Calendar No. 546

112TH CONGRESS *2d Session*	SENATE	REPORT 112–260

PUBLIC SAFETY SPECTRUM AND WIRELESS INNOVATION ACT

R E P O R T

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ON

S. 911

DECEMBER 21, 2012.—Ordered to be printed

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED TWELFTH CONGRESS

SECOND SESSION

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[1] The late Senator Inouye served on the Committee until his death on December 17, 2012.

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PUBLIC SAFETY SPECTRUM AND WIRELESS INNOVATION ACT

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Mr. ROCKEFELLER, from the Committee on Commerce, Science, and Transportation, submitted the following

R E P O R T

[To accompany S. 911]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 911) to establish the sense of Congress that Congress should enact, and the President should sign, bipartisan legislation to strengthen public safety and to enhance wireless communications, having considered the same, reports favorably thereon with an amendment (in the nature of a substitute) and recommends that the bill (as amended) do pass.

PURPOSE OF THE BILL

The purpose of S. 911, the Public Safety Spectrum and Wireless Innovation Act, as reported, is to provide for the creation and deployment of a nationwide interoperable wireless broadband network for public safety; to provide the Federal Communications Commission (FCC) with incentive auction authority; to facilitate more efficient uses of spectrum used by Federal Government users; and to provide for deficit reduction.

BACKGROUND AND NEEDS

Wireless services are a vital part of our daily life, a key component of our national infrastructure, and a growing force in the American economy. Today, more than eight in ten adults own a mobile telephone. But they use their wireless connections to do much more than just speak. Nearly six in ten adults now go online wirelessly, using either a mobile telephone or a laptop. Moreover, the growing market created by the mobile Internet has become a

driving force for the nation's economy and a source of new jobs. According to a recent Mobile Future study, the reassignment of spectrum to mobile broadband over the next five years could spur $75 billion in new capital spending, creating more than 300,000 new jobs and $230 billion in additional Gross Domestic Product. Similarly, Deloitte estimates that United States investment in fourth generation 4G wireless networks during the next five years could account for as much as $151 billion in gross domestic product growth and as many as 771,000 new jobs.

In addition, wireless broadband services can improve the ability of our Nation's first responders to protect us in emergencies. For instance, cutting-edge mobile technologies can provide firefighters with access to high-speed downloads, such as floor plans for a burning building, to better navigate and ultimately reach potential victims. Mobile broadband also has become critical for Federal agencies to continue their missions, such as national defense and homeland security.

But for new mobile technologies to meet the growing demands of commercial and public safety users, they need access to more of the airwaves-radio spectrum-on which they rely. Radio spectrum is the portion of electromagnetic frequencies suitable for wireless communications. In light of the importance of wireless infrastructure in the economy, the growing popularity of wireless devices, and the increasing demand for this scarce resource, it is prudent to consider how both Federal and non-Federal licensees make use of the airwaves today. Failure to make smart use of spectrum could lead to less mobile coverage, diminished service quality, and slower service speeds. Moreover, unless additional spectrum is made available for mobile broadband, wireless innovation may slow or even stop. This could have a negative effect on the economy and hamper innovation. In the past, the Federal Government has addressed the need for more spectrum on a band-by-band or service-by-service basis. But sometimes this approach can be inefficient, limit flexibility, and make reacting to changing technology difficult.

S. 911 addresses the limitations of the traditional approach to spectrum management by using a new tool, called voluntary incentive auctions, to manage spectrum. By allowing current spectrum users to realize a portion of the revenue generated from reassigning their license, incentive auctions will provide a financial incentive for current spectrum users to work with the FCC to reallocate their licenses for efficient uses, such as mobile broadband. But more importantly, these voluntary incentive auctions also will raise funds to build a nationwide wireless broadband network for our nation's first responders. Finally, additional proceeds that are expected from the incentive auctions will help reduce the Federal deficit by billions of dollars.

I. LACK OF NATIONWIDE INTEROPERABLE BROADBAND NETWORK FOR PUBLIC SAFETY

Despite being almost 10 years since the September 11, 2001 tragedies, and almost 6 years since Hurricane Katrina, there is no nationwide interoperable public safety communications system.

As a practical matter, this means that there is no common system that enables public safety entities to communicate among one another-both across agencies and between jurisdictions.

To date, some jurisdictions have achieved varying degrees of interoperability within their locality, region, or State. However, these systems have been focused on narrowband communications. Narrowband networks typically are limited to voice communications, a lot like traditional dispatch radio services. They have served public safety for decades but generally lack the sophistication and functionality of most modern commercial communications networks.

The long-term goal for public safety communications is finding a way to provide interoperable communications on a nationwide basis over broadband networks. Broadband networks can make it possible for public safety entities to be able to remotely access criminal databases, distribute surveillance video feeds to on-scene personnel, and receive high-speed file downloads wirelessly. Broadband can also enhance the Nation's next-generation 911 system, integrating support for multimedia communications (such as text, e-mail, and video) into the existing E911 system. In short, they can make public safety officials more effective, more efficient, and more capable of communicating with one another.

In its 2004 report, the National Commission on Terrorist Attacks Upon the United States (9-11 Commission) called attention to this need for public safety communications interoperability. Specifically, the 9-11 Commission found that first responders were unable to communicate at the World Trade Center, Pentagon, and Somerset, Pennsylvania crash sites. The 9-11 Commission concluded that this was "strong evidence that compatible and adequate communications among public safety organizations at the local, State, and Federal levels remains an important problem." As a result, in its report, the 9-11 Commission called for the expedited and increased assignment of radio spectrum for public safety purposes. More recently, in March of this year, the Chairman and Vice Chairman of the 9-11 Commission, former Governor Tom Kean and former Congressman Lee Hamilton, urged Congress to finally address this problem by immediately allocating a 10 megahertz band of 700 MHz spectrum known as the D Block to public safety to help form a nationwide interoperable wireless broadband network for first responders.

Despite these consistent calls for a nationwide interoperable wireless broadband network for public safety, first responders currently lack the spectrum and funding necessary to facilitate national, interoperable, broadband-capable communications. Roughly half the spectrum that has been allocated for public safety services in the past has physical characteristics that are suitable for local hotspots around individual incidents, but are ill-suited for a nationwide broadband network. Much of the remaining spectrum allocated for public safety is made up of small slices that are designed for narrowband voice communications, with limited broadband capability. And this patchwork of narrow blocks of spectrum is too diverse and scattered to be tied together into a single, nationwide network suitable for ubiquitous broadband service.

In addition to a lack of suitable spectrum, public safety lacks the financial resources to develop a nationwide broadband network. Instead, previous Federal grant programs, including the Public Safety Interoperable Communications Program and Broadband Technology Opportunities Program, have focused on developing local

networks with limited geographic scope and public safety access. Such networks may eventually be interoperable with a nationwide system, but these local networks alone are insufficient to cover the entire nation. Moreover, because they are only local or regional in nature, they often have been procured at high cost and without the efficiency that comes with national scale. Consequently, the sums spent to date on interoperability have led to networks and equipment that lack nationwide capability, fall short of true interoperability, and are often focused only on voice service, rather than broadband functionality. In short, while some progress has been made in developing local interoperability for first responders, past programs do not answer the call for a nationwide, interoperable, wireless broadband network for public safety that was first made in the 9-11 Commission report and repeated by the Chairman and Vice Chairman of the 9-11 Commission before Congress this year.

Background.

The 700 MHz band was made available for wireless services as part of the digital television transition. Under the Balanced Budget Act of 1997, Congress directed the FCC to set aside 24 megahertz of spectrum in the 700 MHz band for public safety use.

Later, Congress passed the Digital Television Transition and Public Safety Act (DTV Act) as part of the Deficit Reduction Act of 2005 (P.L. 109–171). Under the DTV Act, the FCC was directed to auction 63 megahertz of spectrum designated for commercial services in the 700 MHz band of spectrum vacated by full-power television stations transitioning to digital-only broadcasts.

In 2007, the FCC allocated 10 megahertz of the 700 MHz public safety spectrum for broadband communications, consolidated existing narrowband allocations in 12 megahertz of the band, and created an internal guard band of 2 megahertz between the broadband and narrowband allocations.

In establishing auction rules for the 700 MHz band (Auction 73), the FCC proposed to set aside the 10 MHz of broadband public safety spectrum and pair it with 10 MHz of commercial spectrum known as the D Block. Together, these blocks would create a shared network of 20 megahertz for a nationwide broadband network. The future auction winner of the D Block would have been required to enter into a public-private partnership with the public safety broadband licensee to build a shared nationwide network, according to specifications negotiated with the public safety licensee.

On March 18, 2008, Auction 73 ended with the only bid for the D Block license falling well below the reserve price set by the FCC. Following the unsuccessful auction, the FCC sought comment on alternative options for the disposal of the D Block. Comments in response ranged from advocating for the unencumbered auction of the D Block to the granting of spectrum to regional public safety entities to an auction using a revised public-private partnership model. This rulemaking remains pending at the FCC.

In the interim, several public safety jurisdictions (waiver jurisdictions) have sought waivers to begin construction of local or regional wireless broadband systems on the 10 megahertz of public safety broadband spectrum. On May 12, 2010, the FCC conditionally approved 21 of these waiver petitions, subject to a number of conditions designed to ensure that early-built systems will be interoper-

able nationwide and capable of being integrated with the eventual national network. The FCC made clear that the overarching goal was to ensure a nationwide interoperable network available to all public safety personnel. The FCC also made clear that any deployment or expenditures made by waiver jurisdictions were undertaken at their own risk. On May 12, 2011, the FCC conditionally approved an additional waiver jurisdiction. Several other jurisdictions subsequently have sought similar waivers. Those requests remain pending at the FCC.

FCC's National Broadband Plan.

In light of the D Block's history, the FCC staff's National Broadband Plan in March 2010, recommended that the FCC abandon the public-private partnership previously contemplated. Instead, the plan recommended that the FCC re-auction the D Block spectrum for commercial purposes. Rather than imposing a requirement on an eventual D Block auction winner to build a joint network, the plan instead recommended that the FCC create incentives to encourage—but not require—the D Block winner to partner with public safety. The plan also recommended that public safety build and operate its own network in the 10 megahertz of spectrum previously allocated to it and, if feasible, leverage the commercial build-out by the D Block winner or other commercial licensees.

To help public safety fund the initial construction of its network in the 10 megahertz of spectrum, the National Broadband Plan recommended that Congress appropriate $6.5 billion for a public safety wireless broadband spectrum grant program. To help public safety continue to operate this network in the long-term, the plan recommended that Congress authorize an ongoing funding mechanism of as much as $9.5 billion over the next ten years.

Public Safety Response.

With near unanimity, public safety officials opposed the National Broadband Plan's recommendation to auction the D Block. Specifically, they noted that the D Block is immediately adjacent to the existing public safety broadband allocation, and therefore is uniquely valuable to first responders. Furthermore, they noted that combining these two pieces of spectrum is critical to future public safety broadband needs. Doing so will provide public safety with additional throughput capacity and help it avoid the problems public safety has encountered in the past with attempts to achieve interoperability over multiple spectrum bands. Moreover, as more essential communications migrate to broadband and wireless platforms, combining the spectrum will provide public safety officials with the capacity to adopt advanced communications technologies in an economically efficient way, improving local, regional, and national safety.

Critics of the National Broadband Plan also noted that the recommendation to allow public safety entities to gain priority access to commercial networks ignores the reality that commercial networks are not constructed and hardened to public safety specifications. This could result in commercial networks being unavailable to first responders in emergencies—the very time public safety needs access to reliable and interoperable communications.

Finally, critics of the plan acknowledge that over the years, significant sums have been spent trying to help public safety achieve

interoperable communications among their legacy narrowband systems. But they point out that past efforts have been focused on retrofitting and knitting together outdated and proprietary equipment and infrastructure, using diverse slivers of spectrum bands to achieve interoperability. This approach has not been uniformly successful, and typically has only produced local or regional system compatibility. Moreover, continuing this patchwork approach is extraordinarily expensive and unlikely to yield nationwide results. As a result, a wireless broadband network for public safety—with 20 megahertz of contiguous spectrum available nationwide and with sufficient funding—will provide a critical fresh start, alleviate challenges public safety has faced in achieving interoperability in the past, and provide room for wireless service growth in the future. Furthermore, this can be accomplished in an economically efficient way by leveraging existing commercial infrastructure and capitalizing on the significant efficiencies possible with an Evolved Packet Core associated with Radio Access Networks deployed nationwide.

President's Wireless Innovation and Infrastructure Initiative.

On June 28, 2010, the President issued a Memorandum titled "Unleashing the Wireless Broadband Revolution." It provided a framework to expand wireless broadband services through repurposing spectrum, with the goal of making available a total of 500 megahertz of Federal and non-Federal spectrum suitable for mobile and fixed wireless services over the next ten years.

In his January 25, 2011, State of the Union address, the President highlighted the important role of wireless infrastructure in the economy. His speech included a call for policies that enable businesses to provide high-speed wireless service to at least 98 percent of all Americans within five years. He also noted that wireless broadband services can improve public safety, citing the example of a firefighter being able to download to a handset the blueprint of a burning building.

The State of the Union was followed by the February 10, 2011 release of the President's "Wireless Innovation and Infrastructure Initiative." This Initiative builds on the themes in the earlier Presidential Memorandum. It calls on Congress to facilitate the availability of additional spectrum to meet the growing demand for wireless services. Specifically, the Initiative recommends providing the FCC with authority to hold voluntary incentive auctions to promote the more efficient use of our airwaves and further efforts to promote the more efficient use of Federal government spectrum. The Initiative also recommends reallocating the D Block spectrum for public safety use. It estimates that the auction of spectrum voluntarily relinquished by current commercial users through incentive auctions could fund the development and deployment of a nationwide interoperable wireless broadband network for public safety; fund research and development in emerging wireless technologies and applications; and reduce the deficit by billions of dollars over the next decade.

II. NEED FOR ADDITIONAL SPECTRUM FOR WIRELESS BROADBAND

A growing number of Americans are using wireless services to access the Internet and broadband-enabled services. One-third of mobile telephones in this country are now smartphones that fea-

ture Internet functionality and broadband capability. Last year alone, mobile data traffic grew by 300 percent.

Moreover, mobile broadband services are an engine for the economy and a source of job creation. Over the past decade, the wireless industry has spent more than $185 billion in private capital and created approximately 420,000 new jobs. In the next five years, mobile broadband applications alone are predicted to generate $38 billion in sales. Plus, there is growing demand for additional unlicensed spectrum-the spectrum that is already responsible for important services like Wi-Fi. Some have estimated that use of unlicensed spectrum already generates up to $30 billion in value for the economy each year. More unlicensed spectrum can enable new innovations that can bring in tens of billions of dollars in additional economic value in the coming years.

This growing demand for wireless service clearly informed the Presidential Memorandum and Presidential Initiative, and led to the Administration calling for efforts to make 500 megahertz of spectrum newly available for both mobile and fixed wireless broadband uses over the next ten years. As noted above, to help accomplish these goals, the President called on Congress to authorize the FCC to hold voluntary incentive auctions. In an incentive auction, existing license holders can receive a portion of the proceeds realized by the auction of their spectrum licenses. This sharing of proceeds creates inducements for licensees to cooperate with the FCC in reallocating their licenses for wireless broadband.

A bipartisan group of 112 economists, including Nobel and Nemmers Laureates, endorsed the President's plan to give the FCC authority to use voluntary incentive auctions to increase spectrum efficiency. On April 6, 2011, these economists sent a letter to the President, noting that current efforts to repurpose spectrum typically involve complex, multi-party transactions. In contrast, centralized incentive auctions would use a market-based approach to facilitate the repurposing of spectrum while minimizing transaction costs. The economists also suggested that the FCC be given flexibility to work with auction experts to design the auction rules to maximize economic and societal benefits.

III. IMPROVEMENTS TO FEDERAL GOVERNMENT SPECTRUM USE POLICIES

Federal agencies use spectrum for a variety of purposes, including national defense, law enforcement, emergency relief, scientific research, weather data analysis, space, and maritime and air traffic control. The National Telecommunications and Information Administration (NTIA) at the Department of Commerce oversees Federal uses of spectrum.

The NTIA reviews and certifies spectrum support for new Federal systems, coordinates satellite operations, conducts border coordination and international negotiation, coordinates strategic planning, and performs spectrum engineering and analysis. More than 60 Federal agencies receive spectrum assignments from the NTIA. To help direct how these agencies should best use spectrum to meet their needs, the NTIA relies on assistance from the Interdepartment Radio Advisory Committee, which is comprised of representatives from 19 Federal agencies.

Still, critics have charged that Federal spectrum users can be more efficient with the airwaves allocated to them by the NTIA, especially as wireless needs and technology evolve over time. This is challenging, however, because the Federal government often operates a variety of systems within a specific band that may have little in common from a technological perspective.

Efforts to date to promote efficient use and repurpose Federal spectrum for commercial use include the Commercial Spectrum Enhancement Act (P.L. 108–494). That law established a Spectrum Relocation Fund through which Federal agencies can recover the cost of relocating their radio systems from spectrum bands that are authorized for commercial auction. However, additional resources may be necessary for spectrum planning to promote and reward efficient Federal use in advance of commercial auction authorization.

As noted above, the Presidential Memorandum announced the goal of securing an additional 500 megahertz of spectrum suitable for wireless broadband use over the next decade. As part of this effort, the President directed the Secretary of Commerce, working through the NTIA, to collaborate with the FCC to develop a specific plan and timetable for making this spectrum available for commercial use. The NTIA was instructed to convene a Policy and Plans Steering Group to advise it, with support from the Secretaries of Defense, the Treasury, Transportation, State, the Interior, Agriculture, Energy, and Homeland Security; the Attorney General; the Administrators of the National Aeronautics and Space Administration and the Federal Aviation Administration; the Director of National Intelligence; the Commandant of the United States Coast Guard; and the head of any other executive department or agency that is currently authorized to use spectrum.

On November 15, 2010, the NTIA produced a ten-year plan designed to meet the President's goal. The report identified over 2200 megahertz of Federal and non-Federal spectrum as prospects for repurposing for broadband use and set a timetable for making 500 megahertz available. The NTIA report also called for incentives to help Federal agencies relocate to new spectrum, including funding agencies' planning expenses and provisioning a portion of the proceeds from spectrum auctions to purchase new equipment.

In addition, the NTIA performed a "Fast Track Evaluation" to determine if any of four specific Federal spectrum bands could be made available within five years. The evaluation identified 15 megahertz between 1695 and 1710 MHz. As part of this evaluation, the NTIA concluded that the 1695–1710 MHz band offered opportunity for wireless broadband while minimizing overall disruption to Federal agencies. However, the NTIA concluded that the 1690–1695 MHz band would be difficult to reallocate because emergency managers and the public rely on information broadcast on that band from National Oceanographic and Atmospheric Administration satellites. This information includes severe weather warnings and forecasts via the Emergency Manager's Weather Information Network and re-broadcast data from ground-based sensors, such as flood gauges.

As part of this evaluation, the NTIA also considered options to reallocate the 3500–3650 MHz spectrum band and concluded that the 3550–3650 MHz band offered the best opportunity to implement wireless broadband over large portions of the United States,

subject to exclusion zones. The NTIA found that repurposing spectrum above 3550 MHz greatly reduced the potential for interference from high power radars operating below 3500 MHz. The NTIA also recommended studying 40 megahertz within 4200 and 4400 MHz to determine whether radio altimeters operating in these bands would be affected.

Finally, on January 31, 2011, the NTIA announced plans to prioritize a detailed analysis of the 1755–1850 MHz band, which is currently used by the Department of Defense, Federal law enforcement agencies, and other agencies for a variety of satellite, surveillance, aeronautical operations, fixed microwave and other operations. The NTIA focused on this band because the frequencies are particularly well suited for commercial broadband—the band is harmonized internationally for mobile operations, wireless equipment already exists, and the band has characteristics advantageous for mobile operations. For these reasons, the National Broadband Plan also recommended studying this spectrum for possible pairing with the 2155–2180 MHz band at auction.

IV. IMPORTANCE OF OVER-THE-AIR BROADCASTING

Broadcasting is an important feature of the national media landscape and a significant use of our national spectrum resources. In exchange for licenses to use public spectrum, broadcasters are expected to use this resource and provide programming "in the public interest." As a result, many broadcasters provide news, information, and entertainment that is locally significant. Moreover, as a uniquely local medium, broadcasters often reflect the values of the communities in which they provide service.

Reliance on over-the-air television broadcasting has declined over the last decade. Most television viewers enjoy local broadcasting news, information, and entertainment programming through multichannel video programming services (MVPDs). It is the intent of the Committee that broadcast licensees wishing to serve their communities and remain in the business of local broadcasting should have a reasonable opportunity to do so, consistent with the terms of their existing license and the public interest.

SUMMARY OF PROVISIONS

S. 911 would directly allocate the 700 MHz D Block spectrum to public safety for pairing with previously allocated 700 MHz spectrum to allow for a contiguous wireless network in the 700 MHz band that will meet the needs of public safety for many years to come. S. 911 would also make Federal funds available to guarantee that first responders across the country will have access to a modern interoperable wireless broadband network. The costs of this network would be offset by proceeds from spectrum auctions authorized in the bill. The bill would establish a streamlined, independent non-profit Corporation to hold the public safety broadband spectrum license, to build and oversee the wireless network, and to ensure seamless nationwide interoperability. The Corporation would be charged with ensuring a nationwide architecture that controls costs by leveraging economies of scope and scale. The nationwide architecture would also prevent the mistakes of the past

by protecting against balkanized, proprietary, local networks that cannot be truly interoperable.

The bill would put in place a number of accountability and transparency measures to ensure that the funds are spent wisely and efficiently. In addition, the bill would direct the Corporation to leverage existing infrastructure and to enter into public-private partnerships to maximize cost-savings and efficiencies. The bill would also create a National Institute of Standards and Technology (NIST)-directed program to research and develop standards, technologies, and applications that advance wireless public safety communication.

S. 911 would direct the FCC to auction prime wireless broadband spectrum for commercial uses, including the reallocation of at least 55 megahertz of spectrum currently held by the Federal government. The bill also would provide the FCC with incentive auction authority while ensuring that such auctions are voluntary. In connection with voluntary incentive auctions, the bill would put in place a number of protections for television broadcasters. The bill would make clear that broadcasters will not be forced to involuntarily share channels as a result of the repacking process. The bill would direct the FCC to preserve station population coverage and avoid increases in signal interference as a result of the repacking process. Furthermore, the bill would guarantee a portion of incentive auction proceeds will be directed to assist broadcasters and MVPDs affected by the repacking process.

S. 911 importantly would dedicate revenues from these spectrum auctions, especially the new incentive auctions, to solve a pressing national public safety need—funding for a nationwide interoperable wireless broadband network for first responders. While the Committee understands that any rules the FCC would adopt to implement incentive auctions will be complex and will need to balance competing interests, an important consideration for the FCC must be the need to provide adequate funding for our nation's first responders.

S. 911 would also foster commercial innovation and more efficient uses of Federal government spectrum. The bill would promote more innovative and efficient use of commercial spectrum by giving the FCC flexibility to create new unlicensed spectrum, directing the FCC to promote a more robust secondary spectrum market and to update and streamline its experimental license regulations, and directing the Government Accountability Office (GAO) to study receiver standards. The bill would increase research efforts at the National Science Foundation (NSF), NIST, and Defense Advanced Research Projects Agency (DARPA) in advanced information and communications technologies. The bill would direct the FCC and the NTIA to conduct a joint spectrum inventory. In addition, the bill would update the spectrum relocation process to facilitate opportunities and incentives for Federal government spectrum sharing and reallocation. The bill would direct Federal agencies to study the economic value of the spectrum that they use to better inform Federal spectrum management decisions. Finally, the bill would direct the NTIA and the FCC to develop a comprehensive strategic national spectrum plan.

LEGISLATIVE HISTORY

In the 111th Congress, Senator Rockefeller, Chairman of the Senate Committee on Commerce, Science, and Transportation, introduced the Public Safety Spectrum and Wireless Innovation Act, S. 3756, on August 5, 2010. The bill was co-sponsored by Senators Reid, Burris, Gillibrand, Harkin, Lautenberg, Bill Nelson, Klobuchar, and Cardin. On September 23, 2010, the Committee held a hearing on "Keeping Us Safe: The Need for a National Public Safety Network," during which S. 3756 was addressed.

In the 112th Congress, Senator Rockefeller reintroduced the Public Safety Spectrum and Wireless Innovation Act, S. 28, on January 25, 2011. The bill is co-sponsored by Senators Cardin, Harkin, Klobuchar, Lautenberg, Bill Nelson, Schumer, Gillibrand, Kerry, Bennet, Boxer, Franken, Casey, Mikulski, and Manchin. On February 16, 2011, the Committee held a hearing on "Safeguarding Our Future: Building a Nationwide Network for First Responders," during which S. 28 was addressed.

On May 9, 2011, Senator Rockefeller and Senator Hutchison introduced S. 911. The Committee held an executive session on June 8, 2011, during which S. 911 was considered. Senators Rockefeller and Hutchison submitted a substitute amendment to S. 911, which was adopted by a recorded vote of 21 yeas to 4 nays. The following seventeen amendments were incorporated into the Rockefeller-Hutchison substitute amendment to S. 911, creating a manager's package that was agreed to during the Executive Session.

Senator Ayotte offered an amendment to prohibit the Public Safety Broadband Corporation from offering commercial telecommunications services directly to consumers.

Senator Blunt offered an amendment that would require the FCC to issue a report to Congress within five years on the development and use of unlicensed spectrum.

Senator Cantwell offered first- and second-degree amendments that would require the FCC to assign licenses through competitive bidding for the first 84 MHz of spectrum reclaimed through an incentive auction. After that 84 MHz threshold is reached, the FCC would be permitted, if consistent with the public interest, to disburse a portion of the proceeds from the auction to other licensees to make sure that unlicensed spectrum in the UHF spectrum bands remains available nationwide and in each local market.

Senator DeMint offered five amendments that were accepted as part of the manager's package. The first makes the term for the license for the D Block spectrum that is issued to the Public Safety Broadband Corporation a renewable ten-year period. The second requires the Chairman of the Board to be a Non-Federal Member. The third defines a quorum of the Board as consisting of at least six Non-Federal Members. The fourth accelerates the migration of public safety narrowband communications and equipment to the new broadband network. The fifth extends the FCC's authority to reallocate Mobile Satellite Spectrum through an incentive auction indefinitely.

Senator Hutchison offered an amendment to authorize the FCC to allow low-power television in the UHF band to relocate to the VHF band, to the extent feasible and in the public interest.

Senator Klobuchar offered first and second degree amendments to commission a study from the National Highway Traffic Safety Administration on the cost of implementing Next Generation 9-1-1 (NG 9-1-1) services. The amendments would also instruct the FCC to make recommendations to Congress on the laws and regulations necessary to establish and develop effective NG 9-1-1 services.

Senator Rubio offered three amendments that were accepted as part of the manager's package. The first would instruct the Secretary of Commerce to seek rural and urban representation as part of the Corporation's Board. The second amendment would direct the Corporation to seek to leverage existing commercial wireless infrastructure to the maximum extent economically desirable. Senator Rubio's third amendment would cause any unused funds in the Spectrum Relocation Fund to revert to the U.S. Treasury after eight years.

Senator Toomey offered two amendments that were accepted as part of the manager's package. The first amendment prohibits the Corporation from engaging in any lobbying activities. The second requires the Government Accountability Office to conduct an annual audit of the Corporation.

Senator Warner offered two amendments that were accepted as part of the manager's package. The first provides for a transitional analysis of the public safety network attributes, to be conducted by NIST in consultation with the Departments of Homeland Security and Justice and the Office of Management and Budget. The second instructs the FCC to report to Congress on the spectrum used by public safety licensees or for public safety services pursuant to section 337(f) of the Communications Act of 1934 (47 U.S.C. 337).

Senator Toomey offered an additional amendment that would have eliminated a provision authorizing $1 billion for telecommunications research and development, but the amendment was rejected by a recorded vote of 16 yeas to 9 nays.

Finally, during the executive session, the Committee ordered that S. 911, as amended, be reported.

With some modifications, the provisions of S. 911 were enacted into law as title VI of the Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112–96), which was signed into law on February 22, 2012.

ESTIMATED COSTS

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget Act of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office:

S. 911—Public Safety Spectrum and Wireless Innovation Act

Summary: S. 911 would modify existing law regarding federal management of the electromagnetic spectrum. It would extend and expand the Federal Communications Commission's (FCC's) authority to auction licenses for commercial uses of the radio spectrum and would authorize agencies to spend some of those receipts for new purposes. Other provisions would create a Public Safety Broadband Corporation, which would receive federal financing to develop a wireless broadband network using spectrum provided by

the bill. Finally, the bill would require several agencies to conduct studies and issue regulations related to spectrum management, including measures aimed at expediting the siting of telecommunications facilities.

CBO estimates that enacting S. 911 would reduce net direct spending by $6.5 billion over the 2012–2021 period; therefore, pay-as-you-go procedures apply to the bill. The projected savings reflect an estimated increase in offsetting receipts from FCC auctions of $24.5 billion (which count against direct spending) and an increase in direct spending of $18.0 billion. Enacting this bill would not affect revenues.

In addition, CBO estimates that implementing this bill would increase discretionary spending by $43 million over the 2012–2016 period, assuming appropriation of the necessary amounts.

S. 911 contains intergovernmental and private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) because it would impose new requirements on television broadcast stations and cable operators—some of which are operated by state and local governments—and other distributors of television programming. The bill also would impose an intergovernmental mandate by preempting state and local laws governing wireless towers. CBO estimates that the aggregate cost of intergovernmental mandates in the bill would fall below the annual threshold established in UMRA ($71 million in 2011, adjusted annually for inflation). The bill could impose additional private-sector mandates on providers of cell phone services. Based on information from the FCC and industry sources, CBO estimates that the aggregate cost of complying with the private-sector mandates would exceed the annual threshold established in UMRA ($142 million in 2011, adjusted annually for inflation).

The bill would appropriate up to $1 billion for payments to offset the mandate costs to television broadcast stations, cable operators, and other distributors of television programming. Also, the bill would require providers of cell phone services to be compensated for costs that result from the bill.

Estimated cost to the Federal Government: The estimated budgetary impact of S. 911 is shown in the following table. Most of the costs of this legislation fall within budget functions 050 (national defense), 370 (commerce and housing credit), 750 (administration of justice), 800 (general government), and 950 (undistributed offsetting receipts).

	By fiscal year, in millions of dollars—											
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2012–2016	2012–2021
CHANGES IN DIRECT SPENDING												
Extend and Expand FCC Auction Authority												
Estimated Budget Authority	0	35	−500	−3,400	−4,500	−5,100	−4,200	−3,400	−1,700	−1,700	−8,365	−24,465
Estimated Outlays	0	35	−500	−3,400	−4,500	−5,100	−4,200	−3,400	−1,700	−1,700	−8,365	−24,465
Transfer of ''D'' Block Spectrum												
Estimated Budget Authority	1,375	1,375	0	0	0	0	0	0	0	0	2,750	2,750
Estimated Outlays	1,375	1,375	0	0	0	0	0	0	0	0	2,750	2,750
Public Safety Broadband Corporation												
Estimated Budget Authority	25	150	950	2,450	2,550	2,500	2,100	1,050	600	150	6,125	12,525
Estimated Outlays	25	150	950	2,450	2,550	2,500	2,100	1,050	600	150	6,125	12,525
State and Local Grants												
Estimated Budget Authority	250	0	0	0	0	0	0	0	0	0	250	250
Estimated Outlays	10	113	88	39	0	0	0	0	0	0	250	250
Research and Development Programs												
Estimated Budget Authority	0	0	300	300	300	0	0	0	0	0	900	900
Estimated Outlays	0	0	135	240	276	156	57	24	9	3	651	900
Federal Relocation Costs												
Estimated Budget Authority	45	50	50	90	140	190	190	190	190	190	375	1,325
Estimated Outlays	45	50	50	90	140	190	190	190	190	190	375	1,325
Other												
Estimated Budget Authority	6	12	14	27	31	32	32	32	32	32	90	250
Estimated Outlays	6	12	14	27	31	32	32	32	32	32	90	250
Total Changes												
Estimated Budget Authority	1,701	1,622	814	−533	−1,479	−2,378	−1,878	−2,128	−878	−1,328	2,125	−6,465
Estimated Outlays	1,461	1,735	737	−554	−1,503	−2,222	−1,821	−2,104	−869	−1,325	1,876	−6,465
CHANGES IN SPENDING SUBJECT TO APPROPRIATION												
Estimated Authorization Level	26	1	4	3	10	0	4	0	4	6	44	58
Estimated Outlays	22	5	4	3	9	2	3	1	3	6	43	58

Basis of Estimate: For this estimate, CBO assumes that S. 911 will be enacted near the end of fiscal year 2011, that the necessary amounts to implement the bill will be appropriated for each fiscal year, and that outlays will occur at the historical rates for similar activities.

Direct Spending. S. 911 would affect direct spending by generating additional offsetting receipts from auctions of licenses to use the electromagnetic spectrum (which count as a credit against direct spending) and by increasing the amounts that can be spent without further appropriation for various initiatives related to public safety and federal management of spectrum. On balance, 030 estimates that enacting this legislation would reduce net direct spending by $6.5 billion over the 2012–2021 period.

Extend and Expand FCC Auction Authority. S. 911 would amend existing law regarding the FCC's authority to auction licenses to use the electromagnetic spectrum. It would extend the commission's auction authority, which is currently scheduled to expire at the end of fiscal year 2012, through 2021. The FCC would be directed to auction certain frequencies by January 31, 2014, including 95 megahertz (MHz) of spectrum that is currently used by the Department of Defense (DoD) and other agencies. Other provisions would establish a statutory framework for what are known as "incentive auctions," in which private firms (primarily television station owners) would voluntarily relinquish some or all of their existing spectrum rights in exchange for a payment from the FCC. That spectrum would then be available for new licensed or unlicensed services. To implement incentive auctions, the bill would:

- Authorize the FCC to spend auction receipts to pay firms that voluntarily relinquish their licenses;
- Appropriate up to $1 billion from auction receipts to create an Incentive Relocation Fund administered by the National Technology Information Administration (NTIA). The fund would be used to pay television broadcasters who do not relinquish their licenses for costs the FCC would impose to change their channel assignment as part of the process of clearing spectrum for nonbroadcast services. The fund also would cover certain expenses incurred by cable operators and other distributors of television programming.
- Allow the FCC to spend auction receipts to compensate television broadcasters who do not relinquish their license for any modifications made by the FCC to the quality or scope of their coverage as a result of efforts to clear spectrum for nonbroadcast services; and
- Allow the FCC to make some television broadcast frequencies available for unlicensed use if the amount of spectrum awarded through competitive auctions is at least 84 MHz.

CBO estimates that enacting those provisions would reduce direct spending by $24.5 billion over the 2012–2021 period. That estimate reflects the expected value of offsetting receipts (based on the outcomes of various scenarios regarding the quantity and quality of frequencies likely to be auctioned over this period), net of direct spending to compensate existing licensees affected by the auctions.

Quantity of Spectrum Auctioned. Both the FCC and NTIA are studying options for making up to 500 MHz of spectrum available for broadband services, with a goal of making 300 MHz available within the next few years. Most of the spectrum projected to be

auctioned over the 2013–2021 period would require moving existing licensees off their current frequencies, by either relocating them to new spectrum or paying them to stop using the frequencies. This approach contrasts with past auctions, which offered spectrum made available as a result of gains in engineering and spectrum management efficiency.

It is difficult to predict how much spectrum would be auctioned by 2021 because of the time and cost involved in moving existing users. For example, the amounts auctioned as a result of incentive auctions would depend on the willingness of two satellite licensees and dozens of television broadcasters to sell their existing spectrum rights at a price that is below the market value of their licenses. Similarly, DoD and other federal users cannot relinquish their current assignments until they are given alternative frequencies, which also may require moving some commercial licensees to different frequencies. Past experience suggests that relocating federal and commercial users can be very costly and take many years to complete.

Given the procedural and financial uncertainties involved in making spectrum available, CBO expects that the amount of spectrum auctioned by 2021 probably would range from about 150 MHz to 225 MHz of spectrum below 3 gigahertz (frequencies below that benchmark are considered optimal for wireless broadband services). That range assumes that the FCC may allocate some broadcast frequencies for unlicensed uses and that much of the spectrum used by federal agencies identified in the bill would not be available for commercial services until after 2021. CBO also anticipates that the FCC would auction licenses to use frequencies above 3 gigahertz over this period. By comparison, approximately 142 MHz was auctioned for advanced wireless services over the 2001–2010 period.

Market value of spectrum licenses. The unit price of frequencies considered suitable for wireless broadband services—which are commonly measured in terms of the price paid per MHz per person [1]—have recently ranged from 55 cents to over $1, depending on the characteristics of the spectrum. Winning bids for the 142 MHz auctioned since 2001 generated receipts of about $33 billion, or a weighted average of about 80 cents per MHz per person.[2]

CBO estimates that the weighted average unit price paid by winning bidders over the 2013–2021 period probably would be lower than in recent years, or about 70 cents per MHz per person. That decline reflects expected differences in the quality and quantity of spectrum expected to be auctioned. For example, according to the Government Accountability Office (GAO), there may be significant geographic, technical, and timing constraints on the commercial use of frequencies reallocated from federal users, which would lower the value of those licenses.[3] CBO's estimate also includes the

[1] The amounts paid for spectrum licenses depends on many factors, including the projected profitability of services supported by the spectrum, the engineering characteristics of the frequencies, geographic variations among markets, and the financial and strategic interests of the firms participating in the auction. Winning bids are commonly expressed per unit of coverage, which is defined as the product of a license's bandwidth multiplied by the population of the geographic area it covers, or dollars per MHz per person.

[2] Those figures exclude a 2005 auction of licenses that originally were issued in the 1990s and financed by the federal government. Income from the re-auction of those licenses was recorded in the budget as recoveries on the loans.

[3] United States Government Accountability Office, *NTIA Planning and Processes Need Strengthening to Promote the Efficient Use of Spectrum by Federal Agencies,* GAO–11–352 (April 2011), pp. 35–37.

effect on prices from the supply of spectrum projected to be available under this bill and from sources other than federal auctions, including administrative reallocations, secondary markets, and the spectrum that would be provided by S. 911 to the Public Safety Broadband Corporation.

Estimate of Net Proceeds. The net proceeds from many FCC auctions under S. 911 would be lower than in the past because of the need to compensate existing licensees who would be directly or indirectly affected by efforts to clear spectrum for new uses. Estimates of such spending are uncertain because federal agencies have not completed their estimates of relocation costs and the market response to economic incentives to forgo spectrum use is untested. Based on information available from public sources, discussions with industry experts, and considering the range of possible costs, CBO estimates that the direct spending associated with auctions held as a result of this bill would reduce net proceeds by roughly one-third over the 2013–2021 period.

That estimate includes the effect of direct spending that is authorized under current law as well as under S. 911. For example, the FCC is allowed to spend auction receipts to cover certain administrative expenses; such spending has been capped at $85 million a year in annual appropriation acts. Existing law also allows agencies to spend receipts to cover certain relocation expenses and requires that any auction of licenses to use those frequencies generate receipts equal to at least 110 percent of the government's estimated relocation costs. CBO's estimate of $24.5 billion in net receipts is based on the amount of agency spending authorized under current law; the estimated budgetary impact of provisions in S. 911 regarding federal relocation efforts is shown separately below.

Finally, based on past experience with similar activities, CBO expects that it would take several years for the FCC and other agencies to complete the necessary rulemaking and planning activities to execute major spectrum auctions. In addition, there usually is a significant lag between the time an auction begins and the time licenses are issued to winning bidders and receipts are recorded in the budget. To account for the uncertain timing of those events, CBO's estimate shows receipts being collected over a number of years, with most of those amounts expected to be recorded after 2016. Specifically, CBO estimates net receipts from the new auctions of $8.4 billion over the next five years and $16.1 billion after 2016.

Transfer of D Block Spectrum. Current law directs the FCC to auction commercial licenses for 10 MHz of spectrum known as the "D block" and to deposit the proceeds in the Treasury. (The D block covers spectrum between the frequencies from 758 MHz to 763 MHz and between 788 MHz to 793 MHz.) Under current law, CBO estimates that such an auction will be held by the end of 2012 and will generate receipts of $2.75 billion over the 2012–2013 period.

S. 911 would reallocate the D block from commercial to public safety uses, at no cost to those entities. CBO estimates that forgoing the offsetting receipts from the auction of the D block would increase direct spending by $2.75 billion.

Public Safety Broadband Corporation. S. 911 would establish a new entity, the Public Safety Broadband Corporation, to

build, operate, and maintain a broadband network for public safety agencies that would be available across the country on a specific spectrum band.[4] The bill would grant a license to the corporation to use 22 MHz spectrum nationwide: the 10 MHz "D block" spectrum (discussed above) and 12 MHz that has been allocated for public safety purposes under current law. The license would have an initial term of 10 years and would be renewable for additional 10-year terms if the FCC determines that the corporation has met the requirements set out in S. 911.

The bill would appropriate $11.75 billion to the corporation from spectrum auction receipts to build a nationwide network of wireless broadband. The corporation also would be authorized to borrow funds from the public and incur other forms of indebtedness. It would be given temporary authority to borrow funds from the Treasury through the NTIA for amounts necessary to carry out its responsibilities; this borrowing authority would terminate once certain auctions have begun. CBO expects that the corporation would borrow amounts sufficient to allow the network to be developed and operated, independent of the timing of the auctions under the bill.

S. 911 also would authorize the corporation to assess and collect several different fees in amounts sufficient to cover, but not exceed, its annual operating expenses. Specifically, the corporation would be authorized to assess:

- A subscription fee from each entity using the public safety network;
- Fees from commercial services that choose to lease the network's capacity on a secondary basis; and
- Fees from entities that access equipment or infrastructure built and maintained by the corporation.

CBO estimates that establishing the corporation would increase direct spending by $12.5 billion over the 2012–2021 period. This amount includes amounts appropriated to the corporation by S. 911 for capital expenditures and net operating losses that CBO anticipates would be generated in the first few years of the corporation's operations.

Capital Expenditures to Build Network. CBO estimates that the corporation would spend $11.5 billion over the 2012–2021 period to build a nationwide wireless broadband network.

Based on information from the FCC and industry experts, CBO estimates that the corporation would develop a network of about 45,000 sites to serve 95 percent of the population by 2018 at an average cost of about $170,000 per site. That estimate is higher than the costs typically incurred by private firms because of the added reliability and security needed for public safety systems and the cost of independent capabilities specified in the bill. CBO estimates that meeting the goal of nationwide coverage would require several thousand additional sites to be built in rural areas at roughly double that unit cost. Because S. 911 would provide funding for the ad-

[4] CBO believes that the Public Safety Broadband Corporation that would be established under S. 911 should be classified as a government entity and that cash flows related to the corporation should appear in the budget as direct spending because the corporation would exist only to carry out public purposes (building and operating a network for public safety use) using a federal asset (telecommunications spectrum). Moreover, under S. 911, the federal government would retain control over the corporation's operations. Specifically, the bill would authorize the Secretary of Commerce to appoint the nonfederal members of the corporation's board of directors and to remove the chair of the board and any nonfederal member of the board for good cause.

ditional sites, CBO estimates that most of those sites would be operational by 2021.

Net Operating Income. The corporation's annual cash flows from operations would depend on how quickly the network is built and used. Operating costs would be largely tied to the number of sites that are built and on the administrative costs of serving public safety users. CBO based its estimate of operating costs on historical trends for wireless firms as well as FCC and industry projections of the costs associated with sites that have been built or are leased from other companies. Income from customers would depend on the network's available capacity and market conditions. For this estimate, CBO assumes that the corporation would be able to sell virtually all of its available capacity by 2021 at prices that are consistent with industry trends for retail and wholesale transactions.

Based on that information, CBO estimates that the corporation's operating costs would exceed its income by about $1 billion over the 2012–2021 period. Operating losses are typical for new entrants in the wireless market because of the lag between start-up costs and income from retail and wholesale customers. CBO estimates that the corporation would experience annual losses ranging from about $200 million to $400 million a year in the first few years of operation but would start to generate sufficient income to offset those losses by the end of the 10-year period. CBO also expects that the corporation's losses would be higher than for commercial firms because the towers located in areas with very low population densities may not generate enough income during this period to cover the added operating costs.

State and Local Grants. S. 911 would appropriate $250 million from spectrum auction receipts for matching grants to assist state, local, and tribal governments in developing effective ways to use the public safety network created by the corporation. To implement the program, the Department of Commerce would be allowed to borrow that amount from the Treasury beginning on October 1, 2011. Once auction proceeds become available, they would be deposited into a State and Local Implementation Fund and would be credited as an offset to borrowed funds and cover other program expenses, subject to the $250 million limit.

Research and Development Programs. S. 911 would appropriate up to $1.5 billion from auction receipts for two research and development (R&D) programs related to communications technologies. Funding would be provided for each of the fiscal years 2012 through 2016 in the following amounts: $100 million a year would be allocated for a new research program coordinated by the National Institute of Standards and Technology (NIST) on systems for public safety users and $200 million a year for additional research conducted by NIST, the National Science Foundation, and the Defense Advanced Research Programs Agency.

Because of the time needed to conduct auctions and issue licenses to the winning bidders, CBO estimates that there would not be any funding available for the R&D programs until fiscal year 2014. As a result, we estimate that the funding available for those initiatives would total $900 million over 2012–2021 period.

Federal Relocation Costs. Under current law, government agencies are allowed to spend, without further appropriation, any proceeds from the auction of frequencies that are reallocated from

federal to commercial use, subject to certain conditions. Funds are not available until the proceeds from an auction have been deposited in the Spectrum Relocation Fund, and the amounts spent for each relocation effort is limited to the money generated by the sale of licenses for those frequencies.

S. 911 would modify the timing and amount of such expenditures. It would allow agencies to spend money for new purposes, including costs incurred prior to an auction. In addition, subject to some limitations, up to 10 percent of the money in the fund could be spent for measures to enhance the capability of the systems affected by relocation efforts. Finally, outlays would no longer be tied to the proceeds from individual auctions; instead, agencies could access any of the balances in the fund, which currently total about $5.4 billion, to cover authorized expenses. CBO estimates that enacting those changes would increase direct spending by $1.3 billion over the 2012–2021 period, primarily for costs incurred by DoD.

Three activities account for most of that estimated cost. CBO expects that agencies would spend 10 percent of the balances currently in the fund, or about $540 million, on system enhancements. The estimate also includes about $250 million over the 10-year period for the pre-auction planning, research, and engineering expenditures authorized by the bill. Based on historical data, CBO expects that federal spending for relocation costs probably would total several billion dollars over the 10-year period and that such pre-auction activities would account for 2 percent to 10 percent of the total cost, depending on the complexity and cost of the systems being moved.

Finally, $400 million of the estimated cost reflects spending for cost overruns that otherwise would have been financed by annual appropriations. Such increases are common in both federal and commercial relocation efforts—the actual costs of a 2006 relocation program were about 45 percent higher than originally estimated, for example. In that case, proceeds from the auction were available to cover those expenses, and appropriated funds were unnecessary. However, CBO estimates that the difference between relocation costs and auction receipts for some future auctions would be much smaller than in the past; thus, we expect that there is at least a 50 percent chance that any additional costs would be paid from the relocation fund under this bill. For this estimate, CBO assumes that cost overruns would be proportionately smaller for future auctions because of the additional direct spending authorized by the bill for planning and engineering studies.

Other Direct Spending. Other provisions in the bill would affect direct spending by various agencies, including the governmental entity that administers the Telecommunications Development Fund (TDF). CBO estimates that those changes would increase net direct spending by about $250 million over the 2012–2021 period.

Under current law, interest earned on payments made by bidders in order to participate in an auction, known as upfront payments, is transferred to the TDF, which invests those amounts in small businesses that operate in the telecommunications industry. Those interest earnings would be recorded as an intergovernmental transfer in the budget; however, spending of those earnings would be recorded as a cost. Based on historical patterns of the amount of de-

posits collected and the time those deposits are held, CBO estimates that the auctions authorized in S. 911 would be credited with interest of $136 million over the 2012–2021 period. Spending of the amounts credited as interest would cost $136 million over the 10-year period.

S. 911 also would modify policies regarding the siting of telecommunications equipment on federal property. Under current law, policy, and practice, agencies are generally required to approve the siting of antennas (wireless towers) on federal property on a fair, reasonable, and nondiscriminatory basis. Siting considerations include health and safety factors, aesthetics, the historic nature of a property, and the telecommunications requirements of the agencies. Agencies may assess fees on the private sector to place those antennas and collect rental charges.

S. 911 would require the General Services Administration (GSA) to create one standard governmentwide process for siting antennas on federal property. In addition, the legislation would allow agencies to collect fees to cover their direct costs and spend whatever they collect. Based on information from GSA and selected agencies regarding existing antenna fees, CBO estimates that enacting those provisions would increase net direct spending. Under current law, some agencies, such as the U.S. Postal Service and GSA, can already retain and spend the fees they collect. However, other agencies deposit most of the income from such fees in the Treasury as miscellaneous receipts. Based on historical trends in such collections, CBO estimates that those increases in spending would total about $12 million annually.

Spending Subject to Appropriation. S. 911 would require the FCC, NTIA, and GAO to conduct a number of studies related to spectrum management. The bill also would require all federal agencies that use spectrum to develop a long-term plan for that use to serve as a basis for a national plan that considers the spectrum needs of both governmental and private users. Based on information from the FCC, NTIA, and other agencies, CBO estimates that implementing those reporting and planning provisions would increase net discretionary spending by $43 million over the 2012–2016 period, assuming appropriation of the necessary amounts.

Most of that cost would result from requirements for NTIA to complete a report to identify spectrum that would be appropriate to share between governmental and nongovernmental users; develop tools or metrics that measure the efficiency of federal systems that use spectrum; and develop a method for calculating the opportunity cost of spectrum used by federal agencies. In addition, the bill would require all agencies that use spectrum to develop plans, which would be updated every two years, to identify spectrum requirements and approaches that they have taken to meet those needs. Finally, GAO and GSA would required to prepare several reports for the Congress related to spectrum management and telecommunications systems.

The FCC also would be required to produce an inventory of spectrum that is assigned to public safety use, and together with the NTIA, produce an inventory of all license holders and users of the frequencies that each agency manages. Based on information from the two agencies, CBO estimates that implementing those requirements would cost $56 million over the 2012–2016 period. Under

current law, the FCC is authorized to collect fees to offset the costs of its regulatory program, and the bill would direct that all costs incurred by NTIA to produce the spectrum inventory be borne by the FCC. Therefore, subject to future appropriation action, CBO estimates that the FCC would collect fees sufficient to offset those costs. (Those fees are credited as an offset to appropriations; thus, the provision would have no net impact on discretionary spending.)

Pay-As-You-Go considerations: The Statutory Pay-As-You-Go Act of 2010 establishes budget-reporting and enforcement procedures for legislation affecting direct spending or revenues. The net changes in outlays that are subject to those pay-as-you-go procedures are shown in the following table.

CBO ESTIMATE OF PAY-AS-YOU-GO EFFECTS FOR S. 911 AS ORDERED REPORTED BY THE SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION ON JUNE 8, 2011

	By fiscal year, in millions of dollars—												
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2011–2017	2011–2021
	NET INCREASE OR DECREASE (−) IN THE DEFICIT												
Statutory Pay-As-You-Go Impact	0	1,461	1,735	737	−554	−1,503	−2,222	−1,821	−2,104	−869	−1,325	−1,876	−1,876

Intergovernmental and private sector impact: S. 911 contains intergovernmental and private-sector mandates as defined in the Unfunded Mandates Reform Act because it would impose new requirements on television broadcast stations and cable operators—some of which are operated by state and local governments—and other distributors of television programming. The bill also would impose an intergovernmental mandate by preempting state and local laws governing wireless towers. CBO estimates that the aggregate cost of intergovernmental mandates in the bill would total in the tens of millions of dollars but would fall below the annual threshold established in UMRA ($71 million in 2011, adjusted annually for inflation). The bill could impose additional private-sector mandates on providers of cell phone services. Based on information from the FCC and industry sources, CBO estimates that the aggregate cost of complying with the private-sector mandates would exceed the annual threshold established in UMRA ($142 million in 2011, adjusted annually for inflation).

The bill would appropriate up to $1 billion for payments to offset the mandate costs to television broadcast stations, cable operators, and other distributors of television programming. Also, the bill would require providers of cell phone services to be compensated for costs that result from the bill.

Mandates that Apply to Both Public and Private Entities. The bill would impose a mandate on television broadcast stations by requiring them to move channels and on cable operators, and other distributors of television programming by requiring them to adjust their systems to continue carrying local stations. The cost to broadcasters would equal the costs of changing their broadcast operations to a different channel. The cost to cable operators and other distributors of television programming would equal the cost to readjust their networks to receive retransmissions from broadcasters on different channels.

The aggregate cost of the mandate would depend on the number of channels the FCC reclaims, the number of stations that voluntarily give up their licenses in response to incentives offered in the bill, and the number of channels the FCC would compel a station to move. Private entities own most of the roughly 2,300 television stations that could face a mandate under the bill, with state or local governments operating about 100 of those stations. Industry sources indicate that the average cost to a broadcaster to move a channel would be at least $500,000, but that broadcasters could incur additional costs to build interim transmission facilities or to advertise the move. CBO estimates that the cost to stations operated by state and local governments would be in the tens of millions of dollars and that the cost to stations operated by private entities probably would be in the hundreds of millions of dollars.

The bill would appropriate up to $1 billion for payments to offset the mandate costs to television broadcast stations, cable operators, and other distributors of television programming. CBO estimates that the $1 billion would likely cover the costs of the mandates.

Mandates that Apply to Public Entities Only. The bill would preempt state and local laws governing wireless towers by requiring state and local governments to approve requests for modifications to wireless towers that do not substantially change the physical dimensions of the towers. Under current law, most state and

local governments review the potential impacts of changes to wireless towers, such as visual and environmental impacts, before allowing a wireless provider to make a change to a tower. Based on that review, a government may deny an application for a change. The bill would prevent those governments from denying applications for changes that do not substantially change the dimensions of the tower. While that preemption would limit the application of state and local law, CBO estimates that it would impose no duty on state, local, or tribal governments that would result in additional spending.

Mandates that Apply to Private Entities Only. The bill could impose a mandate on providers of cell phone services by authorizing the FCC to require such entities to allow public safety officials to roam onto their networks and gain priority access in an emergency. If the FCC imposed the mandate, the costs would depend on how often the service was used or whether the Public Safety Broadband Corporation could obtain voluntary contracts for such services. Thus, CBO cannot determine the cost of the mandate to the private sector. However, providers of cell phone services would be compensated for any costs they would incur because of the mandate.

Estimate prepared by: Federal Costs: Kathleen Gramp, Susan Willie, Matthew Pickford, Andrew Stocking, and Philip Webre; Impact on State, Local, and Tribal Governments: Elizabeth Cove Delisle; Impact on the Private Sector: Samuel Wice.

Estimate approved by: Theresa Gullo, Deputy Assistant Director for Budget Analysis.

REGULATORY IMPACT STATEMENT

In accordance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee provides the following evaluation of the regulatory impact of the legislation, as reported:

NUMBER OF PERSONS COVERED

S. 911 would update existing communications law to allow the FCC to alter television broadcast licenses so that spectrum could be allocated more efficiently. The bill could affect broadcasters by changing the frequencies on which they are authorized to transmit a television signal. Broadcasters are already subject to FCC regulations, and therefore the number of persons covered should be consistent with the current levels of individuals impacted under the provisions of the law that are addressed in the bill.

ECONOMIC IMPACT

S. 911 would not have an adverse impact on the Nation's economy.

PRIVACY

The reported bill would have no impact on the personal privacy of U.S. citizens.

PAPERWORK

The reported bill should not significantly increase paperwork requirements for individuals and businesses.

CONGRESSIONALLY DIRECTED SPENDING

In compliance with paragraph 4(b) of rule XLIV of the Standing Rules of the Senate, the Committee provides that no provisions contained in the bill, as reported, meet the definition of congressionally directed spending items under the rule.

SECTION-BY-SECTION ANALYSIS

Section 1. Short Title; Table of Contents.

The short title is the "Public Safety Spectrum and Wireless Innovation Act."

Section 2. Definitions.

This section would define 13 terms used throughout the bill. The following definitions are of particular importance:

700 MHz D Block Spectrum.—The term "700 MHz D Block Spectrum" means the portion of the electromagnetic spectrum between the frequencies from 758 MHz to 763 MHz and between the frequencies from 788 MHz to 793 MHz.

Existing Pubic Safety Spectrum.—The term "Existing Public Safety Spectrum" means the portion of the electromagnetic spectrum between the frequencies from 763 MHz to 768 MHz and between the frequencies from 793 MHz to 798 MHz, and between the frequencies from 768 MHz to 769 MHz and between the frequencies from 798 MHz to 799 MHz.

Public Safety Entity.—The term "public safety entity" means an entity that provides public safety services.

Public Safety Services.—The term "public safety services" has the meaning given the term in section 337(f) of the Communications Act of 1934 (47 U.S.C. 337(f)) and includes services provided by emergency response providers, as that term is defined in section 2 of the Homeland Security Act of 2002 (6 U.S.C. 101). This definition is intended to ensure that local, State, and Federal public safety authorities can benefit from a nationwide interoperable wireless broadband public safety network.

TITLE I—REALLOCATION OF PUBLIC SAFETY SPECTRUM

Section 101. Reallocation of D Block to Public Safety.

Section 101 would reallocate the 700 MHz D Block for use by public safety entities.

Section 102. Flexible Use of Narrowband Spectrum.

Section 102 would provide the FCC with the discretion to allow the flexible use of spectrum in the 700 MHz band currently allocated for narrowband public safety use, including for public safety broadband communications.

The Committee recognizes that at present, allowing broadband operations in the 700 MHz band currently allocated for narrowband public safety use might present interference concerns. Furthermore, the Committee is aware that certain 700 MHz narrowband spectrum already has been allocated for public safety narrowband use, and that some State and local governments have

built or are building communications systems that use this spectrum. To the extent that the FCC finds that it is in the public interest to allow public safety broadband operations in the 700 MHz narrowband spectrum, the agency should consider the need to accommodate public safety systems already using this spectrum.

TITLE II—GOVERNANCE OF PUBLIC SAFETY SPECTRUM

Subtitle A—Public Safety Broadband Corporation

Section 201. Single Public Safety Wireless Network Licensee.

This section would require the FCC to provide a 10—year license for the 700 MHz D Block and existing public safety broadband spectrum to the Public Safety Broadband Corporation that is established under section 202. This license can be renewed every 10 years by application to the FCC.

This section would direct the FCC to take all actions necessary to facilitate the transition of the existing public safety broadband spectrum to the Corporation. The Committee intends the direction to "take all actions necessary" not to be read in an expansive way. The Committee intends the FCC to immediately issue a license for the 700 MHz D Block and existing public safety broadband spectrum to the Corporation. To encourage the Corporation's cost effective construction of a broadband network with a national architecture, the FCC should take steps to reduce or eliminate existing encumbrances on the spectrum. Similarly, the Committee expects the FCC will work to prevent any additional uses of the public safety broadband spectrum that could encumber the license being transferred to the Corporation.

The Committee also notes that the current licensee of the existing public safety broadband spectrum is required by the FCC to coordinate the activities of the jurisdictions that already have received waivers to conditionally deploy broadband networks using the existing public safety broadband spectrum. The Committee recognizes that this Act represents a fundamental shift in addressing the long-standing challenge of creating a truly nationwide interoperable public safety network. Specifically, the Act would mandate that the network be based on a single nationwide network infrastructure and framework in order to avoid the balkanization of multiple individual networks that has impeded efforts to create nationwide interoperability in the past. The Committee also recognizes that a small handful of these jurisdictions have begun to use that conditional waiver authority to plan and deploy facilities in anticipation of the nationwide network. The Committee intends those limited facilities to be integrated into the nationwide network. Such plans and facilities can be identified though the State and local implementation grants process in section 222 of this Act.

At the same time, while the Committee recognizes the good faith efforts of the waiver jurisdictions pursuant to conditional authority, the Committee does not intend for these jurisdictions to continue to deploy stand-alone broadband networks that could jeopardize the overarching goal of nationwide interoperability. These waiver jurisdictions should temporarily halt deployment activities until the Corporation can coordinate and integrate these early deployment broadband activities into the nationwide network infrastructure. The Committee also recognizes that the Corporation may decide

that allowing one or two waiver jurisdictions, under extraordinary circumstances, to continue limited deployments could serve as pilot projects beneficial to the Corporation's efforts. This is a decision for the Corporation, however, subject to whatever conditions the Corporation deems necessary in order to preserve and protect the goal of nationwide interoperability, and with assistance from the FCC, as needed.

In addition, there are existing narrowband incumbent operations in the public safety broadband spectrum that would need to be relocated as the broadband network is deployed. Accordingly, the Committee believes it should be the obligation of the Corporation, as part of requests for proposal to deploy the network as outlined in section 206 of this Act, to relocate these narrowband incumbents.

Section 202. Establishment of Public Safety Broadband Corporation.

Section 202 would authorize the establishment of a nonprofit corporation called the Public Safety Broadband Corporation, which would hold the spectrum as provided in section 201.

Section 203. Board of Directors of the Corporation.

Section 203 would designate a Board of Directors (the Board) for the Corporation, consisting of four Federal members and eleven non-Federal members who will meet at least quarterly. The four Federal members would be the Secretary of Commerce, the Secretary of Homeland Security, the Attorney General of the United States, and the Director of Office of Management and Budget. The Secretary of Commerce, in consultation with the Secretary of Homeland Security and the Attorney General, would appoint 11 independent and qualified non-Federal members, including at least three representatives to represent the interests of States, localities, tribes, and territories and at least three representatives who have served or are currently serving as public safety professionals. The non-Federal members would serve staggered three-year terms.

This section would require non-Federal members to represent various areas of expertise, including public safety, technical, commercial network, and financial expertise. This section would require the Secretary of Commerce to make sure that non-Federal members represent various geographic and regional, as well as rural and urban, areas.

This section would also put in place conflict of interest protections to ensure the independence of the non-Federal board members. Meetings of the Board, including any committee of the Board, would be transparent and open to the public. A quorum of the Board would require at least eight members, including at least six non-Federal Members. The Secretary of Commerce would be required to select one of the non-Federal members to be Chair of the Board.

Section 204. Officers, Employees, and Committees of the Corporation.

Section 204 of the bill would instruct the Board to name and fix salaries for a Chief Executive Officer, as well as other officers and employees of the Corporation. No political test or qualification

should be used in selecting, appointing, promoting, or taking other personnel actions with respect to officers, agents, or employees of the Corporation. Officers and employees would not receive any outside salaries and may serve on other boards only with the permission of the Board. Under this section, all rates of compensation would be established by the Federal members of the Board.

This section would charge the Board with establishing a standing public safety advisory committee and authorize the Board to establish other committees or panels, as necessary. The Committee intends that with respect to the standing public safety advisory committee, membership should include a diverse group of individuals who have served or are serving currently as public safety professionals.

This section also would allow the Board to select parties to serve as its agents, consultants or experts. However, the Committee discourages sole source contracts for agents, network administrators, consultants, or experts.

Section 205. Nonprofit and Nonpolitical Nature of the Corporation.

Section 205 would prohibit the Corporation from issuing stock or its directors, officers, or employees from benefiting from their position, other than by a salary or reasonable compensation. The Corporation also would be barred from supporting any political party or candidate. In addition, the Corporation would be barred from engaging in lobbying activities.

Section 206. Powers, Duties, and Responsibilities of the Corporation.

This section would require the Corporation to use its single public safety wireless license under section 201 of this Act to oversee construction, deployment, and operation of a nationwide interoperable public safety broadband network. The Corporation also would ensure adoption of nationwide standards for use of the network; issue requests for proposals for private entities to build, operate, and maintain the network; and manage and oversee the building and operation of the network. In developing the requests for proposal, the Corporation would encourage, to the maximum extent economically desirable, existing commercial wireless infrastructure to be leveraged in deploying the network.

In addition, under this section, the Corporation would be required to ensure the safety, security, and resiliency of the network, including requirements that the network be protected, and monitored to protect, against cyberattack.

The Corporation would be required to promote competition in the equipment market, including by requiring that all equipment on the network be built to open, non-proprietary, commercially-available standards, and, to the extent necessary and technically and economically reasonable, be compatible with second and third generation commercial networks.

The Corporation also would be required to promote integration of the network with public safety answering points or their equivalent.

To ensure interoperability, the Director of NIST, in consultation with the Corporation and the FCC, would oversee the development of a list of certified devices and components meeting appropriate

protocols and standards. Public safety entities and vendors must adhere to these protocols and standards in order to have access to or use of the network.

This section would instruct the Corporation to establish policies for the network that include buildout timetables, coverage and service levels, and performance criteria, as well as technical and operational requirements. The Committee intends that the Corporation pay particular attention to making sure that the network is deployed in rural areas, as well as non-rural areas. As a result, this section would require that the Corporation, as part of the request-for-proposals process, require deployment phases with substantial rural coverage milestones as part of each phase of the construction and deployment of the network. As part of this effort, the Committee encourages the Corporation to make special efforts to address those areas of the country that lag behind the rest of the nation in deployment of third generation wireless services.

To ensure that the needs of local first responders are met, the Committee intends for there to be significant input from State and local public safety entities, especially with respect to planning the network and determining how funds are spent to deploy the network. Consequently, this section would require the Corporation to consult with regional, State, tribal, and local jurisdictions in developing requests for proposal for the network. Specifically, this section would require the Corporation to consult with these jurisdictions with respect to construction of an Evolved Packet Core and any Radio Access Network, the placement of towers in a local area, coverage areas, assignment of priority to-and the training needs of-local users, assignment of priority and selection of entities seeking access to or use of the network, and the adequacy of hardening, security, reliability, and resiliency. The input of regional, State, tribal, and local jurisdictions shall be coordinated through a single point of contact: a single officer or governmental body designated by the State's chief executive officer. In order to assist with the granular State and local input necessary, section 222 would create a planning grant program to assist these jurisdictions in compiling and analyzing the data.

This section would also authorize the Corporation to conduct business, including making contracts to leverage existing infrastructure or spending funds, consistent with the purpose of the work of the Corporation and to enhance public safety. The Committee intends that the Corporation leverage existing infrastructure, including commercial or other communications infrastructure, as well as that owned by Federal, State, tribal, or local entities, to the maximum extent economically desirable. However, the Committee recognizes that, in some instances it may be more economically efficient for the Corporation to construct new infrastructure rather than retrofit existing facilities.

To facilitate the use of existing infrastructure, the Corporation would be allowed to enter into roaming agreements with commercial network providers. The Corporation would speed deployment of the network-especially in rural areas-by leveraging existing commercial networks to the maximum extent economically desirable.

Finally, this section would make clear that the Director of NIST, in consultation with the Corporation, the FCC, and the standing public safety advisory committee, would represent the public safety

users in any proceeding, negotiation, or other matter before a recognized standards-setting entity with respect to standards relating to interoperability. This section would also make clear that the Corporation would have no authority to negotiate or enter into any agreements with a foreign government on behalf of the United States.

Section 207. Initial Funding for Corporation.

Section 207 would permit the NTIA to issue loans to the Corporation until the FCC can conduct the auctions specified in this Act. In order to secure such a loan, this section requires, among other things, that the Corporation submit a plan that provides a reasonable assurance of prompt repayment. The Committee intends that the Corporation prioritize the repayment of this loan, consistent with the purpose of the work of the Corporation and its duties under this law.

Section 208. Permanent Self-Funding; Duty to Assess and Collect Fees for Network Use.

The Committee intends for the Corporation and the nationwide network to be self-funding. Accordingly, section 208 would instruct the Corporation to collect fees for access to the public safety network, including charging a network user fee to public safety entities for use of the network. The Committee intends for local first responders to migrate their data usage from commercial networks to the public safety interoperable network, which is specifically developed and hardened for mission-critical communications. Likewise, the Committee expects, as the network is fully deployed and developments occur in next-generation voice over wireless broadband networks that meet public safety mission-critical standards, the network can one day provide a lower-cost transition path for consolidated public safety communications. The research and development initiatives for public safety communications in section 223 of this Act would assist in these developments.

This section would also allow the Corporation, notwithstanding section 337 of the Communications Act of 1934 (47 U.S.C. 337), to lease access to the network, spectrum, or infrastructure on a secondary use basis to entities that do not meet the definition of public safety services in section 2 of this Act, including, but not limited to, other government agencies, commercial entities, and utilities. The Committee intends that the limitations in section 337 of the Communications Act as to the use of the public safety spectrum apply solely to the primary use of the network and not the secondary use as authorized by this section. This would provide an important source of revenue for the Corporation, which should be used to fund network development and maintenance, consistent with the duties of the Corporation under this Act. In addition, in those rural and remote areas in which there are no existing commercial infrastructure to leverage, commercial wireless carriers may choose to lease tower infrastructure, for example, from the Corporation. Such a sharing of infrastructure would not only provide revenue to the public safety network, but also allow commercial providers to expand their own coverage to consumers.

The total fees assessed would not exceed the amount necessary for the Corporation to recoup its expenses incurred for carrying out

this subsection. The Corporation would be required to reinvest any amounts received from these fees for only the construction, maintenance, or improvement of the network.

Section 209. Audit and Report.

In order to ensure increased accountability and transparency, this section would require the Comptroller General of the United States to audit the Corporation's financial transactions annually. The Comptroller General would then submit a report to the appropriate committees of Congress, the President, and the Corporation detailing the financial operations and condition of the Corporation and providing any related recommendations.

Section 210. Annual Report to Congress.

This section would require the Corporation to submit to the appropriate Congressional committees an annual report that includes details on the Corporation's operations, activities, financial conditions, and accomplishments. In addition, as part of the annual report, the Corporation would be required to include recommendations or proposals for legislative or administrative action, as it deems appropriate.

Section 211. Public Safety Roaming and Priority Access.

While 20 megahertz of public safety broadband spectrum will be needed to provide sufficient bandwidth and efficiencies for a nationwide interoperable public safety broadband network, there will be those emergencies during which even the nationwide public safety network will not provide sufficient communications capacity for our Nation's first responders. In those times, the Committee expects that it may be necessary and in the public interest for public safety to gain access to commercial wireless broadband networks. Section 211 would permit the FCC to consider rules to improve the ability of public safety users to roam on and gain priority access to commercial networks in an emergency. Any such roaming or priority access would be premised upon the public safety entity's equipment being technically compatible with the commercial network, the commercial network being reasonably compensated, and that such access does not preempt or otherwise terminate or degrade all existing voice conversations or data sessions.

Section 212. Transitional Analysis of Public Safety Network Attributes.

This section would require the development of an independent framework to be used by the Corporation to develop a cost-benefit analysis for the building, deployment, and operation of the public safety network. The framework would be required to be completed within 180 days of enactment of this Act. The Committee intends that this up-front analysis and review will help contain costs and promote efficient network choices, while not imposing significant cost or resulting in any delay in the construction of the network.

The analysis would use an evaluation framework developed by the Director of NIST, in consultation with the Secretary of Homeland Security, the Attorney General, and the Director of the Office of Management and Budget. This framework would: (1) be informed by a report by an independent and neutral agent; and (2)

consider a report completed by the Visiting Committee on Advanced Technology of NIST. The framework would evaluate the marginal costs and benefits of each attribute of the network, the feasibility of the attribute, and the resulting competitive vendor supply ecosystem created by the attribute.

Section 213. Prohibition on Offering of Commercial Telecommunications Service Directly to Consumers.

This section would prevent the Corporation from offering, providing, or marketing commercial telecommunications or information services directly to consumers. This section would not prohibit the secondary access to the spectrum, network, or infrastructure pursuant to section 208 of this Act.

Section 214. Provision of Technical Assistance.

Section 214 of the bill would authorize the FCC to provide technical assistance and to assist the Corporation in effectuating its duties and responsibilities under this subtitle. For example, this section would allow the FCC to adopt technical rules necessary to manage spectrum use in bands adjacent to the public safety broadband spectrum to prevent out-of-band interference problems or to address operation of the public safety broadband network in areas near the international borders of the United States.

The Committee recognizes that the bill would provide the Corporation with a unique, statutorily granted nationwide license with broad discretion to manage the spectrum and network on behalf of the Nation's first responders. This also necessarily would create a unique role for the FCC.

The Committee intends the direction to the FCC to "take any action necessary to assist" to indicate a supportive role to the Corporation. The Committee foresees instances in which the Corporation would seek specific assistance or declaratory rulings from the FCC that the Corporation deems necessary.

Subtitle B—Public Safety Commitments

Section 221. State and Local Implementation Fund.

This section would establish a "State and Local Implementation Fund" from which the Assistant Secretary of Commerce for Communications and Information (the Assistant Secretary) can administer a grant program for the purposes of the "State and Local Implementation Grant Program" established in section 222 of this Act. This section would also authorize the Assistant Secretary to borrow from the general fund of the Treasury to implement this section.

Section 222. State and Local Implementation.

Section 222 of this Act would establish a "State and Local Implementation Grant Program," not to exceed $250 million, to assist State, regional, tribal, and local jurisdictions to identify and plan the most efficient and effective way to utilize and integrate use of the nationwide public safety interoperable broadband network to satisfy the communications needs of that jurisdiction. The Committee intends for these grants to provide jurisdictions with the resources necessary to gather information relating to existing and needed infrastructure, to determine and plan for specific commu-

nications needs within jurisdictions, and to aggregate this granular data at the State level. To facilitate this coordination within and among jurisdictions—as well as with the Corporation—each State would be required to certify in its application for grant funds that it has designated a single officer or governmental body to serve as the coordinator of the implementation of grant funds.

While the Federal share of a grant under this program would not exceed 80 percent of the eligible costs, this section would allow the Assistant Secretary to waive, in whole or in part, this requirement if it is in the public interest.

Priority would be given for those grant applications for activities that ensure coverage in rural as well as urban areas.

Section 223. Public Safety Wireless Communications Research and Development.

To maximize the benefits of the nationwide public safety network for current and future users, the Committee believes it is necessary to fund research and development programs that are specifically targeted at public safety communications.

This section would require NIST, in consultation with the FCC, the Department of Homeland Security, the Department of Justice, and the Corporation's standing public safety advisory committee, to research and develop standards, technologies, and applications that advance wireless public safety communication. To accomplish this task, the Director of NIST would be required to work in consultation with the standing public safety advisory committee and the FCC to, among other things: (1) document public safety wireless communications technical requirements; (2) accelerate the development of the capability for existing public safety narrowband systems to communicate with the new broadband network; (3) establish a research plan for future communication technology; and (4) accelerate the development of mission critical voice, including development of device-to-device "talkaround" capability for the broadband network, as necessary. To meet these requirements, NIST would convene working groups of relevant government and commercial parties.

Section 224. Advanced Information and Communications Technology Research.

Section 224 would instruct the Director of NIST and the Director of NSF to promote innovation through transformative telecommunications research for telecommunications services, equipment, and technology. Under this section, NIST would also continue to support research and standards development in advanced information and communications technologies focused on facilitating the availability of advanced communications services to all Americans.

This section would also require the Director of NSF to use not more than five percent of the funds made available in a fiscal year from the "Public Safety Trust Fund," established in section 401 of this Act, to expand existing grant programs to include emerging wireless technologies. The grants would support research in a variety of areas, which may include opportunistic spectrum sharing, cyberphysical systems, efficient spectrum use, dynamic spectrum access, interference mitigation, emerging use interface and sensing

technologies, wireless ad hoc networks, network resiliency and cybersecurity, communications interoperability, pervasive information technology, nanoelectronics, low-power communications, and networking protocols and architectures. Awards of grants would be merit-based and give priority to those that offer the potential for transformational breakthroughs.

This section would instruct DARPA to use not more than five percent of any funds made available in a fiscal year from the Public Safety Trust Fund to conduct research in wireless communications to develop more secure, reliable, and flexible wireless systems for Federal users. Areas of research may include increasing data transmission speeds of wireless communications, spectrum sharing and interference mitigation, technologies to foster reallocation of spectrum for non-Federal use, and converting defense or other Federal systems to more advanced or efficient systems. DARPA should collaborate with the NTIA, NIST, and NSF in these efforts.

TITLE III—SPECTRUM AUCTION AUTHORITY

Section 301. Extension of Auction Authority.

Section 301 would extend the FCC's spectrum auction authority from 2012 to 2021.

Section 302. Auction of Spectrum.

This section would amend the Communications Act to instruct the FCC to auction by January 31, 2014, the following spectrum bands: 1915–1920 MHz, 1995–2000 MHz, 2020–2025 MHz, 2155–2175 MHz, 2175–2180 MHz, and 1755–1850 MHz, and at least 15 MHz of contiguous Federal spectrum in the 1675 to 1710 MHz band identified by the Assistant Secretary within one year of enactment of this Act.

The FCC would be authorized, if technically feasible and in the public interest, to combine the spectrum between 2155 and 2180 MHz and 1755 and 1780 MHz into paired spectrum blocks in an auction of licenses.

This section would also direct the FCC to reallocate through auction the spectrum between 3550 and 3650 MHz. The FCC would be required to auction this spectrum within three years of the passage of this Act. The spectrum would not be auctioned, however, if the President determines that this spectrum is needed to protect incumbent Federal systems or reallocation of other comparably valued spectrum better serves the public interest. If this spectrum cannot be reallocated, then the President would identify within one year between 20 and 100 megahertz of alternate spectrum. This section would also require the President to report to the appropriate committees of Congress what spectrum has been identified and immediately make this spectrum available for reallocation. If the President does not make a decision as to the spectrum between 3550 and 3650 MHz, then the FCC would be directed to auction it within three years from the date of enactment.

Section 302 also would amend the Communications Act to direct the FCC, when designing spectrum auctions, to ensure that there is an adequate opportunity for applicants to obtain licenses covering both large and small geographic areas.

Section 303. Incentive Auction Authority.

Section 303 would expand the FCC's existing spectrum auction authority. The FCC currently has authority to conduct spectrum auctions, but it does not have the authority to share auction revenues with licensees that voluntarily relinquish their spectrum usage rights.

Section 303 would amend the Communications Act to authorize the FCC to conduct incentive auctions. Specifically, if the FCC determines that reallocation of certain spectrum licenses is in the public interest and a current licensee voluntarily agrees to relinquish some or all of its rights to that spectrum, the FCC would be authorized to auction the spectrum and direct to the original licensee a portion of the proceeds from the auction. Relinquishment of these spectrum usage rights would allow more spectrum to be brought to market, which could help meet the growing demand for spectrum for flexible commercial uses, including wireless broadband. This additional authority would be sufficiently flexible to allow for such incentive auctions in a range of spectrum bands and circumstances. This section also would permit the FCC to designate portions of the relinquished spectrum rights for use exclusively on an unlicensed basis.

The section would authorize the FCC to repack broadcast television licensees if such repacking is in the public interest. If a licensee must relocate to a new frequency, the FCC would be allowed to disburse to that licensee a portion of the incentive auction proceeds. The FCC would also be required to make reasonable efforts to preserve the amount of population covered by the licensees' signal within the licensees' service areas, avoid any interference increases, allow licensees assigned to channels 2 through 6 to move to the UHF band, and allow low-power television stations impacted by the relocation of other licensees to move from the UHF to the VHF band. In implementing these provisions, the Committee recommends that the FCC also take into consideration the degree of over-the-air viewership of broadcast television stations, including licenses serving areas where more than a fifth of all viewing occurs in households relying exclusively on over-the-air television. The Committee also intends that in any repacking process, the FCC will take into consideration protecting viewership of over-the-air television along the international borders with Canada and Mexico.

The FCC would not be authorized under this section to reclaim spectrum from a television broadcaster without its voluntary consent, unless: (1) the FCC allocates an identical amount of contiguous spectrum between channels 14 and 50 in the same geographic market television market, if the spectrum was reclaimed from between channels 14 and 51; or (2) the FCC allocates an identical amount of contiguous spectrum between channels 2 and 13 in the same geographic market, if the spectrum was reclaimed between channels 2 and 13.

The FCC would not be permitted to co-locate multiple television broadcast licensees on the same channel if the licensees do not agree. If stations voluntarily agree to share a channel, they would retain their rights to carriage, pursuant to sections 338, 614, or 615 of the Communications Act (47 U.S.C. 338, 534, 535). The Committee, however, intends that the FCC would be able to assist those stations which voluntary agree to co-locate to find a licensee

with which to share a channel, if such stations seek the FCC's assistance.

This section would also establish an "Incentive Auction Relocation Fund" that would be accessible by the NTIA for 18 months after the incentive auction ends or the date on which the FCC issues all necessary new channel assignments, whichever is later. These funds would be used to cover relocation costs for broadcast television stations that are relocated and the costs of MVPDs to comply with the obligations to continue to carry the broadcasters' programming.

This section would direct the FCC, at the same time as it undertakes the incentive auction process for spectrum currently allocated to broadcast television, to ensure that adequate spectrum both nationwide and in each local television market remains available in frequency bands between 54 and 72 MHz, 76 and 88 MHz, 174 and 216 MHz, and 470 and 698 MHz for unlicensed device operation. Subclause (IV) would ensure that to the extent that spectrum is relinquished by broadcasters to the FCC for reassignment pursuant to the incentive auction process authorized by subparagraph (F), at least 84 MHz of that spectrum anywhere in the United States should be reassigned to new users through competitive bidding. The subclause also provides that the Commission will have the discretion to disburse auction revenues to licensees as needed for the purpose of ensuring that unlicensed spectrum remains available in the designated frequency bands, both nationwide and in each local market.

The Committee does not intend the language in this subclause to supersede previous provisions in this Act requiring the Commission to follow specific procedures for reclamation and repurposing of broadcast spectrum for reauction, as outlined in subclauses (I) through (II) of clause (ii) of subparagraph (F). Those required mandates include, but are not limited to, voluntary participation by broadcasters in incentive auctions, steps that the FCC must follow should it conduct broadcast band repacking, and protections for broadcasters who are subject to or affected by repacking.

This section would authorize the FCC to use incentive auctions in the event it decides to make available for terrestrial broadband use the 2000–2020 MHz bands and the 2180–2200 MHz bands. This section would also state that it is the sense of Congress that if any of the spectrum bands identified in section 303 of this Act are auctioned by the FCC, they should be licensed for flexible use consistent with the public interest.

It is the Committee's intent that the FCC, as the expert agency, be given discretion and flexibility in designing and conducting incentive auctions that rely on private market transactions to guide resources to the maximum consumer benefits.

Section 304. Efficient Use of Public Safety Spectrum.

Section 304 would direct the FCC to provide to the appropriate committees within 180 days of enactment, and every two years thereafter: (1) an assessment of whether spectrum is adequate for public safety's current and future needs, including an examination and inventory of how public safety spectrum is being used; and (2) an assessment of the opportunity to return any additional public safety spectrum to the FCC for reallocation. The report would in-

ventory the spectrum assigned to public safety use, including the amount of spectrum allocated to public safety, the number of licensees and amount of spectrum assigned to each licensee, a general description of the technologies in each band, an approximation of network coverage of major systems in major metropolitan areas, and an approximation of the number of users on these systems.

Section 305. Report on Satellite Broadband.

This section would instruct the Comptroller General to conduct a study and submit a report within two years of enactment to the appropriate committees of Congress on the current and future capabilities of fixed and mobile satellite broadband to assist public safety entities during an emergency. The Committee does not intend this study to limit the ability of the Corporation to partner with satellite broadband providers in the implementation of this Act.

Section 306. Federal Infrastructure Sharing.

Section 306 would require the Administrator of General Services to establish rules that allow the Corporation, and other public safety entities permitted to use the spectrum allocated to the Corporation, to have access to those components of Federal infrastructure appropriate to construct and maintain the nationwide public safety interoperable broadband network.

Section 307. Report on Unlicensed Spectrum.

This section would require the FCC to submit a report within five years of enactment to the appropriate committees of Congress on the development and use of unlicensed spectrum.

TITLE IV—PUBLIC SAFETY TRUST FUND

Section 401. Public Safety Trust Fund.

Section 401 would establish a "Public Safety Trust Fund" (the Fund) in which the proceeds from the spectrum auctions under title III of this Act would be deposited. The Fund would be used to pay the required initiatives under this Act.

Under this section, amounts in the Fund would first provide payment to the licensees returning their spectrum for an incentive auction. This section would require the Chairman of the FCC, in consultation with the Director of the OMB, to notify the appropriate committees of Congress at least three months before any incentive auctions. The notification would include the methodology for calculating the incentive payments to the licensees returning their spectrum. The methodology would account for the value of the spectrum in its current use and the timeliness in which it will be cleared.

At least five percent of the Fund, up to $1 billion, shall be deposited into the Incentive Auction Relocation Fund to reimburse television broadcasters and MVPDs pursuant to section 303 of this Act.

This section also requires that $250 million be deposited in the State and Local Implementation Fund under section 221 of this Act to be used for planning grants to State, regional, local, and tribal public safety entities.

Under this section, $11.75 billion would be deposited with the Corporation for the nationwide public safety interoperable broadband network, including at least $10.5 billion for any Radio Access Network buildout and at least $1.25 billion to develop an Evolved Packet Core.

In terms of research and development, $100 million would be designated per year for fiscal years 2012 to 2016 for the Director of NIST to carry out the public safety research and development described in section 223 of this Act. Additionally, $200 million would be designated per year for fiscal years 2012 to 2016 for the advanced information and communications technology research described in section 224 of this Act, of which $130 million is made available for the NSF grant program and $70 million is made available for DARPA's research each year.

Any amounts remaining in the Fund at the end of fiscal year 2021 would be deposited in the Treasury and dedicated solely for deficit reduction.

TITLE V—SPECTRUM POLICY

Subtitle A—Inventory and Planning

Section 501. Radio Spectrum Inventory.

This section would require the FCC to conduct, within 180 days of enactment and biennially thereafter, a spectrum inventory in consultation with NTIA and the Office of Science and Technology Policy. The FCC would prepare a report that inventories each radio spectrum band from 300 MHz to 3.5 GHz, at a minimum. The inventory would be made available online to the public and updated quarterly. The FCC would bear the cost for maintaining the inventory and website.

This section would also set up a process to protect information when the head of any Federal agency determines that such information is classified or its disclosure would be harmful to national security. In addition, if a licensee of non-Federal spectrum determines that public disclosure of certain information would be detrimental to public safety, the section would provide a process to ensure that such information is not disclosed.

Section 502. Federal Spectrum Planning.

Section 502 would take a number of steps to improve spectrum management decisions by Federal agencies. First, the Comptroller General would be required to submit a report within six months of enactment that reviews the processes Federal entities use to evaluate their spectrum needs and recommends how to improve these processes. Within one year of enactment, Federal agencies would be required to comply with the recommendations in the report.

This section would also require Federal entities to submit an entity-specific strategic spectrum plan. Using the individual entity-specific spectrum plans, the Secretary of Commerce would prepare a comprehensive Federal Strategic Spectrum Plan within one year of receiving the reports from the Federal entities.

This section would then direct the NTIA and the FCC, working with State, local, and tribal governments and commercial spectrum interests, to develop a quadrennial National Strategic Spectrum Plan within two years of enactment. The plan would include: the

Federal Strategic Spectrum Plan; long-range spectrum planning of commercial, State and local government, and Federal Government users; new technologies and expanded services requiring spectrum; the nature of new radio communications systems and the spectrum required; efficient approaches to meeting future spectrum needs; and an evaluation of current auction processes.

This section would also establish a process by which information would be protected from public disclosure if a head of a Federal entity determines that disclosure of such information would be harmful to national security.

Subtitle B—Markets

Section 511. Promoting Secondary Spectrum Markets.

This section would direct the FCC to conduct a proceeding to determine how to further promote a more robust secondary spectrum market, including the establishment of a national database for information on secondary market opportunities.

Section 512. Unlicensed Use in 5 GHz.

Section 512 would direct FCC to allow, within one year of enactment, unlicensed devices intended and marketed for indoor use to operate in the 5350–5470 MHz band, provided that the FCC finds that technical solutions, including spectrum sharing technologies such as dynamic frequency selection capability, will protect and not compromise the primary mission of Federal spectrum users. Within eight months of enactment, the NTIA, in consultation with the FCC, would submit to the appropriate committees of Congress a study evaluating sharing technologies and the potential risks to Federal users of allowing indoor use of unlicensed devices in in the 5350–5470 MHz band.

Section 513. Experimental Licenses.

Section 513 would direct the FCC to amend its rules within nine months of enactment to promote greater experimentation, broaden opportunities for market trials, promote advancement in health care, establish innovation zones, and establish a process in which qualified entities, such as colleges and universities and public and private companies, can use a broad range of frequencies for research and experimentation without prior FCC authorization.

Section 514. Repurposing Federal Spectrum for Commercial Purposes and Federal Spectrum Sharing.

This section would provide a number of incentives to Federal spectrum users to facilitate greater spectrum efficiency by such users and to make additional spectrum available for commercial wireless uses.

The section would amend the National Telecommunications and Information Administration Organization Act (NTIAO Act) (P.L. 102–538) to authorize payments from the Spectrum Relocation Fund to cover relocation costs (including upfront planning costs that occur before an auction) for Federal entities to better enable the entities to evaluate the cost and scheduling implications of spectrum relocation activities. These payments would facilitate the Federal government spectrum relocation process while ensuring the continuity of entity missions. The covered costs include: the cost to

modify or replace equipment; the costs of engineering and construction; the costs of research and analysis associated with calculating relocation costs, determining technical feasibility, or planning or managing location; the cost of modification or replacement to accommodate sharing with commercial users; the cost associated with accelerated replacement of systems; and the costs of use of commercial equipment to replace Federal equipment.

This section would also add to the NTIAO Act a provision allowing Federal entities to share Federal spectrum with non-Federal entities. Before sharing any spectrum, the Federal entity must get approval from the NTIA in consultation with the OMB. Any fees collected from spectrum sharing will be deposited in the Spectrum Relocation Fund, which can be used to reimburse Federal entities that incur costs from sharing.

Section 514 would also make available for the Director of OMB up to 10 percent of the amount deposited in the Spectrum Relocation Fund from the auction of licenses vacated by Federal entities, or up to 10 percent of the amount deposited in the Spectrum Relocation Fund by non-Federal entities for sharing of Federal spectrum. The Director of OMB, in consultation with the Assistant Secretary, would be authorized to use such funds to pay eligible Federal entities for timely access to such spectrum. The payments would be based on the market value of the spectrum, the timeliness of clearance, and the need for the spectrum. The payments would be used to achieve enhanced capabilities for the systems affected by the reallocation for Federal spectrum or for other systems essential for the entity. Any amounts remaining in the Spectrum Relocation Fund eight years after the amount was deposited in the Spectrum Relocation Fund would revert to the U.S. Treasury.

Section 515. Report on Spectrum Sharing.

This section would instruct the NTIA to conduct a study and submit a report within one year of enactment that identifies spectrum between 225 MHz and 3700 MHz suitable for sharing with government or non-Federal government entities and describes how Federal entities can use dynamic spectrum sharing to share underutilized spectrum. Within six months of the report, the NTIA would conduct a public consultation to develop rules for Federal users to increase spectrum sharing by Federal entities.

Subtitle C—Efficiency and Management

Section 521. Functional Responsibility of the NTIA to Ensure Efficient Use of Spectrum.

Section 521 would amend the NTIAO Act to make the NTIA responsible for promoting the best possible and most efficient use of the Federal Government's spectrum, subject to and consistent with the needs and missions of Federal agencies.

Section 522. Spectrum Efficiency Analytic Tools.

This section would direct the NTIA to develop analytic tools to measure the spectrum efficiency of Federal spectrum systems. The NTIA would be required to consider the conclusions in the report of the Commerce Spectrum Management Advisory Committee titled "Definitions of Efficiency in Spectrum Use," dated October 1, 2008.

Section 523. Study on Receiver Performance and Spectrum Efficiency.

Section 523 would require the Comptroller General to conduct a study and submit a report within one year of enactment on ensuring that transmission systems are designed so that reasonable use of the adjacent bands does not excessively impair such systems. The study would consider the value of improving receiver performance, improving operations in adjacent bands, and narrowing the guard bands between adjacent spectrum blocks. The study would also consider the role of manufacturers, licensees, and government users, as well as the feasibility of industry self-compliance.

Section 524. Frequency Assignment.

This section would require the NTIA, in consultation with the Interdepartment Radio Advisory Committee, to examine its frequency assignment process and consider best practices to determine whether the current approach for collecting and validating data from Federal entities can be streamlined or improved.

In carrying out this section, the NTIA would be required to consider whether it should provide Federal entities with specific guidelines or requirements to justify spectrum requests, require Federal entities to submit documentation, verify that entities have completed supporting analysis, and require mangers of spectrum resources at each Federal entity to validate, verify, or attest to the accuracy of any spectrum information submitted to the NTIA.

Section 525. Spectrum Opportunity Cost Transparency.

Section 525 would instruct the NTIA, in consultation with the FCC and OMB, to determine the annual economic opportunity cost of each Federal spectrum band between 150 MHz and 6000 MHz assigned to or used by Federal users. This framework would help Federal users better understand the value of the spectrum and increase transparency for the public. The analysis would be updated on an annual basis to account for changes in valuation. This section would define opportunity cost as the value of spectrum, in dollar terms, as if such spectrum were to be reallocated to the highest commercial alternative use that currently does not have access to that spectrum. Each Federal entity would report the opportunity cost borne by that agency for each spectrum band that is entirely under the control of that single agency as part of its budget and the annual required financial statement. Every five years, each Federal agency would be required to analyze the opportunity cost against the cost of relocation of the Federal users, sharing the spectrum, leasing other non-Federal spectrum, or contracting out for its spectrum activities.

This section would instruct the Comptroller General, in consultation with the NTIA, to examine the technologies and equipment used on Federal spectrum to ensure they are the most efficient available. If the technologies and equipment are not the most spectrum efficient available, the study would determine what the cost, benefits, or problems would be to upgrade the system.

Section 526. System Certification.

This section would direct OMB to update, within six months of enactment, section 33.4 of OMB Circular A–11 to reflect the rec-

ommendations in the Commerce Spectrum Management Advisory Committee Incentive Subcommittee report adopted January 11, 2011.

Section 527. Report to Congress on Improving Spectrum Management.

Section 527 would instruct the NTIA to report, within three months of enactment, on the status of NTIA's plan to implement the recommendations in the "President's Memorandum on Improving Spectrum Management for the 21st Century."

Section 528. Wireless Facilities Deployment.

This section would prohibit a State or local government from denying a request for a modification of an existing wireless tower that does not substantially change the physical dimensions of such tower. This section defines "eligible facilities request" as a request for modification of an existing tower for collocation of new transmission equipment, removal of transmission equipment, and replacement of transmission equipment.

The Committee intends that an eligible facilities request under this section includes requests that do not change the overall visual appearance of the tower, the weight loading or sail area of the tower, or the power requirements needed to service the tower's transmission equipment. The Committee further intends that the term "collocation" would mean collocation as defined by the FCC.

The section would also allow Federal executive agencies to grant to State and local governments and to private entities easements or rights-of-way to government-owned buildings to install, construct, or maintain wireless service and backhaul equipment. The agency granting such access would be authorized to collect a fee for such access, which may be waived based on the public benefits of granting such an easement or right-of-way. Any such fees would be deposited in the Federal Buildings Fund. This section would also direct the General Services Administration to develop a master contract for the placement of wireless equipment on buildings and property owned by the Federal government.

In authorizing Federal executive agencies to grant such easements or rights-of-way to government-owned buildings, the Committee does not intend that such permissive authority in any way would compromise Federal executive agencies' ability to protect national security or safety.

TITLE VI—STUDIES ON NEXT GENERATION 9-1-1 SERVICES

Section 601. Definitions.

This section would define the terms 9-1-1 services, E9-1-1 services, Next Generation 9-1-1, and Public Safety Answering Point for use in this title.

Section 602. NHTSA Report on Costs for Requirements and Specifications of Next Generation 9-1-1 Services.

Section 602 would direct the Administrator of the National Highway Traffic Safety Administration (NHTSA), in consultation with the FCC and the Secretary of Homeland Security, to submit a report to Congress within one year of enactment that analyzes the

detailed costs for NG 9-1-1 specifications. The report would serve as a resource to Congress as it considers creating a coordinated, long-term funding mechanism for NG 9-1-1.

Section 603. FCC Recommendations for Legal and Statutory Framework for Next Generation 9-1-1 Services.

This section would direct the FCC, in coordination with the Secretary of Homeland Security and the Administrator of NHTSA, to submit a report to Congress within one year of enactment that includes recommendations on the legal and statutory framework for NG 9-1-1 services. The report would contain a legal and regulatory framework for the transition to NG 9-1-1, legal mechanisms to ensure accurate transmission of 9-1-1 caller information, and recommendations for removing jurisdictional barriers to NG 9-1-1.

TITLE VII—MISCELLANEOUS

Section 701. Severability.

This section would state that, if any provision of the Act is held to be unconstitutional, the other provisions of this Act will not be affected.

Section 702. Rule of Construction.

This section would state that nothing in this Act shall be construed as adding or subtracting from the authority the FCC may or may not have to regulate broadband Internet access service.

TITLE VIII—COMPLIANCE WITH STATUTORY PAY-AS-YOU-GO ACT

Section 801. Budget Compliance.

This section contains standard language regarding the budgetary effects of the Act as it pertains to PAYGO compliance:

Pay-As-You-Go Considerations: The Statutory Pay-As-You-Go Act of 2010 establishes budget-reporting and enforcement procedures for legislation affecting direct spending or revenues. The net changes in outlays that are subject to those pay-as-you-go procedures are shown in the following table.

CBO ESTIMATE OF PAY-AS-YOU-GO EFFECTS FOR S. 911 AS ORDERED REPORTED BY THE SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION ON JUNE 8, 2011

	By fiscal year, in millions of dollars—												
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2011–2016	2011–2021
NET INCREASE OR DECREASE (−) IN THE DEFICIT													
Statutory Pay-As-You-Go Impact	0	1,461	1,735	737	−554	−1,503	−2,222	−1,821	−2,104	−869	−1,325	1,876	−6,465

ROLLCALL VOTES IN COMMITTEE

Senators Rockefeller and Hutchison offered an amendment in the nature of a substitute (subject to numerous amendments previously adopted by voice vote) to strengthen public safety and enhance wireless communications, and for other purposes. By a rollcall vote of 21 yeas and 4 nays as follows, the amendment was adopted:

YEAS—21	NAYS—4
Mr. Inouye[1]	Ms. Snowe
Mr. Kerry[1]	Mr. DeMint
Mrs. Boxer[1]	Mr. Toomey
Mr. Nelson	Mr. Rubio
Ms. Cantwell	
Mr. Lautenberg	
Mr. Pryor	
Mrs. McCaskill	
Ms. Klobuchar	
Mr. Udall	
Mr. Warner	
Mr. Begich	
Mrs. Hutchison	
Mr. Thune	
Mr. Wicker	
Mr. Isakson[1]	
Mr. Blunt	
Mr. Boozman	
Ms. Ayotte	
Mr. Heller	
Mr. Rockefeller	

[1]By proxy

Senator Toomey offered an amendment to the amendment (in the nature of a substitute) offered by Senators Rockefeller and Hutchison, to strike section 224 of the bill (relating to advanced information and communications technology research). By a rollcall vote of 9 yeas and 16 nays as follows, the amendment was defeated.

YEAS—9	NAYS—16
Ms. McCaskill	Mr. Inouye[1]
Mr. DeMint[1]	Mr. Kerry[1]
Mr. Thune	Mrs. Boxer
Mr. Blunt	Mr. Nelson[1]
Mr. Boozman	Ms. Cantwell[1]
Mr. Toomey	Mr. Lautenberg
Mr. Rubio	Mr. Pryor
Ms. Ayotte	Ms. Klobuchar
Mr. Heller	Mr. Udall[1]
	Mr. Warner
	Mr. Begich[1]
	Mrs. Hutchison
	Ms. Snowe[1]
	Mr. Wicker[1]

Mr. Isakson[1]
Mr. Rockefeller

[1]By proxy

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new material is printed in italic, existing law in which no change is proposed is shown in roman):

COMMUNICATIONS ACT OF 1934

[47 U.S.C. 301 et seq.]

SEC. 309. APPLICATION FOR LICENSE.

[47 U.S.C. 309]

* * * * * * *

(j) USE OF COMPETITIVE BIDDING.—

(1) GENERAL AUTHORITY.—If, consistent with the obligations described in paragraph (6)(E), mutually exclusive applications are accepted for any initial license or construction permit, then, except as provided in paragraph (2), the Commission shall grant the license or permit to a qualified applicant through a system of competitive bidding that meets the requirements of this subsection.

(2) EXEMPTIONS.—The competitive bidding authority granted by this subsection shall not apply to licenses or construction permits issued by the Commission—

(A) for public safety radio services, including private internal radio services used by State and local governments and non-government entities and including emergency road services provided by not-for-profit organizations, that—

(i) are used to protect the safety of life, health, or property; and

(ii) are not made commercially available to the public;

(B) for initial licenses or construction permits for digital television service given to existing terrestrial broadcast licensees to replace their analog television service licenses; or

(C) for stations described in section 397(6) of this Act.

(3) DESIGN OF SYSTEMS OF COMPETITIVE BIDDING.—For each class of licenses or permits that the Commission grants through the use of a competitive bidding system, the Commission shall, by regulation, establish a competitive bidding methodology. The Commission shall seek to design and test multiple alternative methodologies under appropriate circumstances. The Commission shall, directly or by contract, provide for the design and conduct (for purposes of testing) of competitive bidding using a contingent combinatorial bidding system that permits prospective bidders to bid on combinations or groups of licenses in a single bid and to enter multiple alternative bids

within a single bidding round. In identifying classes of licenses and permits to be issued by competitive bidding, in specifying eligibility and other characteristics of such licenses and permits, and in designing the methodologies for use under this subsection, the Commission shall include safeguards to protect the public interest in the use of the spectrum and shall seek to promote the purposes specified in section 1 of this Act and the following objectives:

(A) the development and rapid deployment of new technologies, products, and services for the benefit of the public, including those residing in rural areas, without administrative or judicial delays;

(B) promoting economic opportunity and competition and ensuring that new and innovative technologies are readily accessible to the American people by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women;

(C) recovery for the public of a portion of the value of the public spectrum resource made available for commercial use and avoidance of unjust enrichment through the methods employed to award uses of that resource;

(D) efficient and intensive use of the electromagnetic spectrum;

(E) ensure that, in the scheduling of any competitive bidding under this subsection, an adequate period is allowed—

(i) before issuance of bidding rules, to permit notice and comment on proposed auction procedures; and

(ii) after issuance of bidding rules, to ensure that interested parties have a sufficient time to develop business plans, assess market conditions, and evaluate the availability of equipment for the relevant services[; and] *;*

(F) for any auction of eligible frequencies described in section 113(g)(2) of the National Telecommunications and Information Administration Organization Act (47 U.S.C. 923(g)(2)), the recovery of 110 percent of estimated relocation costs as provided to the Commission pursuant to section 113(g)(4) of such Act[.] *;*

(G) ensuring that there is an adequate opportunity for applicants to obtain licenses covering both large and small geographic areas, as such areas are determined by the Commission.

(4) CONTENTS OF REGULATIONS.—In prescribing regulations pursuant to paragraph (3), the Commission shall—

(A) consider alternative payment schedules and methods of calculation, including lump sums or guaranteed installment payments, with or without royalty payments, or other schedules or methods that promote the objectives described in paragraph (3)(B), and combinations of such schedules and methods;

(B) include performance requirements, such as appropriate deadlines and penalties for performance failures, to

ensure prompt delivery of service to rural areas, to prevent stockpiling or warehousing of spectrum by licensees or permittees, and to promote investment in and rapid deployment of new technologies and services;

(C) consistent with the public interest, convenience, and necessity, the purposes of this Act, and the characteristics of the proposed service, prescribe area designations and bandwidth assignments that promote (i) an equitable distribution of licenses and services among geographic areas, (ii) economic opportunity for a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women, and (iii) investment in and rapid deployment of new technologies and services;

(D) ensure that small businesses, rural telephone companies, and businesses owned by members of minority groups and women are given the opportunity to participate in the provision of spectrum-based services, and, for such purposes, consider the use of tax certificates, bidding preferences, and other procedures;

(E) require such transfer disclosures and antitrafficking restrictions and payment schedules as may be necessary to prevent unjust enrichment as a result of the methods employed to issue licenses and permits; and

(F) prescribe methods by which a reasonable reserve price will be required, or a minimum bid will be established, to obtain any license or permit being assigned pursuant to the competitive bidding, unless the Commission determines that such a reserve price or minimum bid is not in the public interest.

(5) BIDDER AND LICENSEE QUALIFICATION.—No person shall be permitted to participate in a system of competitive bidding pursuant to this subsection unless such bidder submits such information and assurances as the Commission may require to demonstrate that such bidder's application is acceptable for filing. No license shall be granted to an applicant selected pursuant to this subsection unless the Commission determines that the applicant is qualified pursuant to subsection (a) and sections 308(b) and 310. Consistent with the objectives described in paragraph (3), the Commission shall, by regulation, prescribe expedited procedures consistent with the procedures authorized by subsection (i)(2) for the resolution of any substantial and material issues of fact concerning qualifications.

(6) RULES OF CONSTRUCTION.—Nothing in this subsection, or in the use of competitive bidding, shall—

(A) alter spectrum allocation criteria and procedures established by the other provisions of this Act;

(B) limit or otherwise affect the requirements of subsection (h) of this section, section 301, 304, 307, 310, or 706, or any other provision of this Act (other than subsections (d)(2) and (e) of this section);

(C) diminish the authority of the Commission under the other provisions of this Act to regulate or reclaim spectrum licenses;

(D) be construed to convey any rights, including any expectation of renewal of a license, that differ from the rights that apply to other licenses within the same service that were not issued pursuant to this subsection;

(E) be construed to relieve the Commission of the obligation in the public interest to continue to use engineering solutions, negotiation, threshold qualifications, service regulations, and other means in order to avoid mutual exclusivity in application and licensing proceedings;

(F) be construed to prohibit the Commission from issuing nationwide, regional, or local licenses or permits;

(G) be construed to prevent the Commission from awarding licenses to those persons who make significant contributions to the development of a new telecommunications service or technology; or

(H) be construed to relieve any applicant for a license or permit of the obligation to pay charges imposed pursuant to section 8 of this Act.

(7) CONSIDERATION OF REVENUES IN PUBLIC INTEREST DETERMINATIONS.—

(A) CONSIDERATION PROHIBITED.—In making a decision pursuant to section 303(c) to assign a band of frequencies to a use for which licenses or permits will be issued pursuant to this subsection, and in prescribing regulations pursuant to paragraph (4)(C) of this subsection, the Commission may not base a finding of public interest, convenience, and necessity on the expectation of Federal revenues from the use of a system of competitive bidding under this subsection.

(B) CONSIDERATION LIMITED.—In prescribing regulations pursuant to paragraph (4)(A) of this subsection, the Commission may not base a finding of public interest, convenience, and necessity solely or predominantly on the expectation of Federal revenues from the use of a system of competitive bidding under this subsection.

(C) CONSIDERATION OF DEMAND FOR SPECTRUM NOT AFFECTED.—Nothing in this paragraph shall be construed to prevent the Commission from continuing to consider consumer demand for spectrum-based services.

(8) TREATMENT OF REVENUES.—

(A) GENERAL RULE.—Except as provided in subparagraphs [(B), (D), and (E),] *(B), (D), (E), and (F),* all proceeds from the use of a competitive bidding system under this subsection shall be deposited in the Treasury in accordance with chapter 33 of title 31, United States Code.

(B) RETENTION OF REVENUES.—Notwithstanding subparagraph (A), the salaries and expenses account of the Commission shall retain as an offsetting collection such sums as may be necessary from such proceeds for the costs of developing and implementing the program required by this subsection. Such offsetting collections shall be available for obligation subject to the terms and conditions of the receiving appropriations account, and shall be deposited in such accounts on a quarterly basis. Such offsetting collections are authorized to remain available until ex-

pended. No sums may be retained under this subparagraph during any fiscal year beginning after September 30, 1998, if the annual report of the Commission under section 4(k) for the second preceding fiscal year fails to include in the itemized statement required by paragraph (3) of such section a statement of each expenditure made for purposes of conducting competitive bidding under this subsection during such second preceding fiscal year.

(C) DEPOSIT AND USE OF AUCTION ESCROW ACCOUNTS.—Any deposits the Commission may require for the qualification of any person to bid in a system of competitive bidding pursuant to this subsection shall be deposited in an interest bearing account at a financial institution designated for purposes of this subsection by the Commission (after consultation with the Secretary of the Treasury). Within 45 days following the conclusion of the competitive bidding—

[(i) the deposits of successful bidders shall be paid to the Treasury, except as otherwise provided in subparagraph (E)(ii);]

(i) the deposits—

(I) of successful bidders of any auction conducted pursuant to subparagraph (F) or to section 302 of the Public Safety Spectrum and Wireless Innovation Act shall be paid to the Public Safety Trust Fund established under section 401 of such Act; and

(II) of successful bidders of any other auction shall be paid to the Treasury;

(ii) the deposits of unsuccessful bidders shall be returned to such bidders; and

(iii) the interest accrued to the account shall be transferred to the Telecommunications Development Fund established pursuant to section 714 of this Act.

(D) DISPOSITION OF CASH PROCEEDS.—Cash proceeds attributable to the auction of any eligible frequencies described in section 113(g)(2) of the National Telecommunications and Information Administration Organization Act (47 U.S.C. 923(g)(2)) *excluding frequencies identified by the Federal Communications Commission to be auctioned in conjunction with eligible frequencies described in section 113(g)(2)* shall be deposited in the Spectrum Relocation Fund established under section 118 of such Act, and shall be available in accordance with that section.

(E) TRANSFER OF RECEIPTS.—

(i) ESTABLISHMENT OF FUND.—There is established in the Treasury of the United States a fund to be known as the Digital Television Transition and Public Safety Fund.

(ii) PROCEEDS FOR FUNDS.—Notwithstanding subparagraph (A), the proceeds (including deposits and upfront payments from successful bidders) from the use of a competitive bidding system under this subsection with respect to recovered analog spectrum

shall be deposited in the Digital Television Transition and Public Safety Fund.

(iii) TRANSFER OF AMOUNT TO TREASURY.—On September 30, 2009, the Secretary shall transfer $ 7,363,000,000 from the Digital Television Transition and Public Safety Fund to the general fund of the Treasury.

(iv) RECOVERED ANALOG SPECTRUM.—For purposes of clause (i), the term "recovered analog spectrum" has the meaning provided in paragraph (15)(C)(vi).

(F) INCENTIVE AUCTION AUTHORITY.—

(i) AUTHORITY.—Notwithstanding any other provision of law, if the Commission determines that it is consistent with the public interest in utilization of the spectrum for a licensee to relinquish voluntarily some or all of its licensed spectrum usage rights in order to permit the assignment of new initial licenses through a competitive bidding process subject to new service rules, or the designation of new spectrum for unlicensed use, the Commission may disburse to that licensee a portion of any auction proceeds that the Commission determines, in its discretion, are attributable to the licensee's relinquished spectrum usage rights, provided that television broadcast stations required to be carried pursuant to sections 338, 614, or 615 that voluntarily elect to share a channel shall retain the rights to carriage set forth in such sections and the rules of the Commission, as such rights apply to such station at its shared location.

(ii) PROHIBITION.—

(I) IN GENERAL.—The Commission may not reclaim spectrum licensed on a primary basis to a television broadcast station, directly or indirectly, on an involuntary basis for purposes of providing spectrum to carry out an incentive auction under this subparagraph.

(II) EXCEPTION.—The Commission may reclaim spectrum licensed to a television broadcast station licensee for the purposes of providing spectrum to carry out an incentive auction under this subparagraph, only if the Commission assigns an identical amount of contiguous spectrum, located between channels 14 and 50, in the same geographic market, if the spectrum was reclaimed from between channels 14 and 51, or located between channels 2 and 13, inclusive, in the same geographic market, to the television broadcast station licensee if the spectrum was reclaimed from between channels 2 and 13, provided that—

(aa) the Commission may not involuntarily co-locate multiple television broadcast station licensees on the same channel; and

(bb) television broadcast stations required to be carried pursuant to sections 338, 614, or 615 that voluntarily elect to share a channel

shall retain the rights to carriage set forth in such sections and the rules of the Commission, as such rights apply to such station at its shared location.

(III) REPACKING.—When assigning spectrum to television broadcast station licensees pursuant to subclause (II), if the Commission determines that it is in the public interest to modify the spectrum usage rights of any incumbent licensee in order to facilitate the assignment of such new initial licenses subject to new service rules, or the designation of spectrum for an unlicensed use, the Commission may disburse to such licensee a portion of the auction proceeds for the purpose of relocating to any alternative frequency or location that the Commission may designate, and the Commission shall, to the extent technically feasible and in the public interest, make reasonable efforts to—

(aa) preserve the amount of population covered by a licensee's signal within the licensee's service area;

(bb) avoid any involuntary increase in interference to the licensee's signal that may otherwise result from new spectrum assignments;

(cc) allow licensees assigned to broadcast channels 2 through 6 to relocate to channels in the UHF range, if possible and consistent with the goals of the incentive auction, as determined by the Commission; and

(dd) allow low power television broadcast licensees assigned to channels in the UHF range that are impacted by relocation of other licensees pursuant to this subclause to relocate to channels in the VHF range.

(IV) UNLICENSED SPECTRUM.—With respect to frequency bands between 54 and 72 MHz, 76 and 88 MHz, 174 and 216 MHz, 470 and 698 MHz, 84 MHz shall be assigned via a competitive bidding process. A portion of the proceeds from the competitive bidding of the frequency bands identified in the prior sentence may, if consistent with the public interest, be disbursed to other licensees, for the purpose of ensuring that unlicensed spectrum remains available in these frequency bands, nationwide, and in each local market.

(iii) TREATMENT OF REVENUES.—Notwithstanding subparagraph (A), and except as provided in subparagraphs (B), (C), and (D), all proceeds (including deposits and up front payments from successful bidders) from the auction of spectrum under this subparagraph shall be deposited with the Public Safety Trust Fund established under section 401 of the Public Safety Spectrum and Wireless Innovation Act.

(G) ESTABLISHMENT OF INCENTIVE AUCTION RELOCATION FUND.—

(i) IN GENERAL.—There is established in the Treasury of the United States a fund to be known as the "Incentive Auction Relocation Fund".

(ii) ADMINISTRATION.—The Assistant Secretary shall administer the Incentive Auction Relocation Fund using the amounts deposited pursuant to this section.

(iii) CREDITING OF RECEIPTS.—There shall be deposited into or credited to the Incentive Auction Relocation Fund any amounts specified in section 401 of the Public Safety Spectrum and Wireless Innovation Act.

(iv) AVAILABILITY.—Amounts in the Incentive Auction Relocation Fund shall be available to the NTIA for use—

(I) for a period not to exceed 18 months following the later of—

(aa) the completion of incentive auction from which such amounts were derived; or

(bb) the date on which the Commission issues all the new channel assignments pursuant to any repacking required under subparagraph (F)(ii); and

(II) without further appropriation.

(v) USE OF FUNDS.—Amounts in the Incentive Auction Relocation Fund may only be used by the NTIA, in consultation with the Commission, to cover—

(I) the reasonable costs of television broadcast stations that are relocated to a different spectrum channel or geographic location following an incentive auction under subparagraph (F), or that are impacted by such relocations, including to cover the cost of new equipment, installation, and construction; and

(II) the costs incurred by multichannel video programming distributors for new equipment, installation, and construction related to the carriage of such relocated stations or the carriage of stations that voluntarily elect to share a channel, but retain their existing rights to carriage pursuant to sections 338, 614, and 615.

(9) USE OF FORMER GOVERNMENT SPECTRUM.—The Commission shall, not later than 5 years after the date of enactment of this subsection, issue licenses and permits pursuant to this subsection for the use of bands of frequencies that—

(A) in the aggregate span not less than 10 megahertz; and

(B) have been reassigned from Government use pursuant to part B of the National Telecommunications and Information Administration Organization Act.

(10) AUTHORITY CONTINGENT ON AVAILABILITY OF ADDITIONAL SPECTRUM.—

(A) INITIAL CONDITIONS.—The Commission's authority to issue licenses or permits under this subsection shall not take effect unless—

(i) the Secretary of Commerce has submitted to the Commission the report required by section 113(d)(1) of

the National Telecommunications and Information Administration Organization Act;

(ii) such report recommends for immediate reallocation bands of frequencies that, in the aggregate, span not less than 50 megahertz;

(iii) such bands of frequencies meet the criteria required by section 113(a) of such Act; and

(iv) the Commission has completed the rulemaking required by section 332(c)(1)(D) of this Act.

(B) SUBSEQUENT CONDITIONS.—The Commission's authority to issue licenses or permits under this subsection on and after 2 years after the date of the enactment of this subsection shall cease to be effective if—

(i) the Secretary of Commerce has failed to submit the report required by section 113(a) of the National Telecommunications and Information Administration Organization Act;

(ii) the President has failed to withdraw and limit assignments of frequencies as required by paragraphs (1) and (2) of section 114(a) of such Act;

(iii) the Commission has failed to issue the regulations required by section 115(a) of such Act;

(iv) the Commission has failed to complete and submit to Congress, not later than 18 months after the date of enactment of this subsection, a study of current and future spectrum needs of State and local government public safety agencies through the year 2010, and a specific plan to ensure that adequate frequencies are made available to public safety licensees; or

(v) the Commission has failed under section 332(c)(3) to grant or deny within the time required by such section any petition that a State has filed within 90 days after the date of enactment of this subsection;

until such failure has been corrected.

(11) TERMINATION.—The authority of the Commission to grant a license or permit under this subsection shall expire September 30, [2012] *2021*.

(12) EVALUATION.—Not later than September 30, 1997, the Commission shall conduct a public inquiry and submit to the Congress a report—

(A) containing a statement of the revenues obtained, and a projection of the future revenues, from the use of competitive bidding systems under this subsection;

(B) describing the methodologies established by the Commission pursuant to paragraphs (3) and (4);

(C) comparing the relative advantages and disadvantages of such methodologies in terms of attaining the objectives described in such paragraphs;

(D) evaluating whether and to what extent—

(i) competitive bidding significantly improved the efficiency and effectiveness of the process for granting radio spectrum licenses;

(ii) competitive bidding facilitated the introduction of new spectrum-based technologies and the entry of new companies into the telecommunications market;

(iii) competitive bidding methodologies have secured prompt delivery of service to rural areas and have adequately addressed the needs of rural spectrum users; and

(iv) small businesses, rural telephone companies, and businesses owned by members of minority groups and women were able to participate successfully in the competitive bidding process; and

(E) recommending any statutory changes that are needed to improve the competitive bidding process.

(13) RECOVERY OF VALUE OF PUBLIC SPECTRUM IN CONNECTION WITH PIONEER PREFERENCES.—

(A) IN GENERAL.—Notwithstanding paragraph (6)(G), the Commission shall not award licenses pursuant to a preferential treatment accorded by the Commission to persons who make significant contributions to the development of a new telecommunications service or technology, except in accordance with the requirements of this paragraph.

(B) RECOVERY OF VALUE.—The Commission shall recover for the public a portion of the value of the public spectrum resource made available to such person by requiring such person, as a condition for receipt of the license, to agree to pay a sum determined by—

(i) identifying the winning bids for the licenses that the Commission determines are most reasonably comparable in terms of bandwidth, scope of service area, usage restrictions, and other technical characteristics to the license awarded to such person, and excluding licenses that the Commission determines are subject to bidding anomalies due to the award of preferential treatment;

(ii) dividing each such winning bid by the population of its service area (hereinafter referred to as the per capita bid amount);

(iii) computing the average of the per capita bid amounts for the licenses identified under clause (i);

(iv) reducing such average amount by 15 percent; and

(v) multiplying the amount determined under clause (iv) by the population of the service area of the license obtained by such person.

(C) INSTALLMENTS PERMITTED.—The Commission shall require such person to pay the sum required by subparagraph (B) in a lump sum or in guaranteed installment payments, with or without royalty payments, over a period of not more than 5 years.

(D) RULEMAKING ON PIONEER PREFERENCES.—Except with respect to pending applications described in clause (iv) of this subparagraph, the Commission shall prescribe regulations specifying the procedures and criteria by which the Commission will evaluate applications for preferential treatment in its licensing processes (by precluding the fil-

ing of mutually exclusive applications) for persons who make significant contributions to the development of a new service or to the development of new technologies that substantially enhance an existing service. Such regulations shall—

(i) specify the procedures and criteria by which the significance of such contributions will be determined, after an opportunity for review and verification by experts in the radio sciences drawn from among persons who are not employees of the Commission or by any applicant for such preferential treatment;

(ii) include such other procedures as may be necessary to prevent unjust enrichment by ensuring that the value of any such contribution justifies any reduction in the amounts paid for comparable licenses under this subsection;

(iii) be prescribed not later than 6 months after the date of enactment of this paragraph;

(iv) not apply to applications that have been accepted for filing on or before September 1, 1994; and

(v) cease to be effective on the date of the expiration of the Commission's authority under subparagraph (F).

(E) IMPLEMENTATION WITH RESPECT TO PENDING APPLICATIONS.—In applying this paragraph to any broadband licenses in the personal communications service awarded pursuant to the preferential treatment accorded by the Federal Communications Commission in the Third Report and Order in General Docket 90-314 (FCC 93-550, released February 3, 1994)—

(i) the Commission shall not reconsider the award of preferences in such Third Report and Order, and the Commission shall not delay the grant of licenses based on such awards more than 15 days following the date of enactment of this paragraph, and the award of such preferences and licenses shall not be subject to administrative or judicial review;

(ii) the Commission shall not alter the bandwidth or service areas designated for such licenses in such Third Report and Order;

(iii) except as provided in clause (v), the Commission shall use, as the most reasonably comparable licenses for purposes of subparagraph (B)(i), the broadband licenses in the personal communications service for blocks A and B for the 20 largest markets (ranked by population) in which no applicant has obtained preferential treatment;

(iv) for purposes of subparagraph (C), the Commission shall permit guaranteed installment payments over a period of 5 years, subject to—

(I) the payment only of interest on unpaid balances during the first 2 years, commencing not later than 30 days after the award of the license (including any preferential treatment used in making such award) is final and no longer subject

to administrative or judicial review, except that no such payment shall be required prior to the date of completion of the auction of the comparable licenses described in clause (iii); and

(II) payment of the unpaid balance and interest thereon after the end of such 2 years in accordance with the regulations prescribed by the Commission; and

(v) the Commission shall recover with respect to broadband licenses in the personal communications service an amount under this paragraph that is equal to not less than $ 400,000,000, and if such amount is less than $ 400,000,000, the Commission shall recover an amount equal to $ 400,000,000 by allocating such amount among the holders of such licenses based on the population of the license areas held by each licensee.

The Commission shall not include in any amounts required to be collected under clause (v) the interest on unpaid balances required to be collected under clause (iv).

(F) EXPIRATION.—The authority of the Commission to provide preferential treatment in licensing procedures (by precluding the filing of mutually exclusive applications) to persons who make significant contributions to the development of a new service or to the development of new technologies that substantially enhance an existing service shall expire on the date of enactment of the Balanced Budget Act of 1997.

(G) EFFECTIVE DATE.—This paragraph shall be effective on the date of its enactment and apply to any licenses issued on or after August 1, 1994, by the Federal Communications Commission pursuant to any licensing procedure that provides preferential treatment (by precluding the filing of mutually exclusive applications) to persons who make significant contributions to the development of a new service or to the development of new technologies that substantially enhance an existing service.

(14) AUCTION OF RECAPTURED BROADCAST TELEVISION SPECTRUM.—

(A) LIMITATIONS ON TERMS OF TERRESTRIAL TELEVISION BROADCAST LICENSES.—A full-power television broadcast license that authorizes analog television service may not be renewed to authorize such service for a period that extends beyond June 12, 2009.

(B) SPECTRUM REVERSION AND RESALE.—

(i) The Commission shall—

(I) ensure that, as licenses for analog television service expire pursuant to subparagraph (A), each licensee shall cease using electromagnetic spectrum assigned to such service according to the Commission's direction; and

(II) reclaim and organize the electromagnetic spectrum in a manner consistent with the objectives described in paragraph (3) of this subsection.

(ii) Licensees for new services occupying spectrum reclaimed pursuant to clause (i) shall be assigned in accordance with this subsection.

(C) CERTAIN LIMITATIONS ON QUALIFIED BIDDERS PROHIBITED.—In prescribing any regulations relating to the qualification of bidders for spectrum reclaimed pursuant to subparagraph (B)(i), the Commission, for any license that may be used for any digital television service where the grade A contour of the station is projected to encompass the entirety of a city with a population in excess of 400,000 (as determined using the 1990 decennial census), shall not—

(i) preclude any party from being a qualified bidder for such spectrum on the basis of—

(I) the Commission's duopoly rule (47 C.F.R. 73.3555(b)); or

(II) the Commission's newspaper cross-ownership rule (47 C.F.R. 73.3555(d)); or

(ii) apply either such rule to preclude such a party that is a winning bidder in a competitive bidding for such spectrum from using such spectrum for digital television service.

(15) COMMISSION TO DETERMINE TIMING OF AUCTIONS.—

(A) COMMISSION AUTHORITY.—Subject to the provisions of this subsection (including paragraph (11)), but notwithstanding any other provision of law, the Commission shall determine the timing of and deadlines for the conduct of competitive bidding under this subsection, including the timing of and deadlines for qualifying for bidding; conducting auctions; collecting, depositing, and reporting revenues; and completing licensing processes and assigning licenses.

(B) TERMINATION OF PORTIONS OF AUCTIONS 31 AND 44.—Except as provided in subparagraph (C), the Commission shall not commence or conduct auctions 31 and 44 on June 19, 2002, as specified in the public notices of March 19, 2002, and March 20, 2002 (DA 02-659 and DA 02-563).

(C) EXCEPTION.—

(i) BLOCKS EXCEPTED.—Subparagraph (B) shall not apply to the auction of—

(I) the C-block of licenses on the bands of frequencies located at 710-716 megahertz, and 740-746 megahertz; or

(II) the D-block of licenses on the bands of frequencies located at 716-722 megahertz.

(ii) ELIGIBLE BIDDERS.—The entities that shall be eligible to bid in the auction of the C-block and D-block licenses described in clause (i) shall be those entities that were qualified entities, and that submitted applications to participate in auction 44, by May 8, 2002, as part of the original auction 44 short form filing deadline.

(iii) AUCTION DEADLINES FOR EXCEPTED BLOCKS.—Notwithstanding subparagraph (B), the auction of the C-block and D-block licenses described in clause (i) shall be commenced no earlier than August 19, 2002,

and no later than September 19, 2002, and the proceeds of such auction shall be deposited in accordance with paragraph (8) not later than December 31, 2002.

(iv) REPORT.—Within one year after the date of enactment of this paragraph, the Commission shall submit a report to Congress—

(I) specifying when the Commission intends to reschedule auctions 31 and 44 (other than the blocks excepted by clause (i)); and

(II) describing the progress made by the Commission in the digital television transition and in the assignment and allocation of additional spectrum for advanced mobile communications services that warrants the scheduling of such auctions.

(v) ADDITIONAL DEADLINES FOR RECOVERED ANALOG SPECTRUM.—Notwithstanding subparagraph (B), the Commission shall conduct the auction of the licenses for recovered analog spectrum by commencing the bidding not later than January 28, 2008, and shall deposit the proceeds of such auction in accordance with paragraph (8)(E)(ii) not later than June 30, 2008.

(vi) RECOVERED ANALOG SPECTRUM.—For purposes of clause (v), the term "recovered analog spectrum" means the spectrum between channels 52 and 69, inclusive (between frequencies 698 and 806 megahertz, inclusive) reclaimed from analog television service broadcasting under paragraph (14), other than—

(I) the spectrum required by section 337 to be made available for public safety services; and

(II) the spectrum auctioned prior to the date of enactment of the Digital Television Transition and Public Safety Act of 2005.

(D) RETURN OF PAYMENTS.—Within one month after the date of enactment of this paragraph, the Commission shall return to the bidders for licenses in the A-block, B-block, and E-block of auction 44 the full amount of all upfront payments made by such bidders for such licenses.

(16) SPECIAL AUCTION PROVISIONS FOR ELIGIBLE FREQUENCIES.—

(A) SPECIAL REGULATIONS.—The Commission shall revise the regulations prescribed under paragraph (4)(F) of this subsection to prescribe methods by which the total cash proceeds from any auction of eligible frequencies described in section 113(g)(2) of the National Telecommunications and Information Administration Organization Act (47 U.S.C. 923(g)(2)) shall at least equal 110 percent of the total estimated relocation costs provided to the Commission pursuant to section 113(g)(4) of such Act.

(B) CONCLUSION OF AUCTIONS CONTINGENT ON MINIMUM PROCEEDS.—The Commission shall not conclude any auction of eligible frequencies described in section 113(g)(2) of such Act if the total cash proceeds attributable to such spectrum are less than 110 percent of the total estimated relocation costs provided to the Commission pursuant to

section 113(g)(4) of such Act. If the Commission is unable to conclude an auction for the foregoing reason, the Commission shall cancel the auction, return within 45 days after the auction cancellation date any deposits from participating bidders held in escrow, and absolve such bidders from any obligation to the United States to bid in any subsequent reauction of such spectrum.

(C) AUTHORITY TO ISSUE PRIOR TO DEAUTHORIZATION.—In any auction conducted under the regulations required by subparagraph (A), the Commission may grant a license assigned for the use of eligible frequencies prior to the termination of an eligible Federal entity's authorization. However, the Commission shall condition such license by requiring that the licensee cannot cause harmful interference to such Federal entity until such entity's authorization has been terminated by the National Telecommunications and Information Administration.

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SEC. 337. ALLOCATION AND ASSIGNMENT OF NEW PUBLIC SAFETY SERVICES LICENSES AND COMMERCIAL LICENSES.

[47 U.S.C. 337]

(a) IN GENERAL.—Not later than January 1, 1998, the Commission shall allocate the electromagnetic spectrum between 746 megahertz and 806 megahertz, inclusive, as follows:

(1) **[**24**]** *34* megahertz of that spectrum for public safety services according to the terms and conditions established by the Commission, in consultation with the Secretary of Commerce and the Attorney General; and

(2) **[**36**]** *26* megahertz of that spectrum for commercial use to be assigned by competitive bidding pursuant to section 309(j).

* * * * * * *

SEC. 342. SPECTRUM INVENTORY.

(a) RADIO SPECTRUM INVENTORY.—Not later than 180 days after the date of enactment of the Public Safety Spectrum and Wireless Innovation Act, and biennially thereafter, the Commission, in consultation with the NTIA and the Office of Science and Technology Policy, shall carry out the following activities:

(1) REPORT.—Prepare a report that includes an inventory of each radio spectrum band, from 300 MHz to 3.5 GHz, at a minimum, managed by each such agency. Except as provided in subsection (b), the report shall include—

(A) the licensee or government user authorized in the band;

(B) the total spectrum authorized for each licensee or government user (in percentage terms and in sum) in the band;

(C) the approximate number of transmitters, end-user terminals, or receivers, excluding unintended radiators, that have been deployed or authorized, for each licensee or government user, in the band; and

(D) if such information is available—

(i) the type of transmitters, end-user terminals, or receivers, excluding unintended radiators, operating in

the band and whether they are space-, air-, or ground-based;

(ii) the type of transmitters, end-user terminals, or receivers, excluding unintended radiators, authorized to operate in the band and whether they are space-, air- or ground-based;

(iii) contour maps or other information that illustrate the coverage area, receiver performance, and other parameters relevant to an assessment of the availability of spectrum in each band;

(iv) the approximate geolocation of base stations or fixed transmitters;

(v) the approximate extent of use, by geography, of each band of frequencies, such as the amount and percentage of time of use, number of end-users, or other measures as appropriate to the particular band;

(vi) the activities, capabilities, functions, or missions supported by the transmitters, end-user terminals, or receivers; and

(vii) the types of unlicensed devices authorized to operate in the band.

(2) PUBLIC ACCESS.—Create a centralized portal or website utilizing data from the Commission and the NTIA to make a centralized inventory of the bands of each agency available to the public via an Internet-accessible website.

(3) UPDATES.—Make all reasonable efforts to maintain and update the information required under paragraph (2) no less frequently than quarterly to reflect, at a minimum, any transfer or auction of licenses or change in allocation, assignment, or authorization.

(4) FCC TO BEAR COSTS.—Notwithstanding any other provision of law, all costs incurred by the Commission and the NTIA in establishing and maintaining the centralized inventory and the centralized portal or website shall be borne exclusively by the Commission.

(5) PAPERWORK REDUCTION ACT EXEMPTION.—Any forms prescribed by the Commission under this section, and any information-gathering activities of the Commission under this section, shall not be subject to the provisions of sections 3507 or 3512 of title 44, United States Code (44 U.S.C. 3507, 3512).

(b) NATIONAL SECURITY; CLASSIFIED INFORMATION.—

(1) IN GENERAL.—If the head of a Federal agency determines that disclosure of information required by subsection (a) would be harmful to the national security of the United States, the agency shall—

(A) notify the NTIA of its determination; and

(B) provide to the NTIA—

(i) the other publicly releasable information required by subsection (a);

(ii) to the maximum extent practicable, a summary description of the information with respect to which the determination was made; and

(iii) an annex containing the information with respect to which the determination was made.

(2) CLASSIFIED INFORMATION.—If the head of a Federal agency determines that any information required by subsection (a) is classified in accordance with Executive Order 13526 of December 29, 2009, or any successor Executive Order establishing or modifying the uniform system for classifying, safeguarding, and declassifying national security information, the agency shall—

(A) notify the NTIA of its determination; and

(B) provide to the NTIA—

(i) the information required by subsection (a)(1) that is not classified;

(ii) to the maximum extent practicable, a summary description of the information that is classified; and

(iii) an annex containing the information that is classified.

(3) ANNEX RESTRICTION.—The NTIA shall make an annex described in paragraph (1)(B)(iii) or (2)(B)(iii) available to the Commission. Neither the NTIA nor the Commission may make any such annex available to the public pursuant to subsection (a)(2) or to any unauthorized person through any other means.

(c) PUBLIC SAFETY NONDISCLOSURE.—

(1) IN GENERAL.—If a licensee of non-Federal spectrum determines that public disclosure of certain information held by that licensee and required to be included in the report under subsection (a) would reveal information for which public disclosure would be detrimental to public safety, or that the licensee is otherwise prohibited by law from disclosing, the licensee may petition the Commission for a partial or total exemption from inclusion on the centralized portal or website under subsection (a)(2) and in the reports required under subsection (d).

(2) BURDEN.—A licensee seeking an exemption under this subsection bears the burden of justifying the exemption and shall provide clear and convincing evidence to support the requested exemption.

(3) INFORMATION REQUIRED.—If the Commission grants an exemption under this subsection, the licensee shall provide to the Commission—

(A) the publicly releasable information required by subsection (a)(1) for the inventory;

(B) to the maximum extent practicable, a summary description, suitable for public release, of the information for which public disclosure would be detrimental to public safety or that the licensee is prohibited by law from disclosing; and

(C) an annex, under appropriate cover, containing the information that the Commission has determined should be withheld from public disclosure.

(d) INFORMING THE CONGRESS.—

(1) IN GENERAL.—Except as provided in paragraph (3), the NTIA and the Commission shall submit each report required by subsection (a)(1) to the appropriate committees of Congress.

(2) NONDISCLOSURE OF ANNEXES.—Each such report shall be submitted in unclassified form, but may include 1 or more annexes as provided for bysubsections (b)(1)(B)(iii), (b)(2)(B)(iii),

and (c)(3)(C). No Congressional committee may make any such annex available to the public or to any unauthorized person.

(3) CLASSIFIED ANNEXES.—If a report includes a classified annex as provided for by subsection (b)(2)(B)(iii), the NTIA and the Commission shall—

(A) submit the classified annex only to the appropriate committees of Congress with primary oversight jurisdiction for the user agencies or licensees concerned; and

(B) provide notice of the submission to the other appropriate committees of Congress.

(e) DEFINITIONS.—In this section:

(1) APPROPRIATE COMMITTEES OF CONGRESS.—The term "appropriate committees of Congress" means the Committee on Commerce, Science, and Transportation of the Senate, the Committee on Energy and Commerce of the House of Representatives, and any other congressional committee with primary oversight jurisdiction for the user agencies or licensees concerned.

(2) NTIA.—The term "NTIA" means the National Telecommunications and Information Administration.

NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION ORGANIZATION ACT

SEC. 103. ESTABLISHMENT; ASSIGNED FUNCTIONS.

[47 U.S.C. 902]

(a) ESTABLISHMENT.—

(1) ADMINISTRATION.—There shall be within the Department of Commerce an administration to be known as the National Telecommunications and Information Administration.

(2) HEAD OF ADMINISTRATION.—The head of the NTIA shall be an Assistant Secretary of Commerce for Communications and Information, who shall be appointed by the President, by and with the advice and consent of the Senate.

(b) ASSIGNED FUNCTIONS.—

(1) IN GENERAL.—Subject to section 105(d), the Secretary shall assign to the Assistant Secretary and the NTIA responsibility for the performance of the Secretary's communications and information functions.

(2) COMMUNICATIONS AND INFORMATION FUNCTIONS.—Subject to section 105(d), the functions to be assigned by the Secretary under paragraph (1) include (but are not limited to) the following functions transferred to the Secretary by Reorganization Plan Number 1 of 1977 and Executive Order 12046:

(A) The authority delegated by the President to the Secretary to assign frequencies to radio stations or classes of radio stations belonging to and operated by the United States, including the authority to amend, modify, or revoke such assignments, but not including the authority to make final disposition of appeals from frequency assignments.

(B) The responsibility to promote the best possible and most efficient use of electromagnetic spectrum resources across the Federal Government, subject to and consistent with the needs and missions of Federal agencies.

[(B)**]** *(C)* The authority to authorize a foreign government to construct and operate a radio station at the seat

of Government of the United States, but only upon recommendation of the Secretary of State and after consultation with the Attorney General and the Chairman of the Commission.

[(C)] *(D)* Functions relating to the communications satellite system, including authority vested in the President by section 201(a) of the Communications Satellite Act of 1962 (47 U.S.C. 721(a)) and delegated to the Secretary under Executive Order 12046, to—

(i) aid in the planning and development of the commercial communications satellite system and the execution of a national program for the operation of such a system;

(ii) conduct a continuous review of all phases of the development and operation of such system, including the activities of the Corporation;

(iii) coordinate, in consultation with the Secretary of State, the activities of governmental agencies with responsibilities in the field of telecommunications, so as to ensure that there is full and effective compliance at all times with the policies set forth in the Communications Satellite Act of 1962;

(iv) make recommendations to the President and others as appropriate, with respect to steps necessary to ensure the availability and appropriate utilization of the communications satellite system for general governmental purposes in consonance with section 201(a)(6) of the Communications Satellite Act of 1962 (47 U.S.C. 721(a)(6));

(v) help attain coordinated and efficient use of the electromagnetic spectrum and the technical compatibility of the communications satellite system with existing communications facilities both in the United States and abroad;

(vi) assist in the preparation of Presidential action documents for consideration by the President as may be appropriate under section 201(a) of the Communications Satellite Act of 1962 (47 U.S.C. 721(a)), make necessary recommendations to the President in connection therewith, and keep the President informed with respect to the carrying out of the Communications Satellite Act of 1962; and

(vii) serve as the chief point of liaison between the President and the Corporation.

[(D)] *(E)* The authority to serve as the President's principal adviser on telecommunications policies pertaining to the Nation's economic and technological advancement and to the regulation of the telecommunications industry.

[(E)] *(F)* The authority to advise the Director of the Office of Management and Budget on the development of policies relating to the procurement and management of Federal telecommunications systems.

[(F)] *(G)* The authority to conduct studies and evaluations concerning telecommunications research and development and concerning the initiation, improvement, expan-

sion, testing, operation, and use of Federal telecommunications systems and advising agencies of the results of such studies and evaluations.

[(G)] *(H)* Functions which involve—

(i) developing and setting forth, in coordination with the Secretary of State and other interested agencies, plans, policies, and programs which relate to international telecommunications issues, conferences, and negotiations;

(ii) coordinating economic, technical, operational, and related preparations for United States participation in international telecommunications conferences and negotiations; and

(iii) providing advice and assistance to the Secretary of State on international telecommunications policies to strengthen the position and serve the best interests of the United States in support of the Secretary of State's responsibility for the conduct of foreign affairs.

[(H)] *(I)* The authority to provide for the coordination of the telecommunications activities of the executive branch and assist in the formulation of policies and standards for those activities, including (but not limited to) considerations of interoperability, privacy, security, spectrum use, and emergency readiness.

[(I)] *(J)* The authority to develop and set forth telecommunications policies pertaining to the Nation's economic and technological advancement and to the regulation of the telecommunications industry.

[(J)] *(K)* The responsibility to ensure that the views of the executive branch on telecommunications matters are effectively presented to the Commission and, in coordination with the Director of the Office of Management and Budget, to the Congress.

[(K)] *(L)* The authority to establish policies concerning spectrum assignments and use by radio stations belonging to and operated by the United States.

[(L)] *(M)* Functions which involve—

(i) developing, in cooperation with the Commission, a comprehensive long-range plan for improved management of all electromagnetic spectrum resources;

(ii) performing analysis, engineering, and administrative functions, including the maintenance of necessary files and data bases, as necessary for the performance of assigned functions for the management of electromagnetic spectrum resources;

(iii) conducting research and analysis of electromagnetic propagation, radio systems characteristics, and operating techniques affecting the utilization of the electromagnetic spectrum in coordination with specialized, related research and analysis performed by other Federal agencies in their areas of responsibility; and

(iv) conducting research and analysis in the general field of telecommunications sciences in support of as-

signed functions and in support of other Government agencies.

[(M)] *(N)* The authority to conduct studies and make recommendations concerning the impact of the convergence of computer and communications technology.

[(N)] *(O)* The authority to coordinate Federal telecommunications assistance to State and local governments.

[(O)] *(P)* The authority to conduct and coordinate economic and technical analyses of telecommunications policies, activities, and opportunities in support of assigned functions.

[(P)] *(Q)* The authority to contract for studies and reports relating to any aspect of assigned functions.

[(Q)] *(R)* The authority to participate, as appropriate, in evaluating the capability of telecommunications resources, in recommending remedial actions, and in developing policy options.

[(R)] *(S)* The authority to participate with the National Security Council and the Director of the Office of Science and Technology Policy as they carry out their responsibilities under sections 4-1, 4-2, and 4-3 of Executive Order 12046, with respect to emergency functions, the national communication system, and telecommunications planning functions.

[(S)] *(T)* The authority to establish coordinating committees pursuant to section 10 of Executive Order 11556.

[(T)] *(U)* The authority to establish, as permitted by law, such interagency committees and working groups composed of representatives of interested agencies and consulting with such departments and agencies as may be necessary for the effective performance of assigned functions.

(3) ADDITIONAL COMMUNICATIONS AND INFORMATION FUNCTIONS.—In addition to the functions described in paragraph (2), the Secretary under paragraph (1)—

(A) may assign to the NTIA the performance of functions under section 504(a) of the Communications Satellite Act of 1962 (47 U.S.C. 753(a));

(B) shall assign to the NTIA the administration of the Public Telecommunications Facilities Program under sections 390 through 393 of the Communications Act of 1934 (47 U.S.C. 390-393), and the National Endowment for Children's Educational Television under section 394 of the Communications Act of 1934 (47 U.S.C. 394); and

(C) shall assign to the NTIA responsibility for providing for the establishment, and overseeing operation, of a second-level Internet domain within the United States country code domain in accordance with section 157.

SEC. 113. IDENTIFICATION OF REALLOCABLE FREQUENCIES.

[47 U.S.C. 923]

* * * * * * *

(g) RELOCATION OF FEDERAL GOVERNMENT STATIONS.—

[(1) ELIGIBLE FEDERAL ENTITIES.—Any Federal entity that operates a Federal Government station assigned to a band of

frequencies specified in paragraph (2) and that incurs relocation costs because of the reallocation of frequencies from Federal use to non-Federal use shall receive payment for such costs from the Spectrum Relocation Fund, in accordance with section 118 of this Act. For purposes of this paragraph, Federal power agencies exempted under subsection (c)(4) that choose to relocate from the frequencies identified for reallocation pursuant to subsection (a), are eligible to receive payment under this paragraph.]

(1) ELIGIBLE FEDERAL ENTITIES.—Any Federal entity that operates a Federal Government station authorized to use a band of frequencies specified in paragraph (2) and that incurs relocation costs because of planning for a potential auction of spectrum frequencies, a planned auction of spectrum frequencies, or the reallocation of spectrum frequencies from Federal use to exclusive non-Federal use, or shared Federal and non-Federal use shall receive payment for such costs from the Spectrum Relocation Fund, in accordance with section 118 of this Act. For purposes of this paragraph, Federal power agencies exempted under subsection (c)(4) that choose to relocate from the frequencies identified for reallocation pursuant to subsection (a), are eligible to receive payment under this paragraph.

(2) ELIGIBLE FREQUENCIES.—The bands of eligible frequencies for purposes of this section are as follows:

(A) the 216-220 megahertz band, the 1432-1435 megahertz band, the 1710-1755 megahertz band, and the 2385-2390 megahertz band of frequencies; and

[(B) any other band of frequencies reallocated from Federal use to non-Federal use after January 1, 2003, that is assigned by competitive bidding pursuant to section 309(j) of the Communications Act of 1934 (47 U.S.C. 309(j)), except for bands of frequencies previously identified by the National Telecommunications and Information Administration in the Spectrum Reallocation Final Report, NTIA Special Publication 95-32 (1995).]

(B) any other band of frequencies reallocated from Federal use to non-Federal or shared use, whether for licensed or unlicensed use, after January 1, 2003, that is assigned—

(i) by competitive bidding pursuant to section 309(j) of the Communications Act of 1934 (47 U.S.C. 309(j)); or

(ii) as a result of an Act of Congress or any other administrative or executive direction.

[(3) DEFINITION OF RELOCATION COSTS.—For purposes of this subsection, the term ″relocation costs″ means the costs incurred by a Federal entity to achieve comparable capability of systems, regardless of whether that capability is achieved by relocating to a new frequency assignment or by utilizing an alternative technology. Such costs include—

[(A) the costs of any modification or replacement of equipment, software, facilities, operating manuals, training costs, or regulations that are attributable to relocation;

[(B) the costs of all engineering, equipment, software, site acquisition and construction costs, as well as any legitimate and prudent transaction expense, including out-

side consultants, and reasonable additional costs incurred by the Federal entity that are attributable to relocation, including increased recurring costs associated with the replacement facilities;

[(C) the costs of engineering studies, economic analyses, or other expenses reasonably incurred in calculating the estimated relocation costs that are provided to the Commission pursuant to paragraph (4) of this subsection;

[(D) the one-time costs of any modification of equipment reasonably necessary to accommodate commercial use of such frequencies prior to the termination of the Federal entity's primary allocation or protected status, when the eligible frequencies as defined in paragraph (2) of this subsection are made available for private sector uses by competitive bidding and a Federal entity retains primary allocation or protected status in those frequencies for a period of time after the completion of the competitive bidding process; and

[(E) the costs associated with the accelerated replacement of systems and equipment if such acceleration is necessary to ensure the timely relocation of systems to a new frequency assignment.]

(3) DEFINITION OF RELOCATION AND SHARING COSTS.—For purposes of this subsection, the terms "relocation costs" and "sharing costs" mean the costs incurred by a Federal entity to plan for a potential or planned auction or sharing of spectrum frequencies to achieve comparable capability of systems, regardless of whether that capability is achieved by relocating to a new frequency assignment, relocating a Federal Government station to a different geographic location, modifying Federal Government equipment to mitigate interference or use less spectrum, in terms of bandwidth, geography, or time, and thereby permitting spectrum sharing (including sharing among relocated Federal entities and incumbents to make spectrum available for non-Federal use) or relocation, or by utilizing an alternative technology. Comparable capability of systems includes the acquisition of state-of-the art replacement systems intended to meet comparable operational scope, which may include incidental increases in functionality, including those necessary to achieve security, reliability, and resiliency. Such costs include—

(A) the costs of any modification or replacement of equipment, spares, associated ancillary equipment, software, facilities, operating manuals, training costs, or regulations that are attributable to relocation or sharing;

(B) the costs of all engineering, equipment, software, site acquisition, and construction costs, as well as any legitimate and prudent transaction expense, including term-limited Federal civil servant and contractor staff necessary to carry out the relocation activities of an eligible Federal entity, and reasonable additional costs incurred by the Federal entity that are attributable to relocation or sharing, including increased recurring costs associated with the replacement of facilities;

(C) the costs of research, engineering studies, economic analyses, or other expenses reasonably incurred in connection with—

(i) calculating the estimated relocation costs that are provided to the Commission pursuant to paragraph (4) of this subsection, or in calculating the estimated sharing costs;

(ii) determining the technical or operational feasibility of relocation to 1 or more potential relocation bands; or

(iii) planning for or managing a relocation or sharing project (including spectrum coordination with auction winners) or potential relocation or sharing project;

(D) the one-time costs of any modification of equipment reasonably necessary to accommodate commercial use of shared frequencies or, in the case of frequencies reallocated to exclusive commercial use, prior to the termination of the Federal entity's primary allocation or protected status, when the eligible frequencies as defined in paragraph (2) of this subsection are made available for private sector uses by competitive bidding and a Federal entity retains primary allocation or protected status in those frequencies for a period of time after the completion of the competitive bidding process;

(E) the costs associated with the accelerated replacement of systems and equipment if such acceleration is necessary to ensure the timely relocation of systems to a new frequency assignment or the timely accommodation of sharing of Federal frequencies; and

(F) the costs of the use of commercial systems (including systems not utilizing spectrum) to replace Federal systems discontinued or relocated pursuant to this Act, including lease (including lease of land), subscription, and equipment costs over an appropriate period, such as the anticipated life of an equivalent Federal system or other period determined by the Director of the Office of Management and Budget.

(4) NOTICE TO COMMISSION OF ESTIMATED RELOCATION COSTS.—

(A) The Commission shall notify the NTIA at least 18 months prior to the commencement of any auction of eligible frequencies defined in paragraph (2). At least 6 months prior to the commencement of any such auction, the NTIA, on behalf of the Federal entities and after review by the Office of Management and Budget, shall notify the Commission of estimated relocation costs and timelines for such relocation.

(B) Upon timely request of a Federal entity, the NTIA shall provide such entity with information regarding an alternative frequency assignment or assignments to which their radiocommunications operations could be relocated for purposes of calculating the estimated relocation costs and timelines to be submitted to the Commission pursuant to subparagraph (A).

(C) To the extent practicable and consistent with national security considerations, the NTIA shall provide the information required by subparagraphs (A) and (B) by the geographic location of the Federal entities' facilities or systems and the frequency bands used by such facilities or systems.

(5) NOTICE TO CONGRESSIONAL COMMITTEES AND GAO.—The NTIA shall, at the time of providing an initial estimate of relocation costs to the Commission under paragraph (4)(A), submit to [the] Committees on Appropriations and Energy and Commerce of the House of Representatives for approval, to the Committees on Appropriations and Commerce, Science, and Transportation of the Senate for approval, and to the Comptroller General a copy of such estimate and the timelines for relocation. Unless disapproved within 30 days, the estimate shall be approved. If disapproved, the NTIA may resubmit a revised initial estimate.

(6) IMPLEMENTATION OF PROCEDURES.—The NTIA shall take such actions as necessary to ensure the timely relocation of Federal entities' spectrum-related operations from frequencies defined in paragraph (2) to frequencies or facilities of comparable capability. Upon a finding by the NTIA that a Federal entity has achieved comparable capability of systems by relocating to a new frequency assignment or by utilizing an alternative technology, the NTIA shall terminate the entity's authorization and notify the Commission that the entity's relocation has been completed. The NTIA shall also terminate such entity's authorization if the NTIA determines that the entity has unreasonably failed to comply with the timeline for relocation submitted by the Director of the Office of Management and Budget under section 118(d)(2)(B).

(7) SPECTRUM SHARING.—A Federal entity is permitted to allow access to its frequency assignments by a non-Federal entity upon approval of NTIA, in consultation with the Director of the Office of Management and Budget. Such non-Federal entities shall comply with all applicable rules of the Commission and the NTIA, including any regulations promulgated pursuant to this section. Any remuneration associated with such access shall be deposited into the Spectrum Relocation Fund established under section 118. A Federal entity that incurs costs as a result of such access is eligible for payment from the Fund for the purposes specified in paragraph (3) of this section. The revenue associated with such access shall be at least 110 percent of the estimated Federal costs.

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SEC. 118. SPECTRUM RELOCATION FUND.

[47 U.S.C. 928]

(a) ESTABLISHMENT OF SPECTRUM RELOCATION FUND.—There is established on the books of the Treasury a separate fund to be known as the "Spectrum Relocation Fund" (in this section referred to as the "Fund"), which shall be administered by the Office of Management and Budget (in this section referred to as "OMB"), in consultation with the NTIA.

(b) CREDITING OF RECEIPTS.—The Fund shall be credited with the amounts specified in section 309(j)(8)(D) of the Communications Act of 1934 (47 U.S.C. 309(j)(8)(D)) *and any payments made by non-Federal entities for access to Federal spectrum pursuant to section 113(g)(7) (47 U.S.C. 113(g)(7))*.

[(c) USED TO PAY RELOCATION COSTS.—The amounts in the Fund from auctions of eligible frequencies are authorized to be used to pay relocation costs, as defined in section 113(g)(3) of this Act, of an eligible Federal entity incurring such costs with respect to relocation from those frequencies.]

(c) USE OF FUNDS.—

(1) FUNDS FROM AUCTIONS.—The amounts in the Fund from auctions of eligible frequencies are authorized to be used to pay relocation costs, as such costs are defined in section 113(g)(3), of an eligible Federal entity incurring such costs with respect to relocation from any eligible frequency.

(2) FUNDS FROM PAYMENTS BY NON-FEDERAL ENTITIES.—The amounts in the Fund from payments by non-Federal entities for access to Federal spectrum are authorized to be used to pay the sharing costs, as such costs are defined in section 113(g)(3), of an eligible Federal entity incurring such costs.

(3) TRANSFER OF FUNDS.—

(A) IN GENERAL.—Subject to subparagraph (B), the Director of OMB may transfer at any time (including prior to any auction or contemplated auction, or sharing initiative) such sums as may be available in the Fund to an eligible Federal entity to pay eligible relocation or sharing costs related to pre-auction estimates or research, as such costs are described in section 113(g)(3)(C).

(B) NOTIFICATION.—No funds may be transferred pursuant to subparagraph (A) unless the notification provided under subsection (d)(2)(B) of this section includes a certification from the Director of OMB that—

(i) funds transferred before an auction will likely allow for a timely relocation, thereby increasing net expected auction proceeds by an amount equal to or greater than the time value of the amount of funds transferred; and

(ii) the auction is intended to occur within 5 years of transfer of funds.

(C) APPLICABILITY.—

(i) PRIOR COSTS INCURRED.—The Director of OMB may transfer up to $10,000,000 to eligible Federal entities for eligible relocation or sharing costs related to pre-auction estimates or research, as such costs are described in section 113(g)(3)(C), for costs incurred prior to the date of the enactment of the Public Safety Spectrum and Wireless Innovation Act, but after June 28th, 2010.

(ii) SUPPLEMENT NOT SUPPLANT.—Any amounts transferred by the Director of OMB pursuant to clause (i) shall be in addition to any amounts that the Director of OMB may transfer after the date of the enactment of the Public Safety Spectrum and Wireless Innovation Act.

(d) FUND AVAILABILITY.—

(1) APPROPRIATION.—There are hereby appropriated from the Fund such sums as are required to pay the relocation *and sharing* costs specified in subsection (c).

(2) TRANSFER CONDITIONS.—None of the funds provided under this subsection may be transferred to any eligible Federal entity—

(A) unless the Director of OMB has determined, in consultation with the NTIA, the appropriateness of such costs and the timeline for relocation; and

(B) until 30 days after the Director of OMB has submitted to the Committees on Appropriations and Energy and Commerce of the House of Representatives for approval, to the Committees on Appropriations and Commerce, Science, and Transportation of the Senate for approval, and to the Comptroller General a detailed plan describing specifically how the sums transferred from the Fund will be used to pay relocation *and sharing* costs in accordance with such subsection and the timeline for such relocation *and sharing*.

Unless disapproved within 30 days, the amounts in the Fund shall be available immediately. If the plan is disapproved, the Director may resubmit a revised plan.

[(3) REVERSION OF UNUSED FUNDS.—Any auction proceeds in the Fund that are remaining after the payment of the relocation costs that are payable from the Fund shall revert to and be deposited in the general fund of the Treasury not later than 8 years after the date of the deposit of such proceeds to the Fund.]

(3) REVERSION OF UNUSED FUNDS.—

(A) IN GENERAL.—Any amounts in the Fund that are remaining after the payment of the relocation and sharing costs that are payable from the Fund shall revert to and be deposited in the General Fund of the Treasury not later than 8 years after the date of the deposit of such proceeds to the Fund, unless within 60 days in advance of the reversion of such funds, the Director of OMB, in consultation with the Assistant Secretary for Communications and Information, notifies the appropriate committees of Congress that such funds are needed to complete or to implement current or future relocations or sharing initiatives.

(B) DEFINITION.—In this paragraph, the term "appropriate committees of Congress" means—

(i) the Committee on Appropriations of the Senate;

(ii) the Committee on Commerce, Science, and Transportation of the Senate;

(iii) the Committee on Appropriations of the House of Representatives; and

(iv) the Committee on Energy and Commerce of the House of Representatives.

(e) TRANSFER TO ELIGIBLE FEDERAL ENTITIES.—

(1) TRANSFER.—

(A) Amounts made available pursuant to subsection (d) shall be transferred to eligible Federal entities, as defined in section 113(g)(1) of this Act.

(B) An eligible Federal entity may receive more than one such transfer, but if the sum of the subsequent transfer or transfers exceeds 10 percent of the original transfer—

(i) such subsequent transfers are subject to prior approval by the Director of OMB as required by subsection (d)(2)(A);

(ii) the notice to the committees containing the plan required by subsection (d)(2)(B) shall be not less than 45 days prior to the date of the transfer that causes such excess above 10 percent; and

(iii) such notice shall include, in addition to such plan, an explanation of need for such subsequent transfer or transfers.

(C) Such transferred amounts shall be credited to the appropriations account of the eligible Federal entity which has incurred, or will incur, such costs, and shall, subject to paragraph (2), remain available until expended.

(2) RETRANSFER TO FUND.—An eligible Federal entity that has received such amounts shall report its expenditures to OMB and shall transfer any amounts in excess of actual relocation *and sharing* costs back to the Fund immediately after the NTIA has notified the Commission that the entity's relocation *and sharing* is complete, or has determined that such entity has unreasonably failed to complete such relocation *and sharing* in accordance with the timeline required by subsection (d)(2)(A).

(f) ADDITIONAL PAYMENTS FROM THE FUND.—Notwithstanding subsections (c) through (e), after the date of the enactment of the Public Safety Spectrum and Wireless Innovation Act, and following the credit of any amounts specified in subsection (b), there are hereby appropriated from the Fund and available to the Director of the OMB up to 10 percent of the amounts deposited in the Fund from the auction of licenses for frequencies of spectrum vacated by Federal entities, or up to 10 percent of the amounts deposited in the Fund by non-Federal entities for sharing of Federal spectrum. The Director of OMB, in consultation with the Assistant Secretary for Communications and Information, may use such amounts to pay eligible Federal entities for the purpose of encouraging timely access to such spectrum, provided that—

(1) any such payment by the Director of OMB is based on the market value of the spectrum, the timeliness with which the licensee cleared its use of such spectrum, and the need for such spectrum in order for the Federal entity to conduct its essential missions;

(2) any such payment by the Director of OMB is used to carry out the purposes specified in subparagraphs (A) through (F) of paragraph (3) of subsection 113(g) to achieve enhanced capability for those systems affected by reallocation of Federal spectrum to commercial use, or by sharing of Federal frequencies with non-Federal entities;

(3) the amount remaining in the Fund after any such payment by the Director is not less than 10 percent of the winning bids in the relevant auction, or is not less than 10 percent of the payments from non-Federal entities in the relevant sharing agreement; and

(4) any such payment by the Director shall not be made until 30 days after the Director has notified the Committees on Appropriations and Commerce, Science, and Transportation of the Senate, and the Committees on Appropriations and Energy and Commerce of the House of Representatives.

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