

Broadcast Spectrum is not the only Spectrum Available

By Thomas Lenard and Lawrence White

(This piece was published in [The Hill](#) on July 23, 2013)

The U.S. House Energy and Commerce Committee is holding an oversight hearing this week to examine the Federal Communications Commission's progress in planning its upcoming spectrum incentive auction. The Commission expects the auction to contribute 120 MHz of broadcast spectrum to the goal of an additional 300 MHz for mobile broadband by 2015 established by the FCC's National Broadband Plan. While the incentive auction is important and deserves the attention it is receiving from the commission and Congress, attention should also be paid to another category of spectrum: the Mobile Satellite Service (MSS) spectrum. This is the most immediately available spectrum—indeed, the only significant block of spectrum that is already licensed but not deployed. Since considerable doubt exists concerning whether the incentive auction will yield anything close to the projected 120 MHz, the commission might get more “bang for the buck” by focusing greater attention on removing the remaining impediments to the deployment of the MSS spectrum.

The National Broadband Plan initially counted 90 MHz of MSS spectrum mostly controlled by Dish and LightSquared toward its 2015 goal, but this estimate has been cut by more than half. The most recent tally, contained in an October 2012 speech by former FCC Chairman Genachowski, counted only 40 MHz of MSS spectrum and did not include the LightSquared spectrum. The company's ability to use that spectrum for its planned 4G LTE network has been thrown into doubt, pending resolution of interference issues with neighboring spectrum users.

In an effort to resolve these concerns, LightSquared has proposed a second-best solution that, at this stage, is perhaps the only way of moving forward with the deployment of its network. This proposal involves vacating or delaying deployment of the 20 MHz of spectrum that is closest to the adjacent receivers. In return, LightSquared would gain access to 5MHz of government spectrum that the company would share with National Oceanic and Atmospheric Administration (NOAA) weather balloons. This proposal would also represent an important “trial balloon” (pun intended) of the Obama administration's plans to expand effective spectrum supply by encouraging government agencies to share under-utilized spectrum with the private sector.

By resolving this issue in a manner that allows LightSquared to move forward with its plan, the FCC can produce significant benefits for millions of users of mobile broadband services and for the U.S. economy more generally: Once deployed, LightSquared's proposed wireless broadband network will produce an estimated \$12 billion in value to the economy and potentially 10 times that amount—\$120 billion—in benefits to consumers. Moreover, LightSquared represents the most immediate prospect for becoming a viable competitor in the mobile broadband space, because LightSquared's spectrum is already licensed and the company has already invested over \$4 billion in the network. Once regulatory certainty is provided, this spectrum could be online in a few years.

In comparison, the incentive auctions will not take place before 2014 at the earliest. U.S. experience indicates that large-scale reallocations of spectrum such as the proposed incentive auction have taken 6-13 years to complete.

From a broader policy perspective, it is worth considering how and why LightSquared's extremely valuable spectrum has become unusable. The immediate explanation is the interference issues with LightSquared's spectrum neighbors. But the inability to resolve interference disputes between users of adjacent spectrum ultimately stems from the absence of a flexibly licensed regime—in essence, the lack of clearly defined quasi-property rights and the absence of a market mechanism for buying and selling those rights. The absence of well-defined rights has made it difficult for the occupants of adjacent bands to strike a mutually beneficial deal that would also have enhanced the value of the spectrum and benefited consumers.

LightSquared represents an extremely costly regulatory failure. At this stage, first-best solutions are no longer available. However, if LightSquared's sharing arrangement with NOAA is approved, the company will be able to use at least some of its spectrum, move forward with deployment of its network, and help meet the National Broadband plan goals.

The Obama Administration has been promoting shared-use arrangements with the private sector as a way to free up government spectrum for commercial use. If sharing of 5 MHz with NOAA weather balloons cannot be done successfully, what's going to happen with the more difficult cases?

Lenard is president and senior fellow at the Technology Policy Institute; White is Robert Kavesh professor of economics at the NYU Stern School of Business.