Updated: Second Quarter, 2020

900 MHz Realignment Issue Brief

SUMMARY

Electric, water, and gas utilities build, own, and maintain their own Information and Communications Technology (ICT) networks to underpin transmission, distribution, and generation infrastructure. These ICT networks are critical to the safe and reliable operation of the nation's electricity grid. Utility networks consist of wireline and wireless components to manage daily reliability functions, restore service after natural disasters, and deploy distributed energy resources.

Any wireless network relies on radio spectrum to function. Spectrum is a finite resource that is needed to enable wireless applications for utilities, public safety, and telecommunications providers, among others. Radio spectrum is subdivided into various bands" (measured in "hertz") that have different properties. One such band is the 900 MHz band, which some utilities use for portions of their ICT networks.

The Federal Communications Commission (FCC, the Commission) in May 2020 approved a proposal to realign the 900 MHz band into two separate blocks: narrowband and broadband. The broadband block would provide utilities and other critical infrastructure industries with broadband access on a priority basis during emergencies. It would also be made available to other radio operations on a non-priority basis. The narrowband block would be reserved for traditional land mobile operations.

UTC POSITION

Because the FCC historically has not recognized the criticality of utility ICT networks to our nation's wellbeing, utilities have few opportunities to acquire interference-free spectrum. This has forced utilities to use a patchwork of spectrum bands in order to operate their ICT networks.

The realignment of the 900 MHz band offers both an opportunity and a challenge for the utility industry. For utilities in need of the kind of broadband services the realignment envisions, this plan provides an opportunity to tap into the 900 MHz band for certain critical functions. These utilities are interested in the potential this proposal envisions and believe it is key to assist in their grid-modernization efforts. However, utilities with systems already in the band are concerned about whether and how any realignment could impact their existing communications networks, which support mission-critical communications.

The Utilities Technology Council (UTC) is supportive of efforts to promote utility access to the broadband spectrum needed for utilities' communications needs. In doing so, UTC urges the FCC to protect those utilities already in the 900 MHz band from potential interference.

BACKGROUND

Utilities require interference-free radio spectrum to operate the wireless components of their ICT networks. These networks support the reliable and safe delivery of essential utility services, from electricity to water and natural gas. Because of the criticality of utility services, their ICT networks are robust and resilient, as they are used to allow utility crews to communicate to restore service after natural disasters or other prolonged outages.

In the case of electric utilities, the nature of electricity itself requires a constant and delicate balance between supply and demand, as electricity must be generated and consumed instantaneously. This means the ICT networks used to underpin utility

infrastructure must communicate important information quickly, with low latency and no radio interference.

The FCC oversees the allocation of commercial spectrum in the U.S. and to date has not acknowledged the criticality of utilities in its spectrum -allocation policies. As a result, utilities have been forced into and out of spectrum bands due to policies that have increased interference and congestion in existing spectrum bands. Given the low -latency requirements and importance of the information carried on utility ICT networks, utility networks cannot tolerate even the threat of spectrum interference.

UTC POSITION

The plan to realign the 900 MHz band could benefit some utilities by providing them the opportunity to access the broadband spectrum needed to extend and expand the coverage and capacity of their telecommunications networks. UTC believes the utilities who do not already have systems in the 900 MHz band should be able to pursue the broadband services this proposal envisions.

At the same time, a number of utilities have already deployed wireless communications systems in the 900 MHz band. These utilities have raised concern that their systems could suffer disruption and interference if they have to relocate and retune their communications equipment to meet the specifications of the rebanding proposal.

These incumbent utilities are also worried about increased interference to these systems as a result of the relocation. Finally, incumbent utilities may face increased costs due to the realignment of the band, both in terms of the relocation and the buildout and operation of the broadband networks.

SITUATIONAL AWARENESS

UTC is supportive of efforts to promote utility access to broadband spectrum below 1 GHz to meet utilities' increasing communications needs. In doing so, UTC urged the FCC to consider technological, financial, and regulatory solutions to protect those utilities already in the 900 MHz band, while also allowing those utilities which do not have licenses in the band to pursue the broadband solutions envisioned in this proposal.

Additionally, the FCC must ensure full understanding that the mission-critical utility communications already in the band are long-term investments that are built to meet specific, highly reliable specifications. The FCC must ensure that any rebanding or rule changes within the band will provide comparable facilities that will continue to meet the narrowband needs of utilities already in the band.

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.

UTC CONTACTS

Sharla Artz, Senior Vice President of Government and External Affairs
Email: Sharla.Artz@utc.org

Brett Kilbourne, General Counsel and Vice President of Policy
Email: Brett.Kilbourne@utc.org

Klaus Bender, Vice President of Engineering, Training, and Standards
Email: Klaus.Bender@utc.org

Rob Thormeyer, Senior Director of Communications and Advocacy
Email: Rob.Thormeyer@utc.org

David Rardin, Director of Government Affairs and Communications
Email: David.Rardin@utc.org

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