

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

In the Matter of	)	
	)	
Amendment of Parts 1 and 22 of the Commission's	)	WT Docket No. 12-40
Rules with Regard to the Cellular Service,	)	
Including Changes in Licensing of Unserved Area	)	RM No. 11510
	)	
Amendment of the Commission's Rules with	)	
Regard to Relocation of Part 24 to Part 27	)	
	)	
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	)	RM No. 11660
Governing Radiated Power Limits for the	)	
Cellular Service	)	

**COMMENTS OF AT&T**

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**COMMENTS OF AT&T**

AT&T Services, Inc., on behalf of AT&T Mobility LLC and its wholly-owned and controlled wireless affiliates (collectively "AT&T"), provides these comments on the Federal Communications Commission's (the "Commission") Further Notice of Proposed Rulemaking ("Further Notice").

**I. INTRODUCTION AND SUMMARY.**

The Commission's November 10, 2014 Report and Order in this docket represented a paradigm shift in the Cellular service. With that Report and Order, the Commission began the process of transforming the Cellular service rules from a site-based licensing scheme grounded on narrowband analog technology to a geographic-based licensing scheme based on wideband digital technology. This transformation will substantially reduce the number of Commission license filings made by Cellular licensees, reduce administrative burdens and time-consuming regulatory processes for licensees, give Cellular licensees greater flexibility to modify their

systems quickly in response to market demands, facilitate advanced broadband services to the benefit of consumers, and begin harmonizing the Cellular service rules with the rules governing other geographically-licensed commercial wireless services.

The Further Notice represents the next step in the evolution of the Cellular rules, evaluating whether to adopt a geographic-area based service discontinuance rule, use frequency coordinators to review unserved area applications, use a power spectral density (“PSD”) measure to calculate base station power levels, and modify other technical rules to account for the use of a PSD measurement. AT&T welcomes this evolution and looks forward to a vastly streamlined Cellular licensing regime that meets the goals of the Commission, Cellular licensees, and consumers. And, because the full benefit cannot be realized until resolution of these issues, AT&T encourages the Commission to address these issues expeditiously.

Transitioning the Cellular service from site-by-site service discontinuance rules to geographic-area service discontinuance rules and from base station power limits per channel to per megahertz (“MHz”) will further bring the Cellular service into parity with the rules governing other geographically-licensed commercial wireless services. It will also promote the deployment of wideband wireless technology by giving licensees the flexibility to modify their systems based upon the capabilities and needs of their networks and customers, without unnecessary administrative burdens. As to the Commission’s proposal to use frequency coordinators to review Cellular unserved area applications, first the Commission must fully examine whether the move is warranted in light of the expected reduction in application filings under the new Cellular licensing rules. If the Commission answers that question in the affirmative, reducing the administrative costs to licensees submitting applications and

streamlining the application process would reduce the potential for frequency coordinator reviews to impede the rapid deployment of broadband service.

AT&T supports the Commission's proposal to require discontinuance of service filings only if the Cellular licensee ceases offering service throughout the cellular geographic service area ("CGSA") for a period of 180 consecutive days, rather than for each base station comprising the border of the CGSA that discontinues offering service for 90 consecutive days. This change furthers the Commission's goal of reducing unnecessary filings, while allowing licensees the flexibility to modify their networks as needed to accommodate changes in technology, network integrations, and system upgrades. To encourage the expansion of service to unserved areas, AT&T further supports beginning the 180-day discontinuance period for new Cellular licensees only after expiration of the one-year construction period.

AT&T supports the adoption of a PSD measurement for Cellular base stations, whereby power limits are measured per MHz, and encourages the Commission to take action on the item forthwith. Like all other wireless carriers, Cellular licensees are experiencing an explosion in wireless data usage, driven by the increasing availability and utility of smartphones, tablets, and other internet capable devices. More efficient network technologies, such as the Long-Term Evolution air interface ("LTE"), are one of the tools now available to licensees to help meet that demand. But, unlike other commercial wireless licensees, Cellular licensees are hamstrung by base station power rules that have not evolved to accommodate LTE and other wideband technologies. As a result, Cellular base stations using wideband technologies must operate at lower power per MHz than both their Cellular narrowband counterparts and licensees of other commercial wireless services. Converting to a PSD limit for Cellular base stations would

eliminate this penalty on broadband deployment, allowing for the more efficient use of spectrum and promoting broadband deployment.

In its Petition for Rulemaking, AT&T proposed a PSD limit of 250 watts/MHz in non-rural areas and 500 watts/MHz in rural areas and demonstrated through a predictive study that Cellular base stations operating at those PSD levels “will not increase the possibility of harmful interference to adjacent bands and will maintain the ‘status quo’ with respect to the potential impact on users of adjacent spectrum, such as the Public Safety Radio Service.”<sup>1</sup> Nevertheless, AT&T recognizes that higher PSD limits proposed by some providers could lead to even greater spectral efficiency and improvements in service quality. Thus, AT&T is open to higher PSD limits for Cellular base stations if they do not increase the potential for interference to public safety devices.

Prior to adopting its proposal to appoint frequency coordinators to review Cellular license applications, the Commission should examine whether that proposal is justified in light of the expected reduction in the number of Commission filings following the adoption of the new Cellular rules. Following this examination, if the Commission concludes that the use of frequency coordinators is in the public interest, the Commission should remove some of the costs and hurdles that could arise with their use. First, the Commission should lower application fees to recognize the reduced Commission time and resources needed to review applications. Second, Cellular licensees should be allowed to operate with conditional authority following the frequency coordinator’s review, which would discover any minimal risk of interference to other licensees. Third, licensees should be allowed to file applications directly with the Commission

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<sup>1</sup> AT&T Services, Inc., Petition for Expedited Rulemaking and Request for Waiver of Section 22.913 of the Commission’s Rules, Appendix A, at 1 (filed Feb. 29, 2012) (re-posted in RM No. 11660 on May 20, 2013) (“Petition for Rulemaking”).

on the rare occasions where they cannot agree with the frequency coordinator's assessment.

Fourth, commercial wireless service licensees and their affiliates should not serve as frequency coordinators to avoid potential conflicts of interest.

## **II. CGSA-BASED DISCONTINUANCE OF SERVICE RULES GIVE LICENSEES FLEXIBILITY TO DEPLOY NETWORKS AND BRING THE CELLULAR REGIME INTO FURTHER REGULATORY PARITY WITH OTHER WIRELESS SERVICES.**

AT&T agrees with the proposal to revise the Cellular discontinuance of service rule to require a minor filing only after 180-consecutive days of no service throughout the CGSA. This change harmonizes the Cellular discontinuance of service rules with more recently adopted rules for other geographic-area commercial wireless services. Retaining the current discontinuance of service rule—which requires a minor application filing for each border cell site that does not provide service for 90-consecutive days,<sup>2</sup> even if the licensee retains the same level of overall coverage and the same CGSA—would contravene the new geographic-area licensing scheme adopted in the Commission's November 2014 Report and Order and undermine the Commission's goal of reducing the number of unnecessary filings.

As the Commission has also observed, applying a 180-day geographic-area based discontinuance of service rule would “better enable licensees to implement technology upgrades involving reconfiguration and possible relocation of cell sites and other network elements.”<sup>3</sup> In

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<sup>2</sup> 47 C.F.R. §22.317.

<sup>3</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, 14127 (2014) (“Report and Order” or “Further Notice”).

fact, licensees often replace and turn down cell sites, upgrade equipment, integrate and retune networks, and deal with temporary base station service interruptions. Licensees also periodically convert or upgrade their network technology. Each of these network tasks involves one or more potential base station shut downs. A 180-day discontinuance of service period for the whole CGSA allows licensees the flexibility to engage in these modifications without the administrative burden of making and tracking multiple filings. Further, this proposed 180-day discontinuance of service rules is straightforward and easy to follow.

Nevertheless, AT&T agrees with the proposal to subject new Cellular entrants to the 180-day discontinuance of service rule only after their one-year construction period expires. New licensees are entitled to design and deploy their systems without risking an automatic loss of license before the full one-year construction period has expired. And, with the significant time needed to design, fund, obtain cell site locations, and build a Cellular system, this is no small risk. Immediately applying the 180-day discontinuance of service rule to new Cellular licensees would discourage potential applicants from filing for new Cellular systems, impeding the roll-out of wireless service in unserved areas.

**III. IF THE USE OF FREQUENCY COORDINATORS IS IN THE PUBLIC INTEREST DESPITE A LOWER FILING VOLUME, LICENSEE COSTS AND ADMINISTRATIVE HURDLES SHOULD BE REDUCED.**

AT&T does not oppose the use of frequency coordinators to perform first-line review of Cellular applications for CGSA expansions and new Cellular systems, and to advise the Commission whether the applications comply with the Cellular service rules. However, AT&T encourages the Commission to consider whether the volume of CGSA expansions and new Cellular systems filings in the future justifies utilizing frequency coordinators. If the Commission concludes that the use of frequency coordinators is in the public interest, then the

Commission should undertake to reduce the filing fees associated with Cellular applications and streamline the unserved area application process.

**A. The Volume of Applications Processed During the Pendency of this Further Notice Can be Used to Assess if the Use of Frequency Coordinators is in the Public Interest.**

AT&T believes that two significant factors—rule changes limiting when Commission filings are needed and the completion of licensee efforts to update Commission CGSA records—will lead to an inevitable reduction in the number of Cellular service applications. This reduced volume of filings could potentially reduce the strain on Commission resources, minimize delays associated with processing applications, and reduce the rationale for using frequency coordinators.

In its November 2014 Report and Order, the Commission significantly reduced the modifications to Cellular systems that will trigger the filing of a Cellular license application. Most minor modifications no longer require a notice filing and major modification unserved area applications must propose CGSA expansion of at least 50 square miles. In fact, the Commission has concluded that limiting unserved area applications in this manner is expected to dramatically reduce their volume — by at least 60%.<sup>4</sup> Coupled with the reduction in minor modification notice filings, AT&T believes that these new rules will significantly reduce the number of applications that licensees will file going forward.

Further, Cellular licensees are no longer updating the Commission CGSA license records. Over the last few years, Cellular licensees, cognizant of the potential changes in the Cellular licensing rules in this docket, have made intentional efforts to update the technical data supporting their CGSAs, including by converting to electronic maps and updating coordinates.

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<sup>4</sup> Report and Order, 29 FCC Rcd at 14114.

While the process has been painstaking for both licensees and the Commission, it was necessary to update licensee and Commission records, and, with release of the Commission's Report and Order, is concluded.

As a result of these changed circumstances, AT&T expects that the number of applications processed will be much lower than historical norms. AT&T suggests that, during the pendency of this Further Notice, Commission staff compare the number of applications processed under the new Cellular rules against the number of applications processed under the old Cellular rules to quantify the reduction of the burden on Commission resources.<sup>5</sup> However, the Commission should not allow this analysis to delay resolution of the other items under consideration in this Further Notice.

**B. Commission Actions can Avoid Increased Costs and Administrative Burdens to Cellular Licensees.**

After examining the record, if the Commission concludes that the use of frequency coordinators is in the public interest, AT&T proposes that the Commission take actions to avoid the potential for the use of frequency coordinators to increase the licensees' costs or administrative hurdles.

**1. Reduce the Commission's Application Filing Fees.**

The Commission can relieve some of the cost burden on Cellular licensees by reducing its application fee. As proposed in the Further Notice, Cellular licensees would submit completed applications to frequency coordinators, which "would work with the applicants to resolve any inaccuracies involving technical information, including the SAB and CGSA

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<sup>5</sup> After the effective date of the new Cellular licensing rules, applications *processed* by the Commission, rather than applications *filed*, will be a better indicator of the future volume of filings, as during the transition to the new Cellular rules, it is likely that some licensees will, in the short term, mistakenly make unnecessary filings that Commission staff will return.

calculations, and ensure compliance with all applicable rules.”<sup>6</sup> This description encompasses the tasks currently performed by Commission staff. Thus, once approved by the frequency coordinator and filed with the Commission, Commission staff need only conduct a quick review prior to taking action on the application. Less review should translate into less fees for processing applications. The Commission currently charges filing fees of \$430 and \$115 for major modification applications and minor applications, respectively. Following frequency coordination, Commission fees for major applications should be reduced to the amount charged for minor applications.<sup>7</sup>

## **2. Grant Cellular Licensees Conditional Authority to Operate.**

The Commission could reduce the delays inherent in an additional review of Cellular license applications by granting Cellular licensees conditional authority to operate consistent with their applications while the application is pending at the Commission following frequency coordination. Granting applicants conditional authority will provide Cellular licensees with more flexibility to extend into unserved areas and benefit consumers by permitting more rapid deployment of Cellular service into those unserved areas.

Moreover, granting Cellular licensees conditional authority would have little potential for negative consequences, as interference concerns are unlikely to materialize after frequency coordinator review. Unlike microwave and public land mobile service, the use of a frequency coordinator in the Cellular service would be less about preventing interference and more about reviewing the application for errors and inaccuracies to confirm compliance with the Cellular

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<sup>6</sup> Further Notice, 29 FCC Rcd at 14131.

<sup>7</sup> Logically, Commission fees for major applications would not be reduced where the Cellular licensee cannot agree with the frequency coordinator and files the application directly with the Commission.

licensing rules. In the Cellular service, licensees remain responsible for coordinating with their co-channel and adjacent channel licensees to avoid interference.<sup>8</sup> In the rare scenario where interference concerns may exist, the frequency coordinators would catch any proposed SABs that overlap with existing CGSAs or other interference concerns. Thus, in the absence of an interference issue discovered by the frequency coordinator, Cellular licensees should have the authority to operate consistent with the application while the application is pending at the Commission.

**3. Allow Cellular Licensees that Disagree with the Frequency Coordinator's Decision to File Applications Directly with the Commission.**

The Commission could also eliminate the prospect for Cellular licensees to encounter an administrative dead end by allowing licensees that disagree with a frequency coordinator's application decision to file applications directly with the Commission. While AT&T's experience working with frequency coordinators in other commercial wireless services suggests that unresolvable disputes would be rare, it would also be naïve to believe that disputes, such as those involving boundaries and rule interpretations, will never occur. After decades of interaction with each other and Commission staff, Cellular licensees have a tremendous amount of real-world experience overcoming the technical, administrative, operational, and practical hurdles of preparing, filing, and evaluating Cellular applications. Frequency coordinators will develop that experience only over many years, regardless of the amount of training they receive. Thus, one could envision a scenario where a Cellular licensee will be more capable than frequency coordinators at evaluating applications, interpreting existing Commission records, and applying Commission rules to the application. Cellular licensees will need a way to resolve these potential disputes, while staying on the path to application approval.

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<sup>8</sup> See 47 C.F.R. §22.907.

#### **4. Frequency Coordinators Cannot Hold Commercial Wireless Licenses.**

Although Cellular licensees will likely be more knowledgeable than frequency coordinators about the Cellular licensing process, licensees cannot serve as frequency coordinators because of the potential conflict of interest. This conflict of interest could create an incentive to delay the processing of applications, contrary to the Commission's goal of expediting service to unserved areas. In fact, this prohibition against licensees and their affiliates serving as frequency coordinators should extend to all commercial wireless service licensees. Cellular licensees compete against not only other Cellular licensees, but against licensees of other commercial wireless services as well. Thus, a potential conflict of interest would likewise exist if any commercial wireless licensee served as a frequency coordinator.

#### **IV. USING A POWER SPECTRAL DENSITY MEASUREMENT FOR BROADBAND TRANSMISSIONS AT CELLULAR BASE STATIONS WILL FOSTER REGULATORY PARITY AND ALLOW FOR MORE EFFICIENT USE OF CELLULAR FREQUENCIES.**

##### **A. Skyrocketing Broadband Usage Compels Wireless Providers to Deploy Efficient Broadband Technologies.**

As the Commission has observed, “[d]emand for wireless capacity is booming: more consumers are accessing mobile broadband every year, driving more innovation and expanding access to public safety.”<sup>9</sup> In particular, the popularity and ubiquity of smartphones and other data-enabled devices with consumer and enterprise customers alike have driven exponential increases in the demand for data. Smartphone penetration has more than doubled in the United

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<sup>9</sup> Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies, Acceleration of Broadband Deployment: Expanding the Reach and Reducing the Cost of Broadband Deployment by Improving Policies Regarding Public Rights of Way and Wireless Facilities Siting, 2012 Biennial Review of Telecommunications Regulations, *Report and Order*, WT Docket No. 13-238, WC Docket No. 11-59, WT Docket No. 13-32, 29 FCC Rcd 12865, 12866 (2014).

States in the last three years – from 78 million in 2010 to 175 million in 2013 – and smartphones generate 49 times more network traffic than a basic handset.<sup>10</sup> These trends drove a 732% increase in U.S. mobile data usage between 2010 and 2013.<sup>11</sup> Using the most recently available data, wireless data traffic more than doubled between 2012 and 2013.<sup>12</sup> Going forward, “Cisco projects that mobile data will grow at an annual rate of 50 percent from 2013 to 2018 while Ericsson . . . projects mobile data growth of 38 percent per year between 2013 and 2019.”<sup>13</sup> With the increased penetration of LTE capable smartphones and tablets and LTE users using twice as much data as non-LTE users,<sup>14</sup> even these estimates may be conservative.

Given these trends, wireless carriers must utilize their spectrum as efficiently as possible to meet the public’s increasing demand for ubiquitous, mobile data service. In terms of efficient network technology, all of the major service providers are deploying or planning to deploy LTE, which brings faster speeds, reduced latency, and, consequently, a richer, more robust consumer experience. LTE is more spectrally efficient than other previously deployed commercial wireless broadband technologies.<sup>15</sup> Thus, the use of LTE can help wireless providers utilize their

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<sup>10</sup> Letter from Scott K. Bergmann, Vice President, Regulatory Affairs, CTIA—The Wireless Association, to The Honorable Thomas E. Wheeler, Chairman, Federal Communications Commission, et. al., WT Docket No. 13-135 (filed Oct. 2, 2014).

<sup>11</sup> *Id.*

<sup>12</sup> *Id.*

<sup>13</sup> Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, *Seventeenth Report*, WT Docket No. 13-135, at 38 (2014).

<sup>14</sup> GSMA Report, *The Mobile Economy*, at 18 (2014).  
[http://www.gsmamobileeconomy.com/GSMA\\_ME\\_Report\\_2014\\_R2\\_WEB.pdf](http://www.gsmamobileeconomy.com/GSMA_ME_Report_2014_R2_WEB.pdf).

<sup>15</sup> *See, e.g.*, Mobile Broadband Explosion: 3GPP Broadband Evolution to IMT-Advanced, Rysavvy Research, at 18 (Sept. 2011), available at:

spectrum to the greatest extent possible, providing more capacity on the same amount of spectrum.

**B. Transitioning to PSD Base Station Power Rules Will Encourage the Efficient Use of Wideband Systems Over the Cellular Bands.**

Wireless carriers can deploy LTE broadband technology over their various spectrum holdings. For its part, AT&T has already deployed LTE over its Lower 700 MHz, Advanced Wireless Service (AWS-1), and 1900 MHz Personal Communications Services (PCS) bands, and is beginning efforts to deploy LTE in the Cellular band. Other Cellular licensees are currently or will in the near future also seek to deploy LTE in the Cellular band. Unfortunately, Commission rules unnecessarily constrain LTE deployment over the Cellular service because the base station power limits favor narrowband systems over more efficient wideband systems. As the Further Notice succinctly notes:

The . . . current [power] limits apply to each emission or channel, so that a licensee using narrow emissions can transmit more total power per MHz than a licensee using wideband emissions. For example under the current rules, a Cellular licensee using a 5 MHz LTE emission in a non-rural area would be limited to 500 W in those 5 MHz (100 W/MHz), while a licensee in the same 5 MHz could deploy four CDMA channels with an aggregate power of 2000 W ERP (400 W/MHz), or 12 GSM channels with an aggregate power of 6000 W ERP (1200 W/MHz).<sup>16</sup>

In its February 29, 2012, Petition for Rulemaking, AT&T explained that penalizing Cellular service in this manner prevents wideband technologies, like LTE, from achieving the same coverage footprint as less efficient narrowband technologies.<sup>17</sup> This Cellular service disadvantage may, in turn, delay, or even preclude, licensees from deploying the most up-to-date

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[http://www.4gamericas.org/documents/Mobile%20Broadband%20Explosion\\_Rysavy\\_Sept2011.pdf](http://www.4gamericas.org/documents/Mobile%20Broadband%20Explosion_Rysavy_Sept2011.pdf) (last visited Jan. 19, 2015).

<sup>16</sup> Further Notice, 29 FCC Rcd at 14138-39.

<sup>17</sup> Petition for Rulemaking at 5.

wideband technologies in the Cellular bands to the broadest population. Updating the Cellular base station power rule to give Cellular licensees with wideband systems the option to measure power output by MHz – a change that has already been implemented without issue in other wireless bands – will permit efficient deployment of broadband technologies in the Cellular service and help to achieve the Commission’s goal of broadly available wireless broadband service.

AT&T also explained its intention to utilize spectrally efficient Multiple Input Multiple Output (MIMO)<sup>18</sup> techniques in its LTE deployments over Cellular service and that the current base station power rules would require AT&T to split the maximum radiated power between the two MIMO transmitters, reducing the service coverage area of the transmitters operating in the MIMO model compared to that of a single transmitter deployment. AT&T will not restate all of the contents of, and refers the Commission to, its Petition for Rulemaking for more detail. Suffice it to say that use of the PSD measurement as an option for the Cellular service would allow Cellular licensees to deploy wideband service over the Cellular bands in a more efficient manner without sacrificing coverage.

Transitioning the Cellular base station power rules to a PSD model would bring the service into regulatory parity with other mobile services and allow Cellular licensees to compete in a competitively neutral manner. The Commission allows licensees of several other

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<sup>18</sup> MIMO uses multiple antennas or multiple antenna elements at both the transmitter and receiver to create multiple distinct spatial channels between the transmitter and the receiver using the same radio channel. AT&T plans to use 2x2 MIMO in its 850 MHz LTE deployments. 2x2 MIMO uses two transmitters operating on the same carrier channel but carrying two different information streams to create two separate spatial channels. Because two spatial channels are created using a single radio carrier, spectral efficiency is increased.

commercial wireless services, including PCS,<sup>19</sup> certain AWS,<sup>20</sup> Upper 700 MHz,<sup>21</sup> and Lower 700 MHz,<sup>22</sup> to calculate base station power under a PSD model. Cellular licensees compete directly with these other commercial wireless services licensees, but are constrained by Cellular rules that limit base station power per channel. These constraints place Cellular licensees at a competitive disadvantage vis-à-vis other commercial wireless services licensees by limiting geographic coverage, requiring a higher concentration of cell sites than other licensees, and penalizing the deployment of broadband technologies.

To promote competitiveness in the provision of wideband services, the Commission should, to the extent possible, place Cellular licensees on the same footing as licensees from other commercial wireless services. To be sure, some Cellular licensees may hold licenses for other commercial wireless services in the same geographic areas. But, harmonizing base station power rules across commercial wireless services would provide licensees with the flexibility to deploy broadband technology over the service that best suits their needs, without being disadvantaged based upon their spectrum position.

**C. The PSD Limits Should Not Increase the Potential for Interference to Public Safety Devices.**

AT&T has proposed a PSD limit of 250 watts/MHz in non-rural areas and 500 watts/MHz in rural areas. AT&T has submitted into the record studies showing that shifting to these PSD power limits would create an interference environment that is not appreciably

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<sup>19</sup> 47 C.F.R. §24.232.

<sup>20</sup> 47 C.F.R. §27.50(d).

<sup>21</sup> 47 C.F.R. §27.50(b).

<sup>22</sup> 47 C.F.R. §27.50(c).

different, and, in some cases is better, than the interference environment that presently exists.<sup>23</sup> These PSD limits would allow Cellular licensees to maintain the *status quo* with respect to the potential interference to co-channel, adjacent channel, and public safety services. While the Commission recognizes that Cellular licensees operating base stations at the PSD levels proposed by AT&T may still operate at less total power than licensees of other commercial wireless services,<sup>24</sup> using PSD at these levels would still place Cellular licensees on a more even footing with other commercial wireless service licensees than the current rules.

Some commenters point to the need to allow Cellular base stations to operate at higher PSD limits.<sup>25</sup> Perhaps Cellular licensees will inevitably need to transition to higher PSD levels to use the spectrum even more efficiently and further improve service quality, such as, for example, by lowering signal-to-noise and enhancing in-building coverage.<sup>26</sup> Therefore, AT&T is open to consideration of a minimum PSD limit of 250 watts/MHz non-rural and 500 watts/MHz rural PSD and higher PSD limits if the record demonstrates that higher limits will not appreciably increase the potential for interference to devices operating in adjacent spectrum by public safety. Or, depending on the record developed in this docket, the Commission, expecting public safety agencies over time to upgrade to devices less susceptible to interference, may elect

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<sup>23</sup> AT&T filed a study with its Petition for Rulemaking and a comparable study for its waiver request to operate using PSD limits in KNKA797. *See* Petition for Rulemaking at 13 and Appendix A; AT&T Request for Rule Waiver, WT Docket No. 14-107 (filed July 1, 2014).

<sup>24</sup> Further Notice, 29 FCC Rcd at 14143.

<sup>25</sup> Comments of Verizon Wireless, RM-11660, at 4-5 (filed June 18, 2012); Comments of Broadpoint, LLC d/b/a Cellular One, Cincinnati Bell Wireless LLC, NE Colorado Cellular, Inc., Smith Bagley, Inc., and Union Telephone Company d/b/a Union Wireless, RM-11660, at 9 (filed June 1, 2012).

<sup>26</sup> As technology evolves, AT&T expects that equipment will allow for higher power levels, especially when using wider channels or 4x4 MIMO or greater, though the timing for that type of an LTE deployment on Cellular spectrum is uncertain.

to set a timeline to transition the Cellular service to higher PSD limits than proposed by AT&T. In either event, the Commission can further harmonize its Cellular base station power rules, while still minimizing disruptions to narrowband technologies by permitting licensees using narrowband technologies to comply with the current power limits of 500 W ERP per emission in non-rural areas and 1000 W ERP per emission in rural areas.

For these reasons, AT&T agrees that establishing power limits per 1 MHz of an emission's bandwidth rather than capping the power limits per each emission is in the public interest because it better accommodates newer, broadband technologies, fosters regulatory parity among competing commercial mobile service providers, and allows licensees to operate in different commercial wireless service bands using the same technologies and infrastructure, if desired. AT&T encourages the Commission to expedite this PSD rulemaking to accelerate the pace at which Cellular licensees across the industry can deploy wideband systems.

AT&T filed its Petition for Rulemaking nearly three years ago, on February 29, 2012, at which time it requested expedited consideration. Since that time, data demand has only increased, and AT&T, needing to farm its Cellular spectrum for LTE deployment, has used the waiver process to facilitate the use of PSD power limits for select licenses. In this context, the waiver process is slow, redundant, and cumbersome – an inefficient use of Commission and licensee resources. And, even with the waiver grant, the length of time to consider the issue by license and the conditions imposed on the waivers delay and discourage the most efficient use of wideband technologies.

**D. Changes to the Height-Power Limit are Unnecessary.**

The Commission, observing that no commenter has proposed changing the height-power limit in Section 22.913(b), solicits comments on whether that limit should be changed or deleted.

AT&T's experience has been that the current height-power limit is a non-factor in the vast majority of deployments and could be deleted, or, in the alternative, retained in its current form. The current height-power limit allows an average distance to SAB that is greater than the SABs deployed at the vast majority of base stations, and thus, the limit is rarely an issue. In those few situations where the limit may be exceeded and thus, coordination would be required under Section 22.913(c), coordination is already required by other Commission rules.<sup>27</sup> Further, adopting a scaled height-power requirement similar to the one applicable in the 700 MHz band is not only unnecessary, but would limit licensees' flexibility to deploy their networks as needed, with no concomitant benefits, which would be counterproductive and undermine the goals furthered by the Commission's November 2014 Report and Order.

January 21, 2015

Respectfully submitted,



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<sup>27</sup> See 47 C.F.R. §22.907.