

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Unlicensed Use of the 6 GHz Band	)	ET Docket No. 18-295
	)	
Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz	)	GN Docket No. 17-183
	)	

**REPLY COMMENTS OF THE GRIDWISE ALLIANCE**

The GridWise Alliance hereby files the following Reply Comments in response to the Commission’s Notice of Proposed Rulemaking in the above-referenced proceeding.<sup>1</sup> GridWise consists of utilities (of all types), information technology equipment and service providers, National Laboratories, academic institutions, and Regional Transmission Operators (RTOs) and Independent System Operators (ISOs) that represent the ecosystem of stakeholders that design, build, and operate the electric system.<sup>2</sup> GridWise has been working since 2003 to advance the modernization of the electric system.

Given the cross-section of GridWise’s membership, GridWise acknowledges the strong opposition reflected in the record – particularly from utilities, public safety, and other critical infrastructure sectors – to expanding the use of the 5.925-6.425 GHz and 6.525-6.875 GHz bands (collectively and hereinafter referred to as the 6 GHz band) to permit unlicensed operations. GridWise also underscores the expanding use of the 6 GHz band by utilities as grid automation and the need for increased visibility and control into grid operations increases (e.g., with the growth of distributed energy resources), while utilities must ensure continued grid reliability, resilience, and security. GridWise also recognizes concerns exist with respect to automated frequency coordination (AFC) for both indoor and outdoor operations, namely, while, technology manufacturers are confident that they can meet requisite protections from interference, this might not yet be the case today. At the same time, GridWise recognizes the view and desire of technology manufacturers to serve the growing number of applications, particularly low-latency, low-power ones, for instance, as homes incorporate more automation through “smart” technologies and devices.

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<sup>1</sup> *Unlicensed Use of the 6 GHz Band*, Notice of Proposed Rulemaking, ET Docket No. 18-295 (rel. Oct. 24, 2018).

<sup>2</sup> These comments do not represent the views of GridWise’s members that are unable to participate in advocacy activities (*i.e.*, RTOs/ISOs, National Laboratories, and the Bonneville Power Administration).

As a result, GridWise seeks to help shape workable solutions for utilities, technology providers, and all relevant stakeholders with respect to this critical issue. As such, GridWise stands ready to be a resource to the Commission, electric utilities, and technology users, should the Commission see value in furthering a discussion as to how use of this spectrum would work by incumbent users and by unlicensed operations, and ways in which all of the users would ensure continued reliability of the system.

If the Commission decides to open the 6 GHz band to unlicensed operations, GridWise supports the development of procedures that will protect incumbents against interference from unlicensed operations in the 6 GHz band. GridWise echoes others' comments and reiterates that the Commission must ensure that interference is prevented before it occurs, not remedied after the fact. In addition, many comments support interference protection from adjacent (and second adjacent) channels, as well as co-channel interference.<sup>3</sup> The Commission should protect against interference by requiring prior coordination of outdoor and indoor operations essential for electric companies and Critical Information Infrastructure (CII), notwithstanding the adoption of other interference protections that ensure the reliability of 6 GHz microwave systems.

As the Utilities Technology Council (UTC) et. al., as well as numerous other comments on the record, have stated, if the Commission opens up this band, and if it relies on automated frequency coordination (AFC) for both indoor and outdoor operations, the Commission should not proceed in permitting unlicensed operations in the 6 GHz band until such time as AFC has been developed, tested, and demonstrated to perform in conformity with adopted requirements and sufficiently protects incumbent users against interference, given utilities' obligations to ensure power remains on and reliable at all times.

Many comments recommend ways to improve AFC, including adopting the appropriate interference criteria and propagation model, using accurate data about microwave systems from ULS or a third-party coordinator, and securing it against cyber-attacks and, finally, performance testing of the AFC. GridWise supports such efforts and underscores the essential need to prevent cyber-attacks that could threaten critical infrastructure communications.

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<sup>3</sup> See e.g., Comments by the Association of American Railroads at 10-11 (explaining that out of band emission limit limits alone will be insufficient to protect incumbent operations because microwave receivers can experience interference even when transmitters in adjacent channels have no out-of-band emissions.); Comments of Comsearch at 4 (stating that "The coordination system must control transmissions by unlicensed devices that are co- or adjacent frequency to a microwave receiver."); and Comments of the FWCC at 25-27 and Attachment B "Need for Adjacent Channel Interference Protection and Attachment C "RLAN/FS Guard Band Analysis"; Comments of Southern Company Services at 15 (stating that "[t]here is no reason why an automated process should not consider adjacent channel systems.").

GridWise appreciates the opportunity to submit these comments. Again, GridWise stands ready to be a resource to help shape workable solutions and to work with the Commission and interested parties, utilities, technology providers, and all relevant stakeholders with respect to this critical issue.

Respectfully,

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