

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of

Acceleration of Broadband Deployment by
Improving Wireless Facilities Siting Policies

WT Docket No. 13-238

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

WC Docket No. 11-59

Amendment of Parts 1 and 17 of the
Commission's Rules Regarding Public
Notice Procedures for Processing Antenna
Structure Registration Applications for
Certain Temporary Towers

RM-11688 (terminated)

2012 Biennial Review of
Telecommunications Regulations

WT Docket No. 13-32

COMMENTS OF QUALCOMM INCORPORATED

QUALCOMM Incorporated ("Qualcomm") is pleased to comment on the Commission's *Notice of Proposed Rulemaking* ("NPRM") in the above-referenced proceedings¹ and offer strong support for the agency's efforts to update its wireless infrastructure siting policies to further encourage the much-needed build-out of broadband infrastructure. Qualcomm strongly supports the Commission's efforts to update its regulations so that small cells can be deployed as simply as Wi-Fi routers are deployed today.

¹ Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies, *Notice of Proposed Rulemaking*, 28 FCC Rcd 14238 (2013) (the "NPRM").

I. Small Cells Will Serve An Increasingly Important Role In Meeting American Consumers' And Businesses' Surging Mobile Broadband Data Demands

Qualcomm has set a corporate goal to meet what we call the “1000x Challenge”— to expand the wireless capacity of today’s mobile broadband networks by 1000 times. Indeed, wireless data usage has been doubling each year, and if this trend continues for the next ten years, the usage in a decade will be 1000 times today’s level.

A key piece of supporting 1000x more capacity will include the placement of very-low-power cellular base stations, *i.e.*, small cells, much closer to user devices and integrating these low-power small cells into the larger macro-cellular networks. These miniature cells, which are about the size of the deck of playing cards, have connectivity similar to that of a typical macro-cellular base station — but unlike a typical base station — small cells operate with very low power. Small cells will be unobtrusively placed indoors or just outside buildings, where lots of wireless traffic originates, and they will work together with larger macrocells to create a heterogeneous network or “het-net.” As the Commission recognizes in the *NPRM*, streamlining its environmental review procedures to allow these low-power small cells to be deployed as easily as today’s similarly low-power Wi-Fi routers is important to supporting America’s growing “demand for and reliance on wireless broadband services.”²

To be clear, however, streamlining the Commission’s wireless facilities siting policies is necessary but not sufficient to meeting the 1000x Challenge. The most important means of meeting the 1000x Challenge is much more spectrum: Clear, exclusive-use, licensed spectrum is critical — this includes the 600 MHz band spectrum to be released via the voluntary incentive auction process. Completely clearing bands for mobile use by a date certain and auctioning the spectrum for licensed use is of utmost importance to the wireless industry. Unlicensed spectrum

² NPRM at ¶ 2.

also is important. Wide contiguous bands at 5 GHz and above are ideal because they are adjacent to existing unlicensed bands and allow for 80 MHz and 160 MHz-wide channels supported by the 802.11ac standard and other similar wideband wireless technologies.

II. The FCC Should Streamline Its Environmental Review Process By Categorically Excluding Small Cell Installations From NEPA and NHPA Reviews

Qualcomm believes that the FCC should categorically exempt small cell installations from both National Environmental Protection Act (“NEPA”) and National Historic Preservation Act (“NHPA”) reviews.³ While Qualcomm recognizes that the Commission could make a series of individual changes to its rules to achieve a similar result, it is simpler and smarter for the FCC to make this single overarching rule change. In fact, when the Commission instituted its wireless siting rules, such low power cellular base stations were not even in existence. This categorical exemption would support broader coverage and increased capacity of wireless broadband networks through facilitating the easy and unobtrusive deployment of miniaturized, ultra-low-power, small cells.

The deployment of ultra-low-power small cells will bring the network closer to the user and provide capacity in those areas where it is needed. For small cell densification to be successful, small cells need to be “plug and play” — just like unlicensed routers are today — so they can be easily installed in homes, offices, shopping malls, and on street signs and utility poles. This is what streamlining the FCC wireless siting procedures for small cells will provide. The small cell will show up on the wireless network where the user installs it or the wireless operator deploys it and it will be configured automatically and adapt to changing spectral environments as more small cells are added, and thus be part of a self-organizing network.

³ See NPRM ¶¶ 43-49, 58-60.

CONCLUSION

Qualcomm encourages the Commission to take necessary and appropriate measures to streamline its wireless facility siting policies to ease the deployment of small cells wherever consumers require reliable, ultra-high-speed, mobile broadband connectivity. The FCC's proposed actions, which Qualcomm strongly supports as described herein, will serve a critical role in supporting the exponentially increasing data demands of today and tomorrow's mobile broadband users and applications..

Respectfully submitted,

QUALCOMM INCORPORATED

By: 

Dean R. Brenner
Senior Vice President, Government Affairs

John W. Kuzin
Senior Director, Regulatory

1730 Pennsylvania Avenue, N.W.
Suite 850
Washington, D.C. 20006
202.263.0020

Attorneys for QUALCOMM Incorporated

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