Pursuant to Section 1.405 of the Commission's Rules, the Utilities Telecom Council ("UTC") hereby files its comments in response to the Commission's Notice of Proposed Rulemaking and Declaratory Ruling in the above-referenced proceeding.[1] UTC urges the Commission to address the impact of the IP Transition on electric, gas and water utilities and other critical infrastructure industries (CII) who rely on leased lines and analog services from common carriers to provide communications services to substations and other critical infrastructure assets.

The retirement of copper networks and discontinuance of TDM services by commercial communications carriers is a significant issue for utilities, as well as for retail consumers and competitive LECs. It is unclear whether the new technologies and services from the carriers will

[1] Ensuring Customer Premises Equipment Backup Power for Continuity of Communications, *Notice of Proposed Rulemaking and Declaratory Ruling*, PS Docket No. 14-174 (rel. Nov. 25, 2014)(hereinafter "NPRM").

be able to meet utilities' functional requirements for reliability and resiliency, as well as latency and security. Moreover, carriers may simply discontinue services altogether, leaving utilities with no connections to their critical assets at all.

The timeframes for the transition from analog to IP-based services and the sheer number of connections to utility assets that are involved place enormous burdens on utilities, who must search for alternative technologies and services when a carrier suddenly notifies a utility that the carrier intends to discontinue services. There are often hundreds of lines that are at risk of being retired, and they are often located in remote areas where there is often a lack of reasonable alternatives for utilities. It is a significant undertaking for utilities and CII to transition off these circuit switched networks and onto IP-based services, assuming that those services are even capable of meeting utility standards for functional requirements.

As these legacy communications networks and services are necessary to ensure the safe, reliable and secure delivery of essential electric, gas and water services to the public at large, the retirement of these legacy networks and the underlying analog services could significantly impact utility operations and public safety, as well as national security. In addition, utilities have no choice but to pay higher fees that carriers impose as they phase-out these circuits and services. Therefore, UTC respectfully requests that the Commission address this problem and require that carriers provide substitute services at reasonable rates, terms and conditions throughout the transition from analog to IP-based technologies and services.[2]

[2] *See* 47 U.S.C. § 201. The Commission normally will authorize proposed discontinuances of service unless it is shown that customers or other end users would be unable to receive service or a reasonable substitute from another carrier, or that the public convenience and necessity would be otherwise adversely affected. Where there is question as to whether a service has reasonable substitutes or whether the present or future public convenience and necessity will be adversely affected, the Commission will scrutinize the discontinuance application, consistent with its statutory obligations. *See* 47 U.S.C. § 214(a); 47 C.F.R. § 63.71; *see also Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities Authorizations Therefor*, CC Docket No. 79-252, First Report and Order, 85 FCC 2d 1, 49 (1980) (*Competitive Carrier First Report and Order*) ("[W]e have retained the right to delay grant of a discontinuance authorization if we believe an unreasonable degree of customer hardship would

I. Introduction

UTC is the international trade association for the telecom and information technology needs of electric, gas and water utilities, pipeline companies and other CII. Its members include large investor-owned utilities that serve millions of customers across multi-state service territories, municipal utilities that serve both large cities like Los Angeles and small towns across the country, and cooperative utilities that serve large parts of rural America. UTC's members have extensive private internal communications networks that they use to support the safe, reliable and secure delivery of essential electric, gas and water services to the public at large.

At the same time, UTC's members use wireline and wireless services from commercial carriers to provide voice and data communications to substations and other critical assets, as well as personnel in the field. These wireline services include DS0, DS1 and frame relay services over copper networks, which are now being phased out as part of the IP Transition. For decades, utilities have leased lines from the commercial carriers to provide a cost-effective communications solution to remote locations. These circuits are uniquely capable of supporting the kind of low latency service that is necessary to provide instantaneous communications for applications that protect the grid from faults that can cause blackouts, as well as other monitoring and control functions. Some utilities have hundreds of these circuits and when they are retired by the carriers, utilities must find an alternative solution to provide communications that is reliable and secure and which meets the utility's standards for protective relaying and substation control.

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result."); *Federal Communications Commission v. RCA Commc'ns, Inc.*, 346 U.S. 86, 90 (1953) (*FCC v. RCA*); *AT&T Application to Discontinue Interstate Sent-Paid Coin Service Not Automatically Granted*, NSD File No. W-P-D-497, Public Notice, 16 FCC Rcd 14935 (Common Carrier Bur. Aug. 3, 2001).

UTC applauds the Commission for addressing the impact of the IP Transition, and it urges the Commission to consider the impact on utilities and other critical infrastructure industries (CII), as well as the impact on consumers and competitive LECs. The Commission is correct to be concerned about businesses and other institutions that rely on communications services.[3] Just as competitive LECs often rely on a combination of their own facilities and the purchase of last-mile facilities and services from the incumbent carriers, utilities and CII also rely on a combination of their own private internal networks and commercial communications networks and services, such frame relay and special access services.

While the Commission's policy has been to promote the migration to IP-based services generally, it should be careful to protect consumers and competition. As more fully described below, the IP Transition does threaten certain core values, including network reliability, resiliency and security with regard to utility and CII applications. Therefore, as the Commission considers the impact of the IP Transition, and it fashions rules to protect consumers and competition, it should also consider the impact on utilities and CII and fashion rules that protect and promote the reliability, resiliency and security of the commercial communications services that support utility and CII applications. To paraphrase the Commission in its NPRM, utility and CII services should not be impacted merely because commercial communications technologies are in transition.[4]

UTC understands that "an incumbent carrier has the right to cease operating its copper network," but UTC agrees with the Commission that it is important that copper retirement—particularly retirement on a wide scale—entail adequate notice to all customers of the

[3] *Id.* at ¶6 (stating that "consumers are not the only customers with which the Commission is concerned.")

[4] *See also Id.* at ¶9 (stating that "As in the consumer context, we consider the relevance both of our copper retirement rules and our service discontinuance rules in fulfilling this vision of ensuring that wholesale access does not decline merely because technologies are in transition.")

incumbent's network, including utilities.[5] Moreover, UTC agrees that we have reached a "tipping point" where providers wish to cease offering legacy services, and that "the time to act is now to prevent harm to consumers, competition, public safety, and national security that cannot be undone."[6] In short, the advent of fiber and next-generation networks "does not mean that copper networks are without value."[7] Therefore, UTC supports the Commission's proposals for updates to the nature and process by which incumbent LECs provide notice of planned copper retirements. Finally, UTC supports the Commission's approach which would require carriers to provide equivalent services on equivalent rates, terms and conditions to the legacy services that they formerly provided prior to the IP transition.[8]

II. Carriers Should be Required to Provide Reasonable Notice of Discontinuance of Service.

In the NPRM, the Commission concludes that "the time is right to review" the current regulations governing copper retirement, because the Commission does not believe that the current process sufficiently protects the Commission's core values, given the increase in frequency and volume of copper retirements and the concurrently growing impact on consumers and competition.[9] In that regard, currently, incumbent LECs that intend to retire loops or subloops that are being replaced with FTTH or Fiber-to-the-Curb (FTTC) loops must provide

[5] *Id.* at ¶6.

[6] *Id*. at ¶9.

[7] *Id*. at ¶22.

[8] *See* NPRM at ¶16 (stating that "we therefore tentatively conclude that to receive authority to discontinue, reduce, or impair a legacy service that is used as a wholesale input by competitive providers, an incumbent LEC must commit to providing competitive carriers equivalent wholesale access on equivalent rates, terms, and conditions.")

[9] NPRM at ¶14. See also *Id*. at ¶¶16-22 (listing "Current Regulations", "Increasing Scope and Frequency of Retirements", "Consumer Protection Concerns", "Competitive Concerns" and "Benefits of Copper" as among the factors driving the need to reform the current process.)

notice via the Commission's network change disclosure process,[10] but carriers do not require affirmative approval from the Commission in order to discontinue service.[11] Nor do the rules require specific consumer notice or consumer education requirements on carriers retiring copper facilities.[12] The record reflects that the IP Transition is fully underway and that carriers are discontinuing services across the country. This is not an isolated issue that can be addressed on an ad hoc basis. It is a widespread problem that threatens to significantly impact utilities and CII, as well as retail consumers and competitive LECs. As such, the Commission proposes revising its copper retirement process to better protect consumers and ensure that transitions to fiber do not undermine competition while at the same time maintaining the incentives for incumbent LECs to deploy fiber.[13]

Specifically, the Commission proposes to expand the notice requirements to require that incumbent LECs provide a description of the expected impact of the planned changes resulting from copper retirement, including but not limited to any changes in prices, terms, or conditions that will accompany the planned changes.[14] The Commission also proposes clarifying that incumbent LECs must provide direct notification of planned copper retirements to each

[10] *Id*. at ¶16, *citing* 47 C.F.R. § 51.325(a) (requiring notice also be provided for network changes that "will affect the incumbent LEC's interoperability with other service providers," and that "will affect the manner in which customer premises equipment is attached to the interstate network") and 51.333(a) (requiring a certificate of service stating that the incumbent LEC provided a copy of its public notice to interconnecting telephone exchange service providers at least five business days in advance of its filing with the Commission). This item uses "network change disclosure" and "network change notification" interchangeably.

[11] *Id*.

[12] *See* Renewed and Revised Motion of the National Association of State Utility Consumer Advocates for Stay and to Suspend 47 C.F.R. § 51.333, GN Docket No. 09-51, et al., Report No. NCD-2351, et al., at 3 (NASUCA Motion) ("[T]he Commission's rules mention objections to the network change only from information service providers and telecommunications service providers, as if end-use consumers might not have objections to changes with these implications.").

[13] NPRM at ¶14.

[14] *Id*. at ¶57.

telephone exchange service provider that interconnects with the incumbent LEC's network and must file a certificate of service to the Commission confirming the provision of such notice regardless of the timing of the retirement.[15] The Commission explains that "[c]ompetitive providers require adequate notice in order to plan for the elimination of copper-based facilities," and it invites comment on whether the 30 days that is currently provided under the rules is sufficient time or whether the time period for notice should be extended.[16] Similarly, the Commission proposes to expand notice to consumers in general, as well as to the states and the Department of Defense.[17] It also proposes to allow retail customers 30 days in which to comment on a proposed copper retirement from the date the Bureau releases its Public Notice.[18]

UTC submits that the same factors that underlie the Commission's proposals to expand notice requirements to consumers and competitive LECs should also justify extending the notice requirements to utilities and CII. Currently, utilities are being provided with inconsistent and insufficient levels of notice from the carriers concerning the discontinuance of service.[19] While some carriers have engaged with utilities proactively and worked with utilities through the transition from legacy TDM services to IP-based services, other carriers have failed to provide

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[15] *Id*.

[16] *Id*. at ¶59, *citing* 47 C.F.R. § 51.333(c).

[17] *Id*. at ¶¶60-83.

[18] *Id.* at ¶68 (adding that the 30 day timeframe "matches the amount of time that interconnecting carriers have to comment, and we believe it strikes the correct balance between providing retail customers with sufficient time to comment and ensuring certainty in our retirement process.")

[19] *See e.g.* Letter from Julia A. Hilton, Corporate Counsel for Idaho Power to Marlene H. Dortch, Secretary, Federal Communications Commission in WC Docket No. 13-266 at 2-3 (filed May 7, 2014)(stating that Idaho Power "did not receive clear notice from Centurylink of the entire scope of the proposed discontinuance" and was told by representatives that the discontinuance would only affect one QCC Frame Relay circuit that crossed LATA boundaries in Oregon – when in fact the discontinuance would actually affect 90 Frame Relay circuits running across southern Idaho.) See also *Id.* at 3 (stating that Idaho Power would likely have taken different steps if it had not been informed by Centurylink that the October 23, 2014, notice was specifically limited to one Frame Relay circuit.) Idaho Power faced $3.1 million in engineering, design, materials, and construction costs to implement the substitute options that were suggested by CenturyLink. *Id.*

sufficient notice. As a result, utilities are finding out too late that their services may be discontinued and they are being forced to find alternative solutions for communications. Given that the services that are being discontinued impact the safety, reliability and security of utility operations, UTC submits that the public interest would be served if the Commission were to extend the notice requirements to utilities, as well as to retail consumers and competitive LECs. In addition, UTC supports the Commission's proposal to provide an opportunity for consumers to comment in response to notification by the Commission that a carrier intends to discontinue service in a given area. This proposal should also be extended to specifically apply to utilities and CII, as well as consumers.

UTC further suggests that the notice requirements should be sufficient to provide utilities and CII with enough time to transition towards alternative communications solutions. While the current rules provide 30 days for competitive LECs, UTC believes that the notice period should be much longer for utilities. There are several reasons why utilities should be provided more time. First, utilities have numerous leased lines with the carriers, so implementing a substitute service is a complex and complicated process in terms of the sheer volume of connections involved. Second, these connections very often are located in remote areas where there is a lack of reasonable alternative communications options and access to these remote areas is difficult for purposes of replacement of existing equipment. Third, utilities have high standards for reliability and resiliency (such as network hardening requirements) which make it difficult to find available equipment that can be used as a substitute, particularly if there is a narrow market among equipment manufacturers. Further, this equipment must be capable of integrating with legacy systems, which adds to the complexity and difficulty of finding available equipment. Accordingly, UTC suggests that carriers should be required to provide utilities with at least a

year of advance notice, prior to the carrier's proposal to discontinue service.[20]

III. The Technical Capabilities of IP-Based Services Should Meet Utility Requirements.

As the Commission observes, networks other than copper and services not based on TDM may not support certain functionalities in the ways that consumers have come to expect, and as competitive providers depend in order to provide broadband services.[21] Thus, one of the key issues the Commission has focused on in this rulemaking is ensuring that consumers receive adequate substitutes for discontinued services.[22] In assessing the adequacy of substitutes, the Commission recognizes the challenge to develop metrics by which to compare legacy and substitute networks and services.[23] As part of the assessment of substitutes, the Commission also recognizes that careful attention to network security becomes particularly important when networks are in transition, and it is relevant to whether proposed or available alternative services provide the same reliability and resiliency that consumers have come to expect from their home voice service.[24] Finally, the Commission recognizes the importance of maintaining wholesale access to protect the enduring value of competition and to ensure that the customers of both incumbent and competitive LECs who currently depend on legacy services continue to have

[20] See Comments of Xcel Energy in WC Docket No. 13-266 at i (filed Dec. 2, 2013)(stating that "In this case, Xcel Energy estimates the transition will require important and time-consuming equipment modifications on Xcel Energy's equipment and will take 3-4 years to implement.")

[21] *Id*. at ¶9.

[22] *Id*. at ¶24.

[23] NPRM at ¶25.

[24] *Id*. at ¶26., *citing Technology Transitions, et al.*, GN Docket No. 13-5, et al., Order, Report and Order and Further Notice of Proposed Rulemaking, Report and Order, Order and Further Notice of Proposed Rulemaking, Proposal for Ongoing Data Initiative, 29 FCC Rcd 1433, 1448, ¶43 (2014) (*Technology Transitions Order*)(explaining that "[a]s the *Technology Transitions Order* emphasized, network security is an imperative in technology transitions.")

appropriate access to either adequate legacy or IP-based service alternatives.[25]

Utilities are also affected by the inability of IP-based services to provide the same level of functionalities as legacy copper networks and TDM services currently do. This is particularly problematic with regard to the capability of the network and service to meet the level of latency necessary to support utility applications such as SCADA and protective relaying, as well as wide area situational awareness. These utility applications require roundtrip latencies of less than 40 milliseconds, which is a challenge for IP-based services on commercial networks. These applications are also required to meet regulatory requirements for critical infrastructure security. If commercial carriers either discontinue DS0, DS1 and frame relay services over legacy copper networks or offer alternative IP-services that are not capable of meeting utility functional requirements, including reliability and resiliency as well as latency and security, utilities could be facing the loss of adequate connectivity to their transmission and/or distribution substations and intelligent electronic devices.

As a practical matter, this poses a risk of widespread outages from cascading faults on the grid, as well as similar effects to the safe and effective delivery of other essential services such as water and gas. Accordingly, utilities would need to replace those circuits with networks and services that would meet utility functional requirements. Unfortunately, many of the circuits are located in remote areas where there are no other commercial alternative providers and/or services that meet utility functional requirements. The sheer magnitude of the number of circuits that would need to be replaced represents another challenge. As explained above, utilities may have hundreds of circuits that need to be replaced. Often multiple carriers are involved and different carriers may have different transition periods and different proposed substitute services, which may or may not be compatible with each other. It is not a simple matter of dealing with just one

[25] *Id*. at ¶27.

carrier or just one substation or just one state. Equipment needs to be provisioned and siting/permitting needs to be obtained, which requires significant time and expense, assuming that they can be obtained at all. As such, this is a significant problem that the Commission should also consider, as the Commission addresses the impact of the IP Transition on consumers and CLECs.

Therefore, UTC submits that it is appropriate for the Commission to address this issue and ensure that commercial service providers offer substitute services that are technically capable of meeting utility functional requirements, including reliability and resiliency, as well as latency and security for mission critical utility applications. UTC underscores the Commission's recognition that "[i]mproved network security reduces risk to all interconnected service providers, their customers, and the nation as a whole," and that therefore "[c]areful attention to network security becomes particularly important when networks are in transition, and it is relevant to whether proposed or available alternative services provide the same reliability and resiliency that consumers have come to expect from their home voice service."[26] Moreover, as the Commission itself has said, the IP Transition should not jeopardize public safety and national security while trials are ongoing and the technology is still being tested.[27] Thus, the Commission should include reliability and resiliency, as well as latency and security among the criteria in assessing whether a substitute for a legacy network or service is satisfactory.

UTC also emphasizes that in addition to voice services, the Commission should be also

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[26] *Id*. at ¶26.

[27] *Technology Transitions Order* at ¶44 (explaining that "[e]xperiments will not be permitted to threaten our country's essential national security and public safety communications systems," and that the "transition to other technologies including IP networks could cripple communications services vital to public safety and national security," such that experiments must allow for the continuation of legacy TDM-based networks and services for such critical governmental systems until it is proven that other solutions can meet system requirements for the performance of safety of life and national security missions.")

focused on data services, because they both affect utility reliability and resiliency, as well as security and safety.[28] In that regard, UTC supports the Commission's suggestion that the Commission should require a demonstration, as part of the section 214 discontinuance process that any IP-supported networks or network components offer comparable communications security, integrity, and reliability.[29] Also in that regard, UTC supports the Commission's tentative conclusion to require that incumbent LECs provide competitive carriers equivalent wholesale access on equivalent terms and conditions, when they seek section 214 authority to discontinue, reduce, or impair a legacy service that is used as a wholesale input by competitive carriers.[30] The Commission should adopt a similar requirement when incumbent LECs seek to discontinue, reduce, or impair a legacy service that is used by utilities to support the safe, secure and reliable delivery of essential electric, gas and water services to the public at large.[31] Carriers should be required to provide substitute services that provide the same or reasonably similar functionality as legacy networks and services as those that they currently provide to utilities and other CII.

IV. The Commission Should Ensure that Carriers Keep Costs Reasonable.

No assessment of this issue would be complete without considering the costs that are being imposed by the IP Transition. The record is replete with allegations that carriers are

[28] *Id*. at ¶97 (inviting comment on what functionality is relevant and whether the FCC should consider only functionality related to voice calls (e.g., ability to use caller ID), or non-call functions as well.) *See also Id*. at ¶99 (inviting comment on the extent to which providers have implemented security into their IP substitute services; whether such implementation has been effective; and whether various providers possess understanding of other providers' risk management measures sufficient to address collective risks in an interconnected IP-network environment.)

[29] *Id*.

[30] *Id.* at ¶¶92, 110.

[31] *See also Id.* at ¶94 (inviting comment on "whether consumers expect, or should be entitled to expect, the same or equivalent functionalities from new services, or whether there are benefits from new services (e.g., more choice, lower cost, better features) that would compensate for any differences.")

unnecessarily and unfairly driving up costs on consumers, while they migrate them onto technology platforms that do not provide the same functionality as the legacy networks they once provided.[32]

Utilities and CII have reported similar anecdotal experiences as carriers begin to phase out services. They report that the cost of the legacy services have increased dramatically over a relatively short amount of time, ultimately forcing utilities to find alternative solutions, if there are any reasonable alternatives available. Utilities also report that carriers are refusing to provide the same level of support to repair and maintain legacy networks and services, similar to the complaints on the record about *de facto* discontinuance of services to consumers.[33] Because utilities must maintain these communications circuits in order to ensure safety and reliability, they often have no alternative but to pay these increased costs and they cannot afford to risk reliability as carriers allow these circuits to degrade and/or fail to repair them on a timely basis. The carriers literally have the utilities over a barrel and appear to be taking advantage of the market power that they have in some of these remote areas. The cost increases that utilities are reporting are prohibitively high for circuits that utilities use for generation and transmission. As such, UTC submits that the Commission should address the issue of cost increases that are reportedly occurring as carriers transition from legacy copper networks and TDM services and as utilities are forced to pay exorbitant prices because they lack alternatives to constrain the price that carriers are charging.

CONCLUSION

In conclusion, UTC appreciates the opportunity to provide these comments in response to

[32] *See e.g.* Letter from Public Knowledge, et al., to Julie A. Veach, Chief, Wireline Competition Bureau, FCC, GN Docket No. 09-51, et al., at 2-3 (filed May 12, 2014)(attaching numerous complaints alleging that carriers were forcing consumers to buy more expensive services as they phased out legacy copper networks).

[33] NPRM at ¶53.

the Commission's NPRM. The Commission should extend notice requirements so that utilities and CII have sufficient time to prepare for the transition from legacy copper networks and TDM services and to comment in response to a proposal to discontinue service in a given area. In addition, the Commission should promote public safety and national security by ensuring that carriers provide substitute services that meet utility requirements and that are provided at the same rates, terms and conditions. The Commission has said that "[m]odernizing communications networks can dramatically reduce network costs and lead to the development of new and innovative services, devices, and applications, and can also result in improvements to existing product offerings and lower prices."[34] Likewise, the incumbent LECs have said that the IP-based services provide better services at lower costs.[35] As such, UTC submits that requiring carriers to provide utilities with sufficient advance notice and suitable substitutes that are also affordable is not an unreasonable request.

Respectfully submitted,

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[34] *Technology Transitions Order* at 1435, ¶ 2.

[35] *See, e.g.*, Deidre Hart, *Verizon Keeps Western Fire Island Residents, Business Connected as the Sumer Vacation Season Ramps Up*, (June 12, 2013), http://www.verizon.com/about/news/verizon-keeps-western-fire-island-residents-businesses-connected-summer-vacation-season-ramps-0/ ("An efficient and effective solution to restore telephone service, Verizon's Voice Link uses wireless technology, rather than copper lines, to deliver voice service to customers. It works seamlessly with customers' current telephones and wall jacks, and provides unlimited local and domestic long-distance calling, enhanced 911 service, and popular calling features such as Caller ID with Name and Call Waiting. Customers pay the same or a lower price compared with what they currently pay.").