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May 24, 2019

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 - 12<sup>th</sup> Street, S.W.  
Washington, D.C. 20554

Ex Parte

Re: Notice of Ex Parte Presentation, ET Docket No. 18-295, GN Docket No. 17-183.

Dear Ms. Dortch:

The Utilities Technology Council (“UTC”) is providing the following ex parte notification in the above-referenced proceeding in accordance with Section 1.1206 of the Commission’s Rules. On May 22, 2019, Christina Baworowsky from Alliant Energy, Ben Portis from Entergy, Brian O’Hara from the National Rural Electric Cooperative Association, Arpan Sura from Hogan Lovells (on behalf of the Association of American Railroads), and the undersigned from the Utilities Technology Council met with Erin McGrath in the Office of Commissioner O’Rielly to discuss matters related to the above-referenced proceedings.

During the meeting, the parties provided the attached presentation and explained how utilities and other critical infrastructure industries operate extensive microwave communications systems in the 6 GHz band, which they use to support the safe, reliable and secure delivery of essential services. Owing to the criticality of these services, their microwave systems are designed, built, and maintained to operate at extremely high standards for reliability and low latency. Potential interference from unlicensed operations represents an unreasonable risk to the performance of these microwave systems in the 6 GHz band, and the parties explained that interference must be prevented rather than fixed after the fact. Specifically, the parties explained how both indoor and outdoor unlicensed operations pose an interference threat. In addition, the parties described various additional issues, including the need for enforcement mechanisms in the event that interference occurs, as well as the need to develop, test and certify automated frequency coordination (AFC) systems to meet performance and security requirements.

Thank you for your help in this matter. If there are any questions concerning this matter, please contact the undersigned.

Respectfully,

A handwritten signature in black ink that reads 'Brett Kilbourne'.


Brett Kilbourne


Cc: FCC Participants




# Potential Interference to UHF and CII 6 GHz Systems from Unlicensed Operations

May 22, 2019

- Utilities and other critical infrastructure industries (CII) rely on the 6 GHz band for a variety of mission critical communications.
  - The 6 GHz band is uniquely suited to support utility and CII communication needs and there is a lack of reasonable alternatives.
  - Many utilities and CII relocated microwave systems to the 6 GHz band after the band was reallocated.
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- Utilities and CII require ultra-high reliability and exceptionally low latency for their communications systems.
  - Potential interference from unlicensed operations must be prevented from occurring.
  - Remedying interference after the fact is not be sufficient.
  - The probability of interference and magnitude of the risk is unacceptable.
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- Concerns:
  - Interference from outdoor operations
    - AFC is untested and lacks transparency to utilities and CII to mitigate and resolve interference that occurs.
    - AFC is predicated on modelling that may not account for real-world environment or adjacent microwave operations.
  - Interference from indoor operations
    - Overestimated attenuation
    - Uncontrolled operations
    - Unknown locations
    - Improper installation

- Remaining issues:
    - Enforcement mechanisms in the event of interference
    - Security concerns about AFC
    - Inaccuracies in underlying data
    - Centralized or decentralized AFC
    - Performance requirements for AFC
    - Independent testing and certification
    - Adjacent channel interference
    - Incremental deployment of unlicensed spectrum to limit the potential for interference
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# Discussion

