



FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

Mike O'Rielly
Commissioner

February 8, 2017

The Honorable Marsha Blackburn
Chairman
Subcommittee on Communications and Technology
House Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, D.C. 20515

Dear Chairman Blackburn:

I write to commend you and the Members of the Subcommittee on Communications and Technology for the recent hearing to consider the reauthorization of the National Telecommunications and Information Administration (NTIA). Having spent considerable time on this topic as a committee staff member, including working on reauthorization legislation in the late 1990s, I appreciate the unique and difficult issues raised by such a discussion. In particular, the Subcommittee should be applauded for exploring ways to expedite the repurposing of spectrum now solely or primarily allocated for federal government functions to commercial use.

As the Subcommittee continues its review, I respectfully suggest that it look closely at the proposal to enact Agency Spectrum Fees as a means to improve government spectrum efficiency. Imposing a cost for spectrum holdings -- even if conservative or undervalued -- to federal agency annual budgets will serve as an appropriate and necessary stick to force agencies to retain bandwidth assignments only if absolutely necessary to further their particular missions. While I am by no means the initiator of this idea, particularly since it was previously explored at length by NTIA's Commerce Spectrum Management Advisory Committee, I enclose my blog post that explains the proposal in further detail.

To the extent I may be of any assistance to the Subcommittee, I offer to make myself available in any capacity.

Sincerely,

A handwritten signature in blue ink that reads "M. Rielly".

Michael O'Rielly

cc: The Honorable Michael Doyle
Ranking Member

Enclosure



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Enacting More "Sticks": Spectrum Fees for Government Users

September 8, 2015 - 3:20 pm

By [Michael O'Rielly \(/node/22746\)](#) | Commissioner

Wireless service and device use is exploding and more commercial spectrum – both licensed and unlicensed – is going to be needed to meet the insatiable demand. While improvements in spectral engineering and infrastructure builds may provide some relief, spectrum is a finite resource so large swaths of spectrum now used by the U.S. government must be reallocated to the private sector to resolve upcoming shortages. And the establishment of spectrum fees for government agencies, or Agency Spectrum Fees (ASF), is one tool to make this happen.

There are many means to reduce the Federal government's spectrum allotment. Statutorily forcing agencies to relocate to other bands remains the most effective way, but this requires strong leadership, is usually a one-time event focusing on specific frequencies and can run into political storms. Others advocate for new incentives that provide agencies funding to voluntarily surrender valuable bands, but this too has drawbacks as the "carrots" needed to achieve success can exceed rationality and may only be effective in narrow circumstances. Further, it is unclear whether such incentives would change the behavior of individual agencies to use their spectrum more prudently. The benefit of ASF is that they can function as a more nuanced "stick" approach that continually generates, if operated correctly, spectrum efficiencies. More importantly, it is not an either/or situation: they can work as an individual solution or be part of a multi-layered approach.

Overall, the ASF concept is fairly simple. By establishing an annual cost to government agencies based on their allocated frequencies, which would impact their annual budgets, an agency would have a deeply-rooted interest in minimizing its individual spectrum footprint. In other words, imposing a price would force agencies to reconsider their spectrum holdings because they would only want to pay for what is actually needed to accomplish their mission, thereby freeing spectrum for commercial uses. It's not too dissimilar to having differential pricing for various sized storage units – it rationalizes behavior by getting users to "rent" what is actually needed, minimizing the chance that space goes unused. A 2012 [GAO Report \(http://www.gao.gov/assets/660/650019.pdf#page21\)](http://www.gao.gov/assets/660/650019.pdf#page21) stated it fairly well: "[f]ees could help to free spectrum for new uses, since licensees that use spectrum inefficiently may reduce

their holdings or pursue sharing opportunities once they bear the opportunity cost of letting their spectrum remain fallow or underused."

By some accounts, the Federal government currently occupies – either exclusively or on a primary basis – between 60 and 70 percent of all spectrum in the commercially most valuable range between [225 MHz and 3.7 GHz](#) (https://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast_spectrum_report_final_july_20_2012.pdf), which comes to approximately 2,417 megahertz. Some have stated that the federal government only controls 17 percent of this spectrum, but that figure does not take into account all of the shared spectrum the government has where, because of its primary status, it can restrict or preclude commercial use. If spectrum fees result in a reduction of the total amount of government spectrum by even 15 percent, that would equate to about 363 megahertz. I don't intend, in any way, to trivialize or minimize the valuable functions for which agencies use spectrum, but the days of reserving or warehousing spectrum on the infinitesimal chance that a particular band might be used in the rarest of occasions need to be brought to an end. To argue that federal agencies cannot get 15 to 20 percent more spectrally efficient, with the use of modern technologies and sharing of services and spectrum within the government, is ludicrous, especially since it is estimated that the private sector is getting approximately 30 percent more efficient in its spectrum use every year.¹

Federal agencies argue that it is impossible to properly capture the value of spectrum usage to meet their public safety missions. However, this point completely ignores the fact that federal spectrum users are already subject to numerous other budgetary pressures from reducing building rents and workforce sizes to the cost of input goods and services. If spectrum fees are problematic, how is it that agencies can deal with the myriad annual cost restrictions imposed by the General Services Administration? Generally, the Federal government is trying, albeit slowly, to reduce its overall square footage. Even the Department of Defense has been subject to space downsizing over the years as part of the Base Realignment and Closure (BRAC) process. Spectrum should be treated as just another factor that agencies should account for as they prepare their annual budgets. And such fees put a more accurate price on all of the costs for a particular agency or function.

Additionally, another concern raised with spectrum fees is setting the appropriate amount to make sure it is not so punishingly high as to jeopardize an agency's public safety functions. In some regards, rate selection (whether flat fee or market fluctuating) can never be a truly perfect process because it will require some entity, rather than the marketplace, to set the rates. Accordingly, we need to accept certain fallibilities and use a conservative approach when setting the price point, adjusting it upwards as time goes on. At this point, I would argue that NTIA, in consultation with the Office of Management and Budget, as is done for spectrum relocation costs, should set the annual rate on a per megahertz basis consistent with recent FCC private sector spectrum auctions in order to generate a price for a given frequency. Where multiple agencies are sharing a particular band, the price can be divided on an equitable basis, rather than trying to determine each agency's use or its intrinsic value. For instance, where sharing occurs, the cost allocated for primary and secondary use can be proportioned, albeit somewhat arbitrarily, at two-thirds and one-third, respectively.

The budgetary mechanism for implementing these fees on government users presents some challenges but is also resolvable. Accepting the position that NTIA accurately knows how much spectrum each agency holds, even spectrum that is used for classified functions, simple math produces the annual fee owed by an agency (i.e., price per megahertz times spectrum allotments times any reduction for sharing). From that amount, an agency's annual budgetary appropriation level would be automatically reduced accordingly, via a sequestration-like structure, in that fiscal year.

Since there are existing budget caps for discretionary spending, which are very likely to stay in place for the foreseeable future, a federal agency would be hard pressed to convince Congressional Appropriators to plus-up its account to counteract the impact of its spectrum fees. This is because any increase would have to come at the expense of some other valuable program within their appropriations allocation. Even those who want to increase the caps would be unlikely to provide relief because it would come at the expense of other spending that they are pursuing. Further, limits can be placed by legislation, if necessary, to prevent any budgetary backfilling, if needed. Personally, I would leave any funds generated by the fees to Appropriators to reallocate as they see fit, but I could see where some would want the money to lower the overall discretionary caps, and therefore the deficit.

Despite the many advantages of spectrum fees, I do not think that they are practical or appropriate to apply to commercial users, either licensed or unlicensed. First, most commercial spectrum users have already paid for their spectrum in one form or another. While some have purchased licenses at an FCC auction, others effectively paid for their spectrum when original licenses were made available on the secondary market. Second, many commercial spectrum holders are in the midst of spectrum re-evaluations and subject to market pressures. For example, television broadcasters are about seven months from the broadcast incentive auction, where Congress established a different regime for promoting spectrum efficiency. Lastly, the attempted application of spectrum fees to commercial users was a contributing factor in preventing their establishment in past debates. As such, the correct thing to do is to focus on the government users.

Installing greater accountability to an agency's use of a precious resource will produce spectrum efficiencies and eventually reduce government users' spectrum inventory. Agency Spectrum Fees can do this and it's a step that we should take.

¹ See Coleman Bazelon & Giulia McHenry, *Substantial Licensed Spectrum Deficit (2015-2019): Updating the FCC's Mobile Data Demand Projections*, at Table 5, line 10 (June 23, 2015), http://www.ctia.org/docs/default-source/default-document-library/bazelon_mchenry_spectrum-deficit_2015-06-23.pdf (http://www.ctia.org/docs/default-source/default-document-library/bazelon_mchenry_spectrum-deficit_2015-06-23.pdf).