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Spectrum Management and Special Funds

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Summary

The Commercial Spectrum Enhancement Act (P.L. 108-494, Title II) establishes a Spectrum Relocation Fund to hold the proceeds of certain spectrum auctions for the specific purpose of reimbursing federal entities for the costs of moving to new frequency assignments. The spectrum to be vacated will be sold to wireless service providers to expand advanced communications services. In addition to furthering the development of new wireless technologies, passage of the act represents a new aspect of national policy for spectrum management by linking spectrum auction proceeds to specific funding programs. The Communications Act of 1934, which the Commercial Spectrum Enhancement Act amends, directs that all auction proceeds be paid to the Treasury for use as general funds.

Building on the precedent of establishing a trust fund to pay for specific purposes, Representative Stupak has introduced the Public Safety Interoperability Implementation Act (H.R. 1323), a bill that would place some auction proceeds in trust for grants to improve public safety communications. Senator Dodd and Representative Regula have proposed using auction revenue to fund a variety of initiatives for applied technology in educational and cultural programs (S. 1023, Digital Opportunity Investment Trust Act). Senator Olympia J. Snowe has introduced a bill (S. 1600) that would help low-power television stations convert to digital broadcasting technology with funds coming from spectrum sale proceeds. Also related to the conversion to digital TV broadcasting, the SAVE LIVES Act (S. 1268, Senator McCain), while not creating a special fund, would require that some spectrum auction proceeds be set aside for specific purposes.

The Commercial Spectrum Enhancement Act additionally requires the Government Accountability Office to study spectrum allocation processes and to make recommendations to Congress about possible changes. Supplementing auctions as the primary mechanism for allocating spectrum and for generating revenue from spectrum resources would represent a shift in public policy regarding spectrum management.

This report covers some of the issues of spectrum management and special funds. and will be updated.

Background

Radio frequency spectrum allocation policy within the United States is coordinated primarily through the Federal Communications Commission (FCC) — for private use, including state and local public safety wireless communications — and the National Telecommunications and Information Administration (NTIA) — for federal use. Spectrum management goals include balancing diverse concerns such as technical quality, economic benefit, fairness, access, security, and global competitiveness. Many economic models for providing the "highest and best use" for spectrum exist and have been tried, both in the United States and worldwide. Spectrum for what is widely described as "prime" frequencies (300 MHz - 3000 MHz)[1] is judged by many to be the most commercially desirable and is widely sought after at auction.[2] The Congressional Budget Office has estimated that auctions for fiscal years 2006-2015 will raise $15 billion for the federal treasury, applied to general revenue.[3] Much of this will come from auctions for advanced wireless telecommunications services. The current authority of the FCC to stage auctions expires at the end of FY2007. The FCC, Congress, and the Administration are reviewing spectrum allocation policies.

Spectrum Management and Auction Proceeds

Current broadcast and wireless communications technology requires the assignment of specific frequencies to prevent interference among transmissions. Preventing interference while fostering spectrum policies that promote public benefits and economic growth have been key bulwarks of spectrum policy and management for the FCC since its creation. Using auctions as a market-driven approach to spectrum allocation is a fairly recent innovation. The Communications Act of 1934, as modified primarily by the Balanced Budget Act of 1997, governs spectrum allocation and auction requirements in the United States. It directs the FCC to hold auctions and to deposit the proceeds in the general fund of the Treasury. Spectrum policy that designates auction proceeds for specific uses is a departure from existing — albeit recent — practice.[4]

Whenever spectrum reallocation is desirable or necessary because of changes in technology, spectrum value, or other factors, some mechanism — such as a trust fund — might be considered a necessary component of spectrum management and policy in order to compensate organizations that cannot recover costs through pricing. On the assumption that spectrum reallocation is an integral part of spectrum management, and

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[1] Spectrum is segmented into bands of radio frequencies and typically measured in cycles per second, or hertz; one million hertz = 1 megahertz (MHz); 1 billion hertz = 1 gigahertz (GHz).

[2] Federal Communications Commission, Office of Plans and Policy, OPP Working Paper Series No. 38, "A Proposal for a Rapid Transition to Market Allocation of Spectrum," November 2002 [http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-228552A1.pdf]. Viewed February 17, 2005.

[3] CBO annually provides an estimate of aggregated revenue from spectrum auctions. The most recent estimate is provided in *The Budget and Economic Outlook: Fiscal Years 2006-2015*, Table 3-4, January 2005.

[4] In supporting the creation of the Spectrum Relocation Fund for federal users, Rep. Tauzin, House Energy and Commerce Committee chairman, noted that it "does not reflect normal Congressional process," in that it encroaches on the authority of the Appropriations Committees, as reported by Communications Daily, April 10, 2003.

recognizing that relocation costs can climb to billions of dollars in some sectors, the need to create reimbursement programs could be considered part of spectrum policy.

Spectrum Relocation Fund

The purpose of the Spectrum Relocation Fund is to create a mechanism whereby federal agencies can recover the costs of moving from one spectrum band to another. The interest in relocating federal users — and accelerating the process by assuring reimbursement for the costs of moving — centers on valuable spectrum (relative to auction prices for comparable spectrum in the United States and other countries) now used by federal agencies, especially the Department of Defense. In particular, spectrum in bands within the 1710-1850 MHz range is sought by wireless telecommunications companies to facilitate the implementation of next-generation wireless technologies, including high-speed mobile services (3G). After much study, the NTIA and the FCC, aided by an Intra-Government 3G Planning Group, announced plans that would transfer spectrum in the 1710-1755 MHz range from federal agencies. Frequencies in this band would be made available to the private sector through spectrum auctions conducted by the FCC. As part of the effort, the need was identified for new legislation that would permit affected federal agencies to recover costs directly from these auction proceeds. To meet this need, in mid-2002 the Department of Commerce proposed the creation of a Spectrum Relocation Fund. This fund could provide a means to make it possible for federal agencies to recover relocation costs directly from auction proceeds when they are required to vacate spectrum slated for commercial auction. In effect, successful commercial bidders are expected to cover the costs of relocation. To accomplish the NTIA and FCC goals required modification of the Communications Act of 1934, to permit the agencies direct access to auction funds. This was accomplished with the passage of the Commercial Spectrum Enhancement Act, Title II of P.L. 108-494.

Among key provisions of the act are requirements that the auctions must recoup at least 110% of the projected costs,[5] and that unused funds will revert to the Treasury after eight years[6] Specific frequencies mentioned include not only the 1710-1755 MHz band but also other federally-used frequencies scheduled for reallocation and possible auction.[7] The Communications Act of 1934 is amended to create a Spectrum Relocation Fund within the Treasury to hold auction proceeds as designated.[8] The fund is to be administered by the Office of Management and Budget.[9] Proceeds from auctions of designated spectrum are to go into the fund.[10] The act requires that the FCC start the process by notifying the NTIA at least 18 months in advance of a planned auction.[11] Shortly after President George W. Bush signed the Spectrum Enhancement Act into law, the FCC notified the NTIA of plans to auction frequencies in the 1710-1755 MHz band

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[5] P.L. 108-494, Title II, Sec. 203 (a) (3) and (b).

[6] P.L. 108-494, Title II, Sec. 204, ‘Sec. 118 ‘(d) ‘(3).

[7] P.L. 108-494, Title II, Sec. 202 ‘(2).

[8] P.L. 108-494, Title II, Sec. 204, ‘Sec. 118.

[9] P.L. 108-494, Title II, Sec. 204, ‘Sec. 118 ‘(a).

[10] P.L. 108-494, Title II, Sec. 203, (c).

[11] P.L. 108-494, Title II, Sec. 202 (4) (a).

as early as June 2006.[12] Under the act, the NTIA is to provide the FCC with estimated costs and timelines for relocation at least six months prior to the proposed auction date.[13]

Proposed Trust Funds

The Commercial Spectrum Enhancement Act facilitates the clearance of spectrum for new uses by providing a means to cover the costs of relocating existing users. Its enactment also establishes the precedent of linking spectrum revenues to specific expenditures and the needs of certain users. Representative Bart Stupak has proposed a trust fund for public safety communications. Senator Christopher J. Dodd and Representative Ralph Regula have introduced bills to fund technology for educational and cultural purposes. Senator Olympia J. Snowe has introduced a bill that would help low-power television stations convert to digital broadcasting technology with funds coming from spectrum sale proceeds. Also related to the conversion to digital TV broadcasting, the SAVE LIVES Act (Senator McCain), while not creating a special fund, would require that some spectrum auction proceeds be set aside for specific purposes.

Public Safety Communications. The Public Safety Interoperability Implementation Act (H.R. 1323, Representative Stupak)[14] would establish in the U.S. Treasury a Public Safety Communications Trust Fund to be funded in part with annual appropriations of $500 million for each of three fiscal years, and in part with a percentage of certain spectrum auction proceeds. The fund is to be administered by the NTIA, in consultation with a board of five directors appointed by the Secretary of Commerce. The board is to consult with the Department of Homeland Security, which may also be represented by one or more members on the board. The NTIA Administrator is to make grants from the fund "to implement interoperability and modernization . . . for the communications needs" of public safety organizations and related agencies or entities. Preference for grants is to be given to those proposing inter-agency or regional and multi-jurisdictional interoperability programs.

Educational and Cultural Programs. The Digital Opportunity Investment Trust Act (S. 1023, Senator Dodd and H.R. 2512, Representative Regula) would establish a not-for-profit corporation under the laws of the District of Columbia. The Treasury would, on a quarterly basis, transfer 30% of spectrum-related revenue received in the previous quarter to an account established for the trust. This amount would be derived form auction proceeds, fees, and any other revenue generated by the sale, transfer or use of radio frequency spectrum. The program would begin with the first quarter of FY2008 and continue through FY2028.[15] The nine-member board of directors would be appointed by the President, based on recommendations submitted by the Majority and Minority leaders of the House and Senate. Primary uses of the fund would be in support of 1)digitizing of collections held by libraries, public television stations, universities,

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[12] "FCC to Commence Spectrum Auction That Will Provide American Consumers New Wireless Broadband Services," FCC News, December 29, 2004 at [http://www.fcc.gov].

[13] P.L. 108-494, Title II, Sec. 202 (4) (a).

[14] For a discussion of interoperability and its role in public safety communications, see CRS Report RL32594, *Public Safety Communications: Policy, Proposals, Legislation and Progress*.

[15] S. 1023, Sec. 3 (b) (2).

museums, and other cultural institutions; 2) creating innovative learning and assessment systems; (3) assessing the legal and regulatory environment for the rapid development of new technologies for learning; and 4) coordinating and disseminating information about federal programs that focus on using technology for education. The bill would also create a separate account to receive part of the interest earned on investments held by the trust. The money from this account would go to the Corporation for Public Broadcasting, which would distribute these funds in the form of grants.

Digital Television Transition. The Spectrum Availability for Emergency-response and Law-enforcement to Improve Vital Emergency Services, or SAVE LIVES Act (S. 1268, Senator McCain), is intended to facilitate the release of spectrum held by broadcasters and address issues of the transition from analog to digital broadcast technology (a process that will free spectrum for public safety use and auctions to the private sectors). The bill covers many aspects of concern in carrying out the transition to digital TV. The bill, for example, would establish criteria for distributing set-top converter boxes and authorizes funds for the program. These funds would be paid out from revenue generated by the auction of designated spectrum. The bill would also allow spectrum auction proceeds to be allocated to a grant program to improve communications interoperability for first responders. To ensure that the FCC has the authority to conduct the auction of the designated radio frequencies, the bill would extend the auction authority of the FCC until September 30, 2009.

Concerned that plans have lagged for converting low-power television broadcasts from analog to digital technology, Senator Olympia J. Snowe has introduced a bill (S. 1600, Digital Translator and Low Power Television Transition) to ensure full access to digital television in areas served by low-power television. Eligible TV stations would receive funds for upgrading from a trust fund set up with auction proceeds.

Spectrum Policy in the 109th Congress

The 109th Congress could decide to examine broader policy changes in spectrum management, auction policies, the use of trust funds, and the application of revenues generated by spectrum licensing. For example, Congress could consider the issue of whether the goal of the federal government to manage spectrum for the benefit of all is at odds with other federal goals to maximize general funds in the Treasury. Spectrum is categorized by most as a natural resource.[16] Some have proposed that spectrum should be managed more closely as a publicly-owned resource, specifically linked to public benefits. Such an approach would represent a departure from current FCC policy that is considered by some to show a trend toward transferring the benefits of spectrum use to the private sector, with a level of control that would be similar to ownership.

Congress, in the Commercial Spectrum Enhancement Act, requires the Comptroller General of the Government Accountability Office (GAO) to examine "national commercial spectrum policy as implemented by the Federal Communications

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[16] The Code of Federal Regulations defines natural resources as "land, fish, wildlife, biota, air, water, ground water, drinking water supplies and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States..." (15 CFR990, Section 990.30.)

Commission" and report on its finding before October 2005.[17] The GAO is to examine the impact of auctioning licenses on the economic climate for broadcast and wireless technologies. It is to assess whether the holders of spectrum licenses received before the auction process was instituted (i.e., largely for free) have an economic advantage over license holders that have purchased spectrum through the auction process. The GAO is also to evaluate whether the disparate methods of allocating spectrum have had an adverse impact on the introduction of new services. The conclusions of the study are to be reviewed in the context of an Administration proposal to introduce license user fees on assigned (not auctioned) licenses. The GAO is also to provide an evaluation for Congress regarding the impact of assessing license fees on the competitive climate in the wireless and broadcast industries.[18] The information and evaluations provided by the GAO to Congress could contribute to the broader discussion of policy tools, possibly including the use of trust funds, for spectrum management.

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[17] P.L. 108-494, Title II, Sec. 209 (a).

[18] The President's budget for FY2004 and again for 2006 proposed that 1) the FCC's authority to conduct auctions be extended indefinitely; 2) user fees be levied on unauctioned licensed spectrum; and 3) broadcasters pay an annual lease fee on analog TV spectrum that they are holding as part of the Congressionally-mandated transition to digital television. In the 2006 Budget, the President also proposed that the Telecommunications Development Fund be terminated and its assets returned to the Treasury. (See The Budget for Fiscal Year 2006, pp. 329-330.) The Telecommunications Development Fund is funded by interest earned on good-faith deposits made by spectrum auction participants. Its objective is to invest in promising telecommunications technologies through support of start-ups and other companies. (See [http://www.tdfund.com]). In his budget for 2005, the President supported proposals for indefinitely extending the FCC's auction authority and giving the FCC the authority to set user fees on unauctioned spectrum.