Utilities Technology Council™

Why Utilities Need Communications Networks

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SUMMARY

All electric, gas and water utilities -- including publicly-owned, cooperatively-organized and investor-owned -- operate and maintain their own communications networks to support the safe, reliable and secure delivery of essential services to the public at large. These communications networks include extensive wireline and wireless communications systems that cover multi-state service territories, including rural and metropolitan areas. They are used to provide mission critical voice and data services for private internal communications. Some utilities also leverage their communications networks to support wholesale and retail commercial communications services.

BACKGROUND

Owing to the importance of the essential services that utilities provide and the safety of line-workers and other personnel in the field, utility communications networks are designed, built and maintained to extremely high standards for reliability, resiliency and security. Any failure of these communications networks can have catastrophic results and jeopardize the safety of life, health, and property. As such, these networks have extended back-up power, redundant and diverse networks, and hardened/secure infrastructure and ruggedized equipment, so that communications are protected against power outages, single points of failure and threats from physical and cyber-attacks.

The reliability and resiliency of these communications networks has been proven during numerous major storms, including Hurricane Katrina and Superstorm Sandy, when they remained largely operational while other commercial communications systems were out for extended periods over wide areas. They also have helped to reduce the duration of power outages significantly by automatically rerouting the flow of power to homes and businesses during the 2012 Derecho and isolating faults on transmission lines from cascading further south into the mid-Atlantic States during the 2003 Northeast Blackout. Finally, these communications networks help to provide security to protect utilities from both cyber and physical attacks.

Utility communications networks enable a proliferation of smart grid devices and the Internet of Things. As such, utilities must contend with increasing demand for communications capacity and coverage. That has required utilities to deploy fiber-optic systems deeper into their transmission and distribution infrastructure to support supervisory control and data acquisition (SCADA) and distribution automation (DA) systems that promote electric service reliability. It has also required utilities to expand their wireless communications systems beyond substations to reach customer homes in order to enable advanced metering infrastructure (AMI), that helps to detect and pinpoint power outages, and to manage the advent of plug-in electric vehicles (PEVs) and distributed energy resources (DER), such as solar-rooftop. Some of these utilities have also leveraged their fiber networks and wireless systems to provide broadband and mobile radio services to communities across

America, including homes, businesses, schools, hospitals, libraries and government institutions, particularly in un-served and underserved areas.

UTC POSITION

The Utilities Technology Council (UTC) is working with utilities, equipment providers and policymakers to develop legislative/regulatory, business and technology solutions to protect and promote the development of utilities' telecommunications and information technology (IT) systems. UTC provides education, networking opportunities, information and advocacy on a variety of matters related to utility telecommunications and IT, including cybersecurity and IT/OT (Internet Technology/ Operational Technology) convergence. Established in 1948, UTC has grown into an international association for all types of electric, gas and water utilities and other critical infrastructure industries in the United States and Canada, as well as South America, Europe and Africa.

ABOUT UTC

The Utilities Technology Council (UTC) is a global trade association dedicated to serving critical infrastructure providers. Through advocacy, education and collaboration, UTC creates a favorable business, regulatory and technological environment for companies that own, manage or provide critical tele-communications systems in support of their core business.

History: UTC was founded in 1948, to advocate for the allocation of additional radio spectrum for power utilities. Over the last 68 years, UTC has evolved into a dynamic organization that represents electric, gas and water utilities, as well as natural gas pipelines, critical infrastruc-ture companies and other industry stakeholders.

UTC Contact

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