

LAWLER, METZGER, KEENEY & LOGAN, LLC

1717 K STREET, NW
SUITE 1075
WASHINGTON, D.C. 20006

STEPHEN J. BERMAN

PHONE (202) 777-7700
FACSIMILE (202) 777-7763

March 7, 2018

Via Electronic Filing

Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Re: *Ex Parte* Notice: *Promoting Investment in the 3550-3700 MHz Band* –
GN Docket No. 17-258

Dear Ms. Dortch:

On March 5, 2018, Michael Fitzpatrick, Head of Regulatory Advocacy at the General Electric Company (“GE”), Vijay Venkateswaran, Entrepreneur in Residence at GE Ventures, and I spoke by telephone with Rachael Bender, Legal Advisor to Chairman Ajit Pai, to discuss the Commission’s pending Notice of Proposed Rulemaking in the above-captioned proceeding.¹ During this discussion, we urged the Commission to maintain census-tract licensing in the Citizens Broadband Radio Service (“CBRS”) band as a means of increasing participation in the 3.5 GHz spectrum auction and promoting U.S. leadership in 5G deployment.

With census-tract licensing for Priority Access Licenses (“PALs”), a broad range of parties will bid for access to licensed spectrum, develop dynamic, diverse uses of the 3.5 GHz band, and maximize the value of CBRS licenses. Spectrum is an essential input for myriad activities around the United States that generate important economic, social, safety, and other public interest benefits. GE, its industrial and critical-infrastructure customers, and other diverse users will make intensive use of their licensed spectrum with targeted, localized wireless network deployments that will generate a wave of new cutting-edge jobs and economic growth in a mix of urban, suburban, rural, and remote areas.

Census-tract licensing is crucial to GE and its industrial and critical-infrastructure customers, since the CBRS band is an ideal spectrum platform for the “Industrial Internet of Things” (“IIoT”). Under the Commission’s current rules, GE and its customers will be able to use their own licensed 3.5 GHz spectrum to “self-provision” IIoT wireless connectivity over geographically targeted, private TDD-LTE networks, rather than having to rely solely on

¹ See *Promoting Investment in the 3550-3700 MHz Band*, Notice of Proposed Rulemaking and Order Terminating Petitions, 32 FCC Rcd 8071 (2017) (“*NPRM*”).

wireless carriers' licensed spectrum and services. As we explained on our call, GE expects to bid on census-tract PALs itself and become a CBRS licensee in numerous instances. At the same time, GE anticipates that its industrial and critical-infrastructure customers will bid on an even greater number of census-tract CBRS PALs around the country – to build out private LTE networks with GE to support IIoT applications. This will equate to several thousand census-tract license areas where industrial and critical-infrastructure-based operations will occur. There is no doubt that entities from the industrial and critical-infrastructure sectors will compete vigorously in auctions for census-tract licenses in order to obtain the spectrum necessary to support IIoT-related services and applications.

As we made clear on this call, whether it is GE or its customers that hold CBRS licenses, GE has a huge economic stake in the preservation of census-tract licensing and the use of the 3.5 GHz band as a springboard for the IIoT. The design, installation, and support of digital infrastructure are increasingly important elements in GE's multi-line global business. GE will work in partnership with its industrial and critical-infrastructure customers as it seamlessly and cost-effectively offers these IIoT customers "connectivity in a box" in the 3.5 GHz band. GE will provide these industrial and critical-infrastructure entities with IIoT technology and serve as a wireless system aggregator for these customers, using PAL spectrum to take full advantage of advances in inspection, remote control, and monitoring technologies, edge computing capabilities, and cloud-based Big Data predictive analytics (as described at length in GE's comments). With self-provisioned private LTE networks at 3.5 GHz, GE and its customers will be able to minimize costs, control service quality, enhance safety, and optimize network and IIoT-system performance.

If the Commission reverses course and moves to Partial Economic Area ("PEA")-based or county-based licensing at 3.5 GHz, it is likely that neither GE nor its customers will be able to obtain CBRS PALs, jeopardizing the benefits of the IIoT. To implement robust IIoT systems, GE and its industrial and critical-infrastructure customers need spectrum that provides certain, secure, cost-effective, and high-performance wireless connectivity. General Authorized Access ("GAA") and other unlicensed spectrum is not a viable alternative to census-tract PAL spectrum in most cases, since such frequencies do not provide users with interference protection or ensure the safe and reliable operation of mission-critical facilities. Nor can GE and its IIoT customers count on cost-effectively obtaining such wireless functionality from commercial mobile operators. The major carriers have traditionally emphasized consumer-based services rather than IIoT-type offerings, and they have long been reluctant to make meaningful amounts of spectrum available to non-traditional users through the secondary market. There is no legal obligation to partition or lease spectrum, and there are in fact numerous factors that would deter large carriers from making sufficient CBRS spectrum available to GE and other IIoT users through these mechanisms. Major carriers would have a disincentive to convey spectrum to parties that might use that resource to develop competitive offerings, while in some locations carriers would use their 3.5 GHz frequencies for their own consumer-based offerings, making spectrum in those areas unavailable for leasing to private LTE network operators. Even where available on the secondary market, CBRS spectrum would likely come at an uneconomic cost, given that the transaction costs for such arrangements will likely fall asymmetrically on non-traditional spectrum users such as IIoT customers.

As GE has described in this proceeding, licensing CBRS on a PEA or county basis would exponentially raise the cost of PALs and convert licensed CBRS spectrum into a commercial mobile band like most others, controlled by the major carriers. GE and its industrial and critical-infrastructure customers would be highly unlikely to bid for PEA-based or county-based licenses at auction, even in key, targeted geographic areas. It would not be economically rational to obtain licenses covering territory extending far beyond their geographically focused deployments, whether in urban, suburban, or rural areas. Thus, if the Commission departs from the existing census-tract framework and shifts to PEA- or county-based licensing, IIoT investment, innovation, and deployment would likely be delayed and reduced.

In considering its options in this proceeding, the Commission should recognize that its “Innovation Band” at 3.5 GHz is a dramatic success so far, triggering a surge in wireless industry involvement by non-traditional participants, including GE and other industrial and critical-infrastructure entities such as the American Petroleum Institute, Port of Los Angeles, Union Pacific, and the Utilities Technology Council.² This band has sparked new investment and commercial activity, innovative business models, digital infrastructure development, and collaboration between stakeholders. GE and its industrial and critical-infrastructure customers are eager to utilize the CBRS band to bring the full benefits of the IIoT revolution to the American public and the U.S. industrial and manufacturing sectors.

Pursuant to section 1.1206(b)(2) of the Commission’s rules, 47 C.F.R. § 1.1206(b)(2), this *ex parte* notification is being filed electronically for inclusion in the public record of the above-referenced proceeding.

Respectfully submitted,

/s/ Stephen J. Berman
Stephen J. Berman

cc: Rachael Bender

² See, e.g., Joint Comments of the Telecommunications Subcommittee of the American Petroleum Institute and the Regulatory and Technology Committee of the Energy Telecommunications and Electrical Association (Dec. 21, 2017); Letter from Eugene D. Seroka, Executive Director of The Port of Los Angeles, to Hon. Ajit Pai, Chairman of the Federal Communications Commission, *et al.* (Jan. 29, 2018); Comments of Union Pacific (Dec. 28, 2017); Comments of the Utilities Technology Council (Dec. 28, 2017), all filed in GN Docket No. 17-258.