

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

In the Matter of	)	
	)	
Reassessment of Federal Communications Commission Radiofrequency Exposure Limits and Policies	)	ET Docket No. 13-84
	)	
Proposed Changes in the Commission's Rules Regarding Human Exposure to Radiofrequency Electromagnetic Fields	)	ET Docket No. 03-137
	)	

**REPLY COMMENTS OF AT&T**

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AT&T Inc., on behalf of its wireless affiliates, (“AT&T”) submits these reply comments<sup>1</sup> in response to the Federal Communications Commission’s (“Commission”) Further Notice of Proposed Rulemaking on human exposure to radiofrequency (“RF”) emissions from fixed wireless facilities.<sup>2</sup>

**I. INTRODUCTION AND SUMMARY.**

AT&T concurs with the Commission’s decision to evaluate its rules and regulations related to RF exposure. This Further Notice presents a good opportunity for the Commission to provide regulatory clarity, minimize unnecessary restrictions on transmitters that present a negligible potential to exceed the Commission’s RF exposure guidelines, and educate the public

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<sup>1</sup> AT&T’s reply comments focus only on comments filed in response to the Further Notice and the Commission’s proposals pertaining to fixed network wireless transmitter sites.

<sup>2</sup> Reassessment of Federal Communications Commission Radiofrequency Exposure Limits and Policies, Proposed Changes in the Commission's Rules Regarding Human Exposure to Radiofrequency Electromagnetic Fields, Further Notice of Proposed Rulemaking, ET Docket No. 13-84, ET Docket No. 03-137, 28 FCC Rcd 3498 (March 28, 2013) (“Further Notice”).

that wireless transmitters which comply with Commission RF exposure rules do not present a public health concern.

AT&T agrees that the Commission would minimize confusion by changing the terminology from “categorical exclusion” to “exemption” when used to reference exceptions to the routine RF evaluation requirement. This modification will avoid the potential misperception that a facility that is “exempt” from routine RF evaluation is “categorically excluded” from environmental processing under the Commission’s National Environmental Policy Act (“NEPA”) rules.<sup>3</sup> AT&T also agrees that the general public often misunderstands the safety of wireless facilities and that the Commission could reduce this confusion by releasing consumer-centric guidance on RF exposure issues at fixed wireless facilities. Such a guide would clearly and concisely explain the Commission’s exclusive role in regulating RF exposure, that licensees are subject to stringent, conservative RF exposure rules that protect the public from excessive RF exposure, and that wireless providers must comply with those rules. Reducing the misinformation that often exists about RF safety would potentially increase the number of locations available for wireless facilities, which would accelerate broadband deployment.

AT&T agrees that the exemption thresholds from routine RF evaluation proposed in the Further Notice are too restrictive. If implemented as proposed, wireless facilities that are currently categorically excluded from routine RF evaluation would require evaluation, even in the absence of a finding that those facilities present an increased risk of exposure in excess of the maximum permissible exposure (“MPE”) limits and even for facilities that present a negligible risk of exposure in excess of the MPE limits because access is controlled by design, such as towers, utility poles, flagpoles, water tanks. For these facilities, the Commission should work

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<sup>3</sup> See 47 C.F.R. §1.1306.

with industry and other commenters to modify the proposed exemption threshold to strike the right balance between ensuring continued protection of the public from excess RF exposure and avoiding unnecessary burdens on licensees for structures that present a negligible risk of excess exposure. In the absence of evidence that the exemption threshold proposed in the Further Notice will better protect the public, there is no justification for imposing this unnecessary burden on wireless licensees and the Commission should leave the current categorical exclusion criteria in place. Similarly, AT&T also supports continuing the exemption from routine RF evaluation for microwave facilities, which are designed to be free of any potential obstruction that might, even intermittently, interrupt the microwave path. Thus, microwave facilities, by design, present a low risk of exposure to workers, transient persons, and the general public.

For those facilities where controlled access is accomplished through mitigation, such as rooftops, AT&T agrees that licensees making reasonable efforts to educate and warn third parties about potential exposure risks and mitigate those risks should not be subject to enforcement action if exposure occurs despite those efforts. AT&T joins with commenters in proposing a safe harbor for compliance with the Commission's RF exposure rules for licensees that work with property owners and managers to avoid excess RF exposure, such as by providing contact information, procedures for access, signage, and maintaining access controls, barriers as required, appropriate information and training. Such a safe harbor would provide licensees with certainty of the measures needed to achieve compliance, and clarify the responsibilities of property owners and managers, which would provide consistent, effective protection for workers and the public.

If the Commission decides to proceed with the proposals in the Further Notice without the modifications advanced in this reply, AT&T proposes that the Commission grant licensees

two years to come into compliance with the new requirements. Imposition of those requirements would require AT&T to re-evaluate the categorical exclusions and potentially modify mitigation measures at thousands of sites, which would require a significant amount of time to accomplish.

## **II. DISCUSSION.**

### **A. Modifying Terminology to Better Describe Exceptions from Routine Evaluation Will Minimize Potential Confusion.**

The Commission's NEPA rules use the term "categorical exclusion" to reference both an exclusion from environmental processing for facilities that have no significant effect on the environment<sup>4</sup> and an exception from routine RF evaluation for transmitters of certain heights and/or power that present a negligible potential to cause exposure in excess of the Commission's MPE rules.<sup>5</sup> AT&T supports the Commission's proposal to change the terminology used to reference the routine RF evaluation exception from "categorical exclusion" to "exemption." This terminology change will eliminate any misperceptions that an exemption from routine RF evaluation triggers a categorical exclusion from environmental processing under the Commission's NEPA rules.<sup>6</sup>

### **B. The Proposed Routine RF Evaluation Exemption Threshold is Overly Restrictive.**

The Commission evaluates categorical exclusions (i.e. exemptions) from routine RF evaluation for fixed transmitting facilities for certain operating services (i.e. frequencies) based on a combination of effective radiated power (ERP), antenna height, and service. AT&T

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<sup>4</sup> *Id.*

<sup>5</sup> See 47 C.F.R. §1.1307(b)(1).

<sup>6</sup> The Commission has emphasized that categorical exclusions from routine RF evaluation are not exclusions from compliance with the Commission's RF exposure rules. OET Bulletin 65—Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields, Ed. 97-01 at 12 (Aug. 1997) ("OET 65").

acknowledges that streamlining the RF exposure rules to apply the same threshold for exemption from routine RF evaluation to all wireless service classifications, as the Commission proposes, would be straightforward, technologically neutral, and capable of accommodating new or converging services, without a new rulemaking. Nevertheless, in the absence of evidence that the current threshold for exempting wireless facilities from routine RF evaluation does not sufficiently protect the public, the threshold should not be modified so as to overly restrict application of the exemption. AT&T agrees with PCIA and Verizon that the proposed exemption threshold for single transmitter sites is overly restrictive in this manner.<sup>7</sup>

Typical deployments that are categorically excluded from routine RF evaluation under the current exemption threshold would not qualify for an exemption under the proposed threshold. Verizon's comments illustrate how 850 MHz cellular transmitters operating at 1000 W at a separation distance of 8.53 meters would be categorically excluded from routine evaluation under the current RF exposure rules, but would require routine evaluation under the threshold formula proposed in the Further Notice.<sup>8</sup> As demonstrated in the following table, similar results occur for other single transmitter facilities operating at various combinations of heights, power levels, and frequencies, including deployments that would be typical of small cells and outdoor distributed antenna systems:

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<sup>7</sup> Comments of PCIA – The Wireless Infrastructure Association and the HETNET Forum, ET Docket No. 13-84, ET Docket No. 03-137, at 4-5 (filed Sept. 3, 2013) (“Comments of PCIA”); Comments of Verizon and Verizon Wireless, ET Docket No. 13-84, ET Docket No. 03-137, at 3-7 (filed Sept. 3, 2013) (“Comments of Verizon”).

<sup>8</sup> Comments of Verizon, Appendix at 3.

MHz	ERP	Separation Distance	Routine Evaluation Exempted <sup>9</sup>	
			Current Rules	Proposed Rules
715	900	8.2 meters	Y	N
	90	3 meters	Y	N
850	3259	10.7 meters <sup>10</sup>	Y	N
	190	4 meters	Y	N
1900	2589	10.4 meters	Y	N
	400	4 meters	Y	N

In all of these examples, the RF exposure at ground level falls well below the Commission’s MPE limit for the general population. The current RF exposure rules have adequately protected the public for years by focusing on deployments that present a potential risk of RF exposure in excess of the MPE limits and there has been no finding that fixed wireless facilities present a greater risk now than they have in the past.

To address this discrepancy with the proposed exemption threshold, AT&T agrees with comments advocating that the Commission modify the threshold exemption for single transmitter sites where access is controlled, such as towers, monopoles, light poles, utility poles, and water towers.<sup>11</sup> Deployments on these structures present such a negligible risk of excess RF exposure that a continued exemption from routine evaluation is warranted. AT&T proposes that the Commission work with the wireless industry and other commenters to resolve this discrepancy in the proposed threshold formula. In the alternative, the Commission need not modify the current categorical exclusion threshold, as they adequately protect the public.<sup>12</sup>

<sup>9</sup> These predictions were derived from Roofview™, a common industry software tool for conducting RF exposure analyses.

<sup>10</sup> The Commission has previously determined that ground-level power densities for antennas mounted higher than 10 meters above ground for cellular facilities are hundreds to thousands of times below MPE limits. OET 65 at 14.

<sup>11</sup> Comments of Verizon at 4.

<sup>12</sup> Although current categorical exclusions are divided by service, there is no significant impediment to modifying those exclusions to account for new services. For operating services not addressed in the current RF exposure rules, the Commission could add the appropriate



AT&T further agrees with the comments of the Fixed Wireless Communications Coalition that the Commission should retain an exemption by rule from routine evaluation for Part 101 fixed microwave facilities.<sup>13</sup> As the Coalition observes, fixed microwave service “requires a line-of-sight path clear of all structures and terrain.” Thus, by design, microwave antennas are not typically placed where persons could intersect the microwave path, even intermittently. Fixed microwave antennas are typically deployed at substantial heights and produce a narrow beam, minimizing the opportunities for a transient person to expose themselves to microwave energy. As the Commission has observed, facilities are “categorically excluded” from routine evaluation because they offer negligible potential for causing exposures in excess of Commission guidelines.<sup>14</sup> That continues to be the case with microwave facilities and, thus, the Commission should retain the exemption from routine RF evaluation for those facilities.

**C. RF Exposure Rules Should Remain Flexible in Allowing Licensees to Determine the Best Method to Minimize Exposure.**

In the Further Notice, the Commission provides detailed guidance on mitigation measures that a licensee can take to minimize RF exposure. AT&T welcomes this guidance and encourages the Commission to provide further guidance in its future revisions to OET 65. As Verizon and PCIA suggest, flexibility must be the cornerstone of any new rules.<sup>15</sup> Rigid rules cannot account for the diversity of wireless facilities that have been deployed over the years, a

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exclusion threshold by modifying the rule in this docket. For future operating services, the Commission could add the service specific exemption criteria when service rules are adopted.

<sup>13</sup> Comments of Fixed Wireless Communications Coalition, Inc., ET Docket No. 13-84, ET Docket No. 03-137, at 2-8 (filed Sept. 3, 2013).

<sup>14</sup> Further Notice, 28 FCC Rcd at 3535.

<sup>15</sup> Comments of PCIA at 5-6; Comments of Verizon at 8.

diversity that is expected to accelerate in the years ahead with the evolution of small cell and distributed antenna systems (“DAS”) technologies.<sup>16</sup>

While many antennas are still deployed on towers, licensees are equally likely, and in the future, will be more likely to deploy antennas on rooftops, penthouses, sides of buildings, light poles, utility poles, water towers, and billboards, among other structures. Each of these categories of deployments requires different considerations and some could be less conducive to standard mitigation techniques. For example, some sites may be more conducive to physical mitigation while other sites might be more conducive to administrative mitigation. The Commission’s RF exposure rules should provide licensees with the flexibility to impose mitigation under multiple scenarios.

As the Commission has recognized, not all property owners and managers at non-tower facilities cooperate with licensees’ efforts to deploy mitigation measures.<sup>17</sup> Further, even if licensees provide training, information, contact numbers, and signage, persons in possession or control of support structures may not abide by those instructions. In these situations, licensees that do not control the structure, but take reasonable measures to mitigate RF exposure, should not be subject to enforcement action. AT&T agrees with Verizon’s and PCIA’s proposal that the Commission recognize a safe harbor for compliance with its RF exposure rules for licensees that use reasonable efforts to work with property owners and managers, such as providing contact information and procedures for access, signage, when control should be maintained, and when

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<sup>16</sup> See Further Notice, 28 FCC Rcd at 3560 (“The Commission realizes that rigid requirements may not be practical in all cases . . .”).

<sup>17</sup> *Id.* at 3564 (the “level of cooperation between property owners, managers, licensees, and subcontractors may be an issue”).

barriers are required; and provide written information.<sup>18</sup> Such a safe harbor would provide licensees with certainty of the measures needed to achieve compliance, and property owners and managers with more clarity as to their responsibilities. This certainty and clarity would, in turn, translate into more consistent and effective protection for workers and the general public.

Further clarification of the requirements to provide RF safety signs would also assist in complying with any final rules. In the Further Notice, the Commission identifies four categories of RF exposure conditions and appropriate mitigation measures for each condition.<sup>19</sup> The mitigation measures for a Category Three condition include signs, controls, or indicators “in addition to the mitigation actions required within those areas designated as Category Two.”<sup>20</sup> AT&T agrees with Verizon that it is not workable to require a wireless facility with a Category Three condition to also include mitigation applicable to a wireless facility for lesser categories, such as providing Category Two NOTICE signs in the same general area as Category Three “CAUTION” signs. Such cumulative mitigation measures create a significant potential for confusion for workers and the public by displaying signs with conflicting messages. It also imposes an undue administrative burden on licensees already grappling with property owners and managers that want to eliminate or reduce the number of signs on a supporting structure. Moreover, it could be impossible to meet this requirement in locations with insufficient space to attach multiples signs and other mitigation measures. For that reason, the Commission should clarify that licensees need not place multiple conflicting mitigation signs in the same general area where a Category Three condition exists.

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<sup>18</sup> Comments of PCIA at 6-9; Comments of Verizon at 10-15.

<sup>19</sup> Further Notice at 28 FCC Rcd at 3561-62.

<sup>20</sup> *Id.* at 3566.

#### **D. More Effective Public Information Would Benefit the American Public.**

AT&T agrees with PCIA that the American public would benefit from clearly stated, standardized information published by the Commission on RF exposure from wireless facilities.<sup>21</sup> The Commission has published three sets of guidelines pertaining to RF exposure: (1) OET 56,<sup>22</sup> (2) OET 65, and (3) A Local Government Official's Guide.<sup>23</sup> However, these publications should be updated to account for current deployment designs and technologies. They also are very lengthy and extremely technical, which could explain why licensees (and the Commission itself) continue to receive a significant number of inquiries about the health and safety of fixed wireless facilities.

A consumer-centric guide, as proposed by PCIA, could be brief, less technical, and explain key information that would educate members of the public about the safety of wireless facilities. While AT&T and other licensees can develop publications of their own, they do not have the imprimatur of the United States Government, and in many cases, would not sway local government officials, members of the public who may have concerns, or others who may be influenced by misleading and unsupported information. Faced with such push-back, licensees spend considerable time and effort educating the property owners, local government officials, and members of the public on RF exposure issues. Yet, all too often, these efforts are fruitless, as confusion and misinformation reduce the locations available for wireless siting.

The Commission could substantially reduce these problems by publishing a consumer-centric guide. Members of the industry could assist the Commission in this effort. AT&T agrees

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<sup>21</sup> Comments of PCIA at 10-13.

<sup>22</sup> OET Bulletin 56— Questions and Answers about Biological Effects and Potential Hazards of Radiofrequency Electromagnetic Fields, 4<sup>th</sup> Ed. (1999).

<sup>23</sup> A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance (2000).

that the guide should, at a minimum, contain information about the Commission's exclusive jurisdiction over RF exposure issues, state that wireless facilities must comply with strict RF exposure rules, state that these rules incorporate wide safety margins, state that RF exposure from wireless facilities is generally substantially less than the limits that protect health and safety, and emphasize that compliant wireless facilities pose no danger to human health from RF exposure. The Commission could also update its website to include some of this same information. The availability of pertinent, easy to understand information about the safety of compliant wireless facilities would likely increase the locations available for wireless siting and minimize questions and objections to licensees' deployment efforts. If successful, these would allow licensees to accelerate broadband deployment.

**E. A Two-Year Period is Needed to Transition to New RF Exposure Rules.**

If the Commission imposes new RF exposure rules, it should provide a minimum two-year transition period. New rules, including changes to the RF evaluation exemption threshold, would require licensees to evaluate sites that are categorically excluded from routine evaluation and potentially require licensees to adopt additional mitigation measures. Licensees will need time to evaluate existing facilities and bring them into conformance with any new rules.

Respectfully submitted,



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