

UTC 2018 Resolution: Providing Utilities Broadband Spectrum While Protecting Incumbents in the 900 MHz Spectrum Band

WHEREAS, energy and water providers have invested significant resources to plan, design, build, and operate dedicated wireless communications networks on the radio portion of electromagnetic spectrum to support the day-to-day reliability of essential electricity, energy, and water services; and,

WHEREAS, radio-frequency spectrum is subdivided into various "bands" (measured in "hertz") that have different properties; and,

WHEREAS, utilities operate many of their wireless private communications networks using licensed spectrum in bands, such as the 900 MHz band, so that their mission critical communications are protected against interference, and these energy and water utilities are therefore "incumbent" licensees of spectrum. Interference with these mission critical communications could jeopardize human safety, reliability, and security of utility operations; and,

WHEREAS, utilities are seeking broadband spectrum in bands below 1 GHz in addition to their existing networks to underpin more flexible, interactive and efficient utility delivery systems. These needs are a direct result of both federal and state energy, water and homeland security policies as well as customer demands and advances in technology; and

WHEREAS, over the years, utilities have been forced to relocate out of bands by the Federal Communications Commission (FCC, the Commission) due to policies that have increased interference and congestion in existing spectrum bands and that have reallocated existing spectrum bands for commercial communications service providers, thereby making it more and more challenging for utilities to find spectrum that meets their needs for reliability and interference-free spectrum; and,

WHEREAS, the Federal Communications Commission issued a Notice of Inquiry (NOI) on August 4, 2017, which considers the realignment of the licensed 900 MHz radio spectrum band to support a Private-Enterprise Broadband Block (PEBB) of spectrum; and,

WHEREAS, the FCC's NOI in the 900 MHz band was prompted by a proposal by pdvWireless and the Enterprise Wireless Alliance (EWA) for realigning the band to create a contiguous 3X3 MHz block of spectrum for broadband operations – the PEBB – which would support a broadband "Long-Term Evolution (LTE) network, a standard for highspeed wireless communications; and,

WHEREAS, this realignment of the 900 MHz band could potentially provide utilities and other critical infrastructure industries with access to broadband spectrum and priority access for utility communications during emergencies; and,

WHEREAS, under the proposal, incumbent private utility systems that operate on channels in those frequency ranges would have the option to participate in the PEBB or relocate their narrowband operations down into a compressed 2X2 MHz of spectrum, resulting in a reduction from 199 channels to 148; and,

WHEREAS, under the proposal by pdvWireless and EWA, any costs associated with relocating in-

cumbents deciding to move to comparable facilities would be paid for by the PEBB licensee. Additionally, under the proposal by pdvWireless and EWA, if a utility decided to participate in the PEBB, it would be provided priority access to available capacity during emergencies and the PEBB network would be constructed to meet the specifications of the utility; and,

WHEREAS, while the proposal by pdvWireless and EWA could benefit some utilities and provide them the opportunity to access broadband spectrum that would provide the additional capacity and coverage to meet existing and future communications needs, utility incumbent licensees in the 900 MHz band have raised strong concerns that they could suffer disruption, additional cost, and harmful interference by being forced to relocate and retune all of their equipment from their current channels; and,

WHEREAS, this resolution should not be considered an endorsement of or in opposition to the May 1, 2018 proposal filed by pdvWireless and EWA.

NOW, THEREFORE, LET IT BE RESOLVED, that the Utilities Technology Council (UTC) is supportive of efforts to promote utility access to broadband spectrum below 1 GHz to meet utilities' increasing communications needs; and,

LET IT BE FURTHER RESOLVED, that the FCC, as it proceeds on the Notice of Inquiry must consider technological, financial and regulatory solutions to protect incumbent utility narrowband communications systems while also allowing for development of broadband systems. Items to be considered include, but are not limited to: conducting field test to demonstrate interference between the wide band and narrow band systems, identifying interference levels and impacts to incumbent systems coverage, and establishment of guard bands to mitigate interference issues; and

LET IT BE FURTHER RESOLVED, that those utilities that do not have any incumbent licenses in the 900 MHz band because of where their service territory is situated geographically should be able to pursue the broadband solutions envisioned in this proceeding; and,

LET IT BE FURTHER RESOLVED, that the FCC must ensure full understanding that the mission-critical communications infrastructure currently deployed by the incumbents are required for the long term. Like public safety entities, the utility industry requires these systems to be highly reliable and are used in addition to any commercial or private broadband systems; and,

LET IT BE FURTHER RESOLVED, given this situation, the FCC should ensure that the PEBB licensees could only convert or sell their 900 MHz license(s) to other Business/Industrial/Land Transportation license-eligible entities that would hold their licenses(s) as a PEBB licensee consistent with requirements established by the FCC for such licenses; and

LET IT BE FURTHER RESOLVED, given that incumbent narrowband systems serve utilities and their customers' long-term needs, and that those systems provide mission critical communications, the FCC must ensure that any re-banding or rule change impacting 900 MHz licensees will provide comparable facilities to continue to meet the incumbents' narrowband needs. Any new 900 MHz band plan should ensure that there is minimal disruption to the operations of all affected incumbents, that the associated reconfiguration costs are fully funded, and the incumbent 900 MHz licensees are provided with "comparable facilities" on other frequencies in the 900 MHz band. Providing comparable facilities requires that the incumbent must be relocated to facilities that provide equivalent spectrum, the same geographic coverage, the same quality of service, and must be compensated to maintain equivalent operating costs for the timeframe the incumbent uses the spectrum. In terms of quality of service, the incumbent must have the same voice quality as currently available and high levels of interference protection to assure continuity of critical services. It is recommended that the

FCC adopt 900 MHz interference rules consistent with the standards for interference protection in the 800 MHz rules, and that the PEBB or any parties under the operations of their license shall agree to follow the 3GPP good neighbor cellular LTE practices in the operation of their LTE services so as not to interrupt these critical infrastructure services being provided for the protection of the public well-being.

Adopted by the UTC Board of Directors, July24, 2018