Before the
Federal Communications Commission
Washington, D.C.

In the Matter of	)	
	)	
Effects on Broadband Communications Networks	)	PS Docket No. 10-92
Of Damage to or Failure of Network Equipment	)	
Or Severe Overload	)	

COMMENTS OF THE UTILITIES TELECOM COUNCIL

Pursuant to Section 1.405 of the Commission's Rules, UTC hereby files its comments in response to the Commission's *Notice of Inquiry* in the above-referenced matter.[1] UTC's interest in this proceeding on behalf of its utility and other critical infrastructure industry members is in the use of carrier networks to support smart grid and other advanced delivery systems. As the Commission is aware, the reliability and security of smart grid is a major industry and public policy objective. To that end, the Commission has recommended as part of the National Broadband Plan that it "explore the reliability and resiliency of commercial broadband communications networks."[2] UTC supports the Commission's initiation of this proceeding and looks forward to working with the Commission to address the following issues of concern with regard to carrier networks and their use for smart grid and other advanced delivery systems.

I. Introduction

UTC is the international trade association for the telecommunications and information technology interests of electric, gas and water utilities, pipeline companies and other critical infrastructure industries. Its members include large investor-owned utilities that serve millions of customers across multi-state service territories to relatively smaller municipal and cooperative utilities that may serve thousands of

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[1] *Effects on Broadband Communications Networks Of Damage to or Failure of Network Equipment Or Severe Overload*, Notice of Inquiry, PS Docket No. 10-92, 75 Fed. Reg. 26180 (May 11, 2010)("*NOI*").

[2] Connecting America: The National Broadband Plan at 251 (http://www.broadband.gov/issues/economic-opportunity.html).
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customers in isolated towns, cities and rural areas of the country. In addition, UTC is allied with the all of the major electric, gas and water utility associations, as well as other organizations representing various other critical infrastructure industries – as part of its Critical Infrastructure Communications Coalition.

All of UTC's members own, manage or control extensive communications systems to support the safe, reliable and efficient delivery of essential services to the public at large. Due to the critical nature of these communications systems, they are designed, built and operated to demanding standards that exceed those of commercial communications systems for coverage, availability and survivability. Utilities need ubiquitous coverage all across their service territories, including remote areas that tend to be underserved or unserved by commercial carriers. They also need communications systems that do not become unavailable due to traffic congestion, particularly during emergency scenarios when utilities need reliable communications the most. Finally, their networks need to be able to survive natural and manmade disasters; so they have extended power back-up and they are built to withstand high winds and heavy ice. As such, utility networks are built for reliability; which sets them apart from commercial systems that are designed for capacity.

Although they rely on their own private internal networks, utilities and other CII also use carrier networks for communications to support the delivery of their essential services to the public at large. These communications include leased lines and wireless communications. Utilities use commercial networks where they lack coverage on their own private networks or for certain targeted applications. As they deploy smart grid, some utilities have turned to carriers to meet their needs for communications for certain applications, such as advanced metering. Thus far, utility use of carrier networks for smart grid has been limited, and part of the reason is that utilities do have concerns about the capability of carrier networks to meet utility standards for communications reliability. As such, UTC is pleased that the FCC has provided this opportunity to raise these concerns in this proceeding.

II. Discussion

As part of the *NOI*, the Commission inquires about the survivability of carrier networks.[3] Utilities need communications that can withstand hurricanes, snow and ice storms, and that have adequate back-up power to remain operational for 72 hours or more in the event of a power outage. Unfortunately, carrier networks do not have that level of survivability and reliability. In the aftermath of Hurricane Katrina and the other hurricanes in 2005, carrier networks were out for extended periods of time. In an effort to harden carrier networks, the FCC ordered wireless carriers to implement 8 hours of battery back-up at every cell site. However, the wireless industry successfully appealed that order and those back-up power requirements have not been implemented. As such, utilities are understandably concerned about using carrier networks without adequate battery back-up.

As part of the *NOI*, the Commission also inquires about severe overloads on carrier networks.[4] Utilities need reliable communications, particularly during emergencies. Unfortunately, carrier networks are subject to overloading during emergencies and can get jammed. Utilities can't afford to wait until carrier networks become decongested during emergencies. In fact, they need priority access in such situations. But neither priority access nor priority restoration is available on wireless networks. As such, utilities are understandably concerned that the reliability of their operations will be compromised if they rely on carrier networks. Hence, utilities use carrier networks primarily for secondary, non-critical communications, if at all.

Although the Commission has not raised it in its *NOI*, coverage is also an issue for utilities when it comes to using commercial networks. Utilities need to have ubiquitous coverage all across their service territories. This extends to remote areas that are not currently served by commercial carriers. It is precisely these areas where utilities need carriers the most. Unfortunately, many utilities report that as much as 40% of their service territories are unserved by carriers, and that carriers have refused to build

[3] *NOI* at ¶¶10-12.

[4] *NOI* at ¶¶15-16.

out their networks in order to support smart grid deployments. As such, utilities must build their own networks, as a matter of necessity as well as reliability.

For all of these reasons, UTC is concerned that carrier networks are unable to meet utility requirements for smart grid and other utility communications needs. UTC is working with carriers to address these concerns, and believes that carrier networks will be able to support at least some smart grid applications. However, utilities and other CII will still need to operate their own private internal communications systems for smart grid and other communications applications; and the Commission should provide access to spectrum for those critical infrastructure communications systems. As such, UTC takes this opportunity to reiterate its requests for access to 30 MHz of spectrum for both data and voice communications to support smart grid and other CI communications applications.

WHEREFORE, the premises considered, UTC thanks the Commission for considering its concerns about carrier networks and it urges the Commission to promote access to spectrum to support smart grid and other utility communications needs.

Respectfully submitted,

Utilities Telecom Council

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