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November 16, 2011

1600

The Honorable Julius Genachowski
Chairman
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Dear Chairman Genachowski:

With the growing calls for Congress to pass incentive auction authority, I feel it necessary to once again raise several critical issues that must also be addressed to meet the long-term spectrum needs of this nation. Unfortunately, there has been a disproportionate amount of focus on incentive auctions as being the principal elixir to addressing the industry's need for spectrum while other more important mechanisms, like fostering greater technical innovation and implementing more robust spectrum management, seem to be discussed more like footnotes. While incentive auctions have the potential to free up additional spectrum for wireless broadband and raise revenue for the treasury, further examination of this tool is necessary to ensure we are setting realistic expectations for its effectiveness.

In your recent speech at the U.S. Chamber of Commerce, you noted that incentive auctions would raise $25 billion in potential deficit reduction. But as you know, that $25 billion is what *might* be generated over ten years. By comparison, the Joint Select Committee on Deficit Reduction is charged with finding $1.5 trillion in debt saving over the same period. So the possible funds raised by incentive auctions would constitute only 1.7 percent of the Super Committee's goal. And that result is only achieved if the full $25 billion goes directly to deficit reduction and no other appropriation.

It is also unclear incentive auctions will end up raising the amounts touted because 1) such figures are dependent on a notable number of broadcasters relinquishing spectrum and 2) recent spectrum auctions in other countries have garnered lower than expected revenue. For example, a 2010 auction of approximately 360 MHz of spectrum in Germany raised only 4.4 billion euros—analysts had estimated it would raise 5.8 to 8 billion euros. The changing competitive landscape of the market, the number of eligible bidders in an auction, and the growing use of unlicensed spectrum[1,2] could also impact auction proceeds. And, as I've written

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[1] Athima Chansanchai , *More smartphone users turning to Wi-Fi,* http://technolog.msnbc.msn.com/_news/2011/06/08/6813297-more-smartphone-users-turning-to-wi-fi.

[2] Kyunghan Lee and others, Mobile Data Offloading: How Much Can WiFi Deliver? In *Proceedings of ACM CoNext, 2010,* http://research.csc.ncsu.edu/netsrv/sites/default/files/CoNEXT2010.pdf

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before, incentive auctions will only yield a fraction of the 500 megahertz the FCC and Administration intend to free up for wireless broadband over the next decade and just a sliver of the amount the International Telecommunication Union (ITU) estimated would be needed by 2020[3]. So we need to look beyond incentive auctions and its revenue generation as the main drivers in spectrum policy reform.

Even more concerning if the super committee only includes incentive auctions in its recommendation, as some have called for, then it would be very difficult to enact more comprehensive reform in the future since a necessary "pay-for" would be eliminated that could have been used for other measures such as a comprehensive spectrum inventory, spectrum measurements and analysis, and modifications to the Commercial Spectrum Enhancement Act[4] in order to free up more government used spectrum. Government agencies will need the adequate resources and funding to upgrade systems or relocate to other frequencies in order to shorten the timeframe of getting more government spectrum to market.

As part of reform, we must also address other critical issues like harmful interference and receiver performance. The escalating demand for this finite resource presents significant challenges. As more entities use spectrum to provide services, the ecosystem becomes more crowded and efforts among users to coexist become more difficult. As a result, disputes among licensees regarding potential harmful interference are occurring with greater frequency. Just in the past few years, interference disputes have arisen between various parties such as MVDDS/DBS, AWS-1/AWS-3, WCS/SDARS, and, more recently, with LightSquared/GPS.

I believe one of the problems contributing to the recurrence of these interference disputes is the lack of clear receiver performance guidelines. As you know, the RADIOS Act[5], which Senator Kerry and I introduced, includes provisions addressing these important issues. The legislation promotes more spectral efficiency and interference immunity of device receivers and tasks the FCC and NTIA to conduct an interference sensing study to provide greater predictability in the determination of harmful interference. Taking these steps or similar ones will help mitigate, and even prevent, future interference disputes.

As Michael Gallagher, the former Assistant Secretary for Communications and Information, once stated "receiver standards mean less interference and more available spectrum."[6] So if more spectrum is to be made available, receiver performance must be included in any general spectrum policy discussion and as part of the equation to prevent a spectrum shortage. In addition, solving this problem of spectrum availability is also contingent upon proper and constant planning and coordination between the FCC and NTIA, which historically has been irregular at times—there is an old saying "if you fail to plan, plan to fail."

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[3] International Telecommunication Union, *Report ITU-R M.2078: Estimated Spectrum Bandwidth Requirements for the Future Development of IMT-2000 and IMT-Advanced*, at 25, Table 25 (2006) (ITU Report).

[4] CSEA, Title II of P.L. 108-494

[5] S.455, Reforming Airwaves by Developing Incentives and Opportunistic Sharing Act

[6] Ensslin, Cylde. "NTIA Urges FCC to Adopt Radio Receiver Standards." National Telecommunications and Information Administration . November 5, 2003. http://www.ntia.doc.gov/legacy/ntiahome/press/2003/receiverstds_11122003.htm

The questionable urgency of the need for more spectrum that some have injected into the dialog has devolved the policy making into a reductive process that is incomplete. I feel it paramount to iterate my concern that if there is not a more comprehensive reform to our dated spectrum policy then we will only partially address the problems that exist and fall very short in setting the proper path to meet the growing demands being experienced in the spectrum ecosystem.

As a recent Real Wireless report for Ofcom rightfully points out, increasing wireless network capacity depends on a combination of spectrum, technology, and topology.[7] Such reform that focuses on a more balanced multi-faceted approach is the only true path to modernizing our nation's radio spectrum planning, management, and coordination activities to better meet the future spectrum needs of *all* users and provide a more fertile ground for continued innovation in the marketplace. So I urge you to do more to expand the current discourse on spectrum policy to better highlight the correct complement of tools that compose the real solution to addressing the spectrum challenges that exist.

Sincerely,

OLYMPIA J. SNOWE
United States Senator

cc: Commissioner Michael J. Copps
Commissioner Robert M. McDowell
Commissioner Mignon Clyburn

[7] Real Wireless Ltd., "Report for Ofcom 4G Capacity Gains – Final Report." January 27, 2011, page 115, http://stakeholders.ofcom.org.uk/binaries/research/technology-research/2011/4g/4GCapacityGainsFinalReport.pdf