

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
FELHC, Inc. et al. Request for Extension)	WT Docket No. 17-201
Or Waiver of 700 MHz Guard Band)	
Performance Requirement)	

To: Chief, Wireless Telecommunications Bureau

COMMENTS OF THE UTILITIES TECHNOLOGY COUNCIL

The Utilities Technology Council (UTC) hereby files the following comments in response to the Wireless Telecommunications Bureau’s Public Notice in the above-referenced proceeding.¹ UTC supports the Request for an Extension or Waiver of Substantial Service Requirement that was filed by FELHC, Inc. (“FELHC”), which is the license-holding subsidiary of FirstEnergy Corp. (“FE”), one of the nation’s largest investor-owned electric systems.² As described below, an extension or waiver of the performance requirement would serve the public interest and is justified by unique circumstances and a lack of reasonable alternatives. An extension or waiver would serve the public interest by providing FELHC sufficient time to be able to deploy systems in the Upper 700 MHz A Block that would support a variety of critical communications for the safe, reliable and secure operation of electric, gas and water utility services. In addition, an extension or waiver is justified by unique circumstances, because FELHC has only recently acquired the spectrum and will need to deploy sites across a large geographic area that includes many remote locations and difficult terrain. Moreover, FELHC needs this spectrum in order to maintain utility communications, which are threatened by the IP Transition as carriers discontinue and/or replace legacy services in various parts of FELHC’s service territory. Also, FELHC lacks reasonable

¹ See Wireless Telecommunications Bureau Seeks Comment on FELHC, Inc. Et Al, Request for Extension or Waiver of 700 MHz Guard Band Performance Requirement, Public Notice, DA 17-743 (rel. Aug. 8, 2017)(“Public Notice”).

² In addition to FELHC, the other parties to the Request are BPC Spectrum, LLC, Dominion 700, Inc., and Access 700, LLC, and FELHC has been assigned or is in the process of being assigned partitioned Upper 700 MHz A Block spectrum by these other parties.

alternatives because the FCC has not allocated any additional licensed spectrum for utilities, and unlicensed spectrum will not provide the coverage and reliability that FELHC needs. Finally, UTC supports FELHC's request for clarification regarding compliance with the substantial service requirement using other metrics besides population coverage, because these metrics are not consistent with FELHC's use of the spectrum to communicate with smart grid devices.

I. The Public Interest Would Be Served by Granting an Extension or Waiver of the Performance Requirement.

As FELHC explains, Upper 700 MHz A Block licensees are subject to the construction requirement of Section 27.14(a) of the Commission's rules, which provides that Upper 700 MHz A Block licensees, as a condition of renewal, must make a showing of "substantial service" in their license area within their prescribed license term -- in the case of the Licenses, by the June 13, 2019 Expiration Date.³ The purpose of this rule is to prevent spectrum warehousing and ensure that the license is actually being used effectively and consistent with the public interest.

UTC submits that the public interest would be served by granting the request for an extension or waiver of Section 27.14(a) of the Commission's rules. As the Commission is well-aware, utilities like FELHC operate extensive private internal communications systems in order to ensure the safe, reliable and secure delivery of essential electric, gas and water services to the public at large. These private internal communications include wireline and wireless communications networks. Utilities rely on these private internal communications systems because they provide greater reliability, availability and resiliency than commercial communications systems. Utilities operate across large multi-state service territories and much of their critical assets are located in remote areas, where commercial communications networks are not available. Utilities are also subject to strict state and federal reliability requirements, which also drive the need for reliable private internal communications systems.

³ Request at 12.

As FELHC points out, utilities are considered critical infrastructure industries (CII), and as such, serve one of four lifeline functions providing essential power to all critical infrastructure sectors, without which none could operate properly.⁴ The Commission itself has recognized the importance of utilities for national security and public safety. It observed that “In a natural disaster or terrorist attack, clearing downed power lines, fixing natural gas leaks and getting power back to hospitals, transportation hubs, water treatment plants and homes are fundamental to protecting lives and property.”⁵ Moreover, the Commission has recognized that for CII “the nature of their day-to-day operations provides little or no margin for error and in emergencies they can take on an almost quasi-public safety function. Any failure in their ability to communicate by radio could have severe consequences on the public welfare.”⁶

Despite being CII, utilities lack access to new spectrum to meet their increasing communications needs.⁷ At the same time, their existing licensed spectrum is under increasing threats from congestion and interference.⁸ And unlicensed spectrum does not provide the necessary coverage and reliability for mission critical communications.⁹ While utilities use their own wireline communications networks to meet some of their communications needs, they also use commercial wireline communications networks

⁴ Request at 6, *citing* U.S. Dept. of Homeland Security, Energy Sector-Specific Plan at 19 (2015), available at <https://www.dhs.gov/sites/default/files/publications/nipp-ssp-energy-2015-508.pdf>.

⁵ Omnibus Broadband Initiative, Federal Communications Commission, Connecting America: The National Broadband Plan (“National Broadband Plan”), Chapter 12 (“Energy and the Environment”), Section 12.1 (March 2010).

⁶ Implementation of Sections 309(j) and 337 of the Communications Act of 1934, as Amended, *Report and Order and Further Notice of Proposed Rule Making*, WT Docket No. 99-87, 15 FCC Rcd 22709, 22746 (2000).

⁷ See National Broadband Plan at 251; Utilities Telecom Council, *The Utility Spectrum Crisis: A Critical Need to Enable Smart Grids* (Jan. 2009), available at <https://ecfsapi.fcc.gov/file/6520194487.pdf>.

⁸ See *e.g.* In the Matter of Higher Ground LLC, *Order and Authorization*, IBFS File No.: SES-LIC-20150616-00357, DA 17-80 (rel. Jan. 18, 2017)(hereinafter “*Order*”) (granting application by Higher Ground to operate 50,000 mobile earth stations in the 6 GHz band, threatening interference to thousands of utility fixed microwave systems in the band). See also Application for Review of the Utilities Technology Council in IBFS File No.: SES-LIC-20150616-00357 at 7-8 (filed Feb. 17, 2017).

⁹ See Request at 8 (stating that “Existing unlicensed alternatives, such as the 902-928 MHz band, no longer meet this criterion, as the interference “noise floor” in such bands exceeds acceptable levels due to the rapid proliferation of commercial Internet of Things (IoT) devices using the same spectrum. For example, Gartner estimates that by 2020 there will be 20.8 billion “connected things” operating on these unlicensed frequencies, due to the exponential growth of IoT devices.”

for various applications, including Supervisory Control and Data Acquisition (SCADA) and remote monitoring and control of substations. However, these commercial wireline networks are being replaced or discontinued altogether as part of the IP Transition.

FirstEnergy recognized that the IP Transition threatened its communications reliability, and it decided to acquire spectrum in the Upper 700 MHz A Block to mitigate the risk.¹⁰ Those secondary market transactions are still ongoing. The project will also require the replacement of hundreds of legacy leased circuits and build-out of private communications infrastructure across five states.¹¹ FirstEnergy also estimates that there will be over 2,000 locations using the Upper 700 MHz A Block for monitoring and controlling electrical equipment that serves millions of customers.¹² Using customer counts and population in the 118 counties where Upper 700 MHz A Block spectrum is (or will be) licensed to FELHC, and its accelerated deployment plan, FELHC believes that it will be able to demonstrate substantial service, as required for license renewal, no later than December 31, 2022.

By its Request, FirstEnergy is proactively seeking an extension or waiver of the performance requirements, recognizing that the projected completion date of the project is past the June 13, 2019 deadline for meeting the substantial service performance requirement for the Upper 700 MHz A Block licenses. UTC submits that FELHC has demonstrated that there are unique circumstances at issue here, given the extent of the deployment and the ongoing negotiations that are underway to acquire the spectrum on the secondary market. UTC submits that this represents a significant undertaking, and that it lacks reasonable alternatives to meet the deadline to comply with the substantial performance requirement. As FE explained, the Upper 700 MHz A Block was the only available spectrum option that

¹⁰ Request at 10 (Several years ago, FE initiated a substantial, accelerated investment program to upgrade its telecommunications equipment to meet the timelines specified in the Technology Transitions Order as carriers announce the sunset of private analog services. To address this challenge, FE is using multiple approaches, including expansion of internal network assets such as fiber and wireless technologies and the use of substitute leased services (MPLS, cellular).

¹¹ Request at 16.

¹² *Id.* at 12. FirstEnergy also has identified an estimated 3,200 locations where 700 MHz spectrum can be employed, including both existing sites and expected expansions over the forecast period. *Id.*

would provide the range and propagation, “considering FE's diverse terrain and the long distances between electrical devices (i.e., substations and line equipment).”¹³ Moreover, the Commission should support FirstEnergy’s effort to put this spectrum to good use, which will serve the public interest by reducing FE’s dependence on third party providers, improving reliability, and hardening security against evolving threats. The public interest would also be served because the network will provide the bandwidth to enable other capabilities at critical sites, including security cameras, asset health monitoring, and other reliability-focused systems to protect the integrity of the electric system.¹⁴

II. The Commission Should Clarify that FELHC May Demonstrate Compliance with Substantial Service Requirements by Showing Coverage of Devices.

UTC supports the request for clarification that FELHC may demonstrate compliance with the substantial service requirement (including through compliance with the Upper 700 MHz A Block safe harbor) by using the coverage of devices used for communications with electrical assets as a reasonable proxy for calculating coverage to the population in the License Areas.¹⁵ As FELHC points out the Commission has previously recognized that activities such as smart grid to monitoring stations, maintenance instrumentation, automatic metering, collection points, and video surveillance, may not easily lend themselves to the supplication of strict population-based measures and may require guidance from the Bureau.¹⁶ This rationale is equally applicable in the context of the 700 MHz A band as it is to WCS in the 2.3 GHz band. In addition, the Commission has also recognized in the *700 MHz Guard Band Second Report and Order* that the threshold for substantial service should be based on the market and type of spectrum users served, with showings reviewed on a case-by-case basis.¹⁷ Clearly, FELHC will

¹³ Request at 9 (adding that “Bandwidth requirements rule out narrowband alternatives, since those solutions typically do not have the capacity to support multiple utility applications over a common communications path.”)

¹⁴ Request at 11.

¹⁵ Request at 18.

¹⁶ Request at 18, citing AT&T WCS Waiver Order, ¶5.

¹⁷ Second Report and Order, *Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules*, 15 FCC Rcd 5299, ¶84 (2000) (“700 MHz Guard Band Second Report and Order”).

provide substantial service to the geographic markets covered by FE's service territory and it will cover the smart grid devices that are supported by the 700 MHz A band network. Accordingly, the Commission should grant the requested clarification, consistent with the methodology and assumptions provided by FELHC in the Exhibit for translating device deployments to population coverage.

CONCLUSION

WHEREFORE, UTC requests that the Commission grant FELHC's Request for an Extension or Waiver of Substantial Service Requirement. The public interest in reliable electricity would be served by granting the request, and it also is justified by unique circumstances that would render strict application of the population metric for coverage inequitable, unduly burdensome or contrary to the public interest.¹⁸ Moreover, UTC agrees that FELHC lacks reasonable alternatives, due to the discontinuance of services by incumbent wireline carriers in the area and the lack of otherwise suitable spectrum that would support its utility communications needs. Finally, UTC urges the Commission to also grant FELHC's request for clarification that FELHC may demonstrate compliance with substantial service requirements for its Upper 700 MHz A block license by showing coverage of devices instead of population.

Respectfully,

Utilities Technology Council

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¹⁸ 47 C.F.R. §1.925.