

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

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

COMMENTS OF THE CITY OF NEW YORK

The New York City Department of Information Technology and Telecommunications (“DoITT”) submits these comments on behalf of the City of New York (“the City”) in connection with, and in response to the Notice of Proposed Rulemaking issued pursuant to, the proceedings listed above¹. The City supports the Federal Communications Commission’s work to study current processes and to provide assurances for measured, responsible technology transitions. The City responds to this proceeding as both a consumer advocate, on behalf of residential and business consumers in New York City, and as a large, institutional customer of both legacy communications services and newer fiber- and IP-based services. We note that the City submitted comments regarding technology transitions on July 8, 2013. These comments are meant to augment our previous comments by focusing on specifics within the Notice of Proposed Rulemaking

¹ Notice of Proposed Rulemaking and Declaratory Ruling, Adopted November 21, 2014, Released November 25, 2015 (“the Notice of Proposed Rulemaking”)

and by providing information regarding the City's own transition from legacy technology-based services to newer technologies.

Consumer Advocacy

In its role as advocate for residential and small business customers, the City asserts that a seamless transition is necessary and will only occur if carriers replacing copper-based services assure that customers continue to have access if they choose services of functionality and price comparable to the legacy service being replaced. Technology transition should not be a method to impose additional functions at additional costs on consumers who do not want them. Service providers must also be required to clearly inform every affected customer of all of the changes to be expected as a result of technology transition, including, without limitation, the impact on continuity of service in an electrical power outage.

From an emergency preparedness and resiliency point of view, beyond merely the provision of information to consumers in advance, replacement of copper-based services with fiber-based services should be accompanied substantively by significant enhancement of backup power facilities available to maximize operability of communications infrastructure and equipment under power outage conditions.

Residents must, for example, have access to reliable, resilient 911 calling. As such, residents need to be assured that affordable battery backup exists sufficient to call 911 via wireless, coax or fiber-based systems for a substantial time after a power outage.²

Small businesses, too, must have access to reliable, resilient voice and internet service to, among other things, communicate with customers and employees for a substantial and reasonable time after a power outage. In such cases, affordable and easily manageable battery backup may help compensate for the loss of copper infrastructure that previously served as a power source for customer premises equipment in an emergency.

In summary, the City recommends that carriers implementing a technology transition be required, at a minimum, to: 1) provide full and complete information regarding the benefits and potential limitations of the replacement service, including how it compares to the customer's service being replaced, with the option of retaining a comparable level of service without incurring additional costs, 2) provide easily manageable and affordable battery backup for voice and internet service at the customer premises (and strong backup systems to keep the system running on the provider end), 3) provide information to assist

² Resiliency at the providers' facilities must also be in place to make sure connectivity is secure from the source to the end user.

the customer in extending the useful life of battery backup (e.g., turn off your system to save battery, close apps, etc.), and 4) identify alternative options in the market for customers to keep their legacy form of service if they choose.

Retail Customer Perspective

As an institutional retail customer with significant legacy-based operations and customer premises-side infrastructure and equipment, the City urges that carriers undertaking tech transitions be required to identify, with significant lead time (as defined by customer needs) and with specificity, substitute services when informing the customer (and the FCC) of planned changes. Such specificity should include, without limitation, identification of the functionally equivalent services readily available at comparable pricing.

DoITT contracts with Verizon and AT&T to provide services to 65 Mayoral and non-Mayoral agencies and 70 other governmental entities and cultural institutions. Verizon and AT&T have both announced plans to discontinue many legacy, copper-based and TDM-based services, and to update their infrastructure to support higher bandwidth services. This transition poses both an opportunity to rethink, refocus and upgrade our programs and functions, but it also creates a challenge to maintain continuity and efficiency of services during and after the transition.

Many City offices have already moved some of their services to newer technologies by, for instance, moving from Centrex telephony to Voice over IP (VoIP). While concentrated efforts are underway to move to fiber, copper-based products are still significantly relied upon by City agencies in their activities serving the public. To assist in transition planning and to ensure continuity of services, the City is conducting an inventory within all City agencies to identify the scope of current usage of legacy products. We have requested the assistance of the providers for this effort; a continued cooperative dialogue with Verizon and AT&T is critical to this project. While the inventory process is still underway, the City estimates that it has more than 80,000 Centrex lines, 30,000 POTS lines, 1000 primary rate interface lines, 3500 basic rate interface lines, 178 frame relay, 1000 T-1 lines, 6000 low speed data lines and approximately 200 digital subscriber lines.

The City has special concerns about public safety related infrastructure and will in many cases need additional scheduling and cost protections in the transition process in order to assure that emergency responders and other providers of critical government services are fully able to smoothly transition extensive existing customer premises-side infrastructure and operations to reflect post-copper and post-TDM technology. For example, one issue that is arising is that fiber-based technology can require additional

space at the customer premises for power sources, cooling equipment and specialized cabinets. Re-engineering space across City government facilities to support equipment associated with fiber-based technology presents a difficult challenge and in some cases the engineering and planning required for such replacement may be disproportionate to any improvements in service being offered.³ Providers should be expected to offer cost offsets to balance disproportionate customer investment required to deal with technology transitions driven by efficiencies being generated for the provider's benefit.

The following represent some specific (non-exclusive) examples of particular, existing legacy-technology dependencies among City government service providers:

- New York City 911 call takers answered approximately 10 million 911 calls last year. The technology infrastructure that supports 911 call processing and dispositioning is a robust integrated system at different stages of evolution. Many of the sub-systems are still supported by technologies that rely upon conventional copper services. Although the City is engaged in next generation 911 planning, the City and the Commission must proceed deliberately and cautiously in transitioning to a new call delivery technology. Cutover to any new technology platform cannot occur prior to comprehensive assessment(s), detailed planning and design, establishment of funding sources and rigorous testing to prevent against unforeseen outages and other network reliability issues. A forced transition will result in massive costs to the City at taxpayer expense and risk to public safety.
- Aside from 911, New York City public safety communications infrastructure presently integrates copper-based circuits between remote sites and critical infrastructure locations. Significant engineering analysis is required to determine whether the City's existing core communications infrastructure is capable of accepting and interfacing to fiber based technology or if major system upgrades will be required. The City must be given ample time to plan a transition of these critical functions to fiber optic cable or alternative technology.
- The New York City Department of Education (DOE) has approximately 40,000 copper based POTS/Centrex, PRI and BRI circuits. To transition from copper to fiber, the DOE will incur building infrastructure costs ranging up to \$75K for each of its approximately 1300 School and office locations. Significant technology analysis is required to determine whether the DOE's existing core

³ The space re-engineering issue described in this paragraph has been raised by City public safety agencies as well as other City agencies.

communications and each individual School's infrastructure is capable of accepting and interfacing with future fiber based technology. In many cases major system upgrades are anticipated. The DOE will require ample time to plan transitions of centralized and School based functions to fiber optic cable or alternative technology. It has been the DOE's experience that Verizon and ATT do not have fiber infrastructure readily available in many residential neighborhoods where Schools are located. When asked to provide fiber conversions for voice and/or data dial tone, Verizon has presented significant conversion charges.⁴

- The New York City Department of Health and Mental Hygiene (DOHMH) uses a large number of POTS/Centrex services for the majority of their major health centers and satellite offices. DOHMH also provides limited POTS services to over 1,000 public and private schools for nurses. The agency is currently in the process of converting these locations to VoIP but needs adequate time to plan and implement the transition. In addition, backup lines at current VoIP locations as well as the majority of the agency's security/fire-elevator and HVAC lines run off copper.
- The New York City Housing Authority (NYCHA) is the largest landlord in New York City. Its 2,563 buildings in 334 developments are home to over 400,000 public housing residents. The migration from copper lines to fiber is likely to cause significant disruption and expense to NYCHA and its residents. All of NYCHA's buildings currently rely on copper-based services for, among other things, the operation of its elevators, alarm systems and boiler monitoring systems. The management office in each NYCHA development is equipped with its own suite of telecommunications systems, providing essential voice and data communications systems enabling staff to communicate with residents, other NYCHA offices, and outside entities. NYCHA's community and senior centers similarly rely on such copper-based services. NYCHA's sensor lines for elevator emergency buttons and boilers are all copper-based. As a means of enhancing resident security, NYCHA has installed intercom systems operating through copper-based telephone systems in many of its developments. Additionally, NYCHA's most vulnerable low-income residents, including the 25 percent to 30 percent of its residents who are seniors, rely on copper-based land lines for communication, including assistance in emergencies. Migration to fiber-based services would certainly have a negative impact on these residents unless the

⁴ DOE reports additional significant examples that the City will share with the FCC upon request.

availability of legacy pricing levels is maintained. Furthermore, NYCHA currently uses more than 10,000 copper infrastructure telecommunications lines. Removal and replacement of the existing copper infrastructure will be a major undertaking that will require careful planning to maintain the safety and security of NYCHA residents. Conversion to an adequate telecommunications alternative will take several years and will require NYCHA to dedicate its already-taxed resources to this major undertaking.

- Multiple other City agencies also still utilize copper service-based telephones to conduct important City government activities.⁵

Recommendations

1. Availability of Similarly Priced Services

The cost of fiber-based services that replace copper-based services is a matter of great concern to the City – both in its role as a consumer advocate and in its role as a large consumer itself. Such concern is even greater when replacement is mandated before the functional end of life of equipment. As such, the City recommends that any mandated service transitions not be permitted unless comparable services are available to the City and other consumers at comparable prices with appropriate offsets for new equipment and infrastructure costs imposed on customers.

2. Notice Acknowledgment

Because notice is critically important to the City’s ability to plan for and respond to communications technology transitions, the FCC should require proof of notice acknowledged by the individual customer for both discontinuances and network changes before allowing such changes that will affect that customer. As a major purchaser of communications technology, the City’s experience is that notice of tech transitions from service providers has been, for practical purposes, sporadic, inadequate and in some cases provided not at all. The City has driven discussions with legacy providers about discontinuance and network changes but absent clear, direct notice to decision-makers for any discontinuance or network change, consumers will not be empowered to either plan or respond.

3. Timing of Notice

The City’s transition to alternative technologies requires long term planning, as the City’s telecommunications environment is extensive and complex. Governmental entities such as the City are often required to pursue substantial procurement cycles. Cycle length is

⁵ One City agency surveyed, for example, uses more than 1,200 copper service telephones.

greater for complex and often high-cost technology contracts. Ninety days' notice is grossly insufficient for the City to plan for and implement replacement services in the communications technology space. Moreover, changes involving public safety must go through rigorous field testing and other steps before full transitions can be made.⁶ As such, the City recommends much longer notice for governmental entities that request it and an even longer notice requirement for public safety-related products and services to allow for proper planning, fair procurement and rigorous testing.

4. Negatively Impacted Services

Given the requirement that FCC intervention is permitted only where services will be negatively impacted by a discontinuance or network change, it is important that “negative impact” be assessed from the customer’s perspective. Incumbents may believe that any technology upgrade is entirely positive, but, as detailed above, the customer’s perspective can be quite different.

5. Disposition of Legacy Copper Infrastructure

If maintenance of a redundant copper network is not cost effective for providers shifting to fiber, required disposition of legacy copper in place to an entity or entities interested in using such infrastructure may be appropriate. A copper infrastructure disposition to another entity or entities could result in a resilient and affordable option for some customers and could ease many transition issues. Also, from a resiliency perspective as it relates to legacy infrastructure removal, DoITT has heard anecdotes about “meltdowns” of aerial fiber when electricity-conductive cables contact fiber optic cable during removal.

The City acknowledges the FCC’s thoughtful approach to technology transitions and we appreciate the opportunity to participate in planning for those transitions. We look forward to continuing to work with the Commission and with service providers in the ongoing process of technology transition.

⁶ For public safety transitions, the FCC should consider a process similar to other public safety transitions whereby a long-term deadline can be established incorporating realistic time frames.

Respectfully submitted by:

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February 5, 2015