Before the
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC 20554

In the Matter of	)	
	)	
Amendment of Part 101 of the Commission's Rules to Facilitate the Use of Microwave for Wireless Backhaul and Other Uses and to Provide Additional Flexibility to Broadcast Auxiliary Service and Operational Fixed Microwave Licensees	)	WT Docket No. 10-153

COMMENTS OF SPRINT

Sprint Nextel Corporation ("Sprint") hereby respectfully submits its consolidated comments on the Second Further Notice of Proposed Rulemaking and Second Notice of Inquiry in the above captioned proceeding.[1] In this 2nd FNPRM/NOI, the Federal Communications Commission ("Commission") seeks more detailed comments on specific proposals to allow the use of smaller antennas and wider channels in other Part 101 microwave bands, and revisions of rules for smaller antennas in the 10.7-11.7 GHz band (11 GHz band).[2] The Commission also seeks input on instituting a comprehensive review of its Part 101 antenna standards.[3]

As a licensee of thousands of microwave stations, Sprint appreciates the Commission's continued efforts to improve and modernize its rules to increase the

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[1] *Second Report and Order, Second Further Notice of Proposed Rulemaking, Second Notice of Inquiry, Order on Reconsideration, and Memorandum Opinion and Order*, WT Docket No. 10-153; RM-11602 *(August 3, 2012) ("*2nd FNPRM/NOI*").*

[2] 2nd FNPRM/NOI at para. 62.

[3] 2nd FNPRM/NOI at para. 76.

flexibility of the Part 101 rules. In these comments, Sprint briefly addresses the Commission's proposals to: (1) modify its antenna standards for the 13 GHz band to allow the use of 2 foot antennas under Category B; (2) amend Section 101.113 to permit EIRP reductions to resolve interference at 11 GHz; and (3) allow intermediate upgrades from one Category B antenna to another Category B antenna with better performance characteristics. Sprint also briefly comments on questions raised in the NOI: (1) whether ETSI standards are a useful benchmark for changing antenna standards and (2) the possibility of establishing standards that allow point-to-multipoint antennas with 30 or 60 degree beamwidths.

2 Foot Antennas in 13 GHZ Band

The Commission proposes to modify antenna standards to allow the use of 2 foot antennas in the 13 GHz band under Category B while ensuring appropriate protection from interference for other users in the band.[4] As Sprint previously submitted in this proceeding, there is value in adopting antenna standards for the 13 GHz band that would be similar to the current antenna standards in the 11 GHz band. The Commission's proposal would align the 13 GHz band with the 11 GHz band, allowing for a smaller, less expensive Category B antenna. Antenna size is one of the major factors that influence microwave deployment due to the accompanying lease costs, tower structure integrity and zoning.[5] Sprint previously submitted in this proceeding a preference for 18 inch dishes in the 13 GHz band,[6] but supports the Commission adopting standards that allow for 2 foot dishes.

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4 2nd FNPRM/NOI at para. 65.

5 Sprint Nextel Comments, WT Docket No. 10-153 (filed October 25, 2010) at page 8.

6 *Id.*

Modify Section 101.113 to Incorporate "Authorized EIRP"

The Commission proposes changes to Section 101.113 that would change the term "maximum EIRP" to "authorized EIRP" and clarify that a microwave licensee may not hold an authorization for more power than it actually needs.[7] Sprint agrees with the Commission's perspective that this change in Section 101.113 would allow increased flexibility for licensees to resolve interference issues. In addition, Sprint recommends that the definition of "authorized EIRP" include consideration of sufficient antenna power to overcome losses due to radomes and stealth material that may be required to meet zoning and site requirements. Finally, encouraging licensees to request the minimum power necessary will encourage a better spectrum environment, facilitate additional development and deployment of microwave facilities and greater frequency reuse.[8]

Upgrading to Better Performing Category B Antennas

The Commission proposes to permit licensees in all Part 101 bands to resolve an interference issue by upgrading from one Category B antenna to another Category B antenna with better performance characteristics.[9] Sprint supports the opportunity to perform an "intermediate upgrade" as this proposal would allow. This proposed upgrade option could reduce the potential conflict with previous zoning approvals that accommodated the smaller dishes of Category B antennas. In addition, these Category B antennas are usually lighter and take up less space on a tower, a significant factor considered by many tower owners leasing space to several customers. The effort to gain local, regulatory approval can be expensive and time-consuming. The opportunity to

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7 2nd FNPRM/NOI at para. 68.

8 Sprint Nextel Comments at page 10

9 2nd FNPRM/NOI at para. 74.

keep an antenna within the similar parameters to an already approved antenna could provide additional opportunities to continue to deploy and install microwave facilities. Currently, Commission requirements to resolve a potential interference issue by upgrading to a larger sized Category A antenna can cause significant changes at the site. This can result in a local zoning authority or site owner having difficulty accommodating larger dishes on a structure. In addition, the added weight of a larger Category A antenna can increase expenses for a tower owner in the form of structural enhancements to the tower, and these expenses are generally passed on to a renter seeking to add larger antennas. The structural enhancements that usually accompany larger antennas can cost nearly $50,000 per tower and can increase rent per year nearly $2500, which when multiplied by the thousands of microwave sites in Sprint's network could become a significant expense. The Commission's proposed rules could help reduce such costs by allowing better performing Category B antennas to resolve potential interference.

Comprehensive Review of Part 101 Antenna Standards

Sprint would also like to reiterate several suggestions for changes to Part 101 antenna standards. Sprint recommends more specific technical rules governing the use of spectrum masks above 15 GHz, similar to current ETSI standards that allow the usage of more frequencies with less potential for interference. Currently there are challenges for microwave design and deployment in these bands because of the variance in the interpretation of rules by some equipment vendors. Sprint believes such variations in interpretation could be mitigated with more specific rules, potentially improving spectrum efficiency while also reducing interference.[10] Today's technology allows for

[10] Sprint Nextel Comments at page 8.

more efficient spectrum masks that would reduce out of band spurious emissions in the frequency bands above 15 GHz.

Sprint also supports the Commission considering standards that accommodate point-to-multipoint antennas with 30 or 60 degree beamwidth with certain limitations on radio frequency antenna size and transmit power.[11] Sprint believes such designs provide opportunities to reduce antenna tower lease costs at hub locations. In some cases, one hub antenna could effectively serve multiple remote locations. This would allow more remote stations to share the same frequency and make efficient use of equipment, frequencies, and reduce costs associated with microwave deployments.

Respectfully submitted,

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[11] *Id.* at page 6.