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Spectrum Auctions and Deficit Reduction: FY2006 Budget Reconciliation

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Summary

Congressional policymakers are seeking a way to accelerate the nation's transition to digital television and to expedite the transfer of certain radio frequency channels from the broadcast industry to public safety and commercial users no later than 2009. The Congressional Budget Office has informally estimated a value of $10 billion from auction proceeds for these commercial channels; many believe the amount could be higher. Broadcasters are holding this valuable spectrum (channels 52-69) but would be required to relinquish it after the transition to digital television (DTV) is achieved. Without a hard deadline, the transition to digital television has been delayed and the spectrum has not been made available for other uses. Congress anticipates applying some of the proceeds received from auctions of the spectrum to be cleared to help meet deficit-reduction goals passed in H.Con.Res. 95. Consequently, some of the legislation deemed necessary to assure a timely transition to digital television has been proposed for inclusion in the FY2006 budget reconciliation process. The Senate is considering some measures as provided in budget reconciliation bill S. 1932

The transition to digital television has two major policy components. One set of policy decisions is concerned with how best to move television broadcasters and their viewers to digital technology. The other key policy issues deal with spectrum management and allocation. Briefly discussed below are key points about the transition process and its possible impact on budget reconciliation negotiations. This report will be updated over the course of the reconciliation procedure.

Budget Reconciliation

Not all the issues that Congress would like to resolve regarding the transition to digital television will be considered as part of the budget reconciliation process; these will be treated in other bills being prepared for introduction. The House Committee on Energy

and Commerce marked up the Digital Television Transition Act of 2005 (referred to herein as House DTV Bill)[1] on October 26, 2005. Some of its provisions are comparable to those approved by the Senate Committee on Commerce, Science and Transportation on October 20 and included in the Deficit Reduction Omnibus Reconciliation Act of 2005 (S. 1932, Senator Gregg). Legislative solutions that are under consideration as part of budget reconciliation are:

- Set a definite date for the release of spectrum at 700 MHz[2] currently held by broadcasters. Senate budget reconciliation would establish April 7, 2009 as the date (S. 1932, Sec. 3002); House DTV Bill would set a deadline of December 31, 2008. [Sec. 103, (a) (1).]

- Require auctions by the Federal Communications Commission (FCC) of the freed spectrum and set a time period for the auctions to occur. The Senate budget reconciliation would require auctions to begin by January 28, 2008 [S. 1932, Sec. 3003 (a)]; the House DTV Bill would commence auctions not later than January 7, 2008, with funds deposited not later than June 30, 2008. [Sec. 104. (a) "(v)].

- The FCC's authority to hold auctions expires in 2007; therefore this authority must be renewed or extended. Senate budget reconciliation would extend FCC auction authority until September 30, 2009 [S. 1932, Sec. 3003 (b)]; House DTV Bill would repeal the section of the Communications Act that sets a termination date for auction authority. [Sec. 104 (b)].

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[1] Citations attributed to House DTV Bill are from Committee Print, dated October 20, 2005.

[2] Wireless (radio frequency) spectrum is measured in cycles per second, or hertz (Hz). Standard abbreviations for measuring frequencies include kHz — kilohertz or thousands of hertz; MHz — megahertz, or millions of hertz; and GHz — gigahertz, or billions of hertz.

- Require that all the available channels in the 700 MHz band be auctioned.[3] The language in the Senate bill [S. 1932, Sec. 3003 (a) '(vi)]is comparable to the House DTV bill [Sec. 104 (a) "(vi)]; both specify that available channels be auctioned but do not explicitly provide a band plan for allocating those channels. The House DTV bill, however, was amended (Representative Cubin) to require the FCC to revise its band plan to auction 12 MHz of spectrum in Block B under rules that would encourage regional and local wireless companies to participate. A Senate bill (S. 1767, Senator Snowe) would require the FCC to create a new band plan for Blocks A, B and E with the similar objective of favoring smaller wireless companies.

- Commit money from any auction(s) of spectrum at 700 MHz, scheduled to take place not later than FY2010, to reducing the budget deficit as specified in H.Con.Res. 95.[4]

- Create a fund to receive a portion of spectrum auction revenue to cover some of the costs to consumers of conversion to digital TV and for other purposes. The Senate budget reconciliation would set aside up to $3 billion toward paying for the cost of a program for consumers and up to $1.9 billion for public safety-related programs, including $1 billion to fund improvements in emergency communications interoperability [S. 1932, Sec. 3005 (c)]. These distributions would extend past 2010. The House DTV Bill would place $990,000 million in a fund to pay for a program to help households buy converter boxes that will receive digital signals on analog TV sets. [Sec. 105 (a) (3).] A public safety communications trust fund would receive $500 million. (Amendment, Representative Upton).

- Sections of S. 1932 provided by the Senate Committee on Commerce, Science and Transportation that have no parallel in the House DTV bill are 1) a requirement for the FCC to assess spectrum use license holders additional fees for FY2006 of $10 million and 2) a possible allocation of $15 million to the essential air service program of the Department of Transportation for fiscal years 2006 through 2010 (S. 1932, Sec. 3006).

Value of the Spectrum

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[3] As presently configured, 874 licenses in 60 MHz could be available for auction. Of these, 280 licenses are considered encumbered by television broadcast stations. Source: 700 MHz Advancement Coalition at [http://www.700MHz.org/700_MHz_band.htm]. Viewed October 19, 2005.

[4] For the House Committee on Energy and Commerce, the total commitment could be $14,734,000,000 for fiscal years 2006 through 2010; H.Con.Res 95, Concurrent Resolution on the Budget for Fiscal Year 2006, Title II, Sec. 201 (a) (2) (C). Reconciliation instructions call for a net contribution toward the deficit of $4.080 billion from Energy and Commerce Committee; Senate budget reconciliation sets the amount from Commerce Committee at $5 billion [S. 1932, Sec. 3005, (d)].

Wireless technology is evolving rapidly and in recent years the industry has moved into offering high-speed, content-rich services generally known as 3G (third generation) while at the same time preparing to offer new services using even more advanced technologies. The 700 MHz spectrum that is to be relinquished by broadcasters is widely considered to be especially desirable for advanced wireless services. Also, many states are waiting for the spectrum to be freed in order to follow up on their plans for robust, interoperable public safety communications networks. Furthermore, digital television represents a superior form of technology, both in its efficient use of spectrum and the quality of the picture it provides. The value of the auction revenue in reducing the budget deficit is also a benefit. Overall, the benefits of releasing spectrum now used for analog TV broadcasting to complete the switch to digital are considered to be substantial, outweighing the costs of conversion.

In considering the potential revenue from spectrum sales, reconciliation negotiators could decide to review the probable value of the channels. The Congressional Budget Office has reportedly set a benchmark estimate of $10 billion in revenue from auction of this spectrum.[5] Other estimates have projected that spectrum auctions in the 700 MHz band would gross $20 billion to $30 billion.[6] A significant factor in valuing spectrum is the size of the market served. Usually this value is expressed in terms of dollars per MHz-Population. Using this methodology, a value of $1.65 per MHz-Population, for example, yields a potential value of $28 billion for 60 MHz of spectrum at 700 MHz. Dollar per MHz-Population estimates for upcoming auctions are derived from results of earlier auctions for similar spectrum. This estimated value is then typically increased or decreased depending on assumptions about a number of variables. The different weight that analysts give to the impact of hard-to-measure market conditions largely explains the range in valuations. For example, poor economic conditions may depress all markets and put downward pressure on prices for spectrum, just as an exuberant market — eager to implement new technology — may place an unusually high value on obtaining new licenses. The usability of spectrum is an important factor as well. There is a disincentive to invest in a non-performing asset, such as spectrum that is blocked by other users, or spectrum that does not serve an immediate market because new technology is not ready for deployment. In the case of spectrum at 700 MHz, some analysts have expressed concern that there is significant risk that the spectrum will remain encumbered, despite hard dates for the switch to digital, thereby tying up resources indefinitely.

Background

Recent Legislative History. Consideration of spectrum issues in the current budget resolution is one step in a long process of introducing digital television (DTV) technology that extends over more than a decade. The Telecommunications Act of 1996 (P.L. 104-104) provided that eligibility for DTV licenses should be limited initially to existing broadcasters. Digital signals cannot be transmitted with existing analog television technology. Therefore, broadcasters were issued additional licenses for new, DTV broadcast channels while continuing to broadcast on existing channels during the

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[5] "Estimates Vary on Value of Spectrum," by Drew Clark, Technology Daily, August 1, 2005.

[6] "Analysis of an Accelerated Digital Television Transition," prepared by the Analysis Group, sponsored by Intel Corporation, May 31, 2005, page 6 at [http://www.itic.org/archives/DTV%20Transition%20Report.pdf]. Viewed August 30, 2005.

transition period. The old, analog licenses were to be returned to the federal government after the transition to DTV. In the Balanced Budget Act of 1997 (P.L. 105-33), Congress set a deadline of December 31, 2006 to complete the transition from analog to digital television but allowed several exceptions that can extend that deadline. The most critical exception is the establishment of a threshold of 85% for the percentage of households, by market, that must be able to receive digital signals before the licenses for analog broadcasts must be relinquished.

Given the slower-than-expected rate of adoption for DTV in American homes, few believe that the goal of over-the-air digital television in 85% of American households by 2006 will be reached. As a result — under the Balanced Budget Act — television stations will be able to broadcast both analog and digital signals indefinitely. In the Intelligence Reform and Terrorism Prevention Act (P.L. 108-458), Congress expressed its sense that 1) it must act in the first session of the 109th Congress to establish a comprehensive approach to the timely return of spectrum held by the broadcasters and that 2) any delay in doing this would delay planning by the public safety sector that is to receive some of the spectrum for new communications systems. (Sec. 7501.)

DTV and Consumers. A key issue in the digital transition is that the millions of analog televisions that rely on over-the-air broadcasts will no longer work once the analog signal is turned off. According to a Government Accountability Office (GAO) survey, 19% of U.S. households (21 million) do not subscribe to a cable or satellite service and rely exclusively on over-the-air broadcasting. The GAO found that low-income, non-white, and Hispanic households are more likely to rely on over-the-air television broadcasting.[7] The Federal Communications Commission (FCC) estimates that 15% of TV households are exclusively over-the-air.[8] The Consumer Electronics Association (CEA) has estimated that less than 13% of TV households currently rely on over-the-air TV broadcasts.[9] In June 2005, the Consumers Union and the Consumer Federation of America issued a joint study[10] that estimated that approximately 16 million households would lose all TV reception when analog signals are cut off . Based on an estimate of a $50 price to purchase a converter box, the report concluded that "the direct government-imposed costs on consumers to preserve the usefulness of [analog television sets] would be $3.5 billion or more." The GAO estimated that the cost of assuring over-the-air

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[7] See U.S. Government Accountability Office, Testimony before the Subcommittee on Telecommunications and the Internet, Committee on Energy and Commerce, House of Representatives, *Digital Broadcast Television Transition: Estimated Cost of Supporting Set-Top Boxes to Help Advance the DTV Transition*, February 17, 2005. Available at [http://energycommerce.house.gov/108/Hearings/05262005hearing1533/Shapiro.pdf]. Viewed July 7, 2005

[8] FCC, *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, Report FCC 05-13, MB Docket No. 04-227, released February 4, 2005.

[9] Statement of Gary Shapiro, President and CEO, Consumer Electronics Association, before the House Committee on Energy and Commerce, Subcommittee on Telecommunications and the Internet, May 26, 2005. Available at [http://energycommerce.house.gov/108 /Hearings/05262005hearing1533/Shapiro.pdf]. Viewed July 9, 2005.

[10] *Estimating Consumer Costs of a Federally-Mandated Digital TV Transition*, Consumers Union and Consumer Federation of America, June 29, 2005 at [http://www.hearusnow.org/fileadmin /sitecontent/DTV_Survey_Report-Final_6-29-05.pdf]. Viewed August 10, 2005.

broadcasting by supplying converter boxes to households that only have analog television could total from $460 million to $10.6 billion, depending on a number of variables such as the cost of the boxes and the number of households eligible to receive assistance.[11] The GAO cost estimates do not include the cost of implementing a subsidy program.

Policy issues include whether some form of financial assistance (subsidies or tax credits, for example) should be provided by the federal government to enable over-the-air households to purchase converter boxes or digital televisions; whether such assistance should go to low-income households exclusively or to all households; whether subsidies, if warranted, should be financed by proceeds garnered by auctioning the analog spectrum; how much funding a subsidy program would require; and how much revenue is likely to be available from auction proceeds.

DTV and the Broadcasters. Many cable households might wish to continue to use analog televisions after the transition. Cable companies might offer converter boxes to these customers. As an alternative, it is possible that cable providers might seek authority from Congress to "downconvert" the digital signal of selected local broadcast stations to analog format. To serve customers with digital televisions, cable providers would continue to provide digital signals as well (in other words, "dual carriage"). Under this scenario, a key issue is whether (and how) Congress should mandate which local broadcast stations would receive the benefit of "dual carriage" to cable customers, and for how long. A related issue is whether cable systems should be required to carry all digital multicasted channels transmitted by commercial broadcasters (known as "multicasting must carry"). The National Association of Broadcasters has maintained that its "priority continues to be the prevention of cable companies from blocking consumer access to local TV programming."[12] Reportedly, NAB is arguing that its acceptance of a hard date for relinquishing broadcast spectrum is contingent on passage of a multicasting must carry requirement for cable companies.[13] The House DTV Bill supports current FCC rules that require must carry for a single "primary video" stream only (not multicasting must carry) and also would set requirements for down conversion and dual carriage. (Sec. 107).

Legislative Activity

Some aspects of the budget resolution could take into account proposals in other legislation. Among bills introduced or planned that deal with spectrum at 700 MHz and the transition to digital television are:

- Representative Joe Barton (Chairman, Committee on Energy and Commerce, House of Representatives) and Senator Ted Stevens (Chairman, Committee on Commerce, Science, and Transportation,

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[11] GAO-05-258T, pp. 14-15.

[12] "Statement," NAB Newsroom press release, June 29, 2005 at [http://www.nab.org/newsroom/pressrel/statements/062905_CU-CFA_Survey_Statement.htm]. Viewed October 19, 2005.

[13] See, for example, "DTV Bills Coming Soon," by Ted Hearn, Multichannel News, page 28, October 10, 2005.

Senate) are advancing bills covering the release of spectrum and the transition to DTV.[14]

- Other bills that deal with the release of spectrum and the transition to DTV include the HERO Act (H.R. 1646, Representative Harman) and the SAVE LIVES Act (S. 1268, Senator McCain) and a bill (S. 1600, Senator Snowe) that would help low-power television stations convert to digital broadcasting technology. The Senate budget reconciliation would allow up to $200 million to assist low-power and translator television stations in converting equipment to digital technology.

[14] "House Panel Unveils Digital TV Draft Bill," by Drew Clark, National Journal, October 21, 2005.