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

In the Matter of	)	
	)	
Service Rules for the 698-746, 747-762 and 777-792 MHz Bands	)	WT Docket No. 06-150
	)	
Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems	)	CC Docket No. 94-102
	)	
Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones	)	WT Docket No. 01-309
	)	
Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services	)	WT Docket No. 03-264
	)	
Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission's Rules	)	WT Docket No. 06-169
	)	
Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band	)	PS Docket No. 06-229
	)	
Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010	)	WT Docket No. 96-86

PETITION FOR RECONSIDERATION

Pursuant to Section 1.429 of the Federal Communications Commission's ("FCC" or "Commission") rules[1], Verizon Wireless requests the Commission's reconsideration

[1] 47 C.F.R. § 1.429 (2006).

and clarification of certain of the power rules adopted in the Commission's recent *Report and Order* on the 700 MHz Band.[2]

Verizon Wireless strongly supports the Commission's stated goals of "accomodat[ing] all technologies"[3] and "promot[ing] uniformity in CMRS regulation"[4] under Section 332 of the Communications Act.[5] However, the rules adopted for the Lower and Upper 700 MHz bands do not meet the Commission's regulatory objectives. To the contrary, some of the rules appear to conflict with those objectives. Verizon Wireless therefore requests modifications to its 700 MHz power rules to ensure that both bands are equally able to accommodate a variety of technologies, including emerging broadband technologies that spread power over a larger spectral bandwidth. These modifications are summarized as follows:

- Modify the power flux density rule for both the Lower and Upper 700 MHz bands such that the limit applies for any base or fixed stations exceeding 1000 watts ERP and 1000 watts per MHz ERP;
- Modify the rules to make clear that all Lower and Upper 700 MHz licensees exceeding 1000 watts ERP and 1000 watts per MHz ERP must provide advance notice to any licensee authorized to operate on adjacent spectrum, including public safety licensees authorized under Part 90 and regional planning committees identified in §90.527; and
- Consolidate all rules for the Upper and Lower 700 MHz bands such that a single set of rules applies to both bands.

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2 *See Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, Report and Order and Further Notice of Proposed Rulemaking, FCC 07-72 (Apr. 27, 2007) ("*Report & Order*").

3 *See id.* at 35-36 (¶ 91).

4 *Implementation of Sections 3(n) and 332 of the Communications Act—Regulatory Treatment of Mobile Services*, Third Report and Order, 9 FCC Rcd 7988, ¶ 13 (1994).

5 47 U.S.C. § 332 (2006).

Verizon Wireless believes that these changes would establish uniformity between the Lower and Upper bands, ensure technology neutrality, be consistent with other commercial mobile radio service rules, and promote the wide deployment of broadband wireless technologies without risking harmful interference to 700 MHz licensees.

I. THE 700 MHz RULES FAIL TO ACHIEVE THE TECHNOLOGICAL NEUTRALITY GOAL DESIRED BY THE COMMISSION.

The *Report and Order* creates a set of rules that attempt to provide substantial regulatory symmetry for all 700 MHz band license holders, while promoting the deployment of broadband wireless technologies. This includes a power spectral density ("PSD") standard that limits base station transmit power on a "per MHz basis" and higher power limits for base stations deployed in rural areas. Verizon Wireless strongly supports these efforts and applauds the Commission's actions in that regard. The use of a PSD limit will promote the deployment of broadband technologies without the risk of harmful interference, while higher power limits in rural areas will promote a wider deployment of these broadband technologies across the country.

Unfortunately, the Commission's *Report and Order* would result in these more flexible rules being applied disparately across the 700 MHz band, across different technologies, and across various geographic markets. Licensees in the Upper 700 MHz Band choosing to deploy broadband technologies, for example, would be held to a more rigorous interference standard than licensees choosing to deploy narrowband technologies. Similarly, licensees operating in rural areas in either the Lower or Upper Bands would be more limited in their deployment of broadband technologies and/or would be required to comply with a more burdensome coordination requirement even though such operations may result in substantially less potential for interference. Verizon

Wireless believes that these regulatory disparities, which are inconsistent with the stated purposes of the Commission, were likely unintentional. With minor modifications to these rules, the Commission will be able to implement power rules on a technology neutral basis without subjecting any license holders to harmful interference.

A. The New Power Flux Density Rules Would Not Advance The Commission's Goal Of Technology Neutrality.

While the Commission adopted a PSD limit and a higher rural power limit for both the Lower and Upper 700 MHz Bands, the conditions under which this additional flexibility is afforded to licensees are significantly more limited in the Upper Band than they are in the Lower Band. Specifically, Lower Band licensees are permitted to operate base stations up to an average power of 1000 watts per MHz ERP (2000 watts per MHz ERP in rural areas) without regard to a power flux density ("PFD") limitation. Licensees wishing to exceed these limits, up to a maximum limit of 50 kW ERP in a 6 MHz bandwidth, would be required to control their emissions such that the PFD does not exceed 3000 microwatts per square meter.[6] Upper Band licensees may also operate base stations up to 1000 watts per MHz ERP (2000 watts per MHz ERP in rural areas), but, in contrast, must limit the emissions of their base station to a PFD of 3000 microwatts per

[6] The PFD limit established by the Commission applies at ground level over the area extending to 1 km from the base of the antenna mounting structure. This limit does not apply to Lower Band A and B Block licensees, as those licensees are not permitted to exceed the "standard" power limits of 1000 watts ERP and 1000 watts/MHz ERP (2000 watts ERP and 2000 watts/MHz ERP in rural areas), for base stations utilizing bandwidths up to 1 MHz and exceeding 1 MHz, respectively.

square meter if the average power of the transmitter exceeds 1000 watts ERP – and without regard to bandwidth.[7]

Two case examples will illustrate the disparity of this rule. First, consider the deployment of a base station with a bandwidth of 5 MHz. A Lower Band licensee can operate such a base station at an average power of 5,000 watts ERP (10,000 watts ERP in rural areas) without having to comply with the specified PFD limit. This is because the PFD requirement does not apply in the Lower Band until the average power exceeds the PSD limit of 1000 watts per MHz ERP (2000 watts per MHz ERP in rural areas). An Upper Band licensee operating the same base station, on the other hand, would be limited to an average power of only 1000 watts ERP in the same 5 MHz bandwidth if it wanted to avoid having to comply with the PFD limit. This is because the PFD limit in the Upper Band applies if the total average power exceeds 1000 watts ERP. As a result, a base station in the Lower Band can emit five times as much energy as one in the Upper Band (ten times in rural areas).

Second, consider two Upper Band licensees – one deploying a technology with a bandwidth of 1.25 MHz and the other deploying a technology with a bandwidth of 5 MHz. The first licensee could operate four radio channels within its 5 MHz assignment each with an average power of 1000 watts ERP. Thus, it could produce a total average power of 4,000 watts ERP in its assigned spectrum without having to comply with a PFD limit. Without subjecting itself to the PFD limitation, the second licensee would be limited to operating a single radio channel with a maximum average power of 1000 watts

[7] *See* 47 C.F.R. §§ 27.50(c)(6)-(7) (included in Appendix B of *Report and Order*, at 114).

ERP. As a result of this disparity, the second licensee would have substantially less flexibility to operate its wireless network, while being 25% less likely to cause harmful interference. There is no rationale for such disparate treatment.

As crafted by the Commission, the 700 MHz power rules are not technology neutral. The imposition of a PFD limitation on all Upper Band licensees operating above 1000 watts regardless of bandwidth could impede broadband deployment, as licensees operating wider bandwidth systems would be more severely restricted as to their overall emissions and/or would be subject to a more stringent interference standard than licensees operating narrower bandwidth systems. As a consequence, it would be more difficult for a broadband licensee in the Upper Band to obtain the same level of coverage from each cell site. This disparity would favor one technology over another, a result the Commission was seeking to avoid.

Importantly, the application of a PFD limitation is not insignificant as it may have a severe effect on the ability of an operator to provide a commercial mobile radio service ("CMRS"). Unlike a high powered broadcast service, upon which the Commission has appropriately imposed a PFD limit in the Lower Band, a CMRS operator relies extensively on the use of down-tilt antennas to maximize coverage around the cell site and minimize interference between adjacent cells. The PFD limit imposed by the Commission could severely limit the ability of the CMRS operator to employ such antennas, and thus, would prevent the licensee from making most efficient use of its assigned spectrum.

The Commission indicated that it was adopting a PFD limit in the Upper Band to remain "especially vigilant regarding the potential for interference to public safety

operations."[8] However, it provided no evidence that imposing a more stringent requirement on broadband operations, as opposed to narrowband operations, is necessary to avoid harmful interference. In fact, there is clear evidence to the contrary. A licensee employing five separate radio channels, each with a bandwidth of 1 MHz and a power of 1000 watts ERP, would create considerably greater potential for interference from its 5,000 watts ERP of total emissions than a licensee employing a single radio channel with a bandwidth of 5 MHz, operating at a total power of 2000 watts ERP (400 watts per MHz). Yet, the second arrangement would require compliance with the PFD limit, while the first would not. Verizon Wireless believes that technology neutrality demands that the Commission apply the PFD limit uniformly to all stations that exceed the 1000 watts per MHz limit. Nothing in the record supports the disparate PFD rules that were adopted. Given the harmful effects that a non-technology neutral rule could have on a CMRS operator's ability to deploy broadband technologies, the Commission should modify its PFD rule to apply consistently to any Lower or Upper Band operations that exceeds a 1000 watts per MHz ERP limit.

Verizon Wireless realizes that this would impose a more stringent limit on Lower Band licensees that may operate up to 2000 watts per MHz without regard to a PFD limitation under the recently adopted rules. However, we believe that such a change is justified. First, while a rule allowing higher power in rural areas would provide greater flexibility to licensees deploying wireless broadband, operations at very high power levels would cause an increased risk of harmful interference. Imposition of the PFD rule in those circumstances would ensure that harmful interference does not result to co-

[8] *Report & Order* at 38 (¶ 97).

channel and adjacent channel licensees. Second, imposition of a PFD limitation would be much less of a burden to licensees in rural areas because higher towers are typically employed. Imposing a PFD limit uniformly on any 700 MHz base or fixed station that exceeds 1000 watts per MHz would thus promote technology neutrality, while minimizing the risk of interference and providing increased flexibility in rural areas.

B. The New Coordination/Notification Requirements are Confusing, Burdensome, and Inconsistent With Technology Neutrality.

The Commission's recently adopted rules require Lower and Upper Band licensees to notify and/or coordinate with various entities under different circumstances. Specifically, Upper Band licensees intending to operate a base station with an average power that exceeds 1000 watt ERP must provide advance notification to the Commission as well as to all public safety licensees and all Regional Planning Committees ("RPCs") within 75 kilometers of the base station location. Moreover, licensees operating such base stations in rural areas must coordinate with all 700 MHz licensees (Upper and Lower Bands) and all RPCs within 75 miles.[9] Lower Band licensees intending to operate base stations in rural areas that exceed 1000 watts ERP must also coordinate with all Upper and Lower Band licensees and all RPCs within 75 miles.[10] And, they must provide advance notification to the Commission and to licensees on adjacent spectrum blocks if the average power exceeds 1000 watts ERP and 1000 watts per MHz ERP (or 2000 watts ERP and 2000 watts per MHz ERP in rural areas).

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[9] 47 C.F.R. § 27.50(b)(7).

[10] *Id.* § 27.50(c)(5).

There are several problems with these notification requirements. First, they unnecessarily impose a more stringent requirement on Upper Band licensees than Lower Band licensees. For example, a Lower Band licensee can operate a 5 MHz base station in a non-rural area at an average power of 5,000 watts ERP without any notification requirement, while an Upper Band licensee would have to notify the Commission and all public safety licensees and RPCs within 75 kilometers if it wishes to operate above 1000 watts ERP for the same 5 MHz base station.

Second, in most circumstances, they impose a notification requirement without regard to spectral separation – imposing the same requirement for a licensee that is spectrally far from the subject base station as it does for one that operates on an adjacent channel. It is well understood that the potential for harmful interference is much more significant for co-channel and adjacent channel licensees than for those far from the potential interferer. For example, a base station transmitting in the Lower B Block at 734-740 MHz may cause harmful interference to operations in the adjacent A Block at 728-734 MHz or the C Block at 740-746 MHz, as well as to co-channel B Block licensees in adjacent markets. However, it would not likely cause interference to other Lower Band or Upper Band licensees. The recently adopted rules are burdensome and unnecessary because they require coordination beyond those licensees that are likely to be affected.

Finally, the rules impose an extremely onerous requirement on base stations operated in rural areas, regardless of whether they are operated in the Upper or Lower Bands. Under the recently adopted rules, both Upper and Lower Band licensees would have to coordinate with all commercial and public safety licensees and RPCs within 75

miles, regardless of spectral separation, if the average power of the base station exceeds 1000 watts ERP.[11] So, while a Lower Band licensee would be able to operate a 5 MHz base station in a dense urban area up to an average power of 5,000 watts ERP without any notification requirement, another Lower Band licensee wishing to operate the same base station in a rural area would be limited to 1000 watts ERP unless it coordinated with all 700 MHz licensees. Such a requirement is irrational and burdensome. Moreover, it completely undermines the reason for having higher power limits in rural areas in the first place, and may unnecessarily limit the deployment of broadband systems in rural areas as a result.

While we understand that the Commission's decision to adopt a higher power limit in rural areas may increase the potential for interference, the Commission should not undermine its technology neutrality and regulatory parity policies by imposing a notification requirement that treats rural and non-rural areas differently even if they operate at the same power levels. We believe that it would be more appropriate to require notification if a base station exceeds both the 1000 watts ERP average power limit and the 1000 watts per MHz ERP PSD limit. Thus, in order to take advantage of the more flexible rural power limits (2000 watts ERP and 2000 watts per MHz ERP, respectively), notification would be required (in addition to the PFD requirement discussed previously).[12]

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[11] *Id.* § 27.50(b)(7).

[12] The Commission could include a requirement for Lower A Block licensees operating a base station above 1000 watts per MHz in the 698-704 MHz band to also coordinate with TV channel 51. However, Verizon Wireless notes that TV reception has interference requirements developed by the Commission, which have been established to be sufficient to protect TV operations. *See id.* §27.60.

The *Report and Order* takes important steps in establishing both a PSD limit and a higher power limit in rural areas. These actions will provide greater flexibility for all 700 MHz licensees and speed the deployment of broadband wireless. The Commission should not undermine those actions by establishing a confusing, burdensome, and bifurcated notification regime. Verizon Wireless believes that all 700 MHz and adjacent band licensees, including public safety, will be fully protected if licensees are required to provide advance notice to all potentially affected parties prior to the activation of new base or fixed stations that have a significant potential to cause interference. Such a process will provide parties the opportunity to analyze any new operations for effects on their existing station prior to any interference occurring. Verizon Wireless believes that requiring notification of all licensees authorized to operate in adjacent spectrum within 75 kilometers of a new 700 MHz base or fixed station operating at greater than 1000 watts ERP and 1000 watts per MHz will enable any party to determine if such new operations would present any interference problems. Verizon Wireless has therefore included this requirement in the attached proposed rules (*see* Appendix A) that would establish uniform coordination requirements.

While the attached proposed rules would require notification of public safety licensees operating in adjacent spectrum if the specified power limits are exceeded, we note that the Commission has already afforded public safety licensees the right to request notification from any 700 MHz licensee, regardless of whether they operate in adjacent spectrum or whether they intend to operate a base or fixed station above those power limits.[13] We support that decision. Combined with the modified notification requirement

[13] *See id.* § 27.70.

proposed herein, these rules would ensure that public safety licensees are notified in advance of operations that are more likely to cause harmful interference, while having the option of receiving broader notifications if they deem those to be necessary.

II. THE COMMISSION SHOULD ADOPT ONE SET OF RULES THAT APPLIES TO BOTH THE UPPER AND LOWER BANDS.

In order to harmonize the technical power requirements and make them easier to understand, implement, and enforce, the Commission should adopt a single set of power and notification rules that is consistent both geographically and across the 700 MHz Band. Verizon Wireless has provided a draft of rules that accomplishes the Commission's goal of avoiding interference while ensuring technological neutrality, regulatory uniformity, and, ultimately, encouraging wireless broadband deployment. The modified rules are provided as Appendix A to this filing.

These rules establish a single triggering standard and set of notification and PFD requirements for all providers regardless of bandwidth and geographic location. Specifically, licensees intending to operate a base or fixed station at an ERP greater than 1000 watts and greater than 1000 watts per MHz will be subject to the 3000 microwatts per square meter PFD limit, and will be required to provide advance notification to all licensees authorized to operate on adjacent spectrum within 75 kilometers of the base station, including commercial licensees, public safety licensees, and RPCs. These notifications will be required 90 days prior to commencement of station operation.

This proposal solves the two key problems in the recently adopted rules. First, it eliminates the disparate regulation of the Lower and Upper 700 MHz bands by establishing uniform PFD and notification rules for all licensees regardless of band,

technology, or area served. Second, it eliminates the potential for confusion by establishing a single set of rules for all 700 MHz licensees.

III. CONCLUSION

Verizon Wireless again commends the Commission for adopting more flexible power rules for the 700 MHz band that will promote the wide deployment of next generation wireless technologies. As Verizon Wireless has noted previously, proper implementation of these rules will ensure parity among commercial providers and protect all licensees against harmful interference. With the changes proposed by Verizon Wireless herein, these objectives will be accomplished and the rules will be greatly simplified.

Respectfully submitted,

VERIZON WIRELESS

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Appendix A
Proposed Rules

§ 27.50 Power and antenna height limits.

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(b) The following power and antenna height limits apply to transmitters operating in the 698-764 MHz and 776-794 MHz bands:

(1) Fixed and base stations transmitting a signal in the 746-747 and 762-764 MHz bands must not exceed an effective radiated power (ERP) of 1000 watts and an antenna height of 305 m height above average terrain (HAAT), except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 1000 watts ERP in accordance with Table 1 of this section.

(2) Fixed and base stations transmitting a signal in the 698-746, 747-762 MHz and 777-792 MHz bands with an emission bandwidth of 1 MHz or less must not exceed an ERP of 1000 watts, except as described in paragraph (3) below. In addition, antennas used with these stations are limited to a height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 1000 watts ERP in accordance with Table 1 of this section.

(3) Fixed and base stations located in a county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, and transmitting a signal in the 698-746, 747-762 MHz and 777-792 MHz bands with an emission bandwidth of 1 MHz or less must not exceed an ERP of 2000 watts and an antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 2000 watts ERP in accordance with Table 2 of this section.

(4) Fixed and base stations transmitting a signal in the 698-746, 747-762 MHz and 777-792 MHz bands with an emission bandwidth greater than 1 MHz must not exceed an ERP of 1000 watts/MHz, except as described in paragraph (5) below. In addition, antennas used with these stations are limited to a height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 1000 watts/MHz ERP accordance with Table 3 of this section.

(5) Fixed and base stations located in a county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, and transmitting a signal in the 698-746, 747-762 MHz and 777-792 MHz bands with an emission bandwidth greater than 1 MHz must not exceed an ERP of 2000 watts/MHz and an antenna height of 305

m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 2000 watts/MHz ERP in accordance with Table 4 of this section.

(6) Licensees authorized to transmit in the 698-746, 747-762 or 777-792 MHz bands and intending to operate a base or fixed station at an ERP greater than 1000 watts and greater than 1000 watts/MHz must comply with the power flux density requirements of §27.55 (b) and must provide advance notice of such operation to certain adjacent channel licensees. Licensees in adjacent spectrum blocks within 75 km of the base or fixed station (or with jurisdiction within 75 km of the base or fixed station) that must be notified are:

> (i) licensees authorized to operate in the 698-746, 747-762, and 777-792 MHz bands;
>
> (ii) licensees authorized to operate in the 764-776 MHz and 794-806 MHz bands under Part 90 of this chapter; and
>
> (iii) all regional planning committees, as identified in §90.527 of this chapter.

Licensees must provide the location and operating parameters of the base or fixed station, including the station's ERP, antenna coordinates, antenna height above ground, and vertical antenna pattern, and such notifications must be provided at least 90 days prior to the commencement of station operation

(7) A licensee authorized to operate in the 710-716, 716-722, or 740-746 MHz bands, or in any unpaired spectrum blocks within the 698-746 MHz band, may operate a fixed or base station at an ERP up to a total of 50 kW within its authorized, 6 MHz spectrum block if the licensee complies with the power flux density and coordination requirements described in section (6) above. The antenna height for such stations is limited only to the extent required to satisfy the requirements of §27.55(b).

(8) Control stations and mobile stations transmitting in the 698-746 MHz, 747-762 MHz, and 776-794 MHz bands and fixed stations transmitting in the 776-777 MHz and 792-794 MHz bands are limited to 30 watts ERP;

(9) Portable stations (hand-held devices) transmitting in the 747-762 MHz and 776-794 MHz bands are limited to 3 watts ERP;

(10) For transmissions in the 746-747 MHz, 762-764 MHz, 776-777 MHz, and 792-794 MHz bands, maximum composite transmit power shall be measured over any interval of continuous transmission using instrumentation calibrated in terms of RMS-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, etc., so as to

obtain a true maximum composite measurement for the emission in question over the full bandwidth of the channel.

(11) For transmissions in the 698-746 MHz, 747-762 MHz and 777-792 MHz bands, licensees may employ equipment operating in compliance with either the measurement techniques described in paragraph (b)(10) or a Commission-approved average power technique. In both instances, equipment employed must be authorized in accordance with the provisions of 27.51.

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Table 1 - Permissible Power and Antenna Heights for Base and Fixed Stations in the 746-747 MHz and 762-764 MHz Bands and for Base and Fixed Stations in the 698-746 MHz, 747-762 MHz, and 777-792 MHz Bands Transmitting a Signal with an Emission Bandwidth of 1 MHz or Less	
Antenna height (AAT) in meters (feet)	**Effective radiated power (ERP) (watts)**
Above 1372 (4500)	65
Above 1220 (4000) To 1372 (4500)	70
Above 1067 (3500) To 1220 (4000)	75
Above 915 (3000) To 1067 (3500)	100
Above 763 (2500) To 915 (3000)	140
Above 610 (2000) To 763 (2500)	200
Above 458 (1500) To 610 (2000)	350
Above 305 (1000) To 458 (1500)	600
Up to 305 (1000)	1000

Table 2 – Permissible Power and Antenna Heights for Base and Fixed Stations in the 698-746 MHz, 747-762 MHz, and 777-792 MHz Bands Transmitting a Signal with an Emission Bandwidth of 1 MHz or Less	
Antenna height (AAT) in meters (feet)	**Effective radiated power (ERP) (watts)**
Above 1372 (4500)	130

Above 1220 (4000) To 1372 (4500)	140
Above 1067 (3500) To 1220 (4000)	150
Above 915 (3000) To 1067 (3500)	200
Above 763 (2500) To 915 (3000)	280
Above 610 (2000) To 763 (2500)	400
Above 458 (1500) To 610 (2000)	700
Above 305 (1000) To 458 (1500)	1200
Up to 305 (1000)	2000

Table 3 – Permissible Power and Antenna Heights for Base and Fixed Stations in the 698-746 MHz, 747-762 MHz and 777-792 MHz Bands Transmitting a Signal with an Emission Bandwidth Greater than 1 MHz	
Antenna height (AAT) in meters (feet)	**Effective radiated power (ERP) per MHz (watts/MHz)**
Above 1372 (4500)	65
Above 1220 (4000) To 1372 (4500)	70
Above 1067 (3500) To 1220 (4000)	75
Above 915 (3000) To 1067 (3500)	100
Above 763 (2500) To 915 (3000)	140
Above 610 (2000) To 763 (2500)	200
Above 458 (1500) To 610 (2000)	350
Above 305 (1000) To 458 (1500)	600
Up to 305 (1000)	1000

Table 4 – Permissible Power and Antenna Heights for Base and Fixed Stations in the 698-746 MHz, 747-762 MHz and 777-792 MHz Bands Transmitting a Signal with an Emission Bandwidth Greater than 1 MHz

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) per MHz (watts/MHz)
Above 1372 (4500)	130
Above 1220 (4000) To 1372 (4500)	140
Above 1067 (3500) To 1220 (4000)	150
Above 915 (3000) To 1067 (3500)	200
Above 763 (2500) To 915 (3000)	280
Above 610 (2000) To 763 (2500)	400
Above 458 (1500) To 610 (2000)	700
Above 305 (1000) To 458 (1500)	1200
Up to 305 (1000)	2000

§ 27.55 Power strength limits.

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(b) *Power flux density limit for stations operating in the 698-746 MHz bands.* For base and fixed stations operating in the 698-746 MHz band in accordance with the provisions of §27.50(b)(6) of this chapter, the power flux density that would be produced by such stations through a combination of antenna height and vertical gain pattern must not exceed 3000 microwatts per square meter on the ground over the area extending to 1 km from the base of the antenna mounting structure.