



# Why Do Utilities Need Access to Spectrum?

NOVEMBER 2016

## SUMMARY

Utilities, pipeline companies and other critical infrastructure industries lack access to suitable radiofrequency spectrum to meet their increasing communications needs. They need access to additional spectrum for both data and voice communications to ensure the safe, effective and reliable delivery of essential electric, gas and water services, as well as oil and gas services to the public at large. This spectrum should be in a suitable frequency range that will provide favorable coverage over a wide area in order to reach remote areas, as well as populated areas. This spectrum should also be broadband or wideband to provide sufficient capacity to support the increasing amount of traffic that is carried over utility communications networks. UTC is working with federal and state policymakers to promote access to suitable spectrum in support of utilities' increasing wireless communications needs.

## BACKGROUND

Utilities operate extensive wireline and wireless communications systems. While these wireless systems are highly reliable, they generally use licensed spectrum that is allocated in narrowband channels. In addition to being limited in capacity, this spectrum is subject to congestion and interference from competing and often incompatible other radiofrequency operations on the same channel or on adjacent channels. There is no spectrum that is dedicated for use by utilities, and as a result, different utilities will operate different communications systems on different spectrum bands. Ideally, they would have a

nationwide spectrum allocation that would promote interoperability and economies of scale. Instead, there is a patchwork of disparate spectrum bands. Some of those bands have even been reallocated by the FCC, which has forced utilities to migrate some of their communications systems to other spectrum bands.

As utilities increasingly implement grid modernization systems and distributed energy resources, they need to improve the capacity and coverage of their wireless communications systems. Additional capacity is needed because of the sheer number of devices that utilities need to control and monitor, often on a real-time basis. Additional coverage is needed because these communications systems need to reach the entire utility service territory, which can extend across multiple states. Moreover, the advent of grid modernization and distributed energy resources means that utilities need to be able to support two-way, real-time communications deeper into their energy and water delivery networks. This is a fundamental change from the narrowband one-way communications systems that utilities have typically used.

In addition, utilities are under increasing regulatory requirements to meet standards for cybersecurity and reliability, and these standards may mean increased communications requirements to protect critical assets for the bulk electric system. For example, FERC has directed NERC to develop standards to address risks due

to physical security threats and vulnerabilities to the bulk electric system, which could require utilities to upgrade communications in substations to address certain physical security threats.

### **UTC POSITION**

UTC supports access to additional spectrum by utilities and other critical infrastructure industries. This spectrum could be allocated on a shared basis with other compatible radiofrequency operations, such as public safety entities, with similar communications needs and missions. As such, UTC has supported opportunities for utilities to work with public safety to design, build and operate statewide shared systems, and we continue to advocate for policies that would enable utilities to partner with public safety and share the 700 MHz nationwide broadband network. At the same time, UTC is advocating for access to other spectrum bands that would provide favorable coverage as well as additional capacity to meet the needs of utilities and other critical infrastructure industries. In addition, it is important that the spectrum is made available to utilities nationwide and that it would support the use of standardized technologies that are commercially available.

Spectrum is scarce and it is under increasing demand from competing purposes, such as commercial mobile services. Yet, it is critically important that public policies support access to additional spectrum for utilities because everything in modern society depends on light, heat and water. Without access to additional spectrum, the reliability, safety and security of utility services could be compromised. UTC is working with other industry organizations and U.S. as well as international agencies and organizations to promote access to spectrum for utilities in order to ensure operational reliability, safety and security.

### **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 telecommunications 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 infrastructure companies and other industry stakeholders.

### **UTC Contact**

Brett Kilbourne, VP & Deputy General Counsel  
Email: [Brett.Kilbourne@utc.org](mailto:Brett.Kilbourne@utc.org)

