

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

In the Matter of	)	
	)	
AT&T Request for Waiver to Permit Power Spectral Density Model for 800 MHz Cellular Operations in Eight Markets in Kentucky and Tennessee	)	WT Docket No. 15-130

**REPLY COMMENTS OF AT&T**

AT&T Services, Inc., on behalf of its wholly-owned and controlled wireless affiliates (collectively “AT&T”), provides these reply comments on the Federal Communications Commission’s (the “Commission”) Public Notice<sup>1</sup> as to AT&T’s Petition for Waiver of the Commission’s Cellular base station power rule, 47 C.F.R. §22.913, in eight markets in Kentucky and Tennessee.

Pending the outcome of a rulemaking that proposes changes to the Cellular base station power rules, AT&T seeks this waiver to enable it to operate base stations in eight Kentucky and Tennessee Cellular markets using a power spectral density (“PSD”) limit of 250 W/MHz in non-rural areas and 500 W/MHz in rural areas. In response to the Public Notice, the National Public Safety Telecommunications Council (“NPSTC”) and Gogo Inc. (“Gogo”) filed comments. Neither has presented sufficient justification to delay the waiver grant.

NPSTC asks the Commission to delay action on AT&T’s waiver request until resolution of the related rulemaking due to the complexity of the issues involved and the desire to resolve interference issues up front. In the alternative, NPSTC requests that the Commission impose

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<sup>1</sup> *Public Notice*, Wireless Telecommunications Bureau Seeks Comment on AT&T Request for Waiver to Permit Power Spectral Density Model for 800 MHz Cellular Operations in Eight Markets in Kentucky and Tennessee, WT Docket No. 15-300 (2015).

waiver conditions similar to those conditions imposed in the Commission's waiver grants covering AT&T markets in Kansas and Missouri and require AT&T to compensate public safety entities that receive interference for the time and expenses incurred investigating and resolving interference complaints.

Notwithstanding the complexity of the issues involved, the public interest would be best served by grant of the waiver. NPSTC's concerns about an increase in the potential for interference are generalized and not specific to AT&T's proposal to use the PSD measure to set base station power limits in Kentucky and Tennessee. The study attached to AT&T's Petition for Waiver demonstrates that operating its base stations in Kentucky and Tennessee using the PSD limits proposed will not increase the potential for interference to public safety devices. As the Commission concluded with a similar study covering Vermont markets, this study "provides a general framework for assessing the likelihood of interference from LTE deployments with MIMO on public safety receivers using various reasonable scenarios to estimate the potential for intermodulation interference, out of band emissions, and overload interference."<sup>2</sup> AT&T's real world experience using PSD thus far supports the study. In those markets where AT&T has been operating using PSD following grant of a waiver, AT&T has received only one interference complaint from a public safety entity, and in that case, the interference was caused by a public safety Part 90 booster, not by AT&T or any other Cellular licensee.

Although AT&T continues to believe that the conditions proposed in waiver grants covering AT&T Cellular markets in Kansas and Missouri are unnecessary, AT&T agrees with NPSTC that interference complaints from Part 90 licensees should be expeditiously responded to

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<sup>2</sup> Interim Waiver of 47 C.F.R. § 22.913 to Permit the Use of a Power Spectral Density Model for Certain Cellular Service Operations for Cellular Market 248 – Burlington, VT, WT Docket No. 14-10, 29 FCC Rcd 11632, 11636 (2014).

and resolved. And AT&T has all intentions of continuing to respond to interference complaints expeditiously and in accordance with existing Commission rules.<sup>3</sup> Consequently, AT&T has no objections to the imposition of waiver conditions identical to those conditions imposed in the waiver grants covering AT&T markets in Kansas and Missouri.

Yet, there is no justification for imposing on AT&T an obligation to compensate public safety entities for dealing with interference complaints. Cost reimbursement is not part of the existing Part 22 or Part 90 interference mitigation rules, and, absent compelling reasons, the Commission should not impose such an open-ended requirement. Identifying and mitigating sources of interference is a shared responsibility between Part 22 and Part 90 licensees—just as it is for all licensees in adjacent spectrum bands—and the Part 22 and Part 90 interference mitigation rules already strike the appropriate balance. Cellular licensees incur costs of their own analyzing and responding to interference complaints, even when they are not the source of the interference, as was the case with the interference that was ultimately determined to be caused by the public safety Part 90 booster. Yet, AT&T is not seeking reimbursement of those costs, even when the public safety entity making the complaint causes the interference. Moreover, it would be unjust to make Cellular licensees bear the costs to public safety entities of reacting to potential interference that is, at least in part, often a consequence of public safety’s decision to not upgrade to newer devices with more robust designs.

For its part, Gogo states that “[a]doption of higher power levels through PSD limits would pose a significant risk of increased interference to the adjacent channel 800 MHz Air-to-Ground (“ATG”) service” and therefore, the Commission should require AT&T to coordinate with adjacent channel licensees such as Gogo prior to commencing any operations at power

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<sup>3</sup> 47 C.F.R. §§22.970 - 22.973.

levels higher than currently allowed and explicitly prohibit any harmful interference to such licensees.<sup>4</sup> AT&T does not oppose discussions with Gogo about the use of PSD and fully expects to engage in detailed discussions soon. But, conditioning grant of a waiver to use PSD on a coordination agreement with all adjacent channel licensees is not warranted because the assumptions underlying Gogo's claims do not hold up.

Gogo inaccurately assumes that AT&T would operate at power levels higher than allowed under current Cellular rules. As the Commission has observed, in a non-rural area Commission rule section 22.317 allows a Cellular licensee to operate "12 GSM channels with an aggregate power of 6000 W ERP (1200 W/MHz)"<sup>5</sup> in a 5 MHz band whereas AT&T seeks authorization to operate at an aggregate power of only 1250 W ERP (250 W/MHz) in that same 5 MHz band. AT&T's proposed PSD limit is based on maintaining the status quo in the RF environment, not on increasing the transmit power of its base stations. Altering the manner in which base stations ERP is measured and applied simply would allow AT&T to implement the Multiple Input Multiple Output (MIMO) feature of LTE, which uses two transmitters on the same carrier frequency, without having to split the currently authorized 500 Watts per carrier between each transmitter.

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<sup>4</sup> Comments of Gogo Inc., WT Docket No. 15-300 at 1 (filed Dec. 31, 2015) ("Gogo Comments").

<sup>5</sup> Amendment of Parts 1 and 22 of the Commission's Rules with Regard to the Cellular Service, Including Changes in Licensing of Unserved Area, Amendment of the Commission's Rules with Regard to Relocation of Part 24 to Part 27, Interim Restrictions and Procedures for Cellular Service Applications, Amendment of Parts 0, 1, and 22 of the Commission's Rules with Regard to Frequency Coordination for the Cellular Service, Amendment of the Commission's Rules Governing Radiated Power Limits for the Cellular Service, *Report and Order and Further Notice of Proposed Rulemaking*, WT Docket No. 12-40, RM No. 11510, RM No. 11660, 29 FCC Rcd 14100, 14139 (2014).

Moreover, Gogo's comments in this docket and *ex parte* filing in WT Docket No. 12-40 reveal that its concerns stem less from the use of PSD and more from *existing* out of band emissions ("OOBE") rules and the ongoing migration of Cellular licensees to broadband networks. Indeed, Gogo references pre-existing "instances where cellular transmit base stations are already causing harmful interference to nearby ATG receive base stations . . . despite operating within the current power and OOBE limits."<sup>6</sup> The existing OOBE rules and network migration to broadband technology are not at issue in this docket or WT Docket No. 12-40. AT&T looks forward to discussing these ongoing issues with Gogo, but the Commission should disregard attempts to attach those concerns to grant of the waiver.<sup>7</sup>

Despite the concerns expressed by NPTSC and Gogo, it would serve the public interest for the Commission to grant AT&T's Petition for Waiver. Use of the PSD measure would allow AT&T to more efficiently deploy LTE over existing Cellular spectrum, generating significant operational and spectrum benefits, without increasing the risk of interference to any adjacent licensees. A waiver grant enables those benefits in the short term, allowing AT&T to meet the ever-increasing data demands of its customers. Waiting for resolution of the rulemaking would unjustifiably delay those benefits, without any demonstrable harm to public safety, adjacent channel, or co-channel licensees.

For all these reasons, AT&T asks the Commission to expeditiously grant the waiver requested to utilize PSD at Kentucky and Tennessee base stations.

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<sup>6</sup> Gogo Comments at 2.

<sup>7</sup> AT&T has analyzed Gogo's OOBE interference concerns and determined that the OOBE levels that Gogo receivers would experience when AT&T implements its proposed PSD limit will not exceed a 1 dB noise floor rise, a standard measure in the wireless industry. AT&T will support this finding in the record in WT Docket 12-40.

January 11, 2016

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Robert Vitanza", with a long horizontal flourish extending to the right.

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