



The Transition to Digital Television: Is America Ready?

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Summary

The Deficit Reduction Act of 2005 (P.L. 109-171), as amended by the DTV Delay Act, directs that on June 12, 2009, all over-the-air full-power television broadcasts—which are currently provided by television stations in both analog and digital formats—will become digital only. Digital television (DTV) technology allows a broadcaster to offer a single program stream of high definition television (HDTV), or alternatively, multiple video program streams (multicasts). Households with over-the-air analog-only televisions will *no longer be able to receive full-power television service* unless they either: (1) buy a digital-to-analog converter box to hook up to their analog television set; (2) acquire a digital television or an analog television equipped with a digital tuner; or (3) subscribe to cable, satellite, or telephone company television services, which will likely provide for the conversion of digital signals to their analog customers.

The Deficit Reduction Act of 2005 established a digital-to-analog converter box program—administered by the National Telecommunications and Information Administration (NTIA) of the Department of Commerce—that partially subsidizes consumer purchases of converter boxes. NTIA provides up to two forty-dollar coupons to requesting U.S. households. The coupons are being issued between January 1, 2008, and July 31, 2009, and must be used within 90 days after issuance towards the purchase of a stand-alone device used solely for digital-to-analog conversion. The DTV Delay Act allows expired coupons to be replaced.

The preeminent goal for Congress is ensuring that American households are prepared for the DTV transition deadline, thereby minimizing a scenario where television sets across the nation “go dark.” At issue is whether the federal government’s current programs and reliance on private sector stakeholders will lead to a successful digital transition with a minimum amount of disruption to American TV households.

On January 8, 2009, then-President-elect Obama’s transition team asked leaders of the House and Senate Commerce Committees to consider postponing the digital transition date, citing the current unavailability of converter box coupons and what they viewed as insufficient federal support and education efforts to ensure that the most vulnerable populations are ready for the transition. Proposals for postponing the transition date were sparked by the announcement from NTIA on January 5, 2009, that the funding ceiling for converter box coupons had been reached, that all new requests would be put on a waiting list, and that growing numbers of households would not receive their coupons in time for the February 17 transition.

Consequently, concerns arose in Congress that further legislation would be necessary to ensure, to the extent possible, a successful digital transition with a minimum amount of disruption to American TV households. The American Recovery and Reinvestment Act of 2009 (P.L. 111-5), signed by the President on February 17, 2009, contains an appropriation of \$650 million to NTIA for the DTV coupon program. Meanwhile, on February 11, 2009, the DTV Delay Act (P.L. 111-4), which changes the digital transition deadline from February 17 to June 12, 2009, was signed by the President. Despite the extended deadline, hundreds of full-power television broadcast stations, having notified the FCC, ceased their analog service on February 17.

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Introduction

After June 12, 2009, households with over-the-air analog-only televisions will *no longer be able to receive full-power television service* unless they either (1) buy a digital-to-analog converter box to hook up to their analog television set; (2) acquire a digital television or an analog television equipped with a digital tuner;¹ or (3) subscribe to cable, satellite, or telephone company television services, which are expected to provide for the conversion of digital signals to their analog customers. The Deficit Reduction Act of 2005 (P.L. 109-171), as amended by the DTV Delay Act, directs that on June 12, 2009, over-the-air full-power television broadcasts—which are currently provided by television stations in both analog and digital formats—will become digital only.² Analog broadcast television signals, which have been broadcast for over 60 years, will cease, and full-power television stations will broadcast exclusively digital signals over channels 2 through 51.

The preeminent issue for Congress is ensuring that American households are prepared for the transition, thereby minimizing a scenario whereby television sets across the nation “go dark” on June 12, 2009. Specifically, Congress is actively overseeing the activities of federal agencies responsible for the digital transition—principally the Federal Communications Commission (FCC) and the National Telecommunications and Information Administration (NTIA)—while assessing whether additional federal efforts are necessary. The Congress is also monitoring the extent to which private sector stakeholders take appropriate and sufficient steps to educate the public and ensure that all Americans are prepared for the digital transition.

DTV Delay Act

On January 8, 2009, then-President-elect Obama’s transition team asked leaders of the House and Senate Commerce Committees to consider postponing the digital transition date, citing the unavailability of converter box coupons and what they viewed as insufficient federal support and education efforts to ensure that the most vulnerable populations are ready for the transition.³ Arguments for postponing the transition date, possibly by several months,⁴ were sparked by an announcement from NTIA on January 5, 2009 that the funding ceiling for converter box coupons had been reached, that all new requests would be put on a waiting list, and that growing numbers

¹ As of March 1, 2007, *all* analog televisions manufactured, imported, or shipped across state lines are required to have a built-in digital tuner, and will therefore not require a converter box. Retailers are permitted to sell analog-only devices from existing inventory, but are required by the FCC to display a “consumer alert” label explaining that the device will require a converter box in order to receive over-the-air television signals after the transition.

² The June 12, 2009, deadline applies only to full-power television stations. Low-power television stations, including Class A stations and translator stations, will transition to digital broadcasting at a date yet to be determined by the FCC.

³ Letter from John Podesta, Co-Chair, Obama-Biden Presidential Transition Team to Chairmen and Ranking Members of Senate Committee on Commerce, Science and Transportation and House Committee on Energy and Commerce, January 8, 2009. Available at http://change.gov/page/-/images/20090109_Podesta_DTV_letter.pdf

⁴ Eggerton, John, *Broadcasting & Cable*, “Markey: Feb. 17 Date May Have to Move,” January 7, 2009. Also see letters to Members of Congress from Consumers Union arguing for a postponement of the transition deadline, available at http://www.consumersunion.org/pub/core_telecom_and_utilities/006502.html.

of households would not receive their coupons in time for the deadline of February 17. Groups also expressed concerns over the sufficiency of the FCC's DTV call center efforts.⁵

Postponing the DTV transition date was supported by numerous entities, many of whom argued that a delay would provide the extra time needed to enable sufficient additional federal resources to be directed towards helping households prepare for the transition. A few additional months, they argued, would enable Congress to adequately fund the coupon program and ensure that all requesting households would receive coupons in advance of the transition date. A delay would also allow more resources to be directed towards public outreach and education efforts (including enhanced call centers), and provide consumers and broadcasters with more time to address local DTV signal reception issues. On January 16, 2009, Democratic FCC Commissioners wrote a letter to Congressional leaders supporting a delay, arguing that FCC efforts to prepare for the digital transition have been inadequate, and that factors such as coordination, consumer education, reception issues, and call center support might be ameliorated with the extra time offered by a delay.⁶

Opponents of delaying the transition⁷ argued that changing the date would sow confusion throughout the American public, who had been long exposed to a wide variety of outreach efforts (public service announcements, flyers, billboards, etc.) reiterating the February 17 transition date. Opponents also argued that delaying the date would be a hardship for many local broadcast stations, who would bear the added expense and logistical complications of operating and maintaining their analog signals for several more months. Additionally, opponents argued, a DTV transition date delay could disrupt plans to use the vacated analog spectrum for a variety of public safety and commercial wireless services. On January 14, 2009, then-Secretary of Commerce Carlos Gutierrez wrote Congressional leaders a letter opposing the delay and recommending that Congress give NTIA \$250 million in increased budget authority, which would enable the immediate distribution of coupons.⁸

Senate

On January 15, 2009, Senator Rockefeller, Chairman of the Senate Committee on Commerce, Science, and Transportation filed a bill that would delay the digital transition until June 12, 2009, and extend the deadline for coupon applications (from March 31 to July 31, 2009).⁹ On January 16, 2009, there was a unanimous consent request for the Senate to immediately consider the bill.

⁵ See January 8, 2009 letters to Members of Congress from Consumers Union arguing for a postponement of the transition deadline, available at http://www.consumersunion.org/pub/core_telecom_and_utilities/006502.html.

⁶ See letter from FCC Commissioners Michael Copps and Jonathan Adelstein to Chairmen and Ranking Minority Members of the House Committee on Energy and Commerce and the Senate Committee on Commerce, Science and Transportation, January 16, 2009. Available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-287974A1.pdf.

⁷ See letter from Hon. Joe Barton, Ranking Member, House Energy and Commerce Committee and 14 House Republicans to President-elect Obama, January 14, 2009, available at http://republicans.energycommerce.house.gov/Media/File/News/1.14.09_Barton_DTV_Letter_to_Obama.PDF.

Also see Press Release, Senator Kay Bailey Hutchison, Ranking Member of the Senate Committee on Commerce, Science and Transportation, "Senator Hutchison: Too Early to Call for DTV Delay," January 8, 2009. Available at http://commerce.senate.gov/public/index.cfm?FuseAction=PressReleases.Detail&PressRelease_id=70978a3d-8d72-4faf-99e2-e586b8c86e7b&Month=1&Year=2009.

⁸ Letter is available at <http://www.ntia.doc.gov/>.

⁹ Press Release, "Rockefeller Files DTV Delay Bill," January 15, 2009. Available at <http://rockefeller.senate.gov/press/record.cfm?id=306824&>.

However, the unanimous consent request was withdrawn due to the understanding that there would be an objection. Democratic and Republican Senators subsequently reached agreement on revised legislative language, and on January 27, 2009, the Senate passed the DTV Delay Act (S. 328) by unanimous consent. However the House failed in its attempt to pass S. 328 under suspension of the rules (2/3 vote required).

On January 29, 2009 the Senate again passed, by unanimous consent, a slightly revised version of the DTV Delay Act (S. 352). The revisions match modifications made by the House, namely that public safety users would not have to await FCC approval in order to use vacated analog spectrum, and that modifications of the coupon program (including clearing the waiting list of coupon requests) could not proceed until additional budget authority was made available (expected from the \$650 million for the DTV coupon program in the economic stimulus package).

House

On January 28, 2009, the House considered Senate-passed S. 328 under suspension of the rules. However, the motion to suspend the rules and pass the bill as amended failed by a vote of 258-168 (a 2/3 vote necessary to pass). Subsequently, on January 29, 2009 the Senate passed by unanimous consent S. 352, a modified version of S. 328 that matches the attempted House amendment that was not passed under the suspension. The House passed S. 352 on February 4, 2009.

P.L. 111-4

S. 352 was signed by the President on February 11, 2009 (P.L. 111-4). The law **changes the digital transition deadline from February 17 to June 12, 2009**. P.L. 111-4 also includes the following provisions:

- **Extension of coupon program**—moves the deadline for coupon applications from March 31, 2009, to July 31, 2009; removes requirement that coupons be sent via the U.S. Postal Service.
- **Treatment of expired coupons**—allows households whose coupons have expired to request and receive one replacement coupon for each expired coupon;
- **Condition of coupon box program modifications** – program modifications cannot proceed until enactment of additional budget authority to carry out the analog-to-digital converter box program;
- **Permissive early termination under existing requirements**—allows broadcasters, as long as they comply with existing FCC requirements, to switch off their analog signal and go exclusively digital before the new deadline;
- **Public safety radio services**—allows public safety service licensees to use vacated and available analog spectrum before June 12, 2009, subject to relevant FCC rules and regulations;
- **Extension of license terms** – extends license period of recovered analog spectrum by 116 days; and
- **Extension of auction authority** – extends FCC auction authority through 2012.

P.L. 111-4 contains a provision specifying that modifications of the coupon program – which would include clearing the waiting list of coupon requests—cannot proceed until additional budget authority is made available. Additional budget authority has been obtained from the \$650 million appropriated for the DTV coupon program in the American Recovery and Reinvestment Act (P.L. 111-5), signed by the President on February 17, 2009. Of the \$650 million, P.L. 111-5 includes \$90 million for education and outreach to vulnerable populations. Outreach funding may be transferred to the FCC, at the discretion of the Secretary of Commerce and with notification of the House and Senate Appropriations Committees.

Early Termination of Analog Signal

While the DTV Delay Act postpones the digital transition deadline to June 12, 2009, many full-power television stations have already terminated their analog signal, either before or on February 17, 2009. P.L. 111-4 allows broadcasters to turn off their analog signals before the June 12 deadline, provided they give sufficient prior notification to the FCC and to their customers, and provided that the FCC determines that early termination is not contrary to the public interest and that those stations who would switch from a pre-transition digital channel to a different post-transition digital channel will not create interference problems.

The FCC has announced that 417 stations terminated their analog service on February 17. Along with the 220 stations that had already terminated their analog signals before February 17, this constitutes 637 stations, or 36% of all full-power stations nationwide. The 637 stations represent 13 entire Designated Market Areas (DMAs), 2.5% of all television households, and 2% of households relying solely on over-the-air television.¹⁰ In markets where all affiliates of the four major networks sought to turn off their analog signal, the FCC required at least one affiliate to maintain an analog signal that provides, at a minimum, local news and emergency information.¹¹

On March 17, 2009, the FCC announced that 158 additional full-power television stations intend to terminate their analog signals between April 16 and June 12, 2009 (subject to FCC approval), while the remaining 927 stations will turn off their analog signal on June 12.¹² Most major network affiliates, particularly those in the more populous DMAs, will not be turning off their analog signal before June 12.

Impacts on February 17, 2009

Because hundreds of full-power television stations voluntarily turned off their analog signals on February 17, 2009, many view that date as a further “dress rehearsal” for the digital transition. While over-the-air households in early analog termination markets will not be completely cut off

¹⁰ Statement of Eloise Gore, Associate Bureau Chief, Media Bureau, FCC Open Commission Meeting, En Banc on Digital Television Transition, March 5, 2009, available at http://www.fcc.gov/realaudio/presentations/2009/030509/Eloise_Gore_Statement.pdf.

¹¹ FCC, *News Release*, “Preparations in High Gear for Stations Going All-Digital This Week,” February 16, 2009, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-288530A1.pdf.

¹² A list of stations transitioning on June 12 is available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-09-589A2.pdf. A list of stations transitioning before June 12 is available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-09-589A3.pdf.

from analog television service, they may be unable to receive one or more channels on their analog televisions unless they have installed a converter box.

The FCC's national DTV call center (1-888-CALL-FCC) prepared for peak activity during the week of February 17.¹³ According to the FCC, early results of the digital transition were "encouraging," but large challenges remain because most of the stations terminating their analog signals are located in smaller markets. According to FCC call center data, over 32% of calls on February 18 were from consumers who had questions on reception and technical issues.¹⁴

What Is Digital Television?

Digital television (DTV) is a new television service representing the most significant development in television technology since the advent of color television. DTV can provide movie-quality pictures and sound far superior to traditional analog television. Digital television technology allows a broadcaster to offer a single program stream of high definition television (HDTV) or, alternatively, multiple video program streams ("multicasts") of standard or enhanced definition television, which provide a lesser quality picture than HDTV, but a generally better picture than analog television. DTV technology also makes possible an interactive capability, such as "pay-per-view" service over-the-air.

In order to receive and view digital television service, consumers must have a digital television set equipped with a digital tuner capable of receiving the digital signal that is provided either over-the-air (in which case an antenna is required) or via cable or satellite television systems. Additionally, consumers can view high definition programs with a digital high definition TV attached to a high definition DVD player (i.e., a Blu-Ray Disc player).

Why Is the Nation Transitioning to Digital Television?

One of the key drivers behind the digital transition is reclaiming a portion of the analog spectrum (broadcast channels 52 through 69, also known as the 700 MHz band) currently occupied by television broadcasters. Digital television uses radio frequency spectrum more efficiently than traditional analog television, thereby "freeing up" bandwidth. The goal of the FCC and Congress has been to complete the transition to DTV as quickly as is possible and feasible, so that analog spectrum could be reclaimed and subsequently reallocated for other purposes. Some of the analog spectrum has been auctioned for commercial wireless services (including wireless broadband), and some will be used for new public safety communications services. Additionally, it is mandated that some of the revenue raised in the spectrum auction will be returned to the U.S. Treasury, thereby contributing toward federal deficit reduction.

¹³ Michael D. Berg, TV Newsday, "Coping with the 'Sturm and Drang' of DTV," February 13, 2009, available at <http://www.tvnewsday.com/articles/2009/02/13/daily.8/>.

¹⁴ FCC, *News Release*, "Initial Phase of DTV Transition Encouraging," February 19, 2009, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-288731A1.pdf. A detailed breakdown of DTV calls is available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-288731A2.pdf.

Another rationale often cited for the digital transition is that—aside from offering a superior television viewing experience to consumers—DTV will give over-the-air broadcasters the capability to offer more channels of programming (via multicasting, if they so choose) as well as the ability to offer similar digitally-based services (such as pay-per-view or other interactive services) offered by cable and satellite television providers.

Who Is Likely to be Most Affected by the Transition?

Households using analog televisions for viewing over-the-air television broadcasts are likely to be most affected by the digital transition. Estimates vary over the number of analog TV sets and households affected. According to Nielsen Media Research, as of May 10, 2009, 2.9% of TV households (about 3.3 million) were completely unready for the digital transition.¹⁵ **Table 1** shows the percentages of households completely unready for the digital transition from May 2008 through May 2009.

A telephone survey poll released on May 1, 2009 by the National Association of Broadcasters (NAB) found that 2.1 million over-the-air households have not yet taken action to get ready for the transition. The NAB poll, conducted between March 26 and April 8, defines prepared households as those already prepared, or those that have applied for or received a converter box coupon.¹⁶ In total, the NAB has estimated 69 million analog television sets impacted by the digital transition, consisting of 19.6 million households (17% of all households) relying exclusively on over-the-air analog television sets (2.27 TV sets per household, equaling about 45 million sets) and an additional 24 million broadcast only sets in cable and satellite households.¹⁷

Table 1. Readiness of U.S. Households for the Digital Transition

| | Percent of households completely unready |
|----------------|--|
| May 2008 | 9.8% |
| June 2008 | 9.6% |
| July 2008 | 9.3% |
| August 2008 | 8.9% |
| September 2008 | 8.4% |
| October 2008 | 7.7% |
| November 2008 | 7.4% |

¹⁵ The Nielsen Company, “Fewer than 3% of U.S. Homes Unready for Digital TV Transition,” May 13, 2009, available at <http://blog.nielsen.com/nielsenwire/tag/DTV>.

¹⁶ National Association of Broadcasters, “More than 4 in 5 Most At-Risk Homes Fully Ready for Digital TV Switch,” May 1, 2009, available at <http://www.dtvanswers.com/presskit/090501.html>.

¹⁷ Testimony of David K. Rehr, President and CEO, National Association of Broadcasters, hearing before the House Committee on Energy and Commerce, Subcommittee on Telecommunications and the Internet, September 16, 2008, p. 3.

| | Percent of households completely unready |
|-------------------|---|
| December 2008 | 6.8% |
| January 2009 | 5.7% |
| February 1, 2009 | 5.1% |
| February 15, 2009 | 4.4% |
| March 1, 2009 | 3.9% |
| March 15, 2009 | 3.6% |
| March 29, 2009 | 3.4% |
| April 12, 2009 | 3.2% |
| April 26, 2009 | 3.1% |
| May 10, 2009 | 2.9% |

Source: Nielsen Media Research

Of particular concern to many policymakers are low-income, elderly, disabled, non-English speaking, minority, and rural populations. Many of these groups tend to rely more on over-the-air television, and are thus more likely to be impacted by the digital transition. A survey commissioned by the Association of Public Television Stations (APTS) indicated that Americans aged 65 and older are consistently more likely to receive television signals via an over-the-air antenna than are Americans under 65. The survey found that during the first quarter of 2007, 24% of households with Americans 65 and older received their TV programming over-the-air, while only 19% of younger households were over-the-air.¹⁸

A 2008 Government Accountability Office (GAO) survey (conducted March and April of 2008) found that households at risk of losing all television service (“high risk households”) are more likely to be lower income. Specifically, the GAO survey found that households with yearly incomes of less than \$50,000 contain 19% high risk households, as opposed to households with incomes of \$50,000 to \$100,000 (14% high risk) and households with incomes over \$100,000 (7% high risk).¹⁹

According to Nielsen Media Research, African-American and Hispanic households would currently be most impacted by the DTV transition, with (as of May 10, 2009) 5.7% of African-American and 4.9% of Hispanic households completely unready for the transition, as compared to 2.3% of White and 3.4% of Asian households completely unready.²⁰

¹⁸ Association of Public Television Stations, “APTS Study Shows Older Americans Less Prepared for the Digital TV Transition,” Press Release, July 24, 2007.

¹⁹ U.S. Government Accountability Office, Statement of Mark L. Goldstein, Testimony before the House Subcommittee on Telecommunications and the Internet, Committee on Energy and Commerce, *Digital Television Transition: Broadcasters’ Transition Status, Low-Power Station Issues, and Information on Consumer Awareness of the DTV Transition*, June 10, 2008, p. 12. Available at http://energycommerce.house.gov/cmte_mtgs/110-ti-hrg.061008.Goldstein-testimony.pdf.

²⁰ The Nielsen Company, “Fewer than 3% of U.S. Homes Unready for Digital TV Transition,” May 13, 2009, available at <http://blog.nielsen.com/nielsenwire/tag/DTV>.

How Will the Digital Transition Affect Cable and Satellite Households?

Multichannel video programming distributor (MVPD) households—consisting of households receiving cable, satellite, or telephone company television services—constitute approximately 85% of all U.S. television households. Many of these households will likely continue to use analog televisions after the transition. For those customers, it is expected that providers will handle the digital-to-analog conversion, either at the “head end” by providing downconverted analog signals, or at the customer premises via a set top box provided by the cable or satellite company. At the same time, many cable and satellite households also have spare televisions relying on over-the-air broadcasts. These stand-alone over-the-air analog televisions will no longer function unless they are equipped with a converter box.

On September 11, 2007, the FCC adopted rules intended to ensure that cable customers continue to receive local TV stations after the transition. Specifically, the FCC requires cable operators to comply with a “viewability requirement” by choosing to either (1) carry the must carry signal in analog as well as digital formats, or (2) carry the must carry signal in a digital only format, provided that all subscribers have set-top boxes which will enable them to view digital broadcasts on their analog TVs. The viewability requirement extends to February 2012, at which time the FCC will reassess the need for the requirement. On August 21, 2008, the FCC adopted an order which exempts small cable systems from the requirement to include must carry digital broadcast signals as long as that signal is available to all subscribers in a viewable analog format.

The Digital-to-Analog Converter Box Program

After June 12, 2009, analog-only televisions will no longer be able to receive over-the-air broadcast signals from full-power stations, unless those televisions are equipped with a digital-to-analog converter box that is attached to an antenna. A separate converter box, available for \$40 to \$70, will be required for each analog over-the-air television set. Converter boxes will not only enable analog televisions to function, they should also provide better reception, additional features such as closed captioning and parental controls, and allow the viewing of multicasted channels. However, a converter box hooked up to an analog TV will not enable the viewer to watch a broadcast in the high-definition format.

The 109th Congress acted to establish a digital-to-analog converter box program that will partially subsidize consumer purchases of converter boxes. Title III of the Deficit Reduction Act of 2005 (P.L. 109-171) directed the National Telecommunications and Information Administration (NTIA) of the Department of Commerce to provide up to two forty-dollar coupons to requesting U.S. households. According to the statute, as amended by the DTV Delay Act, the coupons are to be issued between January 1, 2008, and July 31, 2009, and must be used within three months after issuance towards the purchase of a stand-alone device used solely for digital-to-analog conversion. However, the DTV Delay Act (P.L. 111-5) allows expired coupons to be replaced.

The converter box program is funded by receipts from the auction of the analog television spectrum. P.L. 109-171 initially designated \$990 million for the converter box program, including up to \$100 million for administrative costs (of which no more than \$5 million can be used for consumer education). P.L. 109-171 provided that in the event that NTIA notified Congress that

additional funding was needed, the total may be raised up to \$1.5 billion, including up to \$160 million for administrative costs.

On March 12, 2007, NTIA released its final rule implementing the converter box program.²¹ The final rule stated that starting on January 1, 2008, for the initial \$990 million program (the “Initial Period”), up to two forty-dollar coupons is available to any and all requesting U.S. households to be used towards the purchase of up to two digital-to-analog converter boxes. Coupons mailed to consumers are accompanied by information listing converter box models and local (and online) retailers certified to participate in the converter box coupon program. The rule stated that in the event that NTIA determines that the additional \$510 million is needed, only exclusively over-the-air households will be eligible for coupons during this “Contingent Period.”

During the “Contingent Period,” households are required to self-certify that they are exclusively over-the-air and do not subscribe to cable, satellite, or other pay television services. Cable and satellite households that contain extra over-the-air televisions **will** be eligible for coupons during the “Initial Period” of the program (the first \$990 million), but **will not** be eligible for coupons during the second phase (“Contingent Period”) of the program (the additional \$510 million).

The rule also set forth procedures and requirements for manufacturers and retailers who wish to participate in the converter box program. Participation in the converter box program is voluntary. Manufacturers must submit test results and sample converter boxes to NTIA for approval. Approved devices must meet prescribed technical specifications that are intended to ensure an affordable state-of-the-art converter box. Additional permitted features include a smart antenna interface connector and program guide. Features that would disqualify a converter box from being covered by the coupon program include video recording, playback capability, or other capabilities that allow more than simply converting a digital over-the-air signal.²²

Meanwhile, retailers must receive a certification from NTIA in order to participate in the converter box coupon program. Certified retailers must agree to have systems in place capable of processing coupons electronically for redemption and payment, track every transaction and provide reports to NTIA, train employees on the purpose and operation of the coupon program with NTIA-provided training materials, use commercially reasonable methods to order and manage inventory, and assist NTIA in minimizing incidents of waste, fraud, and abuse, including reporting suspicious patterns of customer behavior. Retailers are not responsible for verifying household eligibility.²³

On August 15, 2007, NTIA announced it had entered into a contract with IBM to run the Digital-to-Analog Converter Box Coupon program. The total award is \$119,968,468, which breaks down to \$84,990,343 for the initial period and \$34,978,125 for the contingent period. The contract performance began immediately and is to close out on September 30, 2009. The IBM-led team will provide services in three areas: consumer education, coupon distribution to consumers and

²¹ U.S. Department of Commerce, National Telecommunications and Information Administration, “Rules to Implement and Administer a Coupon Program for Digital-to-Analog Converter Boxes,” 47 CFR 301, *Federal Register*, Vol. 72, No. 51, March 15, 2007, pp. 12097-12121.

²² National Telecommunications and Information Administration, *DTV Converter Box Program Information Sheet for Manufacturers*, March 2007, available at <http://www.ntia.doc.gov/dtvcoupon/DTVmanufacturers.pdf>.

²³ National Telecommunications and Information Administration, *DTV Converter Box Program Information Sheet for Retailers*, September 2007, available at <http://www.ntia.doc.gov/dtvcoupon/DTVretailers.pdf>.

retail store participation, and financial processing to reimburse retailers, to maintain records, and to prevent fraud, waste, and abuse.

As of January 1, 2008, consumers could apply to NTIA for up to two converter box coupons, either by logging onto <http://www.dtv2009.gov/>, or by calling the toll-free number: 1-888-DTV-2009 (1-888-388-2009). The following are some issues that have surfaced since the converter box program has begun.

Supply of Coupons

By law (section 3005 of P.L. 109-171), NTIA could not exceed the \$1.34 billion ceiling in total funding obligated for the value of converter box coupons sent to households.²⁴ Over the latter part of 2008, consumer demand for and redemption of coupons became heavier than expected. As the transition date neared, more people requested coupons and a higher percentage of those people redeemed their coupons. An increase in demand and redemption rates also may have been due to the current economic downturn, which could necessitate that more households would choose over-the-air television with converter boxes rather than choosing more expensive options such as purchasing digital televisions or subscribing to cable or satellite service.

On January 5, 2009, NTIA announced that this funding ceiling had been reached, and new requests for coupons were placed (as of January 4) on a first-come-first-served waiting list. Between January and March of 2009, the waiting list grew to over 4 million coupon requests representing over 2 million households. Coupons continued to be sent out, but only as soon as recycled money became available from expired coupons (i.e. coupons that had previously been sent out to households and not redeemed after 90 days).

Subsequently, the American Recovery and Reinvestment Act of 2009 (ARRA), signed by the President on February 17, 2009 (P.L. 111-5), included a provision that appropriated \$650 million to NTIA for the converter box coupon program. Of the \$650 million, the ARRA designated \$90 million for education and outreach to vulnerable populations. Minus administrative costs and the \$90 million for education, \$490 million is available for the cost of 12.25 million additional coupons. On March 21, 2009, NTIA completed clearing the coupon request waiting list, and is now distributing all coupons using first class mail.²⁵

Converter Box Supply

Another issue is the possibility of a converter box shortage due to higher demand for boxes than was previously projected by NTIA. According to NTIA estimates in December 2008, assuming the distribution capability of 51.5 million coupons and a 60% redemption rate, “it is therefore possible that total demand for CECBs (coupon-eligible converter boxes) using a coupon could outpace availability by approximately 2.5 million boxes,” and that additional purchases of boxes

²⁴ Funds are obligated when a \$40 coupon is sent to a household. If, after 90 days, the coupon is not redeemed and expires, the \$40 is again available to be obligated for another coupon request.

²⁵ Testimony of Anna M. Gomez, Acting Assistant Secretary for Communications and Information, NTIA, before the House Subcommittee on Communications, Technology, and the Internet, Committee on Energy and Commerce, March 26, 2009, available at http://www.ntia.doc.gov/congress/2009/DTV_House_090326.html.

could be made by consumers without coupons.²⁶ NTIA sent a letter to retailers emphasizing the increase in coupon demand and urging them to maintain sufficient inventory through the end of the program.²⁷

At a March 26, 2009 hearing before the House Energy and Commerce Committee, the Consumer Electronics Association stated that its survey data suggested that while manufacturers and retailers will likely be able to meet consumer demand for converter boxes and antennas through the transition, they cannot be sure this will be the case until the transition actually takes place.²⁸

On April 9, 2009 the House Energy and Commerce Committee sent letters to major retailers and manufacturers requesting information to determine whether the supply of converter boxes will be sufficient to meet consumer demand through the duration of the DTV transition. The Committee requested a response on April 24 and subsequent updates every three weeks thereafter.

Coupon Expiration

According to the Deficit Reduction Act of 2005 (P.L. 109-171), “all coupons shall expire 3 months after issuance” (section 3005(c)(1)(C)). Coupons first issued in February 2008 expired in May 2008. Because some lower-cost or more desirable converter box models were initially not readily available (particularly boxes with “analog pass-through” necessary to watch analog low-power television stations) there were calls to allow consumers to reapply for new coupons if their unused coupons expire after 90 days. The DTV Delay Act (P.L. 111-4) reverses the prohibition on replacing expired coupons, allowing households to request and receive one replacement coupon for each expired coupon. On March 24, 2009, NTIA announced it was accepting requests for replacement coupons.²⁹

Coupon Eligibility

Under the March 12, 2007, rule implementing the converter box program, households eligible for converter box coupons were required to have a United States Postal Service (USPS) mailing address. Post office (P.O.) box addresses were not accepted unless the applicant was a resident of an Indian reservation, Alaskan Native Village, or other rural area without home mail delivery. The effect of this regulation was that NTIA denied applications from nursing home residents (who do not have a unique USPS mailing address) and from residents who prefer to utilize post office boxes.

On April 24, 2008, the NTIA issued a Notice of Proposed Rulemaking proposing certain waivers to NTIA regulations regarding household eligibility and the necessity of a USPS mailing address. On September 19, 2008, NTIA published a revised rule that allows residents of nursing homes,

²⁶ Baker, Responses to Questions from Chairman Markey, December 24, 2008, p.5.

²⁷ Ibid.

²⁸ Testimony of Gary Shapiro, President and Chief Executive Office, Consumer Electronics Association, before the House Subcommittee on Communications, Technology, and the Internet, Committee on Energy and Commerce, March 26, 2009, available at http://energycommerce.house.gov/Press_111/20090326/testimony_shapiro.pdf.

²⁹ NTIA, *Press Release*, “Commerce’s TV Converter Box Program Now Accepting Requests to Replace Expired Coupons to Assist More Americans with Transition to Digital TV,” March 24, 2009, available at http://www.ntia.doc.gov/press/2009/DTV_ReplacementCoupons_090324.html.

intermediate care facilities, and assisted living facilities to be eligible for the coupon program if they provide their name, the name of their facility, and how they receive television service. Alternatively, a family member or representative from the facility may apply for one coupon for a nursing home resident. The revised rule also permits applicants using post office boxes to receive coupons if they provide their physical residence in addition to their post office box number. The rule became effective on October 20, 2008.³⁰

Reception of Digital Signals

A converter box must be attached to an antenna in order to receive digital signals over-the-air. Antennas can range from simple indoor “rabbit ears” to large rooftop antennas of various shapes and configurations. According to the FCC, over-the-air households that currently receive good quality reception of an analog television signal should be able to receive a digital signal (via a converter box or digital television) with the same antenna previously used to receive analog TV signals. However, some viewers—particularly those living near obstructions or towards the outer edges of a station’s broadcasting range—may have difficulty receiving a digital signal, and may require a repositioned, bigger, or different type of antenna. Also, some television stations are temporarily operating their digital signal at a reduced power level or at a different channel than will be used after the transition date.³¹ The FCC provides a website focused on fixing DTV reception problems.³² Also available from the FCC is a trouble shooting guide for digital-to-analog converter boxes and digital televisions,³³ a publication, *Antennas and Digital Television*, which offers tips and advice for consumers with over-the-air digital signal reception problems,³⁴ and an online interactive DTV reception map.³⁵

Results of the test pilot program in Wilmington, NC (see **Appendix A**), identified DTV signal reception issues as a major challenge of the DTV transition. There are two separate digital reception issues: the “digital cliff effect” and reduced DTV coverage areas. The “digital cliff effect” can be a problem for viewers who currently receive a weak analog signal. Unlike analog signals, which when weak or obstructed may be received with fuzzy yet watchable reception, digital signals are received either perfectly or not at all. Viewers experiencing the “digital cliff effect” will likely require an antenna modification. The FCC has estimated that about 5% of over-the-air viewers may need a new antenna due to the “digital cliff effect,” equivalent to about 1% of all TV households. According to the FCC, the Wilmington data suggest a similar estimate.³⁶

³⁰ Department of Commerce, National Telecommunications and Information Administration, Final Rule, 47 CFR Part 301, “Household Eligibility and Application Process of the Coupon Program for Individuals Residing in Nursing Homes, Intermediate Care Facilities, Assisted Living Facilities and Households that Utilize Post Office Boxes,” *Federal Register*, Vol. 73, No. 183, September 19, 2008, pp. 54325-54334.

³¹ In a survey conducted December 2007 through February 2008, the General Accountability Office (GAO) found that 68% of responding stations were operating their digital signals at full power, and that 68% of stations were transmitting their digital signal on the channel from which they will broadcast after the transition. See GAO, *Digital Television Transition: Majority of Broadcasters Are Prepared for the DTV Transition, but Some Technical and Coordination Issues Remain*, GAO-08-510, April 2008, 34 pp. Available at <http://www.gao.gov/new.items/d08510.pdf>.

³² Available at <http://www.dtv.gov/fixreception.html>.

³³ Available at <http://www.fcc.gov/cgb/consumerfacts/troubleshootguide.html>.

³⁴ Available at <http://www.fcc.gov/cgb/consumerfacts/dtvantennas.pdf>.

³⁵ Available at <http://www.fcc.gov/mb/engineering/maps/>.

³⁶ Written statement of Kevin Martin, Chairman, Federal Communications Commission, before the House Committee (continued...)

The second DTV digital reception issue stems from the fact that some digital stations will have a reduced service contour compared with their current analog service contour. In other words, their digital broadcasts may not reach all the households that these stations previously served. In Wilmington, a reduced service contour of the NBC affiliate was the leading single cause of consumer complaints to the FCC. According to FCC estimates, about 15% of television markets may have a station with significantly reduced coverage after the transition. The FCC is identifying these markets and analyzing how stations can fill these coverage gaps through such options as an additional antenna, a distributed transmission system or multiple towers, or translator or repeater stations.³⁷ On November 3, 2008, the FCC approved an order which permits stations to deploy distributed transmission systems (small antennas that would fill gaps in coverage areas).

Meanwhile, the House Energy and Commerce Committee, on November 7, 2008, asked the FCC, NTIA, and broadcasters for specific information on how consumers should address digital reception problems and which stations and markets may have reduced service contours after the digital transition. On December 23, 2008, the FCC released data and maps showing digital and analog coverage areas for each of the 1,749 full-power television stations in the U.S. The FCC found that 89% of stations (1,553 stations) will experience an overall net gain in the population that can receive their signals, while 11% of stations (196 stations) will experience a net loss. Also on December 23, the FCC released a Notice of Proposed Rulemaking that would create a new “replacement” digital television translator service to permit full-service television stations to continue to provide service to areas that would otherwise lose service after the digital transition.³⁸ On May 8, 2009, the FCC adopted the final rule which allows broadcasters, if they choose, to implement “replacement” digital translators to provide digital signals to areas which would otherwise lose service.³⁹

On March 13, 2009, the FCC adopted and released a report and order⁴⁰ requiring broadcasters to provide ample notification to viewers on three digital reception issues:

- Signal loss: Stations must provide on-air and other notifications of potential signal loss if 2% or more of their analog viewers are predicted to lose service, regardless of whether stations gain viewers in other areas;
- Antennas: All stations must include information about the use of antennas as part of their consumer education campaigns, including additional information if they

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on Energy and Commerce, Subcommittee on Telecommunications and the Internet, September 16, 2008, p. 5.

³⁷ BNA, *Daily Report for Executives*, “FCC to Refocus DTV Outreach on Technical Aspects of Transition,” September 17, 2008.

³⁸ FCC Press Release, “FCC Reports Show Analog and Digital Coverage of TV Stations,” December 23, 2008. Available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-287579A1.pdf.

³⁹ FCC, *Report and Order*, “In the Matter of Amendment of Parts 73 and 74 of the Commission’s Rules to Establish Rules for Replacement Digital Low Power Television Translator Stations,” MB Docket 08-253, FCC 09-36, adopted and released May 8, 2009, 25 pages, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-09-36A1.pdf.

⁴⁰ FCC, *Third Report and Order and Order on Reconsideration*, “In the Matter of: Implementation of the DTV Delay Act (MB Docket No. 09-17), DTV Consumer Education Initiative (MB Docket No. 07-148), Third Periodic Review of the Commission’s Rules and Policies Affecting the Conversion to Digital Television (MB Docket No. 07-91), and Digital Television Distributed Transmission System Technologies (MB Docket No. 05-312),” FCC 09-19, adopted and released March 13, 2009, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-09-19A1.pdf.

are changing from the VHF to UHF bands and viewers may need additional or different equipment to avoid loss of service; and

- Scanning: Stations must inform and remind viewers about the importance of periodically using the rescan function of their digital televisions and digital converter boxes. During the time surrounding the conclusion of the transition, many stations will be changing the service areas and the broadcast frequencies of their digital transmissions. As a result, viewers will need to periodically rescan during this period in order to ensure that they are correctly receiving all the digital broadcast services available to them.

Citing concerns that adequate digital TV signals may be unavailable in some parts of a television market area, Senator Snowe introduced S. 899 (DTV Cliff Effect Assistance Act), which would direct the Department of Commerce to make payments not to exceed \$125 million during FY2009 through FY2012 to local civil government bodies for construction and equipment of digital TV translators to fill gaps in digital coverage of full-power television stations, in cases where such gaps were caused by the analog to digital transition. The funding would be drawn from the Digital Television Transition and Public Safety Fund, which was established from the auctioning of the analog TV spectrum.

Status of DTV Public Education

With the June 12, 2009 deadline for the digital transition approaching, Congressional concern is focusing on the adequacy of efforts to inform the public of the digital transition. Based on previous DTV transition experiences—the September 2008 pilot DTV conversion in Wilmington, NC, and the early analog signal terminations of February 17, 2009 – it has become apparent that while virtually all consumers have heard of the DTV transition, many are not aware of exact steps they must take—even if they have converter boxes—to ensure that their over-the-air televisions will receive digital signals. NTIA and the FCC have refocused consumer outreach on such issues as scanning and rescanning converter boxes, as well as addressing digital signal reception issues such as repositioning or replacing antennas.

NTIA Funding and Activities

Two federal agencies—the NTIA and the FCC—are directly engaged in consumer education efforts regarding the digital transition. P.L. 109-171 (the Deficit Reduction Act of 2005) funded NTIA at “not more than \$5,000,000 for consumer education concerning the digital television transition and the availability of the digital-to-analog converter box program.” The NTIA’s DTV consumer education effort is focused on raising awareness of the coupon program, particularly with five target groups most likely to be affected by the digital transition: senior citizens, the economically disadvantaged, rural residents, people with disabilities, and minorities. To reach those groups and the American public in general, the NTIA is pursuing a strategy of leveraging its resources by partnering with private sector stakeholder groups representing those constituencies most at risk. NTIA is also working with the DTV Transition Coalition, a broad-based coalition of business, trade, and industry groups as well as grass roots and membership organizations. In

addition to working with private sector groups, NTIA is working with federal government agencies that target economically disadvantaged Americans.⁴¹

On May 15, 2008, the Senate Appropriations Committee adopted an amendment to the War Supplemental Appropriations bill (H.R. 2642) that sought to increase NTIA funding for DTV consumer education. Although the DTV provision was not included in the final Senate bill, the DTV consumer education provision was subsequently incorporated into S. 2607 (The DTV Transition Assistance Act), which was passed by the Senate on June 19, passed by the House on July 9, and signed into law (P.L. 110-295) by the President on July 30, 2008. P.L. 110-295 gives NTIA the authority to take unused funds from the low-power television Digital-to-Analog Conversion grant program and use remaining amounts for consumer education and technical assistance. Such an education program is directed to address the DTV transition needs of vulnerable populations and the need for education plans regarding analog pass-through converter boxes in areas served by low-power or translator stations.

Pursuant to P.L. 110-295, on August 28, 2008, NTIA announced it was reducing available grant funding for the low-power television Digital-to-Analog Conversion grant program from \$8 million to \$3.5 million, and to no more than \$1 million after November 17, 2008. This allows for \$4.5 million to become available for consumer education and technical assistance related to the DTV transition and the coupon program. On November 18, 2008, NTIA announced it was awarding \$2.7 million to the National Association of Area Agencies on Aging to help seniors transition to DTV. On November 21, 2008, NTIA announced an award of \$1.65 million to the Leadership Conference on Civil Rights Education Fund to help vulnerable populations transition to DTV, particularly focusing on television markets with large over-the-air populations.

The American Recovery and Reinvestment Act of 2009, signed by the President on February 17, 2009 (P.L. 111-5), provides an appropriation to NTIA of \$650 million for the DTV coupon program, and of that amount, allows up to \$90 million for DTV education, outreach, and assistance to vulnerable populations such as senior citizens, minority communities, people with disabilities, low-income individuals, and people living in rural areas. Outreach funding may be transferred to the FCC, at the discretion of the Secretary of Commerce and with notification of the House and Senate Appropriations Committees.

FCC Funding and Activities

Similar to the NTIA, the FCC is also pursuing collaborative partnerships with private and public sector entities to target outreach to vulnerable populations and to raise the general awareness of the American public about the DTV transition and how to prepare for it. The FCC has become a member of the DTV Transition Coalition, has prepared and issued consumer publications and web materials, and is promoting DTV awareness by attending and holding events and conferences.⁴²

⁴¹ For information on NTIA DTV consumer education efforts, see Testimony of John Kneuer, Assistant Secretary for Communications and Information, National Telecommunications and Information Administration, hearings held by the Senate Committee on Commerce, Science and Transportation, "Preparing Consumers for the Digital Television Transition," July 26, 2007. Available at http://commerce.senate.gov/public/_files/JohnMRKneuerTestimonyv2.pdf.

⁴² Testimony of Catherine Seidel, Chief, Consumer and Governmental Affairs Bureau, Federal Communications Commission, hearings held by the Senate Committee on Commerce, Science and Transportation, "Preparing Consumers for the Digital Television Transition," July 26, 2007. Available at http://commerce.senate.gov/public/_files/ (continued...)

The Joint Explanatory Statement accompanying the Consolidated Appropriations Act, 2008 (P.L. 110-161) provided the FCC with \$2.5 million for the digital television consumer education and outreach initiative, an increase of \$1 million over the Administration's FY2008 budget request. Additionally, the FCC requested and received approval from the House and Senate Appropriations Committees to reprogram \$12 million of unspent FY2008 funds for DTV consumer education.⁴³ Therefore, with reprogrammed funding, the total FY2008 level was \$14.5 million for the FCC's DTV consumer education activities.

In the Administration's FY2009 budget proposal, the FCC requested \$20 million for DTV education and outreach. On June 25, 2008, the House Committee on Appropriations approved \$20 million for FCC DTV education as part of the FY2009 Financial Services and General Government appropriations. On July 10, 2008 the Senate Committee on Appropriations also approved \$20 million for the FCC's FY2009 DTV consumer education and outreach. P.L. 110-329, the Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009, provided \$20 million to the FCC for DTV public education through March 6, 2009.

The FCC's FY2010 budget requested \$1 million to address the aftermath of the DTV transition of full power television stations, and to begin to address the impending DTV transition of low power and translator stations.

On January 16, 2009, the FCC announced it is awarding IBM up to \$12 million for call center support which will allow the FCC to handle up to two million agent-assisted calls during the week of the digital transition, including up to 400,000 calls on the day after the transition.⁴⁴ The FCC is anticipating 2.15 million calls during the week of the transition, with peak days generating 1.475 million agent-answered calls. According to the FCC, the FCC's call center effort alone is insufficient to handle the entire volume of consumer calls anticipated nationally, and the FCC is working to coordinate with other entities planning to provide DTV call centers (for example, the National Association of Broadcasters, the National Cable Television Association, and local broadcasters, governments, and community groups).⁴⁵

In addition to increased funding for call centers, the FCC is spending the \$20 million on publications (\$1 million); distribution, including grassroots outreach (\$10 million); and events, conferences, and awareness sessions (\$2 million). On January 6, 2009, the FCC announced it is awarding a total \$8.4 million to 12 grassroots groups for DTV outreach, with a focus on reaching seniors, people with disabilities, and Spanish-speaking households in areas with high over-the-air populations.⁴⁶ Additional outreach funding from NTIA (via the ARRA funding) is being used to

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WrittenStatementofCathySeidel7262007Hearing.pdf.

⁴³ *Communications Daily*, "Senate Subcommittee Gives FCC Extra Funds for DTV, Broadband," July 10, 2008.

⁴⁴ FCC, Press Release, "FCC Announced \$12 Million Call Center Contract to Assist DTV Call Center Capability," January 16, 2009.

⁴⁵ For further details, see Kevin Martin, Chairman, Federal Communications Commission, Responses to December 19, 2008 Questions from Chairman Edward J. Markey, December 23, 2008, pp. 4-6. Available at http://markey.house.gov/docs/telecomm/martin_response_dtv_qa_122308.pdf.

⁴⁶ FCC Press Release, "FCC Announces Selection of 12 Grassroots Groups for DTV Outreach Valued at \$8.4 Million," January 6, 2009. Available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-287750A1.pdf.

support local organizations providing hands-on assistance including walk-in centers and in-home assistance.⁴⁷

Role of the Private Sector

The significant reliance of the FCC and the NTIA on the private sector for DTV public education has led some to question whether the federal government should assume a more proactive role in promoting DTV public education activities. In response to criticisms and suggestions on DTV consumer education raised by a May 24, 2007, letter⁴⁸ from the House Energy and Commerce Committee, the FCC released on March 3, 2008, a *Report and Order* on DTV consumer education.⁴⁹ The FCC order requires various stakeholders (e.g., broadcasters, MVPDs, television manufacturers, 700 MHz spectrum auction winners, and others) to provide and promote DTV consumer education. On March 13, 2009, the FCC released an order mandating that stations still broadcasting an analog signal to provide service loss notices, antenna information, information on rescanning converter boxes, local consumer referral telephone numbers, publicity for consumer help centers, 60-day countdowns preceding the analog signal termination, and 30 minute informational videos.⁵⁰

According to GAO, private sector stakeholders have committed over \$1 billion for consumer education efforts.⁵¹ A major component of any DTV public education campaign is likely to be the airing of public service announcements (PSAs). On October 15, 2007, the National Association of Broadcasters (NAB) announced a consumer education campaign, including DTV spots, crawls, and 30-minute educational programs.⁵² In September 2007, the National Cable & Telecommunications Association (NCTA) began running on cable channels an English and Spanish language advertising campaign on the digital transition; NCTA will continue the advertising spots through the transition.⁵³ The NAB and NCTA consumer education advertising campaigns are estimated at a value of \$1.4 billion.⁵⁴ The FCC *Report and Order* imposes education and reporting requirements on broadcast stations, but gives broadcasters the option of complying with alternate plans and guidelines developed either by the FCC, the NAB, or (for noncommercial stations) the Association of Public Television Stations. The FCC also asked

⁴⁷ FCC, *News*, “30 Days and Counting to DTV Transition: FCC Concentrates on Preparing Consumers for June 12 Deadline,” May 13, 2009, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-290711A1.pdf.

⁴⁸ Available at http://energycommerce.house.gov/Press_110/FCC.052407.Martin.ltr.DTV.pdf.

⁴⁹ FCC, *Report and Order*, *In the Matter of DTV Consumer Education Initiative*, MB Docket No. 07-148, FCC 08-56, 82 p.

⁵⁰ FCC, *Third Report and Order and Order on Reconsideration*, “In the Matter of: Implementation of the DTV Delay Act (MB Docket No. 09-17), DTV Consumer Education Initiative (MB Docket No. 07-148), Third Periodic Review of the Commissions Rules and Policies Affecting the Conversion to Digital Television (MB Docket No. 07-91), and Digital Television Distributed Transmission System Technologies (MB Docket No. 05-312),” FCC 09-19, adopted and released March 13, 2009, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-09-19A1.pdf.

⁵¹ Government Accountability Office, *Digital Television Transition: Implementation of the Converter Box Subsidy Program is Under Way, but Preparedness to Manage an Increase in Subsidy Demand is Unclear*, GAO-08-1040, September 2008, p. 7.

⁵² Associated Press, “Broadcasters unveil \$697 million digital TV campaign,” October 15, 2007.

⁵³ National Cable & Telecommunications Association, Press Release, “Cable Launches \$200 Million Digital TV Transition Consumer Education Campaign,” September 6, 2007.

⁵⁴ Government Accountability Office, *Digital Television Transition: Implementation of the Converter Box Subsidy Program is Under Way, but Preparedness to Manage an Increase in Subsidy Demand is Unclear*, GAO-08-1040, September 2008, p. 7.

broadcasters nationwide to conduct a voluntary “soft test” on May 21, 2009, in which analog programming will be interrupted three times on that day with DTV education messages.

Key Issues

The key issue for Congress is the extent to which American households will be ready for the digital transition, and whether measures taken by the government and the private sector are sufficient to minimize the number of televisions across America that may “go dark” on the transition deadline.

Two lines of inquiry have repeatedly been raised in Congressional hearings on the digital television transition. First, are public education and outreach efforts sufficient, and is the federal government playing a sufficient role in leading that effort? With limited funding, both the FCC and the NTIA have relied heavily on a strategy of leveraging private sector efforts. On the one hand, private sector groups have a market incentive to ensure that the public is ready for the digital transition: for example, the consumer electronics industry wants to sell DTV products, and broadcasters want their viewers to be able to continue watching their local broadcasts. Accordingly, industry groups have launched multifaceted public outreach campaigns. On the other hand, critics question whether market forces will ensure that public outreach efforts are sufficiently targeted to those segments of American society (the elderly, non-English speakers, rural areas, disabled citizens, minorities, the economically disadvantaged) that may be more at risk of being adversely affected by the digital switch-over.

A second major question is the extent to which NTIA’s converter box program will meet the needs of analog television households, and the extent to which coupon and converter box supply problems, equipment and installation problems, and reception issues may surface for consumers. Will retail outlets—whether large or small stores, whether in urban, suburban, or rural areas—stock sufficient numbers of boxes to meet the demand of consumers seeking to redeem the \$40 coupons? Will NTIA, manufacturers, and retailers be prepared and able to meet the spike in demand for coupons and boxes as the transition date nears? And finally, will anticipated consumer problems with converter box set-up, antennas, and digital signal reception be adequately addressed?

The announcement from NTIA on January 5, 2009, that the funding ceiling for converter box coupons had been reached, that all new coupon requests would be put on a waiting list, and that growing numbers of households would not receive their coupons in time for the February 17 transition raised concerns in Congress that ultimately led to passage of the DTV Delay Act (P.L. 111-4), which delays the digital transition deadline to June 12, 2009. While most agree that the partial DTV transition of February 17, 2009 (the 36% of full-power stations that voluntarily turned off their analog signal early) went relatively smoothly, the FCC and others have cautioned that only 2.5% of all households were affected on February 17, and that a much larger challenge remains on June 12, 2009.

Appendix A. DTV Test Pilot Program in Wilmington, North Carolina

On September 8, 2008, most⁵⁵ broadcast television stations in Wilmington, NC, permanently ceased transmitting programs with their analog signal and went digital-only in response to an FCC pilot program announced on May 8, 2008. Wilmington is the 135th largest television market in the United States (about 180,000 households) and about 8% of Wilmington's television households (approximately 14,000) are reliant on over-the-air broadcasting.⁵⁶ In preparation for the early transition, the FCC coordinated with local officials and community groups in the Wilmington, NC, area to accelerate and broaden consumer education outreach efforts. The early DTV transition is intended to give the FCC, the NTIA, and broadcasters a "test case" that will supply valuable data and experiences that can be applied to the nationwide.

The FCC and the broadcasters collected feedback and data on the results of the test pilot program. After the cut-off at noon on September 8, analog programming was replaced with a screen telling consumers about the digital transition and how to get help. Over the first five days following the cut-off, the FCC received 1,828 calls to its DTV help line (about 1% of the total number of TV households in Wilmington). Of the total number of calls, 5% were from consumers who were unaware of the transition, 18% from consumers who had problems with their converter boxes, 22.9% from consumers who had antenna and reception issues, and 30% from households in out of market communities (as far south as Myrtle Beach, SC, and as far north as Raleigh, NC) who could no longer receive the Wilmington NBC affiliate (whose digital coverage area no longer extends to these out of market areas).⁵⁷

A general consensus has emerged that while the Wilmington test proceeded relatively smoothly, the experience has raised a number of challenges that must be met in order to ensure the most successful transition possible. While consumer awareness of the DTV transition in Wilmington was at a very high level, a much greater problem was consumers experiencing technical problems involving converter boxes, antennas, and/or signal reception. Former FCC Chairman Kevin Martin testified before the House Committee on Energy and Commerce that "though our consumer education efforts appear to have been effective, our focus now turns to resolving technical challenges."⁵⁸ FCC Commissioner Michael Copps recommended that the FCC take a number of steps, including conduct additional field testing, dedicate a special FCC team to the needs of at-risk communities, ramp up the FCC call center, prepare comprehensive DTV contingency plans, create an online DTV consumer forum, educate consumers on DTV troubleshooting (including antenna issues and the need to "re-scan" converter boxes and sets), ensure that broadcasters meet their construction deadlines, encourage the rapid deployment of small battery-powered DTV sets, and find a way to broadcast an analog message to consumers

⁵⁵ The Wilmington PBS station, WUNJ, will continue broadcasting programs in both analog and digital through the transition.

⁵⁶ Nielsen Media Research, DMA Household Universe Estimates: July 2008. Available at TVB Online, <http://www.tvb.org>.

⁵⁷ Written statement of Kevin Martin, Chairman, Federal Communications Commission, before the House Committee on Energy and Commerce, Subcommittee on Telecommunications and the Internet, September 16, 2008. Data available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-285403A5.pdf.

⁵⁸ Written statement of Kevin Martin, Chairman, Federal Communications Commission, before the House Committee on Energy and Commerce, Subcommittee on Telecommunications and the Internet, September 16, 2008, p. 4.

following the transition.⁵⁹ Meanwhile, on November 7, 2008, the House Committee on Energy and Commerce sent letters to the FCC, NTIA, NAB, and the major television networks asking how they will specifically address the issues of consumer education with respect to the need to re-scan converter boxes, antenna issues, and signal contour issues.

In response to the Wilmington test, both the FCC and NTIA refocused their outreach and public education efforts on consumer preparedness in addition to consumer awareness. Specifically, consumers are being encouraged to apply for coupons as early as possible, and to try out converter boxes in advance of the transition date in order to proactively address equipment issues (such as re-scanning the converter box, or repositioning or upgrading antennas). Meanwhile, many television stations across the nation conducted “soft” analog cutoffs in which the analog signals were temporarily discontinued and replaced by an educational message on the DTV transition.

⁵⁹ Letter from Michael J. Copps to the Kevin J. Martin, September 12, 2008, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-285373A1.pdf.

Appendix B. Short-Term Analog Flash and Emergency Readiness Act

During the Wilmington test, stations were able to continue broadcasting DTV consumer information on their analog channels. Consumers who had not upgraded their analog televisions were still able to receive a screen explaining what was happening and providing telephone numbers and websites for more information and assistance. Under current law, full-power television stations are prohibited from broadcasting anything on their analog channels after the transition deadline. Legislation has been introduced in the 110th Congress which would give stations short-term authority to maintain operation of their analog channel for a short period after the transition. The Short-Term Analog Flash and Emergency Readiness (SAFER) Act (H.R. 7013/S. 3663) would allow many television stations the option of broadcasting on their analog channels digital television transition and emergency public safety information.

On November 20, 2008, the Senate passed S. 3663 by Unanimous Consent. The bill would require the FCC to develop and implement a program by January 15, 2009, which would encourage and permit television stations (to the extent technically feasible and subject to limitations) to broadcast public safety and digital transition information on their analog service for 30 days after the transition date. In designing the program and determining broadcaster eligibility, the FCC would be required to take into consideration such factors as market-by-market needs such as channel and transmitter availability, avoiding harmful interference with digital television signals, prohibiting analog service on spectrum already designated for auction or for public safety use, and other factors. The 30-day analog signal would not be required to be carried or retransmitted by cable or satellite systems.

The legislation was passed by the House on December 10, 2008, and signed into law by the President on December 23, 2008 (P.L. 110-459). On December 31, 2008, the FCC adopted a Notice of Proposed Rulemaking to implement the Short-Term Analog Flash and Emergency Readiness Act (also referred to as the “Analog Nightlight Act”). On January 15, 2009 the FCC adopted and released the *Analog Nightlight Order*.

Appendix C. DTV Border Fix Act

Concerns have been raised that many over-the-air Spanish-speaking households near the U.S.-Mexican border may choose not to convert to digital because they will continue to watch analog signals from Mexican television stations not expected to convert to digital until 2021. The impact of households exclusively watching Mexican analog television broadcasts after the transition are two-fold. First, these households will lose access to important information broadcast on U.S. digital-only stations in the event of an emergency or natural disaster, including Emergency Alert System and AMBER Alert messages. Second, U.S. broadcast stations near the U.S.-Mexican border could lose significant numbers of analog-only viewers (both in the United States and in Mexico) after these stations convert to digital-only.

In response to these concerns, the DTV Border Fix Act was introduced in the Senate (S. 2507, introduced by Senator Hutchison) and the House (H.R. 5435, introduced by Representative Solis). S. 2507 was reported by the Committee on Commerce, Science, and Transportation (S.Rept. 110-424) and passed the Senate by voice vote on August 1, 2008. On September 8, 2008, S. 2507 was referred to the House Committee on Energy and Commerce.

S. 2507, as passed by the Senate, would give television stations within 50 miles of the U.S.-Mexican border the option of continuing their analog signal through February 17, 2013, *provided* they can establish to the satisfaction of the FCC that continued analog broadcasting is in the public interest. Stations must also broadcast between channels 2 through 51. Continued analog service cannot prevent the auction or public safety use of recovered spectrum, cannot interfere with any channel reserved for public safety use, and cannot interfere with any digital station.

Opposition to S. 2507 has been expressed by many English-language television stations along the U.S.-Mexico border. These stations argue that prolonging the analog option for some stations would create a confusing transition, that a future transition in four or five years for the border region will be problematic in the absence of a national DTV transition effort, and that stations planning to go all-digital on the transition date, may be compelled by competitive pressures to continue their analog signals, thereby adding additional and otherwise unnecessary expense.⁶⁰ On the other hand, supporters of S. 2507 (including Spanish-language stations) argue that Hispanic households in the border region are significantly more reliant on over-the-air television than the general population, and are likely to be less prepared for the digital transition, especially given that they can continue to watch analog over-the-air broadcasts from Mexican television stations. The legislation is particularly necessary, they argue, to ensure that these groups continue to receive important information over their televisions during an emergency or natural disaster.

⁶⁰ Eggerton, John, *Broadcasting & Cable*, "Border Stations Don't Speak the Same Language," September 9, 2008.

Appendix D. Low-Power Television and the Digital Transition

Unlike full-power television stations, low-power television (LPTV) stations, along with Class A stations and translator television stations,⁶¹ are *not* required to convert to digital broadcasting by the national transition date. With a later deadline for LPTV digital conversion (possibly in 2012) still to be set by the FCC, most LPTV stations will continue to broadcast analog signals after the transition date for full-power stations. A growing issue of concern to LPTV, Class A, and translator stations is the capability of digital-to-analog converter boxes to either pass through or receive broadcasted analog signals in addition to receiving and converting digital signals. A household that receives both full-power and LPTV broadcast signals, and that installs a converter box in order to receive the full-power station's digital signal, will not be able to receive the LPTV station's analog signal unless the converter box is equipped with an analog signal pass-through capability or an analog tuner. NTIA permitted but did not require manufacturers to install an analog signal pass-through capability in certified converter boxes, arguing that such a requirement could raise the cost of the boxes and pose possible interference problems for the digital signal.⁶² Coupon-eligible converter boxes (CECBs) that receive an analog signal (with tuners capable of receiving both digital and analog signals) are not eligible under the coupon program.

The Community Broadcasters Association (CBA), representing LPTV and Class A stations, argues that the widespread use of converter boxes without an analog reception or pass-through capability would effectively cause many of these stations to go out of business. The CBA has filed a complaint at the FCC asserting that the NTIA-certified converter boxes violate the All-Channel Receiver Act of 1962 if they block reception of analog over-the-air television broadcast signals.⁶³ On February 12, 2008, FCC Chairman Martin wrote a letter to the broadcasting, cable, satellite, consumer electronics, and consumer electronics retailing industries, asking each to voluntarily take specific steps to lessen the adverse effects of the digital transition on LPTV, Class A, and translator stations.⁶⁴ On March 26, 2008, the CBA petitioned the U.S. Court of Appeals for the District of Columbia Circuit to direct the FCC to immediately enforce the All-Channel Receiver Act and to stop the marketing and distribution of all converter boxes that do not receive an analog signal (e.g. all CECBs). However, on May 7, 2008, the Court dismissed the CBA lawsuit.

⁶¹ Low-Power Television (LPTV) was created by the FCC in 1982 to serve rural areas and individual communities within larger urban areas. Class A stations are former LPTV stations with certain interference protection rights not available to LPTV stations. TV translator stations rebroadcast programs of full-power stations in remote or mountainous areas. According to the FCC, as of December 31, 2007, there were 2,295 licensed LPTV stations, 556 Class A stations, and 4,271 TV translator stations. A list of LPTV, Class A, and translator stations is available at <http://www.ntia.doc.gov/dtvcoupon/LPTVmap.html>.

⁶² For the latest listing of NTIA-approved coupon eligible converter boxes, see https://www.ntiadtv.gov/cecb_list.cfm.

⁶³ Community Broadcasters Association, *Petition for Declaratory Ruling, In the Matter of Compliance of Digital Converter Boxes With the All Channel Receiver Act*, filed before the Federal Communications Commission December 7, 2007, 11 p. Available at <http://www.dtvnow.org/documents/dtvconv5.pdf>.

⁶⁴ Letter from FCC Chairman Kevin J. Martin to industry stakeholders. Available at http://www.fcc.gov/commissioners/martin/cm_letter_021208.pdf.

The Deficit Reduction Act of 2005 established two grant programs administered by the NTIA designed to assist low-power television stations with the digital transition.⁶⁵ Section 3008 provides funding not to exceed \$10 million during FY2008-FY2009 (starting October 1, 2007) to compensate low-power television stations (including Class A, translator, or booster television stations) for the cost of a digital-to-analog conversion device in order to convert the digital signals received from their corresponding full-power television stations and provide analog signals to their customers. In no case shall the compensation for a single digital-to-analog converter device exceed \$1,000. On October 29, 2007, NTIA announced the availability of \$8 million in grant money for the LPTV Digital-to-Analog Conversion grant program that will help low-power television stations continue analog broadcasts. The program provides funds to eligible low-power stations that must purchase a digital-to-analog conversion device to convert the incoming digital signal of a full-power television station to analog for transmission on the low-power station's analog channel. Applications are being accepted between October 29, 2007, and June 12, 2009. On August 28, 2008, NTIA announced that, pursuant to the DTV Transition Assistance Act (P.L. 110-295), the amount of money available for the grant program is reduced from \$8 million to \$3.5 million, an amount NTIA has determined will cover payments to eligible LPTV facilities. After November 17, 2008, available funding was to be reduced to \$1 million.

Section 3009 provides funding not to exceed \$65 million that will be made available on or after February 18, 2009, to reimburse low-power television stations for equipment to upgrade stations from analog to digital in eligible rural communities.⁶⁶ Priority reimbursements will be given to stations with licenses held by non-profit corporations and stations that serve rural areas with less than 10,000 viewers. On May 12, 2009, NTIA announced the availability of \$44 million in awards for the Low-Power Television and Translator Upgrade Program.⁶⁷

⁶⁵ For further information on NTIA's LPTV grant programs, see <http://www.ntia.doc.gov/lptv/index.html>.

⁶⁶ Eligible rural community is defined as "any area of the United States that is not contained in an incorporated city or town with a population in excess of 20,000 inhabitants." (7 U.S.C. 950bb(b)(2))

⁶⁷ National Telecommunications and Information Administration, "Low-Power Television and Translator Upgrade Program: Notice of Availability of Funds," 74 *Federal Register* 22402, May 12, 2009.

Appendix E. Legislation and Hearings in the 110th and 111th Congresses

Congress is closely monitoring and overseeing federal and private sector efforts to ensure a digital transition that proceeds as smoothly as possible. **Table E-1** shows a listing of hearings held in the 110th and 111th Congresses on the DTV transition.

Table E-1. DTV Hearings Held in the 110th and 111th Congresses

| Date | Committee | Topic |
|--------------------|--|--|
| March 28, 2007 | House Committee on Energy and Commerce, Subcommittee on Telecommunications and the Internet | "The Status of the Digital Television Transition" |
| July 26, 2007 | Senate Committee on Commerce, Science and Transportation | "Preparing Consumers for the Digital Television Transition" |
| September 10, 2007 | Senate Special Committee on Aging | "Preparing for the Digital Television Transition: Will Seniors Be Left in the Dark?" |
| October 17, 2007 | House Committee on Energy and Commerce, Subcommittee on Telecommunications and the Internet | "Status of the DTV Transition—Part 2" |
| October 17, 2007 | Senate Committee on Commerce, Science and Transportation | "The Digital Television Transition: Government and Industry Perspectives" |
| October 31, 2007 | House Committee on Energy and Commerce, Subcommittee on Telecommunications and the Internet | "Status of the DTV Transition—Part 3" |
| February 13, 2008 | House Committee on Energy and Commerce, Subcommittee on Telecommunications and the Internet | "Status of the DTV Transition—370 Days and Counting" |
| April 8, 2008 | Senate Committee on Commerce, Science and Transportation | "Oversight of the DTV Transition" |
| May 7, 2008 | House Committee on Small Business | "The DTV Transition and Small Businesses: Small Firms Contributing to a Big Change" |
| June 10, 2008 | House Committee on Energy and Commerce, Subcommittee on Telecommunications and the Internet | "Status of the DTV Transition: 252 Days and Counting" |
| July 18, 2008 | House Committee on Oversight and Government Reform, Subcommittee on Government Management, Organization, and Procurement | "Management of the Digital TV Transition: Is New York Prepared?" |
| September 16, 2008 | House Committee on Energy and Commerce, Subcommittee on Telecommunications and the Internet | "Status of the DTV Transition: 154 Days and Counting" |
| September 23, 2008 | Senate Committee on Commerce, Science, and Transportation | "Oversight of the DTV Transition: Countdown to February 2009" |
| March 26, 2009 | House Committee on Energy and Commerce, Subcommittee on Communications, Technology, and the Internet | "Oversight of the Digital Television Transition" |

Enacted Bills in the 110th Congress

P.L. 110-161 (H.R. 2764). Consolidated Appropriations Act, 2008. Provides \$2.5 million to the FCC for DTV consumer education in FY2008. Signed by President December 26, 2007.

P.L. 110-295 (S. 2607). DTV Transition Assistance Act. Makes technical corrections to section 3009 of the Deficit Reduction Act of 2005 by directing NTIA to make grant money available for low-power television and translator station digital upgrades on February 18, 2009, rather than on October 1, 2010 (as is prescribed in current law). Additionally, gives NTIA the authority to take unused funds from the low-power television Digital-to-Analog Conversion grant program and use remaining amounts for consumer education and technical assistance focusing on vulnerable populations and the need for education plans regarding analog pass-through converter boxes in areas served by low-power or translator stations. Introduced by Senator Snowe February 7, 2008; referred to Committee on Commerce, Science and Transportation. Ordered to be reported favorably without amendment April 24, 2008. Reported without amendment June 10, 2008 (S.Rept. 110-348), and placed on Senate Legislative Calendar. Passed Senate with an amendment by Unanimous Consent June 19, 2008. Passed House by voice vote under suspension of the rules July 9, 2008. Signed by President July 30, 2008.

P.L. 110-329 (H.R. 2638). Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009. Section 121 gives NTIA the authority to spend up to \$20 million in extra funding for administrative expenses, if needed. Section 136 provides \$20 million to the FCC for DTV public education. Signed by President September 30, 2008.

P.L. 110-459 (S. 3663). Short-term Analog Flash and Emergency Readiness (SAFER) Act. Requires the FCC to provide for a thirty day extension of the analog television broadcasting authority so that essential public safety announcements and digital television transition information may be provided for a short time during the transition to digital television broadcasting. Introduced October 1, 2008; referred to Committee on Commerce, Science and Transportation. Passed Senate (amended) by Unanimous Consent November 20, 2008. Passed without objection by House December 10, 2008. Signed by President December 23, 2008.

DTV-Related Bills in the 111th Congress

P.L. 111-4 (S. 352). DTV Delay Act. Postpones the digital transition deadline from February 17, 2009, to June 12, 2009. Introduced in the Senate January 29, 2009. Passed Senate without amendment by unanimous consent January 29, 2009. Passed House February 4, 2009. Signed by President February 11, 2009.

P.L. 111-5 (H.R. 1). American Recovery and Reinvestment Bill of 2009. Includes \$650 million in appropriated funds to NTIA for DTV coupons and related activities including education, consumer support, and outreach. Introduced January 26, 2009. Passed House January 28, 2009. Passed Senate February 10, 2009. Conference report (H.Rept. 111-16) approved by House and Senate February 13, 2009. Signed by President February 17, 2009.

H.R. 299 (Engel). National Digital Television Consumer Education Act. Provides consumers with information about the digital transition. Provides \$20 million in FY2009 for a grant program for the purpose of coordinating and leading a national consumer education and outreach campaign on the digital transition. Amends section 3005 of the Digital Television Transition and

Public Safety Act of 2005 to provide \$200 million in extra funding authority for the converter box coupon program. Introduced January 8, 2009; referred to Committee on Energy and Commerce.

H.R. 339 (Platts). Digital Television Coupon Improvement Act. Extends the expiration date of DTV converter box coupons to March 31, 2009. Introduced January 8, 2009; referred to Committee on Energy and Commerce.

H.R. 508 (Braley). DTV Converter Box Rebate Act of 2009. Allows a refundable credit against federal income tax for the purchase of converter boxes for taxpayers who did not use coupons. Introduced January 14, 2009; referred to the Committee on Ways and Means, and in addition to the Committee on Energy and Commerce.

H.R. 661 (Barton). To provide additional coupons for the digital-to-analog converter box program and to expedite delivery of coupons under such program. Introduced January 23, 2009; referred to Committee on Energy and Commerce.

H.R. 681 (Waxman). Digital Television Transition Extension Act of 2009. Extends the digital transition deadline to June 12, 2009. The legislation would also modify the coupon program by extending the deadline for coupon applications (from March 31 to July 31, 2009); allowing households whose coupons have expired to request one replacement coupon for each expired coupon; directing NTIA to deliver coupons via first class mail; allowing broadcasters, as long as they comply with FCC requirements, to switch off their analog signal and go exclusively digital before the new deadline; allowing public safety use of vacated and available analog spectrum before June 12, 2009, if the FCC determines that such use is in the public interest and does not cause harmful interference to television broadcasting in the analog spectrum; extending the license period of recovered analog spectrum by 116 days and extending FCC auction authority through 2012; and directing NTIA to issue monthly detailed reports on the status of the DTV converter box coupon program. Introduced January 26, 2009; referred to Committee on Energy and Commerce.

S. 25 (Sanders). A bill to ensure access to basic broadcast television after the Digital Television Transition. Introduced January 7, 2009; referred to Committee on Commerce, Science, and Transportation.

S. 300 (Gregg). TV Converter Box Coupon Relief Act. Enables NTIA to resume timely processing and distribution of TV converter box coupons by increasing its fiscal authority by \$250 million. Introduced January 22, 2009; referred to the Committee on Commerce, Science, and Transportation.

S. 899 (Snowe). DTV Cliff Effect Assistance Act. Establishes an assistance program for the construction of digital TV translators to fill coverage gaps that are created by the transition from analog to digital signals. Introduced April 27, 2009; referred to the Committee on Commerce, Science, and Transportation.

Appendix F. Sources for Further Information

A variety of websites have been established to provide basic information to consumers on many aspects of the digital transition. The following is a partial listing.

Federal Communications Commission (FCC)

<http://www.dtv.gov>

National Telecommunications and Information Administration (NTIA)

<https://www.dtv2009.gov/> <http://www.ntia.doc.gov/dtvcoupon/index.html>

DTV Transition Coalition

<http://www.dtvtransition.org/>

National Association of Broadcasters (NAB)

<http://www.dtvanswers.com/>

Consumer Electronics Retailers Coalition (CERC)

<http://www.ceretailers.org/transtodtv.htm>

Consumer Electronics Association (CEA)

<http://www.digitaltips.org/>

National Cable & Telecommunications Association (NCTA)

<http://www.getreadyfordigitaltv.com/>

Community Broadcasters Association

<http://www.keepuson.com/index2.php>

National Association of Regulatory Utility Commissioners (NARUC)

<http://www.naruc.org/dtv/>

Consumers Union

<http://www.hearushow.org/tvradio/12/>

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