

DEPARTMENT OF COMMERCE

National Telecommunications and Information Administration

47 C.F.R. 301

Docket Number: 0612242667-7051-01

RIN 0660-AA16

Rules to Implement and Administer a Coupon Program for Digital-to-Analog Converter Boxes

AGENCY: National Telecommunications and Information Administration, Commerce

ACTION: Final Rule

SUMMARY: In this document, the National Telecommunications and Information Administration (NTIA) adopts regulations to implement and administer a coupon program for digital-to-analog converter boxes. This rule implements provisions of section 3005 of Public Law 109-171, known as the Digital Television Transition and Public Safety Act of 2005. This action amends 47 C.F.R. Chapter III by adding part 301.

DATES: These rules become effective [Insert date 30 days after publication in the *Federal Register*].

ADDRESSES: A complete set of comments filed in response to the Notice of Proposed Rulemaking is available for public inspection at the Office of the Chief Counsel, National Telecommunications and Information Administration, Room 4713, U.S. Department of Commerce, 1401 Constitution Avenue, N.W., Washington, D.C. The responses can also be viewed electronically at <http://www.ntia.doc.gov>.

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SUPPLEMENTARY INFORMATION:

TABLE OF CONTENTS

<u>Heading</u>	<u>Paragraph No.</u>
I. Background	001
II. Discussion	004
A. Eligible U.S. Households.....	004
B. Coupon Value and Use Restrictions.....	012
C. Application Process.....	019
D. Coupon Expiration.....	023
E. Coupon-Eligible Converter Box.....	026
F. Manufacturer Certification.....	096

G. Retailer Participation.....	103
H. Consumer Education.....	125

III. PROCEDURAL MATTERS.

I. Background

1. The Digital Television Transition and Public Safety Act of 2005 (the Act), among other things, directs the Federal Communications Commission (FCC) to require full-power television stations to cease analog broadcasting and to broadcast solely digital transmissions after February 17, 2009.¹ The returned analog television spectrum is to be auctioned, and the Act directs the FCC to deposit receipts from that auction into a new Treasury Fund to be known as the Digital Television Transition and Public Safety Fund (the Fund).²

2. Recognizing that consumers may wish to continue receiving broadcast programming over the air using analog-only televisions not connected to cable or satellite service, the Act authorizes NTIA to create a digital-to-analog converter box assistance program (Coupon Program). Specifically, Section 3005 of the Act directs NTIA to implement and administer a program through which eligible U.S. households may obtain via the United States Postal Service a maximum of two coupons of \$40 each to be applied towards the purchase of a Coupon-Eligible Converter Box (CECB).³ To implement the Coupon Program, the Act authorizes NTIA to use up to \$990 million from the Fund for the program, including up to \$100 million for program administration (Initial Funds).⁴ A contingent level of \$510 million in additional funds is authorized upon a 60-day notice and certification to the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate that the initial funding level is insufficient to fulfill coupon requests for eligible U.S. households (Contingent Funds).⁵ NTIA is, therefore, authorized to expend up to a total of \$1.5 billion for the program, including up to \$160 million for administration. Assuming the entire administrative amount is taken into account, \$1.34 billion would be available for distributing up to 33.5 million coupons. This section also authorizes NTIA, beginning on October 1, 2006, to borrow not more than \$1.5 billion from the Treasury to implement the program. NTIA must reimburse the Treasury for this amount, without interest, as recovered analog television spectrum

¹ See Title III of the Deficit Reduction Act of 2005, Pub. L. No. 109-171, 120 Stat. 4, 21 (Feb. 8, 2006) (the Act). Section 3002(a) of the Act amends Section 309(j)(14)(A) of the Communications Act of 1934 so that analog full-power television licenses will terminate on February 17, 2009. Section 3002(b) of the Act directs the FCC to terminate analog television licenses for full-power stations by February 18, 2009.

² Section 3004 of the Act.

³ See subsections 3005(c)(1)(A), (c)(4) of the Act.

⁴ NTIA intends to enter into a contract for services to administer the Coupon Program through a separate program acquisition plan. The contractor will be responsible for establishing and managing the systems and processes through which some of the final rules may be applied. In this document, “NTIA” should be understood to be either NTIA or its contractor.

⁵ Section 3005(c)(3) of the Act.

auction proceeds are deposited into the Fund.⁶

3. On July 25, 2006, NTIA published a Notice of Proposed Rulemaking (NPRM) and Request for Comment in the *Federal Register* on ways to implement and administer such a program pursuant to the Act.⁷ NTIA also held meetings on November 14 and 15, 2006, to afford interested parties the opportunity to clarify comments submitted in response to the NPRM.⁸

II. Discussion

A. Eligible U.S. Households

4. After February 17, 2009, households may make one or more of several consumer choices to achieve digital-to-analog conversion, such as via cable or satellite service (where available), or through a converter device.⁹ In the NPRM, NTIA proposed to define those U.S. households eligible to participate in the Coupon Program as “those households that only receive over-the-air television signals using analog-only television receivers.”¹⁰ NTIA further proposed to make households that receive cable or satellite television service, even if those households have one or more analog television signals not connected to such service, ineligible for the Coupon Program.

5. Many commenters disagreed with NTIA’s proposed definition and argued that all consumer households should be eligible to receive coupons.¹¹ Given the funding level and the possibility that many households with cable or satellite service may wish to purchase a converter box, commenters expressed concern about excluding any household.¹² Commenters also expressed

⁶ Section 3005(b) of the Act.

⁷ *Request for Comment and Notice of Proposed Rules to Implement and Administer a Coupon Program for Digital-to-Analog Converter Boxes*, Notice of Proposed Rulemaking, 71 Fed. Reg. 42,067 (July 25, 2006).

⁸ Summaries of these *ex parte* meetings are posted on NTIA’s website at <http://www.ntia.doc.gov>.

⁹ Not all local television signals are uplinked and delivered to satellite homes today. The extent to which satellite subscribers will have digital-to-analog conversion of local signals available to them after February 17, 2009, will depend on the availability of “local-into-local” offerings from satellite providers.

¹⁰ NTIA proposed to define a “television household” as a “household with at least one television . . . consisting of all persons who currently occupy a house, apartment, mobile home, group of rooms, or single room that is occupied as separate living quarters and has a separate U.S. postal address.” See NPRM, 71 Fed. Reg. at 42,068.

¹¹ See Association for Maximum Service Television, Consumer Electronics Association, and National Association of Broadcasters (Joint Industry) Comments at 5-11; Thomson Comments at 2; Archway Marketing Service Comments at 2; LG Electronics Comments at 5; Community Broadcasters Association Comments at 3; Consumer Electronics Retailers Coalition (CERC) Comments at 5; AARP Comments at 5; MTVA Comments at 3; Joint Consumer Comments at 2-8; APTS Comments at i; RadioShack Corporation Comments at 3-6; Sodexho Comments at 4.

¹² See Letter to Hon. John M. R. Kneuer from Hon. John D. Dingell, Hon. Edward J. Markey, Hon. Henry A. Waxman, Hon. Frank Pallone, Jr., Hon. Bart Gordon, Hon. Eliot L. Engel, Hon. Ted Strickland, Hon. Lois Capps, Hon. Tom Allen, Hon. Rick Boucher, Hon. Sherrod Brown, Hon. Bart Stupak, Hon. Gene Green, Hon. Diana Degette, Hon. Mike Doyle, Hon. Jan Schakowsky, (Letter from Members of the House Energy and Commerce Committee) (Nov. 15, 2006) at 2.

concern about those consumers that may need to rely on over-the-air capabilities in times of emergency. Some commenters argued that the Act and the legislative history do not support NTIA's proposed definition and that the Agency lacks the statutory authority to limit the eligibility requirements.¹³ For example, in Joint Industry Comments, the commenters argued that the Act and the legislative history, as well as practical considerations, "preclude any implementation of the program that would exclude from coupon eligibility analog sets in cable or satellite-served homes not connected to those services."¹⁴ Likewise the Consumer Electronics Retailer Coalition (CERC) argued that there is no basis in the Act or the legislative history to support the standard proposed in the NPRM.¹⁵

6. Several comments raised other points in favor of expanding eligibility beyond that proposed in the NPRM. For example, some commenters noted that even cable and satellite households may need the ability to receive signals over the air in times of emergency or severe weather.¹⁶ Others noted that limiting coupons to over-the-air-only households could disadvantage satellite customers who receive their local broadcast signals over the air.¹⁷ Operators of Class A and LPTV stations noted that these facilities will continue to broadcast in analog after February 17, 2009, that most of these facilities are not eligible for cable or satellite must carry and that NTIA should not deny converter-box subsidies to households that rely on analog receivers to watch Class A and LPTV stations over the air, even if they have another means to view digital full-power stations.¹⁸ Consumers Union contended that denying converter boxes to all households would cause disruptions in service that could undermine consumer support for the digital television transition.¹⁹ RadioShack suggested that limiting eligibility could reduce demand for converter boxes, thus raising their costs and potentially harming low-income households.²⁰

7. NTIA recognizes that limiting eligibility as proposed in the NPRM would be difficult to enforce. There are no lists of households that only receive over-the-air television broadcasts. Moreover, as the Government Accountability Office (GAO) recognized, it would be a highly challenging task to obtain a list of cable and satellite subscribers in order to identify over-the-air-

¹³ Joint Consumer Comments at 2-8; Richard Brittain Comments; Joint Industry Comments at 5.

¹⁴ Joint Industry Comments at i.

¹⁵ CERC Comments at 5.

¹⁶ *See, e.g.*, Marvin Clegg Comments at 1; Richard Brittain Comments at 1; Thomson Comments at 2.

¹⁷ *See, e.g.*, Richard Brittain Comments at 1.

¹⁸ Community Broadcasters Association Comments at 5. Section 3002 of the Act permits Class A and LPTV facilities to broadcast in analog after February 17, 2009. Moreover, a cable system must carry a LPTV facility only if it meets certain limited requirements. 47 U.S.C. § 534(h)(2).

¹⁹ Joint Consumer Comments at 9.

²⁰ RadioShack Comments at 7.

reliant homes by the process of elimination.²¹ In fact, it would be difficult for NTIA to determine which U.S. households currently have, or plan to obtain, an analog television set requiring a CECB. Moreover, efforts to confirm eligibility would likely delay reasonable and timely distribution of coupons.²² Unless NTIA devoted substantial resources to review applicants' certifications of eligibility, there would be potential for waste, fraud and abuse.²³ Such efforts could also substantially increase the costs of administering the program.²⁴

8. Upon careful consideration of all arguments raised in the comments for and against limiting household eligibility criteria, NTIA has decided *not* to initially limit household eligibility in the Coupon Program to households reliant exclusively on over-the-air broadcasts for television service. Accordingly, the Final Rule permits coupons to be distributed initially to all U.S. households. As proposed in the NPRM and consistent with the definition used by the U.S. Census Bureau, a "household" consists of all persons who currently occupy a house, apartment, mobile home, group of rooms, or single room that is occupied as a separate U.S. postal address.²⁵ NTIA received a comment from SunBelt Multimedia Company that requested the household definition to be expanded to allow multiple families residing at a single address to each count as a household, based on the community or income criteria.²⁶ NTIA recognizes that multiple families may exist in households as defined by this Final Rule, however, it would be administratively difficult to determine the number and location of these households and to establish a definition based on community or income criteria.

9. Recognizing that funds allocated for this program are limited and the possibility that over-the-air reliant television households may lose television service as a result of this decision, NTIA will permit open eligibility on a first-come, first-served basis while the Initial Funds are available (*i.e.*, until coupons valuing \$890,000,000 have been redeemed and issued but not expired, in accordance with Section 3005(c)(2)(B) of the Act).²⁷ The Act permits funding of the program to increase by \$510,000,000 to a total of \$1,500,000,000 upon certification to Congress that the initial allocated amount of \$990,000,000, the Initial Funds, is insufficient to fulfill

²¹ See "Digital Broadcast Television Transition: Several Challenges Could Arise in Administering a Subsidy Program for DTV Equipment," GAO-05-623T (May 26, 2005) at 11-13 (GAO Challenges Report). In addition to the cable industry's reluctance to give the government access to its subscriber lists, GAO noted that it would be difficult to merge information across the more than 1,100 cable and satellite companies in the United States. GAO Challenges Report at 12.

²² See, *e.g.*, RadioShack Comments at 8.

²³ See, *e.g.*, Thomson Comments at 2.

²⁴ See, *e.g.*, Archway Marketing Services Comments at 2.

²⁵ See U. S. Census Bureau, <http://www.census.gov> (Current Population Survey – Definitions and Explanations).

²⁶ Sunbelt Multimedia Company Comments at 11.

²⁷ See *supra*, para 2.

coupon requests.²⁸ If such Contingent Funds are available for the Coupon Program, the eligibility for those coupons provided from Contingent Funds will be limited to over-the-air-only television households (Contingent Period). Consumers requesting those coupons during the Contingent Period must certify to NTIA that they do not subscribe to a cable, satellite, or other pay television service. NTIA makes this decision balancing the demand uncertainty and funding limitations with the need to prioritize contingency funds for over-the-air reliant households which will lose total access to television broadcasts after the transition date.

10. NTIA did not propose to consider “economic need” as part of the eligibility requirement, but solicited comment on whether it should be considered and, if so, how it should be determined. NTIA received comments opposing adoption of eligibility criteria encompassing economic need because of the complications involved in such an analysis. Some commenters also asserted that NTIA lacks such statutory authority.²⁹ Other commenters, however, supported the idea of adopting a means test and suggested that NTIA use income or participation in other federally supported programs as a basis of determining eligibility. For example, the American Association of People with Disabilities suggested that NTIA adopt a program similar to the FCC Lifeline-Linkup phone subsidy program which uses 135 percent of the poverty level or persons who are beneficiaries of other federal assistance programs as a basis for eligibility.³⁰

11. NTIA agrees that including economic need as an eligibility factor in the Coupon Program would be a complicated process. Furthermore, because this is a one-time program, it would not be cost effective to develop eligibility requirements and verification systems such as those used by other federal assistance programs, such as Food Stamps. NTIA noted in the NPRM that neither the Act nor the legislative history suggests such a requirement. Accordingly, NTIA will not consider economic need as part of an eligibility requirement for the coupon program. Moreover, the Agency will only make the Coupon Program available to individual U.S. households, as proposed in the NPRM, not businesses, schools, or other entities as suggested by one commenter.³¹ The Act states that a “household” may obtain coupons, and there is nothing in the legislative history or the comments that suggests that Congress intended to extend eligibility beyond households.

B. Coupon Value and Use Restrictions

12. Consistent with the Act, NTIA proposed in the NPRM to issue \$40 coupons to be redeemed

²⁸ See Section 3005(c)(3)(ii) of the Act.

²⁹ See Carolyn McMahon Comments; Stored Value Systems, Inc. Comments at 4; Consumer Union, Consumer Federation of America, and Free Press Comments at 9-10; Sodexho Comments at 5; Letter from Members of the House Energy and Commerce Committee at 2.

³⁰ See American Association of People with Disabilities Comments at 8 (the federal programs cited by AAPD include Medicaid, Food Stamps, Supplemental Security Income, Federal Public Housing Assistance, Low-Income Home Energy Assistance Program, Temporary Assistance to Needy Families, The National School Lunch Program’s Free Lunch Program, Bureau of Indian Affairs General Assistance, Tribally Administered Temporary Assistance for Needy Families, Head Start, Tribal National Lunch Program).

³¹ See Jon Kaps Comments (arguing that schools should be eligible to participate in the Coupon Program).

only at certified retailers when purchasing a CECB. The Agency also proposed to place identifying serial numbers on the coupons to keep track of the number of coupons issued to and redeemed by consumers as well as to minimize fraud, such as counterfeiting. NTIA did not propose a specific form of the coupon, but requested comment on whether the Agency should issue a paper coupon or an electronic coupon card.

13. NTIA proposed to restrict each individual coupon to the purchase of one CECB. Consistent with the Act, NTIA also proposed to prevent coupon holders from using two coupons in combination toward the purchase of a single CECB. To prevent fraud, NTIA also proposed to prohibit coupon holders from returning a converter box to a retailer for a cash refund or for credit towards the purchase of another item. However, the Agency did propose to permit the even exchange for another CECB in the event of defective or malfunctioning equipment.

14. One commenter argued that a buyer should be able to use the \$40 coupon to buy a converter box with deluxe features.³² Best Buy supported only “even” exchanges of devices and opposed allowing consumers to return converters for a cash refund or for credit towards the purchase of an upgraded device.³³ RadioShack recommended that statements such as “No Cash Value” or “Exchange Only for Eligible Converter” be clearly printed on the coupon and in accompanying consumer material.³⁴

15. Consistent with the Act, the value of the coupons issued will be \$40. In no case may consumers receive any cash value for the coupon.³⁵ If the cost of a CECB is less than \$40, retailers will only be reimbursed for the retail price of the box. Likewise, consumers cannot receive a refund or credit towards the purchase of another item if the price of the CECB is less than the \$40 value of the coupon. Retailers and consumers are also prohibited from using two coupons in combination towards the purchase of a single CECB. NTIA recognizes the opportunities for fraud and abuse by permitting consumers to receive a cash refund for the value of the coupon or for credit towards another item outside of the program. Therefore, NTIA will permit an exchange only for another converter box certified under these regulations.³⁶

16. Some commenters supported the use of a paper coupon. For example, one commenter stated that it was Congressional intent to issue a paper coupon with UPC coupon-type barcode, which brick-and-mortar retailers and clearinghouses could handle in the same fashion as manufacturers’ cents-off coupons because this would minimize the cost of the overall program.³⁷ Another commenter stated that the paper coupon was both straightforward to use and provides

³² Robert Diaz Comments.

³³ Best Buy Comments at 4.

³⁴ RadioShack Comments at 13.

³⁵ To further prevent fraud, the Final Rule states that consumers may not sell, duplicate or tamper with the coupon.

³⁶ However, if a consumer returns a CECB to a retailer, the retailer may refund to the consumer that portion of the purchase price not covered by the coupon.

³⁷ See Richard Brittain Comments.

for a fast and economical means to mail eligible applicants their coupons in a short time frame.³⁸ Moreover, paper coupons could have several security features, including unique serial numbers, barcodes, security paper and consumer identification.³⁹ Many of the comments, however, addressed the problems associated with paper coupons including the potential for fraud, delay in retailer reimbursement and increased administrative costs.⁴⁰

17. Other commenters, particularly retailers, supported the use of an “electronic coupon card” (ECC) on which the \$40 value can be credited towards the purchase of a CECB. Many commenters agreed that use of the ECC was the most efficient way to administer the program as well as the best way to reduce fraud.⁴¹ CERC stated that an ECC should (a) bear a “use by” date on its surface and should be coded to expire after the time indicated on its surface; (b) carry a unique serialized number (encoded in a magnetic strip and printed in human-readable form on the card) that can be transmitted to a central database immediately upon submission for on-line verification; and (c) provide clear and succinct rules concerning coupon use.⁴² CERC also noted that the use of ECCs would permit more consumer friendly converter exchanges.⁴³ It was also noted that the use of ECCs would facilitate real-time transmission of information on redemption rates which is important because transmission delays may limit NTIA’s ability to monitor performance or to request additional congressional funding.⁴⁴ There were, however, concerns expressed about the use of ECCs. For example, ORC Macro noted that these cards may not be compatible with electronic scanning devices used by participating retailers, and that the requirement for electronic systems may eliminate small retailers from participating.⁴⁵ NTIA also received conflicting comments on whether ECCs could be encoded to limit use to a specific product.⁴⁶ Retailers suggested that ECCs may require significant up-front costs for software, payment processing and employee training.⁴⁷

18. The coupons will not carry any “stored value,” but the appropriate amount will be identified on the cards and authorized for redemption when matched to the central database to verify each

³⁸ See Poorman-Douglas & Hilsoft Notifications Comments.

³⁹ *Id.*

⁴⁰ See CERC Comments at 7-8; Archway Marketing Services at 5-6.

⁴¹ See Joint Industry Commenters at 22; CERC Comments at 7-8; Samsung Electronics Comments at 2; Joint Consumer Comments at 17; Best Buy Comments at 2; RadioShack Corporation Comments at 10.

⁴² CERC Comments at 6-9.

⁴³ *Id.* at 8.

⁴⁴ Joint Consumer Comments at 17.

⁴⁵ ORC Macro Comments at 3.

⁴⁶ Archway Marketing Services Comments at 6; Sodexho Comments at 9; Best Buy Comments at 2; CERC Comments at 7; Stored Value Systems, Inc. Comments at 8.

⁴⁷ Best Buy Comments at 2; CERC Comments at 6.

transaction. In light of the comments received, particularly those from retailers, NTIA will provide coupons that are capable of electronically encoding information that is necessary for the program to run efficiently and permit electronic tracking of transactions. NTIA also believes that electronically encoded coupons will reduce opportunities for fraud in the program. NTIA notes that electronic information may be encoded on paper coupons as well as plastic cards.⁴⁸

C. Application Process

19. NTIA proposed to require coupon applicants to submit the following information: (1) name; (2) address (no Post Office Box); (3) the number of coupons required, not to exceed two coupons; (4) a certification that they only receive over-the-air television signals using an analog-only (NTSC) television receiver; and (5) a certification that no other member of the household has or will apply for a coupon. Furthermore, consistent with the Act, NTIA proposed to commence the application period on January 1, 2008 and conclude on March 31, 2009. If an applicant does not specify the number of coupons needed, NTIA proposed sending the applicant one coupon. Also consistent with the Act, NTIA proposed sending the requested coupon(s) via the United States Postal Service.

20. Few of the comments raised concerns about the information NTIA proposed to require consumers to provide as part of the application process. CERC, however, argued that certifications that a household receives only over-the-air television signals and that no one else in the household will apply is neither consistent with the Act, nor practical nor fair.⁴⁹ Council Tree Communications Inc. argued that NTIA should allow for “alternative methods of delivering the coupons to Indian Reservations and Alaskan Native Villages.”⁵⁰ Some commenters encouraged the Agency to make applications available in foreign languages.⁵¹ With respect to the application period, one commenter suggested that the time period be extended to December 31, 2009, because consumers may not understand the need for a converter box until their televisions go dark after February 17, 2009.⁵²

21. The Final Rule requires applicants to provide NTIA with only the information necessary for NTIA to fulfill a coupon request. Accordingly, applicants for coupons must provide the following: (1) name; (2) address; (3) the number of coupons that they require; and (4) a certification as to whether they receive cable, satellite, or other paid television service. NTIA is sensitive to privacy concerns and is not requesting unnecessary personal identification information, such as social security numbers. Multifamily residences (i.e., a residence occupied by more than one family unit) will not be eligible for more than two coupons unless each household is occupied as separate living quarters and has a separate U.S. postal address.

⁴⁸ An example of a paper card with electronic tracking capability would be a MetroCard, used in the Washington D.C.-area Metro system.

⁴⁹ CERC Comments at 9.

⁵⁰ Council Tree Communications Inc. Comments at 1.

⁵¹ Sunbelt Multimedia Co. Comments at 12.

⁵² Robert Diaz Comments.

Coupons will be mailed via the U.S. postal service along with the terms and conditions of use. Given the sensitivity of commenters to the prevalence of Post Office Boxes in rural America, NTIA will make allowances for households on Indian Reservations, Alaskan Native Villages and other rural areas where Post Office Boxes are the only means of mail delivery. Residents of Indian reservation, Alaskan Native Villages and other rural areas without home postal delivery may be requested to supply additional information to identify the physical location of the household. With respect to the application period, NTIA will adhere to the period provided in the legislation; thus NTIA will accept applications only between January 1, 2008 and March 31, 2009.⁵³

22. Commenters agreed with NTIA's proposal to make application forms widely available.⁵⁴ NTIA will administer the program to make it accessible particularly to those in need of coupons. As part of the consumer education program, consumers will be made aware of the various ways to access and submit applications for the Coupon Program. NTIA will ensure that applications and accompanying materials are available in other languages consistent with its obligations under Executive Order 13166, "Improving Access to Services for Persons with Limited English Proficiency," (Aug. 11, 2000).⁵⁵ The Final Rule provides that coupons may be requested by mail, by phone and electronically (*e.g.*, by email or through a website).

D. Coupon Expiration

23. According to the Act, coupons issued under this program are to expire three months after issuance. Accordingly, NTIA proposed to print an expiration date on each coupon and proposed that the expiration date be three months after the coupon's issuance date. NTIA defined issuance date as the date upon which the coupon is placed in the U. S. mail.

24. Although commenters agreed with NTIA's proposal to print an expiration date on the coupon, many thought that the proposed expiration date of three months after the coupon's issuance should be extended. The time that commenters suggested the date be extended varied from three to ten days after issuance to take into consideration such matters as the rural location of the consumers, homebound or disabled consumers, slow mail delivery and coupons lost in the mail.⁵⁶

25. As stated above, the Act requires NTIA to issue coupons that expire three months after issuance. NTIA believes that three months is reasonable and allows ample time for consumers to receive and use the coupons. The expiration date will encourage consumers to use coupons

⁵³ Section 3005(c)(1)(A) of the Act.

⁵⁴ AARP Comments at 9-10.

⁵⁵ The Department of Commerce Limited English Proficiency guidelines are provided on the Department's website at <http://www.osec.doc.gov/ocr/doclepplan2003.pdf>.

⁵⁶ Susan Stanke Comments; Richard Brittain Comments; AARP Comments at 10; Best Buy Comments at 3; RadioShack Comments at 9; Sunbelt Multimedia Co. Comments at 11. *See also* Ralph L. Mlaska Comments (coupons issued in first 6 months of the year should expire in December; coupons issued in the last 6 months should expire in July of the following year); George McLam Comments (program should last all of 2009).

promptly and will permit NTIA to use funds from expired coupons to issue coupons to other households. Accordingly, NTIA adopts a rule that coupons will be issued with an expiration date of three months after the issuance date. Three months will further be defined as 90 calendar days to provide a uniform redemption period for all coupon recipients. The issuance date will be the date the coupon is placed in the U. S. Mail.

E. Coupon-Eligible Converter Box

26. The Act defines the term “digital-to-analog converter box” (a CECB) as “a stand-alone device that does not contain features or functions except those necessary to enable a consumer to convert any channel broadcast in the digital television service into a format that the consumer can display on television receivers designed to receive and display signals only in the analog television service, but may also include a remote control device.”⁵⁷ NTIA’s Final Rule adopts technical specifications and features required for a CECB to qualify for the Coupon Program. Manufacturers are free to market converter boxes which do not comply with the requirements of the Final Rule, although such devices would not be eligible for the Coupon Program.

27. NTIA acknowledges that many sections of the NPRM incorporate standards or rules adopted by the FCC regarding digital television transmission or receiver requirements, and also incorporate industry standards and guidelines adopted by the Advanced Television Systems Committee (ATSC), CEA or other organizations.⁵⁸ NTIA’s incorporation of these industry standards and guidelines or FCC standards and rules into its regulations is intended to assist converter-box manufacturers by gathering NTIA’s basic converter-box requirements in a single place. NTIA’s regulations do not supercede the FCC’s authority, affect any FCC requirement or revise any of the industry standards and guidelines discussed in this document. In these regulations, NTIA adopts technical specifications and features required for a CECB. NTIA recognizes that CECBs are not currently available to consumers, and that manufacturers will have barely 12 months to bring converter boxes compliant with NTIA specifications to market, less than the typical 18-month manufacturing cycle.⁵⁹

28. NTIA underscores that the converter boxes that will be eligible for this program are in development and are not yet commercially available. NTIA cannot warrant the performance, suitability or usefulness of any CECB.

29. The NPRM requested comment on NTIA’s proposed rule to define the converter box eligible for the Coupon Program. The NPRM presented several guidelines which NTIA used in developing the proposed rule and analyzing the comments submitted by the public. These

⁵⁷ See Section 3005(d) of the Act.

⁵⁸ FCC receiver standards are set forth at 47 C.F.R. § 15.117; FCC transmission standards are set forth at 47 C.F.R. §73.682. Examples of industry standards and guidelines incorporated in this Final Rule are ATSC A/74 and CEA 909.

⁵⁹ Thomson Comments at 8.

guidelines include the ability of consumers to continue receiving broadcast programming in the same receiving configuration (*e.g.*, same household antenna, same location) as used for the existing analog reception; that the CECBs be inexpensive but meet a minimum performance level; and that they should be easy to install and operate.⁶⁰

30. The NPRM requested comment on several related issues, including the appropriate minimum technical capabilities for CECBs, their features; and the extent to which NTIA should consider certain standards, such as energy efficiency, in determining the type of converter box that would be eligible for the Coupon Program. Comment was also sought on how NTIA can determine whether a converter box meets the requirements of the Coupon Program and how the CECBs should be identified so the public is informed that a specific box is eligible for a coupon. Comments were received on each of these issues as well as additional areas. Each of these is discussed in the following sections.

a. Minimum Technical Specifications: ATSC Guidelines A/74 and FCC Part 73

31. The NPRM stated that “[f]or purposes of the coupon program, NTIA proposed certain standards for a minimum-capabilities converter box that simply converts an ATSC terrestrial digital broadcasting signal to the analog National Television Standards Committee (NTSC) format.”⁶¹ The NPRM proposed that the converter box should be capable of receiving, decoding and presenting video and audio from digital television transmissions as specified in FCC Part 73 (47 C.F.R. Part 73) and that meet the ATSC Recommended Practice: Receiver Performance Guidelines ATSC A/74 (A/74).

32. NTIA received many comments regarding the technical specifications proposed in the NPRM. All the comments agreed that A/74 should form the basis of the technical specifications for the CECB.⁶² One commenter, Zoran, urged NTIA to adopt, but not exceed, the A/74 guideline. Zoran stated that “[e]xceeding A/74 on a basic set top box calls for over engineering and the use of non-commodity parts that increase cost exponentially.”⁶³ Many of the commenters recommended that NTIA adopt performance specifications for the converter box that go beyond the receiver guidelines contained in A/74. The Joint Industry Comments noted that there have been ongoing improvements in technology since the A/74 guidelines were adopted in 2004 that would enable NTIA to set reasonable requirements exceeding A/74 performance levels in some areas and also to fill in some requirements for performance levels where A/74 only specified test procedures.⁶⁴ MTVA, an association of television stations that serve the New York City metropolitan area, echoed the Joint Industry Comments and indicated

⁶⁰ NPRM, 71 Fed. Reg. at 42,069-70.

⁶¹ *Id.* at 42,069.

⁶² See *e.g.*, Funai Comments at 7; Microtune Comments at 1; Motorola Comments at 2.

⁶³ Zoran Comments at 2.

⁶⁴ Joint Industry Comments at i. See also LG Electronics Comments at 10; Samsung Comments at 2; Thomson Comments at 4.

that it may be possible to improve on the A/74 performance levels with the fifth generation of VSB decoder chips and new RF tuners that have been developed since A/74 was adopted.⁶⁵ Charles Rhodes, former Chief Scientist of the Advanced Television Test Center, that tested the DTV systems adopted by the FCC in 1996, stated that A/74 was just a guideline and was never intended to serve as a minimum performance standard.⁶⁶

33. The New America Foundation *et al* (NAF) also recommended that NTIA establish performance specifications beyond those contained in A/74.⁶⁷ NAF's concerns regarding NTIA converter-box specifications extend beyond the delivery of digital television to those who currently depend on analog television. NAF argued that the quality of the converter boxes NTIA mandates will affect the utility of the white spaces within TV channels 2-51 and noted that, in an FCC NPRM on "Unlicensed Operation in the Broadcast Bands" (Docket 04-186), the FCC expressed concern that low-quality DTV receivers could severely impact the utility of the white spaces within TV channels 2-51."⁶⁸ NAF suggested that desensitization performance of the converter boxes should be considered and should be equivalent to most of the stand-alone TV sets presently marketed. NAF also proposed that detailed engineering measurements be made of the susceptibility of current DTV receiver designs to interference from out of band signals.⁶⁹ NAF noted that the FCC was conducting tests that will not be available until mid-2007, but presented preliminary results of the three receiver tests it funded at the University of Kansas.⁷⁰ Raising another issue regarding interference, MTVA recommended that NTIA adopt MTVA specifications for NTSC into DTV taboo channels (television channels that cannot be used because of interference with other channels).⁷¹ MTVA did not provide laboratory or real world measurements supporting its recommendation or information on whether manufacturers can currently build DTV equipment capable of meeting proposed specifications.

34. The comments filed by these organizations all highlight areas where the commenters believe the A/74 Receiver Performance Guidelines of June 18, 2004, do not provide a sufficient level of performance for the CECB. The technical comments and thoughtful recommendations of these commenters prompted NTIA to reexamine the NPRM proposal that the A/74 guidelines be adopted as the performance specifications for the CECBs.

35. While all of these commenters recommend that NTIA adopt specifications or tests to qualify

⁶⁵ MTVA Comments at 9-10.

⁶⁶ Charles W. Rhodes Comments at 1.

⁶⁷ See Comments from New America Foundation, Media Access Project Consumer Federation of America, Wireless Internet Service Providers Association (Wisp), Acorn Active Media Foundation Community Technology Centers' Network, Champaign Urbana Community Wireless Network (Cuwin), The Ethos Group, and Freenetworks.org (collectively, referred to hereafter as NAF Comments).

⁶⁸ NAF Comments at 2; See also Charles W. Rhodes Comments at 1.

⁶⁹ NAF Comments at 5.

⁷⁰ NAF 2nd Comments (November 16, 2006).

⁷¹ MTVA Comments at 17.

a CECB that go beyond those in the A/74 guidelines, they each present differing technical recommendations.⁷² NTIA shares the concern of the commenters that CECBs perform at a level to meet the reception needs of the American public. NTIA has carefully analyzed the recommendations presented by the commenters, and has seen no scientific data that any proposed set of technical specifications will ensure any given level of performance of converter boxes in real-world environments. Many of the commenters recommend that further tests be performed.⁷³ Given the requirements of the Act that coupons be available for CECBs early in 2008, there is time neither for additional analysis testing as proposed by the commenters nor for the establishment of industry-accepted standards following such tests.⁷⁴

36. While NTIA cannot guarantee the performance of the CECBs, NTIA intends that coupons be used for converter boxes using current technology available in the marketplace. To this end, NTIA recognizes that digital reception technology has advanced in the two years since the adoption of A/74. Further, NTIA recognizes that in order to qualify a converter box to meet minimum specifications, it must, in the words of the Joint Industry Comments “fill in some requirements for performance levels where ATSC A/74 only specified test procedures.”⁷⁵

37. Having reviewed the comments filed by many parties, NTIA has accepted the technical recommendations of the Joint Industry Comments as the basis for the minimum technical specifications of the CECB. The Joint Industry Comments represent a collaboration by the broadcast industry and the consumer electronics industry to present a set of technical specifications which both industries believe can provide the American consumer with a high-quality, low-cost and easy-to-use CECB. The Joint Industry Comments use the A/74 guidelines as the basis for their proposal, but propose several revisions to reflect advances in technology in the two years since the A/74 standard was adopted. Further, they propose target performance levels in several areas where A/74 only specifies test procedures. The NAB and MSTV have funded the development of converter-box prototypes from two manufacturers which they state

⁷² For example, while A/74 does not require any specific number of field ensembles to be successfully demodulated, the Joint Industry Comments recommended that a converter box successfully demodulate 30 of the 50 field ensembles included in A/74. Joint Industry Comments at Appendix 4. Rhodes recommends that “tests of ACI [adjacent channel interference] should be carried out over the full range of D [desired] signal powers that will exist within the coverage area of the transmitter,” while A/74 only specifies three desired signal power levels. Rhodes Comments at 4. MTVA stated that multiple interfering signal tests are important but said that reasonable interference levels are not yet known. MTVA Comments at 15. NAF indicated that in addition to the A/74 guidelines, tests must also include desensitization performance. NAF Comments at 5.

⁷³ For example, the MTVA noted that “reasonable interference values are not yet known at this time, but should be investigated (with lab testing) in the near future recognizing current tuner technology.” MTVA Comments at 15. *See also* Charles Rhodes Comments at 7 (“testing should cover the same desired signal power range as in single Taboo testing above....It is my intention to actually perform these tests in my own laboratory in the next few months”); NAF Comments at 5 (“detailed engineering measurements as to the susceptibility of current DTV receiver designs to interference from out-of-band signals are needed.”).

⁷⁴ “[A]ssuming NTIA adopts final rules by January 1, 2007, manufacturers will have barely 12 months to bring compliant converter boxes to market—less than the typical 18-month manufacturing cycle.” Thompson Comments at 8.

⁷⁵ Joint Industry Comments at 1.

demonstrate that the technical specifications they propose are “clearly achievable in practical products designed to be amenable to production in mass manufacturing quantities. Further, the project results provide tangible evidence that a high-quality, low-cost converter box can be built with measured performance that exceeds the levels specified in the ATSC A/74 Recommended Practice on Receiver Performance in several important areas and consequently can provide reliable reception under a variety of real-world conditions.”⁷⁶

38. NTIA believes that CECBs should be produced according to specifications currently accepted by major manufacturers. It would be contrary to the public interest if coupons were used to purchase converters designed with obsolete or poorly performing components.⁷⁷ On the other hand, some commenters suggested technical specifications that have not been widely agreed upon nor quantified; and products in widespread commercial deployment have not been tested to these specifications. The technical specifications adopted by NTIA should provide American consumers with an economical CECB containing state-of-the-art technology available today from manufacturers within the time frame required by the Act.

39. Therefore, NTIA adopts the required minimum features and technical specifications in Technical Appendix 1 of the Final Rule. In addition, NTIA specifies permitted and prohibited features of a CECB in Technical Appendix 2.

b. Converter-Box Antenna Inputs

i. Smart Antenna

40. The NPRM proposed that the only input to the converter box shall be for an external antenna. The NPRM stated that “[a] single input (Type F connector) ensures that only an antenna can be connected to eligible boxes thus ensuring use of such boxes as for over-the-air television reception only.”⁷⁸ The F-type connector is the standard antenna input in most television receivers. While the F-type connector was supported by all who commented on antenna inputs, many commenters requested that an additional antenna input be permitted in the CECB. Most of the comments proposing an additional antenna input requested the flexibility to include an interface for a technology known as a smart antenna.⁷⁹ A smart antenna allows for automatic electronic steering and signal-level control so a consumer can receive the best signal for each channel. The Joint Industry Comments stated that in many markets, television stations’ transmitters are located on different sides of the population center due to separation requirements or other practical considerations outside their control. In these instances, consumers can achieve

⁷⁶ *Id.* at 13.

⁷⁷ Letter from Members of the House Energy and Commerce Committee at 2 (stating that converter boxes should, at a minimum, replicate the picture and audio quality consumers experience today when watching their analog televisions).

⁷⁸ NPRM, 71 Fed. Reg. at 42,070.

⁷⁹ A standard for smart antenna interfaces is defined by the CEA-909 Antenna Control Interface standard, which is included in the A/74 guidelines, Section 4.2.

the best reception using electronically steered smart antennas.⁸⁰

41. MTVA stated that in difficult reception environments, the DTV video and audio is either perfect or nonexistent and the use of a smart antenna can mean the difference between having good DTV service or no service.⁸¹ CERC noted that a smart antenna would “better allow consumers to adjust for propagation characteristics and set capabilities. This may minimize consumer disappointment and post-sale product exchanges.”⁸²

42. Zoran, however, opposed the use of a smart antenna and only supported the use of a passive antenna. RadioShack supported the option of a smart antenna interface in a CECB. In its comments, RadioShack did not propose that a smart antenna interface be mandated as it will add unnecessary cost for many consumers, but recommended that it should be an option in a certified converter box for those consumers who seek it.⁸³

43. NTIA recognizes that DTV reception can be difficult in many regions of the country. The NPRM stated that “[i]deally, a converter box should be able to receive digital broadcast signals in the same receiving configuration (*e.g.*, same household antenna, same location) as used for the existing analog reception.”⁸⁴ NTIA notes, however, recent GAO congressional testimony indicating that antenna reception of digital signals may vary based on a household’s geography and other factors.⁸⁵ In addition, antennas configured for primarily VHF service may not be as effective as many stations switch to UHF frequencies.

44. After reviewing the comments from Joint Industry Comments, MTVA and others, as well as the GAO congressional testimony, NTIA concludes that many consumers may wish to use smart antennas. While NTIA expects that the industry will continue to work on improving the performance and reduce the cost of both passive and active smart antennas, NTIA believes that many consumers will benefit from smart-antenna technology to receive over-the-air digital television broadcasts. It is clear, however, that a smart-antenna interface will add to the cost of the converter box and will not be needed by many households.

45. In order to permit the inclusion of a smart antenna, but not add to the cost of the converter box for those who do not require this capability, the Final Rule will *permit*, but not require, manufacturers to include in their CECBs the circuitry and connectors associated with the so-called smart-antenna interface.

ii. Bundling

⁸⁰ Joint Industry Comments at 17.

⁸¹ MTVA Comments at 5-6.

⁸² Zoran Comments at 3; *but see* CERC Comments at 10.

⁸³ RadioShack Comments at 20.

⁸⁴ NPRM, 71 Fed. Reg. at 42,069.

⁸⁵ *See* GAO Challenges Report at 6.

46. In its comments, Funai supported the use of a smart antenna and recommended that “the ‘bundling’ of such an antenna with a DTA box should not preclude eligibility for the subsidy.”⁸⁶ Funai suggested that “[a]lthough prices may fluctuate due to market conditions, we conservatively estimate that it is possible to price a DTA and Smart-Antenna bundle at less than \$100.”⁸⁷ NTIA does not believe that the bundling of a smart antenna with a converter box meets the requirement of the Act which defines a CECB as a “stand-alone” device.⁸⁸ The purchase of a smart antenna at the same time a consumer purchases a converter box equipped with a smart-antenna interface will ease the installation and operation of the converter box for many people. Manufacturers or retailers may wish to offer combined purchases of converter boxes with smart antenna interfaces and smart antennas at promotional prices. The CECB, however, must be presented for sale at all outlets as a stand-alone single unit and cannot be sold conditioned on the purchase of any other items.

iii. CEA-909

47. CEA-909 is the current industry standard for a smart antenna interface. MTVA stated that “eligibility should not be limited to only devices that comply with this standard (CEA-909) since such a requirement could preclude or delay technological advances in this area that are now being considered.”⁸⁹ NTIA recognizes that technological advances are being made in many areas of digital television broadcasting. In order for this program to proceed so converter boxes can be available to the public in 2008, however, NTIA must establish a Final Rule to specify CECBs which manufacturers will build during 2007. A reference to this standard will be included in the Final Rule for the program.

iv. 300 Ohm Inputs

48. The Community Broadcasters Association (CBA) did not object to NTIA’s proposal that a CECB have an RF input, but recommended that “manufacturers who choose to add a 300-ohm input with screw terminals should not be penalized for doing so.”⁹⁰ The CBA comments included no further explanation or information supporting this recommendation. NTIA recognizes that use of 300-ohm antenna inputs is old technology and has no information on the number of television receivers in use today that are equipped only with 300-ohm antenna inputs. NTIA also recognizes that many inexpensive indoor “rabbit-ear” antennas have 300-ohm connectors. NTIA notes that manufacturers of television receivers commonly include inexpensive matching transformers to connect 300-ohm ribbon leads to Type F inputs rather than including built-in 300-ohm antenna inputs, and that such transformers are commonly available where television receivers are sold. We believe that the use of these inexpensive transformers is

⁸⁶ Funai Comments at 10.

⁸⁷ Funai 2nd Comments at 1-2.

⁸⁸ See Section 3005(d) of the Act.

⁸⁹ MTVA Comments at 5.

⁹⁰ CBA Comments at 6. Richard Brittain also noted that older sets still have 300-ohm ribbon leads and screw terminals instead of Type F connectors. See *Richard Brittain Comments*.

the most economical method of meeting the needs of those consumers who have television receivers which only contain 300-ohm inputs. The Final Rule, therefore, will *permit*, but not require, manufacturers to include matching transformers to connect 300-ohm ribbon leads to the required Type F connectors. The Final Rule will also permit manufacturers to provide connectors for 300-ohm inputs on the CECB.

c. Analog Signal Pass Through

49. The National Translator Association recommended that the CECBs pass analog signals directly through without processing or modification.⁹¹ The CBA also requested that NTIA require that CECBs pass through an analog signal, either actively or passively. CBA noted that Class A and LPTV stations are not subject to the February 17, 2009 end-of-transition deadline, applicable to full-power stations. It indicated that it was important that the converter box not block the analog signal.⁹² LPTV licensee Island Broadcasting noted that thousands of LPTV stations in the United States will remain analog after the transition and are not carried on a cable system or other multi-channel video delivery service. Island recommended that the converter box contain a feature to pass through the analog signal from the antenna to the TV receiver, either when the box is shut off, the signal is passed, or by means of a built in by-pass switch.⁹³ Funai, however, noted that “[a]n analog pass through, while conveniently retaining legacy analog TV support, would degrade the RF noise performance of all so-equipped DTA tuners by 3dB – a penalty that could not be recovered by any consumer with such a unit.” Funai recommended that a consumer purchase a separate switch and/or external splitter to receive analog television.⁹⁴

50. NTIA is sensitive to the needs of consumers who will wish to continue to view over-the-air analog television during and after the digital transition. Not only will many consumers continue to rely on analog television reception of Class A stations, LPTV stations and translators after the transition, many consumers who purchase the CECB will require the ability to receive analog television signals during the transition period as not all full-power television stations in the United States have completed their digital build-out. NTIA, however, is reluctant to require an analog pass through feature because it will result in a reduction in received signal level and in increased cost to all consumers who purchase a CECB. The amount of reduction in receiver sensitivity and increased cost is dependent on how the analog pass through feature is implemented. This reduction may not be noticeable to consumers who receive strong signals in urban areas, but may mean that consumers who receive marginal digital and analog signals will be unable to receive television signals via the CECB. NTIA notes that switches and external splitters are commonly available where television sets are sold. A single A/B switch will not

⁹¹ National Translator Association Comments at 1.

⁹² CBA Comments at 3.

⁹³ Island Broadcasting Comments at 2. Similar comments were filed by the Association of Public Television Stations (APTS), which recommended “that NTIA allow eligible converter boxes to contain a built-in and easily workable A/B switch.” APTS Comments at 30. Richard Brittain recommended a pass through of analog signals if the box is turned off. *See* Brittain Comments.

⁹⁴ Funai, 2nd Comments at 2 (Nov. 17, 2002).

fully bypass a CECB, however, creating a difficult wiring scenario for the consumers. Splitters and their inherent loss as well as additional cabling makes their use less than optimal in fringe reception areas. NTIA strongly urges manufacturers to take into consideration the needs of consumers to receive analog television along with digital television in the development of CECBs and to investigate minimal signal loss solutions that would ensure an acceptable analog signal pass-through. In the Final Rule, NTIA *permits* that the converter box to pass through the analog signal from the antenna to the TV receiver.

d. Converter-Box Outputs

i. RF and Composite Video Outputs

51. The NPRM proposed that the converter box contain the following outputs: Composite video and stereo audio (all three RCA connectors) and Channel 3 or 4 switchable (NTSC) RF (Type F connector) output. RadioShack recommended that NTIA permit the inclusion of an RF modulator output as an option, but not require this feature. RadioShack stated that “there are only a limited number of households with televisions requiring RF modulators, and of those households, many have already purchased RF modulators in order to connect such devices as DVD players and game consoles, etc. Thus, mandating that *all* consumers pay extra for a product they do not need or may already have in order to satisfy the needs of a smaller number of consumers seems inconsistent with Congress’ desire to subsidize a reasonably priced converter box.”⁹⁵

52. Most commenters on the subject supported the inclusion of both composite video/audio and RF outputs in the converter box. THAT Corporation (THAT Corp.) noted in its comments that “[t]o utilize these (composite video) outputs, consumers must be able to connect three separate cables from these converter box outputs to three corresponding inputs on the TV monitor. . . such a hookup requires a degree of technical competence lacking in many consumers.”⁹⁶ All receiver manufacturers supported the inclusion of both RF and composite outputs as did comments received from other members of the public. A few commenters suggested that NTIA permit the converter box to include an S-video output.⁹⁷ S-video is an analog output which delivers standard definition video to the television receiver.

53. As noted earlier, NTIA seeks to ensure that the CECB will be easy to install and operate. The RF output is very easy to use as it only requires the consumer to connect a single cable between the converter box and the analog television. The Final Rule, therefore, *requires* that the CECB include an RF output and also *requires* that the CECB include composite outputs for those consumers who wish to continue to use the features provided by this technology. NTIA will also *permit* a S-video output which provides a better standard definition picture using a simple and inexpensive hookup with one cable.

⁹⁵ RadioShack Comments at 19.

⁹⁶ THAT Corp. Comments at 8-9.

⁹⁷ For example, Zoran, Brittain, and Diaz recommended that NTIA permit S-video as an output. See Zoran Comments at 1; Richard Brittain Comments; Diaz Comments at 1.

54. In its comments, Funai recommended that NTIA clarify the types of outputs that would not be permitted in a CECB. Funai commented that “we feel that it is inappropriate to extend Coupon Program eligibility to devices that support high-definition (HDTV) viewing, *i.e.*, a display with higher-than-standard definition video resolution.”⁹⁸ Funai then listed a series of connectors which it felt should not be permitted in the NTIA supported converter box. Funai requested that the following connectors be excluded from the converter box program: Digital Video Interface (DVI), high-definition multimedia interface (HDMI), analog component video (YPbPr), computer video (VGA), as well as USB IEEE-1394 (sometimes trademarked as iLink or Firewire), or IEEE-802.3 (Ethernet) or IEEE-802.11 (wireless).⁹⁹ Funai further recommended that “any device that includes an integrated display intended for use as the primary video presentation should be ineligible for the Subsidy.”¹⁰⁰

55. In the NPRM, NTIA proposed that “the converter box would not be required to render pictures and sound at more than standard definition quality.”¹⁰¹ This proposal follows from the definition of a converter box contained in the Act, which limits the converter box to a unit so “the consumer can display on television receivers designed to receive and display signals only in the analog television service.”¹⁰² If NTIA were to permit any digital output to the CECB, then it would cease to be a digital-to-analog converter and would become a digital tuner capable of providing a digital signal to a television monitor. This would clearly be beyond the plain language of the Act which states that the CECB shall “convert any channel broadcast in the digital television service into a format that the consumer can display on television receivers designed to receive and display signals only in the analog television service.”¹⁰³

56. Therefore, NTIA specifies in the Final Rule those connectors that will not be permitted in a CECB. Likewise, NTIA clarifies in the Final Rule that CECBs are *prohibited* from containing items such as display screens, recorders or storage devices that go beyond the simple task of converting a digital television signal to an analog signal for display on analog television receivers.

ii. Audio outputs

57. Two organizations, the WGBH National Center for Accessible Media (NCAM) and THAT Corp., commented on NTIA’s proposal that the outputs include stereo audio. The NPRM proposed that “[t]he outputs shall be channel 3 or 4 (NTSC modulated signals), composite video

⁹⁸ Funai Comments at 11.

⁹⁹ *Id.* at 11-12.

¹⁰⁰ *Id.*

¹⁰¹ NPRM, 71 Fed. Reg. at 42,069-70.

¹⁰² *See* Section 3005(d) of the Act.

¹⁰³ *Id.*

(NTSC baseband), and audio (stereo).”¹⁰⁴

58. THAT Corp. requested that NTIA clarify the stereo requirement proposed in the NPRM. They noted that the proposed output with “composite video (NTSC baseband), and audio (stereo)” will provide the analog television receiver with a stereo audio signal. THAT Corp. continued stating that the proposed output on “channel 3 or 4 (NTSC modulated signals)” does not, by itself, provide a stereo signal to the analog television receiver. THAT Corp. notes that “the RF output will contain stereo (left/right) audio information if, and *only* if, the output contains BTSC stereo audio information.”¹⁰⁵ They recommended that NTIA specify that the RF output must contain BTSC stereo audio information.

59. NCAM recommended that the converter boxes’ audio outputs support the Secondary Audio Program (SAP) service where video description for blind individuals is provided. NCAM indicated that video description within digital television signals will be delivered via multiple ancillary audio services (including alternate language audio) and these additional audio channels should be available via the subsidized converter box.¹⁰⁶ NTIA notes that television stations are not required to broadcast video descriptions.¹⁰⁷ None of the commenters provided information regarding the number of digital television stations providing video description services, the number of people served by such services, or the number of manufacturers currently building digital television equipment capable of processing such services. NTIA believes that it would be desirable for manufacturers to include a capability in CECBs that will enable the use of SAP type services, including video description.¹⁰⁸ We note that because digital television encodes audio in a different manner than the encoding used in analog television, digital television does

¹⁰⁴ NPRM, 71 Fed. Reg. at 42,070.

¹⁰⁵ THAT Corp. at 13. “BTSC” derives from the Broadcast Television Systems Committee, an industry group convened in the late 1970s that, primarily, added additional audio channels to NTSC, allowing stereo (left and right) audio and a second audio program (SAP) channel to be broadcast. In 1984, the FCC developed rules and specified a pilot tone for BTSC. *See* Second Report and Order, Docket No. 21323, Rad. Reg. 2d (P&F) 1642 (1984). *See* Multichannel Television Sound Transmission and Audio Processing Requirements for the BTSC System in OET Bulletin No. 60, Revision A (Feb. 1986).

¹⁰⁶ Combined Comments of NCAM, American Association of People with Disabilities, and Information Technology and Accessible Interface Rehabilitation Engineering Research Center, Trace Center-University of Wisconsin-Madison Comments at 2 (hereafter NCAM Comments). The secondary audio program channel is provided under the BTSC standard and the FCC does not require nor restrict the use of the SAP channel.

¹⁰⁷ *See Motion Picture Ass’n of Am. v. FCC*, 309 F.3d 796 (D.C. Cir. 2002) (holding that the FCC did not have statutory authority to issue video description regulations).

¹⁰⁸ Congress enacted this coupon program “[t]o help consumers who wish to continue receiving broadcast programming over the air using analog-only televisions.” H.R. Rep. No. 109-362, at 201 (2005) (Conf. Rep). Consistent with that guidance, NTIA encourages manufacturers to incorporate features that enhance accessibility.

not utilize the SAP channel present in analog television. Standards and guidelines for digital television audio are contained in ATSC publications A/52, A/53 and A/54.¹⁰⁹ Section 6.6 of A/54 provides for two types of main audio service and six types of associated services, including associated services for the visually impaired (VI). The A/54 standard also permits the transmission of secondary language programming and reserves associated audio services for the hearing impaired (HI) and for emergencies (E). Because of the important public services that may be provided by these associated audio services, NTIA will *permit* CECBs to be capable of processing these associated audio services broadcast by a digital television station, particularly as more stations provide them in the coming years.

60. Manufacturers may provide output for the main channel audio service and associated audio services on the RF Type F connector by using either of the following two methods. NTIA will *permit* manufacturers to follow current industry practice regarding RF outputs for audio/video equipment which provides a mono RF output which is switchable between a station's main channel audio and other associated audio services. In this instance, consumers could use a button on the converter box remote control to select the RF output for a station's monaural main channel audio or toggle through a station's visually impaired (VI) or other associated audio services. NTIA will also permit manufacturers to provide BTSC Multichannel Television Sound (stereo audio) in the RF output. The BTSC stereo audio signal and included SAP carrier will provide stereo main channel or visually impaired or other associated audio service to the television receiver as selected by the consumer. Consumers will also have the option of receiving stereo audio through the converter box's left/right audio outputs (RCA connectors).

iii. Multicast Reception

61. Funai asked NTIA to clarify its interpretation of the Act which defines the converter box in part, as a device "to enable a consumer to convert *any channel* broadcast in the digital television service." Funai stated that the converter box "should provide access to all 'sub-channels' of a DTV transmission, i.e., the so-called 'major and minor' channels that may be transmitted as a 'multicast' by the broadcast operator."¹¹⁰ NTIA believes that multicast capability is an integral feature of digital television transmission and the Act clearly intends that the CECB convert all channels, including those that are multicast. NTIA notes that the Act's definition requires the converter box to "enable a consumer to convert any channel broadcast in the digital television service into a *format that the consumer can display on television receivers designed to receive and display signals only in the analog television service.*"¹¹¹ The Act, therefore, does not permit the output to another device such as a computer which might be required to capture streams of data included on the digital television transport stream. The Final Rule will clarify that a CECB is *required* to receive, decode and display all channels, including multicast channels, broadcast by digital television station that can be displayed on an analog television receiver.

¹⁰⁹ Audio standards for digital television are contained in ATSC A/52, Digital Audio Compression Standard, (AC-3); ATSC A/53, and ATSC Digital Television Standard; guidelines for implementation of ATSC audio are contained in ATSC A/54, Recommended Practice: Guide to the Use of the ATSC Digital Television Standard.

¹¹⁰ Funai Comments at 7.

¹¹¹ See Section 3005(d) of the Act (emphasis added).

e. Requirements for Closed Captioning, Emergency Alert System (EAS) and Parental Controls (V-Chip)

62. NTIA proposed in the NPRM that CECBs comply with FCC requirements for Closed Captioned, Emergency Alert System (EAS) and the required parental controls (V-chip).¹¹² Several commenters noted that the FCC Rules require that television tuners decode Captioning and Parental Control (V-Chip) and, therefore, NTIA regulations are not required in this regard.¹¹³

63. Several commenters state that there are no FCC-imposed specific EAS requirements on television receivers at this time.¹¹⁴ NTIA notes that the FCC requires that all digital television stations participate in the Emergency Alert System after December 31, 2006.¹¹⁵ The Emergency Alert System is an important way that national, state and local emergency management personnel reach the public with emergency messages. It is, therefore, in the public interest that all television viewers be able to receive and display EAS messages. The Final Rule will include a requirement that, in order to be eligible to participate in the NTIA Coupon Program, a CECB must be capable of receiving, decoding and displaying EAS messages broadcast by digital television stations as required by the FCC Rules.¹¹⁶

64. NTIA believes that it is helpful to manufacturers that the Final Rule provide a comprehensive listing of features required for a CECB. With regard to Closed Captioning and Parental Controls, NTIA will require that CECBs comply with the FCC receiver requirements for Closed Captioning and Parental Controls and NTIA will not impose any requirements beyond those contained in the FCC Rules.¹¹⁷

f. Tuning Capability to All Television Channels 2-69

65. There was no opposition to the NPRM proposal that the converter box tune to all television channels, 2-69. This proposed rule reaffirmed the FCC Rules that “TV broadcast receivers shall

¹¹² NPRM, 71 Fed. Reg. at 42,070.

¹¹³ The FCC’s Closed Captioning receiver requirements are contained in 47 C.F.R. § 15.122 and incorporate the CEA 708 standard “Digital Television (DTV) Closed Captioning” which was developed from the CEA 608 standard. The FCC’s Parental Control (V-Chip) receiver requirements are contained in 47 C.F.R. § 15.120 and incorporate the EIA/CEA-766-A standard. “U.S. and Canadian Region Rating Tables (RRT) and Content Advisory Descriptors for Transport of Content Advisory Information using ATSC A/65-A Program and System Information Protocol (PSIP).” FCC requirements for Closed Captioning and Parental controls were noted by Thomson, Funai and Brittain. Thomson Comments at 3; Funai Comments at 7; Richard Brittain Comments at 5.

¹¹⁴ Funai, Thomson and Richard Brittain noted that there were no FCC rules regarding EAS applicable to television receivers. Funai Comments at 7; Thomson Comments at 3; Richard Brittain Comments at 5.

¹¹⁵ *In the Matter of Review of the Emergency Alert System*, First Report an Order and Further Notice of Proposed Rulemaking, FCC 05-191, November 3, 2005.

¹¹⁶ 47 C.F.R. Part 11.

¹¹⁷ 47 C.F.R. §§ 15.120, 15.122.

be capable of adequately receiving all channels allocated by the Commission to the television broadcast service.”¹¹⁸ NTIA clarifies that the CECB is required to receive signals for those television channels that will be “out of core” (channels 52-69) once the digital transition is complete.

66. In its comments, CBA notes that it is important that the tuning capability of boxes not stop at channel 51 because Class A and LPTV stations are permitted to operate on channels 52-69 on a secondary basis even after the February 17, 2009 deadline when full power stations must broadcast within the FCC’s “core” channels, 2-51. Moreover, operation on temporary companion digital channels will be permitted on channels 52-59, even after the end of the full-power transition; and temporary flash-cut digital operations is permitted on channels 60-69 when no other channel is available.¹¹⁹

67. NTIA did not receive comments opposing the action. The Final Rule contains the requirement that the CECB receive all television channels 2-69.

g. Remote Control

68. In the NPRM, NTIA proposed that the CECB be operable by and include a remote control. The Act specifically permits NTIA to require a remote control, and remote control units are now standard with almost all consumer video equipment such as television receivers, VCR and DVD players and recorders. There were few comments on the requirement to include a remote control. Brittain noted that there may be “real-world reasons for requiring a remote (such as to provide the minimum ATSC functionality).”¹²⁰

69. NCAM called NTIA’s attention to the difficulty the blind and visually handicapped have in using remote controls. NCAM recommended that the CECB’s remote control contain dedicated keys which provide direct access to the closed captioning function and the SAP/video description function.¹²¹ To that extent NCAM directed NTIA’s attention to Section 508 related to products purchased by the Federal government. Section 508 applies to all Federal agencies when they develop, procure, maintain or use electronic and information technology.¹²² Although converter boxes may fall under the definition of electronic and information technology, NTIA is not developing, procuring, maintaining or using CECBs; therefore, Section 508 is not applicable to CECBs in NTIA’s program. Nevertheless, NTIA strongly urges manufacturers to take into

¹¹⁸ 47 C.F.R. § 15.177(b).

¹¹⁹ CBA Comments at 6; *see also* MTVA Comments at 11; Joint Industry Comments at Appendix 1.

¹²⁰ Richard Brittain Comments at 5.

¹²¹ NCAM Comments at 3. NCAM also suggested the inclusion of a “talking menu” which can read out the functions that are highlighted on an on-screen menu. *Id.*

¹²² *See* 29 U.S.C. § 794d.

consideration the needs of consumers with disabilities in the development of CECBs.

70. In order to ease customer use of the remote control, the Final Rule will *require* that the remote control is supplied with batteries and uses standard technology and codes commonly used by television manufacturers as part of remote controls provided with television receivers. The standard codes for the remote control will be included in the CECB instructions so consumers can, at a minimum, program an existing remote control to turn on and off both the converter box and their existing analog television receiver. The Final Rule will also *permit* the manufacturer to provide a programmable remote control which can accept the code of the consumer's existing analog receiver and related video/audio equipment.

h. Program Information Displays (Electronic Program Guide)

71. Many commenters raised the issue of whether the inclusion of an electronic program guide would disqualify a converter from being eligible for the Coupon Program. The Joint Industry Comments stated that the requirement that broadcasters transmit program content information is included in the FCC's adoption of the ATSC A/65 standard regarding transmission of Program System Information Protocol (PSIP), including program content details in digital television broadcast signals. They felt that this requirement "is premised on the FCC's conviction that a mechanism for locating digital channel and program content, including multicast channels, is an integral feature of the digital television experience."¹²³

72. The inclusion of an electronic program guide was supported by television receiver manufacturers Samsung, Thomson and LG Electronics. LG Electronics noted that "[e]ase of use is particularly important given the ability of digital broadcasters to transmit multiple program streams (*i.e.*, multicast) via their DTV signals."¹²⁴ CERC recommended that the converter boxes contain program guides and the capability to process PSIP data because such features may be of assistance to consumers that are inexperienced in finding and tuning digital channels. They also note that the components and software for displaying PSIP data are commonly included in the manufacture of televisions.¹²⁵

73. Gemstar-TV Guide International ("Gemstar") requested that NTIA permit the inclusion of hardware and software that would enable a consumer to receive Gemstar's TV Guide On Screen electronic program guide or other third-party guides. Gemstar notes that distribution of television program information is required by the A/65 standard, which defines the PSIP. The PSIP also includes information about the multicast channels and contains the parental control (V-chip) information required by the FCC. Gemstar further notes that many televisions are equipped with built-in capability to receive and display Gemstar's TV Guide On Screen service. Gemstar stated that it is working with the Society of Cable Telecommunications Engineers regarding the Digital Video Standard 706 "VBI-in-MPEG" which will allow carriage of existing

¹²³ Joint Industry Comments at 16-17; *see also* 47 C.F.R. § 73.682.

¹²⁴ LG Comments at 7.

¹²⁵ CERC Comments at 10.

analog standard definition video VBI signals in digital broadcast transmissions.¹²⁶

74. RadioShack sought clarification that it would be permissible to include full PSIP capability and noted that over-the-air television viewers will see the number of broadcast channels increase fourfold and thus having the television appropriately display the channels is an important feature for these viewers. RadioShack also noted that because the functionality is imbedded in chips already, providing this functionality adds no cost to the box.¹²⁷

75. After reviewing the comments received on the NPRM, NTIA *requires* that the converter box receive, decode and display information contained in the PSIP broadcast pursuant to the A/65 standard. NTIA notes that television receivers must decode the PSIP in order to display the parental controls required by the FCC. The basic capability of decoding PSIP information, therefore, is already required of all converter boxes. Moreover, with PSIP functionality incorporated in ATSC tuner chips, it would be costly and impractical to require manufacturers to build converters without such functionality.

76. Further, NTIA will *permit*, but not require, a CECB to display other electronic program information. As noted by many of the commenters, this capability will assist the consumer in navigating through the many channels that will be provided by digital broadcasters. NTIA believes the means to achieve such electronic program information should be left to the judgment of individual receiver manufacturers who will be *permitted* to make hardware and software modifications necessary to display electronic program information.

i. Software Upgrades

77. Several commenters recommended that NTIA require that a CECB be capable of receiving software updates from an over-the-air terrestrial broadcast distribution service.¹²⁸ Update Logic noted that the converter boxes are essentially small computers which contain a set of software programs, software that has bugs and needs updates. They also noted that in everything from PCs to cell phones to ATMs, routine and multiple software upgrades have been installed to fix errors, improve quality and maintain functionality. The converter box will be no different.¹²⁹

78. CBA noted that digital television technology is likely to advance in the not-too-distant future, as equipment manufacturers seek to make the system more robust and efficient. If upgrade capability is forbidden, then the boxes that qualify for subsidies may become obsolete and may be discarded before the end of the useful life of their electronic components. In no

¹²⁶ Gemstar Comments at 6-8.

¹²⁷ RadioShack Comments at 20.

¹²⁸ Letter from Members of the House Energy and Commerce Committee at 2 (CECBs should have the capability to be updated, modified, or repaired in circumstances where problems arise).

¹²⁹ Update Logic Comments at 1.

event should the program impose a restriction that will shorten the useful life of the product.¹³⁰

79. NCAM echoed these comments and added that over-the-air software download mechanisms are available to assure the continuing successful operation of the boxes and should be required as part of the maintenance program that should also be put in place by manufacturers of the devices. Software downloads will accommodate any potential future changes to emergency alerting, closed captioning or V-chip parental control ratings as they may develop.¹³¹ Both the NAF and the National Council of Women's Organizations reiterated that converter boxes should have the capability of receiving software downloads to repair problems and make necessary updates.¹³²

80. National Datacast indicated that an industry standard for software downloads exists. "The broadcast and CD industry anticipated the need for firmware updates and created the ATSC 'Software Data Download Specification' (A-97) which was ratified in 2004."¹³³

81. After reviewing these comments, NTIA believes that the automatic software download and upgrade capability proposed by the commenters is a desirable feature that could materially ease the consumer's use of the CECB. The use of automatic software upgrades could benefit both manufacturers in updating software and the users in upgrading a CECB's authorized features. It is NTIA's understanding that this automatic software update feature was only recently field tested and is not currently commercially available, even in expensive television receivers.¹³⁴ NTIA is reluctant to require that manufacturers include in a CECB this new technology which is just emerging from field tests. The Final Rule will, therefore, *permit* a CECB to receive and decode software pursuant to ATSC Standard A-97.

j. Energy Specifications

82. In response to its request for comments on whether and to what extent NTIA should consider energy usage in determining eligibility criteria,¹³⁵ several comments urged NTIA to either adopt minimum requirements or, on a permissive basis, encourage manufacturers to incorporate certain energy efficiency features. In addition to several comments generally urging NTIA to address energy usage, three areas of specific recommendations emerged from the comments: (1) an automatic power down feature and maximum power level for converters in "sleep" or standby mode; (2) a maximum power level in the "on" or operating mode; and (3) the

¹³⁰ CBA Comments at 6-7.

¹³¹ NCAM Comments at 4-5.

¹³² NAF Comments at 7; NCWO Comments at 1.

¹³³ National Datacast Comments at 1.

¹³⁴ Field tests were completed of the "UpdateTV" technology in July 2006 and the service is expected to be commercially available in 2007. Update Logic Comments at 5.

¹³⁵ NPRM, 71 Fed. Reg. at 42,070.

effect of an NTIA energy specification on various state regulations and proposals.

83. The majority of comments support adoption of some type of energy usage requirement into the eligibility criteria for CECBs.¹³⁶ With respect to NTIA's proposal to consider the CECB's cost, comments advised NTIA to consider that energy costs could raise the box's overall cost. According to the American Council for an Energy-Efficient Economy (ACEEE), a converter without energy usage limits of any kind would cost "more than two times more to operate over its estimated 5 year life than its estimated \$40-\$50 purchase cost."¹³⁷ Comments assert that energy standards for CECBs would reduce the energy cost for U.S. consumers, thereby lowering the overall cost of ownership.

84. The record suggests that significant operating cost and energy savings could be achieved by requiring CECBs to include an auto power-down feature and standby power limits. The Environmental Protection Agency (EPA) estimated that televisions are not in use in typical households for 18-20 hours per day, yet converter boxes may remain on during that time if no one turns them off or if there is no automatic power-down feature.¹³⁸ The EPA urged NTIA to require an auto power-down feature, to mandate that products be shipped with the feature enabled, and also suggested an auto power down feature after four hours of user inactivity, combined with a one watt power limit in standby mode.

85. A supplementary comment was received from the Joint Industry Comments with the additional support of the Natural Resources Defense Council (NRDC) and the CERC¹³⁹ requesting NTIA adopt two energy use performance specifications: (a) converters shall use no more than two watts of electricity in a "Sleep" state, and (b) converters shall meet an automatic power-down requirement after four hours of inactivity.¹⁴⁰ The Joint Industry Energy Comment also recommended these settings be enabled at the factory as default settings that could be changed by the consumer.¹⁴¹

86. Walmart also supported an automatic standby mode after four hours with a maximum allowable standby level of two watts.¹⁴² The standby energy level of two watts is also consistent with the CEA's voluntary standard CEA-2013 and is appropriate for the narrow purposes of the

¹³⁶ Natural Resources Defense Council (NRDC) Comments at 4; American Council for an Energy-Efficient Economy (ACEEE) Comments at 1; Letter from Members of the House Energy and Commerce Committee at 2.

¹³⁷ ACEEE Comments at 1.

¹³⁸ EPA Comments at 2.

¹³⁹ Letter of CERC, The Association for Maximum Service Television, Inc., National Association of Broadcasters, and Natural Resources Defense Council to Honorable John M.R. Kneuer, (Joint Industry Energy Comments) (Oct. 25, 2006).

¹⁴⁰ This measurement is in accordance with industry standard, CEA 2013-A.

¹⁴¹ Joint Industry Energy Comments at 4.

¹⁴² Walmart Comments at 2; *see also* NRDC Comments at 4; ACEEE Comments at 1.

converter coupon program.¹⁴³ No comments opposed adoption of a four-hour standby trigger or a two watt standby energy level. NTIA believes that consumers will benefit significantly from an automatic power-down feature triggered after four hours of inactivity and a “sleep” state operating power level of two watts. Therefore, NTIA will *require* these performance capabilities for eligible converters.

87. ACEEE calculated that significant cost savings could be realized through capping a CECB’s operating power limits at eight watts, a reduction from an estimated 17 or 18 watts.¹⁴⁴ No other comments suggested an operating limit be imposed. Walmart stated that while it is “very supportive of efforts to reduce the ‘On-mode’ power use due to the additional energy savings they can provide, we are deferring such discussions to other policy forums such as ENERGY STAR and state standard setting procedures.”¹⁴⁵

88. We are aware that, on January 31, 2007, the EPA’s ENERGY STAR program adopted voluntary specifications for converter boxes. The EPA’s voluntary specifications include one watt power consumption during the “sleep” mode and also include eight watt power consumption during the “on” mode.¹⁴⁶ NTIA’s requirements for a CECB include two watt power consumption during the “sleep” mode, and does not include a specification for power consumption during the “on” mode. NTIA urges manufacturers participating in the Coupon Program to adopt those ENERGY STAR specifications.

89. Some comments assert that cost savings could be achieved by adopting a single, national pre-emptive energy consumption standard.¹⁴⁷ These parties are concerned that by permitting states to enact their own energy efficiency standards for converter boxes, the cost would rise for all converter boxes as manufacturers attempt to design, manufacturer, test and distribute boxes that comply with varying requirements of individual states. Motorola generally opposed including energy standards into the regulations, but said that to the extent that an energy requirement is considered, it should be instituted at the Federal level and not the state level to avoid inconsistent and costly requirements.¹⁴⁸

90. NTIA is adopting these performance capabilities solely for the purpose of implementing the Coupon Program and does not intend to influence any other Federal or state agency activity regarding energy efficiency guidelines or requirements for CECBs. Converter boxes are not yet commercially available and manufacturers are willing to design and produce them as new

¹⁴³ CEA Standard 2013, Digital STB Background Power Consumption.

¹⁴⁴ See EPA Comments at 2; ACEEE Comments at 1.

¹⁴⁵ Walmart Comments at 2.

¹⁴⁶ The EPA ENERGY STAR specifications are available on the Internet at http://www.energystar.gov/ia/partners/product_specs/eligibility/dtas_elig.pdf.

¹⁴⁷ Joint Industry Energy Comments at 20; LG Comments at 11; Walmart Comments at 2; CERC Comments at 11; APTS Comments at 30.

¹⁴⁸ Motorola Comments at 3.

products with these energy efficiency requirements.¹⁴⁹ NTIA is also persuaded by those comments regarding the cost savings that can be achieved by converter boxes that incorporate energy efficient standards.

k. Other proposals regarding the converter box specifications.

91. KTech, a manufacturer of DTV equipment, provided several recommendations regarding features of the CECB. KTech recommended that the CECB contain a LED power light to allow users to determine if the external power is connected to the unit. KTech noted that “a ‘power-good’ display function [should be] allowed on the converter as a possible health and status display of the unit.”¹⁵⁰ NTIA has determined that a power light LED will be useful to consumers in the operation of the CECB, and the Final Rule will *require* a power light indicating when the unit is turned on.

92. KTech believes that, as written, the NPRM only permits an antenna input and does not state that an external AC/DC power input connector is allowed on the CECB. In the Final Rule, NTIA clarifies the power input connections and also responds to several comments regarding the use of battery power. Brittain noted that, as a safety measure, “many people have a second, battery-operated TV for use if the power goes out; virtually all of these are analog, and it will likely be years before similar DTVs are available at an affordable price.” He recommended that the Final Rule “should be written so as not to prohibit battery-powered boxes, which would be a necessity for battery-powered TVs.”¹⁵¹ Because of the public interest benefit, the Final Rule, therefore, *permits*, but does not require, manufacturers to provide converter boxes that operate on battery power as well as those which use an external AC/DC power input.

93. KTech also recommends that NTIA require that the CECB display a variety of technical measurements to assist consumers in improving television reception. KTech notes a variety of possible reception impairments (*e.g.*, multi-path interference and signal blockage). KTech recommends that the CECB display test measurement results for RF power level expressed in dBm, measured Signal-to-Noise Ratio number expressed in dB, measured Bit Error Rate and other technical measurements that could aid the consumer in taking steps to improve signal reception.¹⁵²

94. NTIA recognizes that television signal reception for some consumers will present challenges, whether analog or digital. As discussed earlier, to assist consumers in improving signal reception, the Final Rule permits the inclusion of a smart antenna interface in the signal box. NTIA notes that the A/74 guidelines states that “[t]he capability to display received signal quality conditions on a quasi-real time basis is a feature that should be included in all digital broadcast receivers.” To further assist consumers in improving signal reception, we include in

¹⁴⁹ LG Comments at 11-12; Thomson Comments at 6

¹⁵⁰ KTech Comments at 4.

¹⁵¹ *See* Richard Brittain Comments.

¹⁵² KTech Comments at 4.

the Final Rule provisions that *require* manufacturers to include software which will display on the television receiver signal strength and *permit* the display of other operating parameters chosen by the manufacturer. Display of signal information on the television receiver will provide information to the consumer at minimal cost. NTIA will not, however, specify exactly what such signal-quality information should contain. NTIA will follow the guideline of A/74, that “[m]eans to achieve such signal quality indications should be left to the judgment of individual receiver manufacturers.”¹⁵³

95. Brittain recommends that the CECB come with a Type F cable to connect the RF output of the converter box to the RF input of the television receiver.¹⁵⁴ Because most consumers who purchase a CECB will require at least a cable of this type, we believe that such an RF cable is integral to the use of the converter and should be required. The Final Rule will, therefore, *require* that manufacturers supply an RF cable and also *permit* manufacturers to supply additional cables, such as a cable with three RCA connectors, if they desire.

F. Manufacturer Certification

96. In the NPRM, NTIA proposed that manufacturers self-certify that their CECBs meet NTIA’s performance specifications and reserved the right to test CECBs that have been self-certified to ensure that they meet NTIA’s technical eligibility requirements.¹⁵⁵ NTIA sought comment on this proposal and other compliance testing and verification procedures that could be used for the Coupon Program.

97. Several commenting parties referred to the FCC’s well-established three-tiered approach for Equipment Authorization.¹⁵⁶ Most supported NTIA’s proposal that, after successful testing, manufacturers self-certify that their CECBs meet the NTIA eligibility features and functionality; some recommended that the manufacturer’s test results be submitted to a third party for an independent level of review.¹⁵⁷ Most parties felt that “certification,” the most stringent level of FCC technical approval, applicable to new technology, computers, cell phones and other non-television products, was inapplicable to CECBs. Motorola said that a third-party certification process would decrease the amount of time available for product development and would increase the costs of bringing the device to market.¹⁵⁸ RadioShack opposed government testing

¹⁵³ Advanced Television Standard Committee, Standard A/74, section 4.7 “Consumer Interface—Received Signal Quality Indicator.”

¹⁵⁴ Richard Brittain Comments.

¹⁵⁵ NPRM, 71 Fed. Reg. at 42,070.

¹⁵⁶ “Verification” or self-certification; “Declaration of Conformity” which requires testing by third-party laboratories selected from an accredited list; and “Certification” under which the FCC itself tests products prior to approval. The procedures are described at <http://www.fcc.gov/oet/ea/procedures.html#sec1>.

¹⁵⁷ Thomson Comment at 7; LG Comments at 10; CERC Comments at 10-11; Funai Comments at 12-13.

¹⁵⁸ Motorola Comments at 2.

of each model certified as it would burden manufacturers and delay product introduction.¹⁵⁹

98. Most commenters supported an approval process proposed by the Joint Industry Comments, termed “*verification plus*.” The Joint Industry Comments stated the following:

Rather than developing a new and untested conformity assessment program, the Joint Industry Commenters urge that NTIA leverage the existing resources of the FCC, the longstanding expert agency in this area, to conduct an efficient and accurate conformity assessment process. Specifically, NTIA should adopt a “verification plus” process, based on the FCC’s present, well-established and well-understood verification procedures. Under these procedures, manufacturers would be responsible for conducting compliance testing at their own facilities or through an independent laboratory contracted by the manufacturer. This process would ensure efficiency and avoid delays that would occur if the FCC or any other third-party entity were required independently to test every converter box. To ensure the integrity of the program, however, the FCC, most likely through its Office of Engineering and Technology, should have the ability to be involved in the approval process before the devices are released to market. To this end, manufacturers should be required to submit their test results, along with appropriate samples of the tested equipment, to the FCC. The FCC should then review test results to ensure conformity between the converter boxes and the NTIA’s performance standards which themselves are based on standards endorsed by or known to the FCC. If the FCC does not alert NTIA and the manufacturer of any problem within 15 days of when the data were submitted, the device should automatically qualify for the program. If the FCC does issue notification of a problem, however, it should expedite its own testing and rapidly notify NTIA and the manufacturer of any noncompliance.¹⁶⁰

99. NTIA will adopt the FCC’s verification process as the core of its technical acceptance plan to identify CECBs. As noted, several stakeholders in the Coupon Program, including manufacturers, retailers and broadcasters, support this proposal. This approval process will not unduly burden manufacturers and will not add significant costs or delay to the development and production of CECBs.

100. NTIA believes it is not procedurally sound for converters to become “automatically” eligible for the Coupon Program without agency confirmation. While manufacturers may market any converter or other device including digital-to-analog decoding functionality outside of the Coupon Program, NTIA intends to use a central electronic tracking database to track retailers’ point-of-sale (POS) transactions including authorization of coupon redemptions and

¹⁵⁹ RadioShack Comments at 21.

¹⁶⁰ Joint Industry Comments at 21-22.

sales data of CECBs.¹⁶¹ Action is required, therefore, by NTIA to load and update eligibility data (e.g., product SKU) for each model approved by NTIA.

101. Therefore, the Final Rule requires manufacturers to conduct tests or have independent laboratories conduct tests to demonstrate that each converter model meets the features and performance specifications set forth in our regulations for CECBs. It also requires manufacturers to provide detailed certified test results along with a sample of the tested equipment to NTIA and its designee. NTIA has entered into an agreement with the FCC by which the FCC may review the manufactures' converter box test results submitted to NTIA. The FCC may test converter boxes, if necessary. NTIA will base its decision to approve each converter box upon its consultation with the FCC. A Public Notice will be published subsequent to issuance of the Final Rule to provide manufacturers with specific address and contact information regarding the required submission of these materials. NTIA will record the date test results and sample models are received and will notify the manufacturer of the date by which the agency intends to make a determination of eligibility. In general, NTIA will attempt to ensure that the review of test results and any additional testing are completed within the 15-day period proposed by the Joint Industry Comments. As promptly as possible, NTIA will issue a statement of eligibility or non-eligibility for each converter model submitted by a manufacturer. The agency will attempt to meet demand, although the pacing of manufacturer submissions may be uneven. Because it is impossible to determine at this time how many manufacturers will submit test results and equipment, whether multiple models will be built by each manufacturer, and when converters will be proposed for inclusion in the Coupon Program, NTIA must allow flexibility to establish the appropriate time frame for agency review. As noted above, NTIA will promptly include make and model number information in its POS data, consumer education materials and other files used to identify CECBs.

102. Finally, NTIA reserves the right to test CECBs. As an additional means to ensure that converters made available to the public as part of the Coupon Program meet NTIA's technical specifications, NTIA may select converters to test at any time during the course of the Coupon Program. If a converter box appears not to meet NTIA's technical specifications, NTIA will follow a process similar to that used by the FCC in consulting with the manufacturer. If a converter box model is subsequently found not to meet the features and performance specifications set forth in the Final Rule, that model will no longer be eligible for the Coupon Program.

G. Retailer Participation

103. In the NPRM, NTIA noted that participation by retailers in this program would be voluntary, and that NTIA would not compensate retailers that choose to participate. Given the nature of the program, NTIA proposed to permit consumers to redeem coupons at retailers that have established production and distribution channels and who have demonstrated that they can

¹⁶¹ Letter from Members of the House Energy and Commerce Committee at 3 (coupon program should be designed so that retailers can provide updated information concerning the inventory of converter boxes in order to remedy supply difficulties promptly).

redeem coupons expeditiously and efficiently.¹⁶² NTIA proposed to require retailers to adhere to and enforce coupon restrictions such as prohibiting coupon holders from using two coupons in combination towards the purchase of a single CECB and prohibiting consumers from using coupons to purchase any device other than an eligible converter box, pursuant to these regulations. NTIA proposed to reimburse retailers within 60 days after receiving sales information related to CECBs.¹⁶³

104. Several comments were received from retail companies, organizations and members of the public addressing these proposals and raising other issues affecting retailers. NTIA believes that the regulations of this one-time program should not discourage retailer participation. Some comments noted that there has not been a government-sponsored program involving retailers quite like the Coupon Program, but that other government programs such as the USDA's Food Stamps and Women, Infants and Children's benefits may provide examples for NTIA to follow.¹⁶⁴

105. Commenters made recommendations and asked NTIA for clarification with respect to (a) retailer obligations to predict or meet demand for CECBs; (b) legal liability and additional operating costs for retailers who voluntarily participate in the program; (c) the timing for retailers to be ready to redeem coupons; (d) need for confidential treatment of sales data; (e) retailer certification criteria and procedures; (f) payment terms to retailers; and (g) consumer and retailer appeals.

a. Retailer Obligations to Predict or Meet Demand

106. CERC stated that retailers and manufacturers should not be subject to sanction for an inability to predict or meet demand. They pointed out that the demand for converters may peak in the millions and then drop toward zero, all within a period as short as 90 days. At the end of the Coupon Program, excess inventory may be unsellable at any price.¹⁶⁵ RadioShack opposed an obligation on the part of the retailer to maintain inventory in all stores at all times because it would be burdensome and perhaps impossible to meet such a requirement.¹⁶⁶

107. NTIA recognizes that the product cycle for converters is unknown and perhaps atypical of consumer electronics products generally. Furthermore, NTIA does not want retailers to decline to participate because they feel that our requirements are too burdensome or unrealistic. Therefore, NTIA will clarify that retailers are expected to follow commercially reasonable practices in ordering and managing inventories of CECBs.

¹⁶² NPRM, 71 Fed. Reg. at 42,070.

¹⁶³ *Id.*

¹⁶⁴ RadioShack Comments at 2-3.

¹⁶⁵ CERC Comments at 4.

¹⁶⁶ RadioShack Comments at 16.

108. CERC raised a related point in response to NTIA’s proposal that retailers accept the obligation “to honor all valid coupons that are tendered in the authorized manner.”¹⁶⁷ A reasonable interpretation, according to CERC, is that a retailer will honor valid coupons “if the retailer is offering subsidized Converters for sale at the time the coupon is presented by the consumer.”¹⁶⁸ NTIA agrees and will not expect retailers to attempt to redeem coupons if they have no CECBs available for sale.

b. Legal Liability and Additional Cost for Retailer Participation

109. CERC described NTIA’s statement in the NPRM that retailers must certify “under penalty of law” as “insufficiently vague to offer guidance yet daunting in their possible consequence.”¹⁶⁹ CERC stated that any interested retailer would reasonably want to be fully aware of the potential for liability, to third parties as well as to the government, before agreeing to participate.¹⁷⁰ Similarly, RadioShack asked us to clarify what was meant that retailer certification statements would be made “under penalty of law.” They suggested that penalties “would only apply to intentional efforts to defraud the program and that unintentional non-compliance or error would not be subject to penalties.”¹⁷¹

110. The Act did not include any specific government remedies or civil or criminal penalties for violations or non-compliance with the statute or the regulations promulgated by NTIA thereunder. Retailers should be aware, however, that other statutes provide for civil or criminal penalties for wrongdoing in connection with federal programs such as the Coupon Program.¹⁷² For example, the False Claims Act establishes penalties for “any person who knowingly presents, or causes to be presented, to an officer or employee of the United States Government . . . a false or fraudulent claim for payment or approval.”¹⁷³ NTIA clarifies that it does not intend to sanction retailers for unintentional non-compliance or error. NTIA encourages retailers and other participants in the Coupon Program to familiarize themselves with the laws that impose liability for making false statements to the Federal government, for making false claims, or engaging in other activities that violate Federal law.

111. CERC and other commenters expressed concern that they may incur substantial costs to participate in the program. CERC stated that the “[c]onverter is a unique, limited occasion product that is likely to be subject to unique laws of supply, demand, and subsidy. As a matter of public policy, there are simply too many novel costs and risk factors, and imponderables, for

¹⁶⁷ See NPRM, 71 Fed. Reg. at 42,070.

¹⁶⁸ CERC Comments at 11.

¹⁶⁹ CERC Comments at 12 (*quoting* NPRM, 71 Fed. Reg. at 42,070).

¹⁷⁰ *Id.*

¹⁷¹ RadioShack Comments at 16.

¹⁷² See *e.g.*, 18 U.S.C. § 1001 (“False Statement Statute”); 31 U.S.C. § 3729 (False Claims Act).

¹⁷³ 31 U.S.C. § 3729(a).

NTIA to place these investments, expenses, and risks solely on the backs of retail vendors who come forward to participate in this program.”¹⁷⁴ The electronically trackable coupon will necessitate custom changes to retailers’ point of purchase systems. RadioShack added that “[i]n a normal retail environment, a retailer would likely consider this cost as an investment, amortized against the sales life of the many products sold in its stores. . .[But] there is nothing against which to amortize this cost - - the shelf life of the eligible converter box is as short as the 18 months of the program and the system upgrade is only required for the purchase of the few models of eligible converter boxes.”¹⁷⁵ Best Buy also pointed out that their “current electronic processing systems are not able to limit an Electronic Coupon Card to a single product purchase.”¹⁷⁶

112. CERC stated that it would be prudent to use some of the administrative funds authorized for the Coupon Program for “NTIA’s contract(s) with its vendor(s) to provide - - in light of the apparent inadequacy of existing commercial channels - - for the distribution of the necessary software and other system support to participating retailers as an included cost of the program.”¹⁷⁷ RadioShack said such payments could be “considered analogous to the manufacturers’ common payment to retailers of fees for the handling of their manufacturing coupons.”¹⁷⁸ In the NPRM, NTIA stated that it will not compensate retailers for participating in the program. NTIA maintains that it does not intend to compensate retailers directly for participation in the program. NTIA, however, fully intends to distribute and process coupons consistent with reasonable commercial practices that do not place undue burdens on participating retailers.

c. Timing of Retailers to be Ready to Redeem Coupons

113. Best Buy urged NTIA and its contractor to “avoid the holiday months of October, November, December and January to require participating retailers to implement or upgrade any POS systems.”¹⁷⁹ Best Buy stated that because these months include the heaviest shopping traffic and volume of transactions of the year, it could not risk any costly down time of its systems or employees caused by complicated upgrades.¹⁸⁰ CERC said that “once into the holiday shopping season, it would be very difficult for retailers to modify their point of sale and other hardware and software systems so as to be ready by January 1, 2008.”¹⁸¹

¹⁷⁴ CERC Comments at 11.

¹⁷⁵ RadioShack Comments at 17.

¹⁷⁶ Best Buy Comments at 2.

¹⁷⁷ CERC Comments at 11.

¹⁷⁸ RadioShack Comments at 17.

¹⁷⁹ Best Buy Comments at 2.

¹⁸⁰ *Id.*

¹⁸¹ CERC Comments at 4.

114. NTIA reiterates that it is its intent to establish regulations and procedures that are reasonable and practical in light of commercial constraints. The Act requires NTIA to accept requests for coupons between January 1, 2008 and March 31, 2009, and thus, it proposed that retailers be ready to redeem coupons starting January 1, 2008, consistent with the statutory guidance. NTIA expects widespread retailer POS system modifications to occur in the first quarter of 2008.

d. Confidential Treatment of Sales and Inventory Data

115. Consistent with the legislative history regarding measures to reduce fraud and abuse, NTIA intends to establish a system for coupon redemption that is easily audited.¹⁸² NTIA will need to ensure that only valid coupons are redeemed by those actually requesting them, how many CECBs are being sold, how many are available in the market, and how demand is pacing for the program's initial and contingent funding. NTIA will need cooperation from retailers to provide reports of that nature. CERC pointed out that NTIA will receive "sales data, pertaining to individual retailers and manufacturers, that ordinarily would be held confidential by these entities. Accordingly, it will be necessary to protect the non-aggregate sale data of particular retailers and their vendors, as highly confidential."¹⁸³ RadioShack urged NTIA to clarify that its vendor "will retain such proprietary information confidentially" and that it will "not be released to the public or to other retailers or manufacturers."¹⁸⁴

116. Again, because NTIA wishes to encourage participation by a wide range of retail entities in the Coupon Program, competitively sensitive or proprietary information provided by retailers in non-aggregated form to NTIA will be treated confidentially consistent with federal law and regulations, including Freedom of Information Act requests and court orders.

e. Retailer Certification and Procedures

117. Commenting parties generally supported NTIA's proposal that retailers comply with specific requirements by certifying that they will: (1) provide information to customers about the necessity for and the installation of a CECB; (2) have in place systems that can be easily audited as well as systems that have the ability to prevent fraud and abuse in the Coupon Program; (3) are willing to be audited at any time during the course of the Coupon Program; (4) have the ability to electronically provide NTIA with sales information related to coupons used in the purchase of CECBs, specifically tracking each serialized coupon by number with a corresponding certified converter box purchase; and (5) will only submit coupons for redemption as a result of purchases of CECB models certified by NTIA.¹⁸⁵

118. CERC stated that certification should entail representations by retailers that they have

¹⁸² See Conf. Rep. at 202.

¹⁸³ *Id.* at 12.

¹⁸⁴ RadioShack Comments at 15.

¹⁸⁵ NPRM, 71 Fed. Reg. at 42,070.

“established production and distribution channels and have demonstrated that they can redeem coupons expeditiously and efficiently.”¹⁸⁶ Radio Shack urged NTIA to require participating retailers “to demonstrate that they have experience in consumer electronics retail.”¹⁸⁷

119. NTIA agrees that retailers must have experience in consumer electronics retail sales sufficient to support the sale of CECBs as an additional CE product. We do not think that this program is appropriate for brand new ventures, either of the bricks and mortar type or online sellers. NTIA agrees with CERC that demonstrated capabilities as to staff, training, capacity to carry inventory and to order and take delivery of CECBs through commercial channels is important.¹⁸⁸ As a result, retailers will need to certify that they have been engaged in the consumer electronics business for at least one year prior to their application. This requirement may be waived by NTIA upon a showing of good cause. A determination of “good cause” will be based on a showing of what is the best interest of the coupon program. This application process will provide NTIA with information well in advance of the 2008 launch of which retailers will participate and what markets will be served.

120. The comments from retailers were unanimous that NTIA should dispense with the proposed consumer certifications regarding eligibility. CERC said that the two per household limit “can be complied with by the simply electronic means of not allowing the system to allocate more than two coupons to any specific household address.”¹⁸⁹ RadioShack said that “fraud would be minimized by use of an electronic coupon card” with several suggestions on how the request, distribution, and redemption system would work.¹⁹⁰ NTIA agrees that an electronically trackable system will enable NTIA to reduce the chance that no more than two coupons are sent to a given household. NTIA agrees that retail employees should not be placed in the position of having to judge whether a particular customer is eligible to purchase the product. However, NTIA expects retailers to report suspicious patterns of customer behavior to NTIA. Recognizing that many scenarios may exist for fraudulent activity, NTIA will leave it to the retailer's discretion as to the type of behavior that requires notification to NTIA.

121. Some commenters addressed the need for retailers to provide information to customers about converter boxes. In support of NTIA’s proposal, RadioShack said that retailers should be required to demonstrate that their sales people have received “specific training on the necessity for and use of the converter box so that consumers can ask questions and receive accurate answers. [B]ecause the need for specific features and capabilities will vary based on the age and location of televisions, knowledgeable sales people are essential to the success of the converter box program.”¹⁹¹ Best Buy said that “[w]hile it is reasonable to expect participating retailers to

¹⁸⁶ CERC Comments at 11.

¹⁸⁷ RadioShack Comments at 15.

¹⁸⁸ CERC Comments at 11.

¹⁸⁹ CERC Comments at 9.

¹⁹⁰ RadioShack Comments at 10-11.

¹⁹¹ RadioShack Comments at 15.

inform consumers on which converter boxes are eligible for the coupon subsidy, they should not be legally required to invest in displays, placards, or advertisements. Retailers should be allowed flexibility to incorporate the list of eligible converters into existing consumer education and communications plans and materials at their own discretion.”¹⁹² NTIA agrees and will not specify how retailers are to market or promote CECBs.

f. Payment Terms.

122. NTIA proposed that retailers participating in the Coupon Program would be required to present to the Government coupons for payment within 30 days of the redemption transaction and retain hard copies of sale information for one year, and that payment from the Government would be made to the retailer for all validly redeemed coupons within 60 days of receipt by the Government.¹⁹³ Commenting parties asserted that if an electronic system is used, there would be no need for a records retention requirement, and that the proposed 60-day payment would be unnecessarily long.

123. RadioShack said that “a retailer may be reluctant to participate in the program, knowing that they are in effect lending the government \$40 for each sale for at least 60 days.”¹⁹⁴ Instead, RadioShack suggested that “reimbursement should occur immediately upon a transaction. . . [W]ith an electronic coupon card system, the reimbursement would be automatic with the transaction, saving an endless amount of time in the transaction settlement process.”¹⁹⁵

124. Payments from program funds to retailers will be accomplished in a commercially reasonable manner. While it may be possible for payment to occur within a day or two if an electronically trackable system is used, payments will typically be processed no later than 3 business days after the retailer submits an authorized transaction to NTIA or its contractor. For purposes of these payments to retailers, “business day” means a calendar day other than a Saturday, Sunday or a federal holiday. To ensure that vendors are paid promptly, they will be required to complete a Central Contractor Registration (CCR). CCR validates the registrant information and electronically shares the secure and encrypted data with the federal agencies’ finance offices to facilitate paperless payments through electronic funds transfer (EFT). To ensure payment to the retailer and provide a closed loop audit trail, NTIA will require retailers to provide positive verification that payment has been received for authorized coupon redemption transactions. With respect to retaining hard copies of sales information for one year, in view of the decision to allow the use of ECCs, NTIA will not require retailers to retain hard copies of this information. However, for auditing purposes, sales information must be retained for at least one year and to the extent that retailers choose to retain it electronically, they should be prepared to convert it to a hard copy format if requested by NTIA.

¹⁹² Best Buy Comments at 3.

¹⁹³ NPRM, 71 Fed. Reg. at 42,070.

¹⁹⁴ RadioShack Comments at 16.

¹⁹⁵ *Id.*

H. Consumer Education

125. Many commenters offered suggestions about effective means of educating consumers about the Coupon Program. While the program regulations will not directly address consumer education issues, NTIA will carefully consider the many commenters' advice as it develops a comprehensive consumer education campaign. In addition, the comments demonstrated the link between consumer education and other aspects of the proposed Rule, such as coupon eligibility, application process and certification of eligible boxes and participating retailers. Commenters offered many useful suggestions about educating consumers about the Coupon Program. Mindful of the need to manage our consumer education resources effectively and to work cooperatively with the consumer electronics and broadcast industry, community organizations, and the FCC, NTIA will build on the commenters' suggestions to develop a comprehensive consumer education effort.

III. Procedural Matters

Paperwork Reduction Act

The Paperwork Reduction Act (PRA), 44 U.S.C. Chapter 35, requires federal agencies to seek and obtain OMB approval before undertaking a collection of information directed to ten or more persons. Under the PRA, a rule creates a "collection of information" where ten or more persons are asked to report, provide, disclose, or record "information" in response to "identical questions."

In the NPRM, NTIA invited comment on three information collections required for the implementation of the Coupon Program. To successfully administer the Coupon Program, NTIA requested approval on three collection requirements and reporting requirements for: (1) The applications that households must submit to receive coupons; (2) the certification form for retailers that will sell the converter boxes and submit coupons for redemption; and (3) the certification form and recordkeeping and reporting requirements for manufacturers regarding converter boxes eligible for the coupon program. Specifically, comments were invited on (a) whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of burden including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility; and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

NTIA received over 100 comments in response to the NPRM. There were no comments submitted specifically with respect to the information collection and recordkeeping requirements. The comments to the NPRM and the analysis to the NPRM, however, resulted in changes or modifications from the proposed rule to the Final Rule. Accordingly, NTIA has modified certain aspects of the information collection and reporting requirements. These modifications are discussed below.

(1) *Title:* Application for the Digital-to-Analog Converter Box Coupon

Type of Request: New Collection

Estimate of Burden: Public reporting burden for this collection of information is estimated to average .25 hours (15 minutes) per transaction

Respondents: U.S. households

Estimated Number of Respondents: 110 million

Estimated Number of Responses per Respondent: 1

Estimated Total Annual Burden on Respondents: 27,500,000 hours

This new information collection is for the application required to request and receive a coupon to purchase a digital-to-analog converter box. This collection of information is necessary for NTIA to provide the benefit to U.S. households as directed in the Act. In the NPRM, NTIA estimated the public reporting burden for this collection to average .25 hours (15 minutes) per respondent. The NPRM identified the respondents affected by this information collection as U.S. television households that receive over-the-air television in an analog format. The estimated number of respondents was 21 million U.S. television households. Because the Final Rule has been changed to include all U.S. households, the estimated number of respondents is 110 million. This estimate assumes that all U.S. households with analog television sets will apply for a coupon. The Final Rule requires consumers to submit the following: (1) name; (2) address; (3) the number of coupons requested; and (4) a certification as to whether they receive cable, satellite, or other pay television service.

The OMB Approval Number of the information collection will be provided in a subsequent *Federal Register* notice.

(2) *Title:* Certification for Retailer to Accept and Redeem Coupons for the purchase of a Digital-to-Analog Converter Box Coupon

Type of Request: New Collection

Estimate of Burden: Public reporting burden for this collection of information is estimated to average .25 hour per respondent

Respondents: Retailers that accept coupons for digital-to-analog converter boxes

Estimated Number of Respondents: 10,000

Estimated Number of Responses per Respondent: 1

Estimated Total Annual Burden on Respondents: 2,500 hours

As part of the coupon program, retailers that choose to participate in the program by selling converter boxes must accept the coupons from consumers and then seek reimbursement from the Federal Government. The Final Rule requires retailers that wish to participate in the program to submit a form to the agency which requires them to self-certify to that they: (1) have been engaged in the consumer electronics retail business for at least one year; (2) have completed a Central Contractor Registration; (3) have in place systems that can be easily audited as well as systems that can provide adequate data to minimize fraud and abuse in retail redemption and government payment for coupons; (4) agree to have coupons box sales audited at any time during the term of participation in the coupon program by the U. S. Government or an independent auditor at no expense to the retailer; (5) will provide NTIA electronically with redemption information and payment receipts related to coupons used in the purchase of converter boxes, specifically tracking each serialized coupon by number with a corresponding converter box purchase; (6) agree only to accept coupons for, and receive payment from authorized purchases made for CECBs.

The OMB Approval Number of the information collection will be provided in a subsequent *Federal Register* notice.

(3) *Title:* Certification of Digital to Analog Converter Box

Type of Request: New Collection

Estimate of Burden: Public reporting burden for this collection is estimated at 1.25 hour per respondent

Respondents: Companies that manufacture digital to analog converter boxes who request NTIA certification

Estimated Number of Respondents: 10

Estimated Number of Responses per Respondent: 1

Estimated Total Annual Burden on Respondents: 12.5 hours

Manufacturers that wish to participate in the program must submit a notice of intent to NTIA at least three months prior to submitting test results and sample models of converter boxes. The notice shall include a brief description of the proposed converter box, including permitted as well as required features, and the date which the proposed converter box is expected to be available for testing. The notice of intent shall supply the name, title and address and phone number of an individual responsible for the manufacturer's submission. When the manufacturer submits its converter box to NTIA, it shall also provide test results along with a certification of the testing supervisor as to their authenticity, completeness, and accuracy.

The OMB Approval Number of the information collection will be provided in a subsequent *Federal Register* notice.

Executive Order 12866

This Final Rule has been determined to be economically significant for purposes of Executive Order 12866; and therefore, has been reviewed by the Office of Management and Budget (OMB). In accordance with Executive Order 12866, and Economic Analysis was completed outlining the costs and benefits of implementing this program. The complete analysis is available from NTIA upon request.

Executive Order 12988

This Final Rule has been reviewed under Executive Order 12988, Civil Justice Reform. NTIA has determined that the rule meets the applicable standards provided in section 3 of the Executive Order, to minimize litigation, eliminate ambiguity, and reduce burden.

Congressional Review Act

This rule has been determined to be major under the Congressional Review Act, 5 U.S.C. § 801 *et seq.*

Regulatory Flexibility Analysis

As required by the Regulatory Flexibility Act, an Initial Regulatory Flexibility Analysis (IRFA) was prepared and published with the NPRM.¹⁹⁶ A copy of the IRFA was provided to the Chief Counsel for Advocacy of the Small Business Administration. Although NTIA specifically sought comment on the costs to small entities of complying with the Final Rule, no commenters provided specific cost information. NTIA has carefully considered whether to certify that the Final Rule will not have a significant impact on a substantial number of small entities. NTIA continues to believe the Final Rule's impact will not be substantial in the case of small entities. However, NTIA cannot quantify the impact the Final Rule will have on such entities. Therefore, in the interest of thoroughness, NTIA has prepared the following Final Regulatory Flexibility Analysis (RFA) with this Final Rule in accordance with the Regulatory Flexibility Act.¹⁹⁷

1. Succinct Statement of the Need for, and Objectives of the Rule:

NTIA is issuing this Final Rule because of a statutory mandate to create and implement a coupon program that will affect the public under Section 3005 of the Digital Television Transition and Public Safety Act of 2005.¹⁹⁸ The Act requires the Federal Communications Commission (FCC) to require full-power television stations to cease analog broadcasting after February 17, 2009. After that date, households using analog-only televisions will no longer be able to receive over the air television broadcasts unless the television is connected to a converter box that converts the digital

¹⁹⁶ See NPRM, 71 Fed. Reg. at 42,072, Appendix A.

¹⁹⁷ See 5 U.S.C. § 604.

¹⁹⁸ See Title III of the Deficit Reduction Act of 2005, Pub. L. 109-171, 120 Stat. 4, 21 (Feb. 8, 2006).

signal to analog format. As a result, the Act authorizes NTIA to create a program whereby U.S. households can apply for \$40 coupons to be used towards the purchase of digital-to-analog converter boxes.

The Final Rule sets forth a framework to implement the coupon program as authorized by the Act. The Final Rule also provides clear guidance for consumers, manufacturers, and retailers regarding eligibility, responsibilities, and certifications.

2. Summary of the Significant Issues Raised by the Public Comments in Response to the IRFA; Summary of the Assessment of the Agency of Such Issues; and Statement of Any Changes Made in the Rule as a Result of Such Comments:

The only comments that directly responded to the IRFA were those submitted by Stored Value Systems, Inc. (Stored Value), although other comments submitted in response to the NPRM addressed issues raised in the IRFA.¹⁹⁹ Stored Value commented on the IRFA section regarding “Alternatives to Minimize Burdens.” In that section, NTIA stated that the proposed self-certification by retailers for certain compliance requirements was less burdensome than other alternatives such as requiring third-party compliance, or instituting a process whereby NTIA certified compliance.²⁰⁰ NTIA stated that either of those options would involve additional steps in the certification process and would therefore increase time and cost.²⁰¹ Although Stored Value agreed with our analysis, it added that “not pursuing either option would not necessarily relieve the program or associated stakeholders with conducting similar additional steps and most likely would add even increased time and cost, or possible program delay.”²⁰² NTIA maintains that a third-party certification of retailer credentials would add costs and delay implementation of the program. The Final Rule, therefore, permits retailers to provide self-certification as to the program requirements.

3. Description and Estimate of the Number of Small Entities to Which the Rule will Apply Or an Explanation of Why no Such Estimate is Available:

The RFA requires agencies to provide a description and an estimate of the number of small entities to which the rule will apply or an explanation of why no such estimate is available.²⁰³ Under the RFA, the term “small entity” has the same meaning as the terms “small business,” “small organization” and “small governmental jurisdiction.”²⁰⁴ To the extent that this rule affects small businesses, the affect would be on businesses in the retail or manufacture of digital-to-analog converter boxes. The Small Business Administration defines small entities in the “radio, television and other electronic stores” sector as those organizations with less than \$8 million in annual

¹⁹⁹ See Stored Value Comments at 46.

²⁰⁰ See NPRM, 71 Fed. Reg. at 42,074, Appendix A.

²⁰¹ *Id.*

²⁰² Stored Value Comments at 46.

²⁰³ 5 U.S.C. § 604(a)(3).

²⁰⁴ 5 U.S.C. § 601.

revenue.²⁰⁵ With respect to equipment manufacturers, the SBA defines those small entities as those with less 750 employees.

As stated in the IRFA, NTIA does not have precise information on the number of qualifying small businesses that are in the manufacturing or electronic retailing sectors that would be affected by the Final Rule. The digital-to-analog converter box is not commercially available today and the life of this particular product is limited. Thus, there is no readily available data that would assist NTIA in making an estimate as to the number of “small business” retailers or manufacturers that would be affected by the regulations. Moreover, none of the comments submitted in response to the NPRM addressed the number of small entities to which these regulations will apply.

According to data from the U.S. Census Bureau, there were 1014 U.S. companies in 2002 that manufactured radio and television communications equipments, and approximately 1010 of these firms were classified as small entities having fewer than 750 employees.²⁰⁶ Specific figures for the number of firms that manufacture television equipment are unavailable, however, NTIA believes that some of these companies are capable of manufacturing a converter box pursuant to the standards provided in the Final Rule. In fact, several electronic equipment manufacturers submitted comments in this proceeding. There was no indication that any of these manufacturers were small businesses. To the extent that there exist small entities capable of manufacturing a converter box pursuant to the standards provided in the Final Rule, the extent to which they choose to participate in the coupon program will be a business decision and not based on any mandatory action resulting from this Final Rule. Therefore, NTIA is unable to predict with any certainty the number of small entities that will consider the coupon program an advantageous business opportunity. Moreover, the comments submitted in response to the proposed rule did not provide data that would assist NTIA in making such an estimate.

Likewise, it is not possible to ascertain the number of consumer electronic retailers that qualify as small entities for the purpose of this program. Certain data from trade associations, however, provide a glimpse of the type of small businesses that may participate in the coupon program. For example, the Professional Audio-Video Retailers Association (PARA) division of the Consumer Electronics Association (CEA) has more than 250 professional audio, video, home theater, and custom electronics specialty dealers.²⁰⁷ CEA has also formed a partnership with the North America Retailers Association (NARDA), a group of independent retailers that include consumer electronics retailers that represent approximately 3,500 storefronts and accounts for over \$11 billion in annual sales.²⁰⁸ However, not all NARDA members may be interested in participating in the digital-to-analog converter box coupon program. In addition to consumer electronics, NARDA’s members also sell and service kitchen and laundry appliances, consumer mobile

²⁰⁵ See U.S. Small Business Administration Table of Small Business Size Standards Matched to North American Industry Classifications Systems Codes, <http://www.sba.gov/size>.

²⁰⁶ See U. S. Census Bureau, 2002 Economic Census, Industry Statistics by Employment Size, Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing (NAICS Code 334220), Table 4, available at <http://www.census.gov/econ/census02>.

²⁰⁷ See <http://www.ce.org/Membership/Divisions/98.asp>.

²⁰⁸ See <http://www.narda.com>.

electronics, computers and other home and small office products, furniture, sewing machines, vacuum cleaners, room air conditioners, and other consumer products. Moreover, NARDA's members are not limited to retailers, but also include manufacturers, suppliers and vendors. PARA and NARDA members may be specialty electronic dealers not interested in selling converter boxes. The comments submitted in response to the IRFA did not provide data that would assist NTIA in making an estimate of "small entities."

4. Description of Projected Reporting, Recordkeeping and Other Compliance Requirements of the Rule, Including an Estimate of the Classes of Small Entities That Will Be Subject to the Requirement and the Type of Profession Skills Necessary for Preparation of the Report or Record:

It should be noted again here that this coupon program is for a limited amount of time so there will not be any long term or recurring reporting, recordkeeping and other compliance requirements. Moreover, participation in this program is voluntary, thus any requirements would only occur if a retailer or manufacturer chooses to participate. As stated above, there is no readily available data to assist NTIA in making an estimate as to the number of "small entities" that will be subject to the requirements of the rule, and comments submitted in response to the proposed rule did not address such an estimate.

A. Manufacturers

The Final Rule requires manufacturers that wish to participate in the program to submit a notice of intent to NTIA at least three months prior to submitting test results and sample models of converter boxes. The notice shall include a brief description of the proposed converter box, including permitted as well as required features, and the date which the proposed converter box is expected to be available for testing. As part of this notice of intent, the manufacturer shall supply the name, title, address and phone number of an individual responsible for the manufacturer's submission. When the manufacturer submits its converter box to NTIA, it shall also provide test results along with a certification of the testing supervisor as to their authenticity, completeness, and accuracy.

Because these certification and recordkeeping requirements should be a part of a manufacturer's normal course of business, NTIA does not anticipate that a particular type of professional skill is necessary beyond that already incorporated into the manufacturer's existing business operations. It should be noted that most of the comments submitted in response to the NPRM, supported the approach adopted in the Final Rule whereby the manufacturer would conduct its own testing and submit the converter box to NTIA for "verification plus." No comments submitted in this proceeding indicated that the compliance requirements of this Rule would require a particular type of professional skill.

B. Retailers

The Final Rule requires retailers to have in place systems that are capable of electronically processing coupons for redemption and payment, tracking each transaction and generating reports that are auditable. The Final Rule also requires retailers to provide transaction reports to NTIA and to retain such reports for at least one year. Retailers are required to provide NTIA redemption

information and payment receipts related to coupons used in the purchase of converter boxes. To participate in the program, retailers must have engaged in electronic retailing for at least one year and must register in the Central Contractor Registration database.

Because these certification and recordkeeping requirements are typically part of a retailer's normal course of business, NTIA does not anticipate that a particular type of professional skill is necessary beyond that already incorporated into a retailer's existing business operations. No comments submitted in this proceeding indicated that the compliance requirements of this Rule would require a particular type of professional skill. The recordkeeping requirements for reports are necessary for NTIA to monitor the program to ensure that coupons are being utilized and redeemed. This information is necessary in the event NTIA is required to request additional program funding. Moreover, because this is a federal government program, NTIA must ensure that it can be audited as necessary.

There were comments received that the use of coupons may not be compatible with electronic scanning devices used by participating retailers and that the requirement for electronic systems may eliminate small retailers from participating. Moreover, some retailers suggested that the use of electronic coupon cards may require significant up-front costs for software, payment processing and employee training. NTIA notes again that this program is voluntary, thus any costs incurred are a result of retailers choosing to participate. With respect to limiting small retailers, NTIA did not receive comments from any small retailers that the use of electronic systems would somehow discourage them from participating. On the other hand, most of the retailers stated that incorporating electronically encoded information on the coupons was necessary for the program to run efficiently. There was no data submitted in this proceeding indicating that small retailers would not have electronic systems in place. As for those retailers that state that electronic systems would require significant up front cost, NTIA reiterates that retailers are free to set the retail price of the converter boxes. Thus, any up-front costs incurred by a retailer can be recouped.

5. Description of the Steps the Agency Has Taken to Minimize the Significant Economic Impact on Small Entities Consistent with the Stated Objectives of Applicable Statutes, Including a Statement of the Factual, Policy, and Legal Reasons for Selecting the Alternative Adopted in the Final Rule and Why Each of the Other Significant Alternatives to the Rule Considered by the Agency That Affect the Impact on Small Entities Was Rejected:

The IRFA proposed and solicited a number of alternatives to minimize the economic impact on small entities. It should be noted, as it was in the IRFA, that any significant economic impact would not be caused by the Final Rule because participation in this program is voluntary on all levels - - consumers, retailers and manufacturers. Likewise, there is no significant economic impact if a small entity chooses not to participate in the program. Nonetheless the Final Rule includes steps to minimize any adverse economic impact on all participants.

a. No Limits on Pricing of the Converter Boxes

The Final Rule does not restrict the wholesale or retail price of the converter box. Thus, to the extent that manufacturers and retailers incur certain costs to provide the converter boxes, these costs may be recouped through the retail or wholesale price established by them. The alternative

would have been to limit the retail price of the converter box. That alternative may cause a hardship on small entities because it would limit the ability of small entities to recoup costs involved in making the converter box available. Because this program is new and the demand for the converter box is uncertain, NTIA's decision to allow manufacturers and retailers to price the box as they deem appropriate should minimize economic burdens. Moreover, NTIA does not have the statutory authority to determine the price for the set top boxes.

b. Retaining Hard Copies of Sales Data

In the NPRM, NTIA proposed to require retailers to retain hard copies of sales information for at least one year. Retailers submitted comments asserting that if electronic systems were used, there would be no need for such a records retention requirement. Accordingly, the Final Rule dispensed with the requirement that retailers retain hard copies of sales information for one year, however, retailers are still required to retain such information electronically for one year and to convert it to a hard copy format if requested by NTIA.

c. Electronic Processing of Coupons

The comments from retailers overwhelmingly recommended the use of an electronic coupon card system. Retailers were concerned that unless an electronic system was utilized, reimbursement from the government would be delayed. As a result of these comments, NTIA intends to use retailer point of sale electronic tracking systems to authorize coupon redemptions and to track sales transactions of eligible devices. To ensure that retailers are reimbursed in a timely manner, the Final Rule permits retailers to register in Central Contractor Registration which facilitates paperless payments through electronic funds transfer. Alternatively, retailers would have to wait a longer period of time to be reimbursed by the Federal Government.

List of Subjects in 47 C.F.R. Part 301

Antennas, Broadcasting, Cable television, Communications, Communications equipment, Electronic products, Telecommunications, Television.

For the reasons set forth in the preamble, NTIA replaces 47 C.F.R. Part 301, which is currently reserved, with the following:

PART 301 DIGITAL-TO-ANALOG CONVERTER BOX COUPON PROGRAM

- 301.1 Program Purposes
- 301.2 Definitions
- 301.3 Household Eligibility and Application Process
- 301.4 Coupons
- 301.5 Manufacturers' Technical Approval Process
- 301.6 Retailer Participation
- Technical Appendix 1
- Technical Appendix 2

AUTHORITY: Title III of the Deficit Reduction Act of 2005, Pub. L. No. 109-171, 120 Stat. 4, 21 (Feb. 8, 2006) (the “Act”).

§301.1 Program Purposes.

Pursuant to section 3005 of the Act, (The Deficit Reduction Act of 2005), the purpose of the Digital-to-Analog Converter Box Coupon Program is to provide \$40 coupons that can be applied towards the purchase price of eligible digital-to-analog converter boxes. After February 17, 2009, the Federal Communications Commission will require that all full-power television stations in the United States broadcast using digital television technology. Consumers who wish to continue to receive local broadcast television programming over-the-air using analog televisions not connected to cable or satellite service may wish to purchase digital-to-analog converter boxes in order to do so.

§301.2 Definitions.

- (a) “Act” means Title III of the Deficit Reduction Act of 2005, Pub. L. No. 109-171, 120 Stat. 4, 21 (Feb. 8, 2006).
- (b) “Agency” means the National Telecommunications and Information Administration of the United States Department of Commerce or its contractor.
- (c) “Certified Retailer” means a seller of Coupon-Eligible Converter Boxes directly to consumers that has met the requirements for certification and has been identified by NTIA as certified to redeem coupons.
- (d) “Contingent Funds” means those funds referenced in Section 3005(c)(3) of the Act.
- (e) “Coupon” means a voucher provided by the Agency to Eligible Households which only may be used to purchase a Coupon-Eligible Converter Box from a Certified Retailer.
- (f) “Coupon-Eligible Converter Box” (CECB) means a stand-alone device that does not contain features or functions except those necessary to enable a consumer to convert any channel broadcast in the digital television service into a format that the consumer can display on a television receiver designed to receive and display signals only in the analog television service. CECBs may also include remote control devices. CECBs must have the features required by, and meet the technical performance specifications listed in Technical Appendix 1.
- (g) “Department” means the United States Department of Commerce.
- (h) “Eligible Household” means those Households in the United States and its territories that make a valid request for a coupon pursuant to Rule 301.3 within the time period specified by NTIA, but no later than March 31, 2009.
- (i) “FCC” means the Federal Communications Commission.
- (j) “State” includes each of the fifty states, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Northern Mariana Islands.
- (k) “Household” consists of all persons who currently occupy a house, apartment, mobile home, group of rooms, or single room that is occupied as separate living quarters and has a separate U.S. Postal address. A household does not mean a Post Office Box.

§301.3 Eligibility and Application Process.

- (a) To apply for and receive a coupon, an Eligible Household must:
 - (1) provide the name of the person submitting the request
 - (2) provide a United States Postal Service mailing address
 - (A) a Post Office Box will not be considered a valid mailing address unless (2)(B) applies
 - (B) residents of Indian reservations, Alaskan Native Villages and other rural areas without home postal delivery may be requested to supply additional information to identify the physical location of the household, as required.
 - (3) indicate the number of coupons requested, but no more than two coupons.
- (b) As of January 1, 2008, requests for coupons may be submitted by mail, telephone or the Internet on forms provided by the Agency.
- (c) Requests for coupons must be submitted to the Agency no later than March 31, 2009.
- (d) Once Contingent Funds are available for the Coupon Program, only over-the-air households will be eligible. During the period in which Contingent Funds are available, households must certify that they do not receive cable, satellite, or other pay television service.
- (e) If an applicant does not meet the above eligibility requirements, the request will be denied.

§301.4 Coupons

- (a) The coupon value will be \$40 or the price of the CECB, whichever is less.
- (b) Each Eligible Household will be limited to a total of two coupons.
- (c) Two coupons may not be used in combination toward the purchase of a single CECB.
- (d) Coupons will be sent to Eligible Households via the United States Postal Service.
- (e) Coupons will expire 90 days after the issuance date. Issuance date means the date upon which the coupon is placed with the United States Postal Service.
- (f) Consumers may not return a CECB to a retailer for a cash refund for the coupon amount or make an exchange for another item unless it is another CECB.
- (g) The coupon has no cash value. It shall be illegal to sell, duplicate or tamper with the coupon.

§301.5 Manufacturers' Technical Approval Process

- (a) Manufacturers wishing to participate in the coupon program must submit a notice of intent to NTIA at least three months prior to submitting test results and sample models of converter boxes. Notices should be sent to DTV Converter Coupon Program, NTIA/OTIA, U.S. Department of Commerce, Room 4809, Washington, DC 20230, Fax Number 202-482-4626 and provide the name, title, address, and phone number of an individual responsible for the manufacturer's submission. The notice shall also include a brief description of the proposed converter box, including permitted as well as required features, and the date which the proposed converter box is expected to be available for testing.
- (b) NTIA shall treat the notices of intent received as business confidential and proprietary information and will not release information from the notices of intent to the public unless otherwise

required by law.

(c) The manufacturer will supply two production sample converter boxes to NTIA. NTIA will provide the manufacturer with mailing information in a letter of acknowledgment after NTIA receives the notice of intent.

(d) Each model proposed to be a CECB shall meet the performance specification and features set forth in Technical Appendix 1 of this Section. Each model proposed may also include “permitted” features set forth in Technical Appendix 2, but shall not include “disqualifying” features set forth therein.

(e) NTIA may issue other guidance or test-bed conditions and it is the manufacturer’s responsibility to conduct tests pursuant to any guidance so provided. A manufacturer shall conduct its own tests or have a qualified independent third party conduct the tests.

(f) Reports of test conditions and test results must be clear and comprehensive so that they can be easily interpreted by NTIA and others reviewing them. The FCC may test converter boxes, if requested by NTIA.

(g) Test results shall be submitted to NTIA along with a certification of the testing supervisor as to their authenticity, completeness and accuracy based on personal knowledge.

(h) NTIA will provide prompt notice to the individual submitting test results whether the model has met technical approval and is or is not a CECB. NTIA will base its decision whether to approve each converter box upon consultation with the FCC.

(i) A list of CECBs, including make and model number, will be maintained by NTIA and regularly distributed to participating retailers for use in electronic Point-of-Sale (POS) systems.

(j) It is the responsibility of the manufacturers to resolve any performance or product defect issues with consumers and retailers.

(k) NTIA shall not warrant the performance, suitability, or usefulness of any CECB for any use.

§301.6 Retailer Participation

Retailer participation is voluntary. NTIA encourages retailers to participate in the Coupon Program and to cooperate with NTIA and its contractor in the administration of an effective and efficient program resulting in high customer satisfaction with a minimum of waste, fraud and abuse.

(a) Retailer Obligations: Certified Retailers are required to redeem valid coupons toward the purchase of CECBs, and

- (1) Must have systems in place that are capable of electronically processing coupons for redemption and payment, tracking each and every transaction, and generating reports that are easily auditable.
- (2) Must train employees on the purpose and operation of the Coupon Program. NTIA or its contractor will provide training material.
- (3) Will not be responsible for checking consumer or household eligibility but shall report to NTIA suspicious patterns of customer behavior.
- (4) Use commercially reasonable methods to order and manage inventory to meet customer demand for CECBs.

- (5) Must provide transaction reports based on NTIA's requirements. Reports must be maintained by the retailer for at least one year. Business confidential and proprietary information shall not be disclosed to the public unless otherwise required by law.
- (b) Retailer Certification:
- (1) Retailers seeking to participate in the Coupon Program must apply for certification by contacting NTIA between June 1, 2007 and March 31, 2008.
 - (2) Retailers must complete the form provided by the Agency which requires the retailers to self certify that they:
 - (A) Have been engaged in the consumer electronics retail business for at least one year unless waived for good cause by NTIA. Good cause will be determined upon a showing by the retailer that participation would be in the best interest of the program. NTIA will issue a written determination as to whether a retailer has made a sufficient showing of good cause to waive this requirement;
 - (B) Have completed a Central Contractor Registration (www.ccr.gov);
 - (C) Have in place systems or procedures that can be easily audited as well as systems that can provide adequate data to minimize fraud and abuse in retail redemption and government payment for coupons;
 - (D) Agree to have coupon box sales audited at any time during the term of participation in the coupon program by the U.S. Government or an independent auditor at no expense to the retailer;
 - (E) Will provide NTIA electronically with redemption information and payment receipts related to coupons used in the purchase of converter boxes, specifically tracking each serialized coupon by number with a corresponding CECB purchase; and
 - (F) Agree only to accept coupons for, and receive payment resulting from authorized purchases made for CECBs.
 - (3) Retailer Certification may be revoked by NTIA if a Certified Retailer fails to comply with these regulations, with the terms of any agreement made between the Certified Retailer and NTIA, or for other actions inconsistent with the Coupon Program.
 - (4) NTIA will not revoke retailer certification for unintentional non-compliance or error.
 - (5) Retailers may contact NTIA for late application or dispute resolution for problems such as denial or revocation of certification. Such issues will be resolved on a case-by-case basis.

TECHNICAL APPENDIX 1

NTIA Coupon-Eligible Converter Box (CECB)

Required Minimum Performance Specifications and Features

REFERENCE DOCUMENTS

ATSC A/74, Receiver Performance Guidelines, June 2004

ATSC A/53E, ATSC Digital Television Standard, Revision E with Amendments No. 1 and No. 2, September 2006

ATSC A/65C, Program and System Information Protocol for Terrestrial Broadcast and Cable (Revision C) With Amendment No. 1, May 2006

Recommendation ITU-R BT.500-11, Methodology for the subjective assessment of the quality of television pictures

ATSC A/69, PSIP Implementation Guidelines for Broadcasters, June 2002

ELIGIBLE CONVERTER BOXES SHALL COMPLY WITH THE FOLLOWING MINIMUM PERFORMANCE SPECIFICATIONS AND FEATURES:

1. Decoder

Equipment shall be capable of receiving and presenting for display program material that has been encoded in any and all of the video formats contained in Table A3 of ATSC A/53E. The image presented for display need not preserve the original spatial resolution or frame rate of the transmitted video format.

2. Output Formats

Equipment shall support 4:3 center cut-out of 16:9 transmitted image, letterbox output of 16:9 letterbox transmitted image, and a full or partially zoomed output of unknown transmitted image.

3. PSIP Processing

Equipment shall process and display ATSC A/65C Program and System Information Protocol (PSIP) data to provide the user with tuned channel and program information. See ATSC A/69 for further guidance.

4. Tuning Range

Equipment shall be capable of receiving RF channels 2 through 69 inclusive.

5. RF Input

Equipment shall include a female 75 ohm F Type connector for VHF/UHF antenna input.

6. RF Output

Equipment shall include a female 75 ohm F Type connector with user-selectable channel 3 or 4 NTSC RF output.

7. Composite Output

Equipment shall include female RCA connectors for stereo left and right audio (white and red) and a female RCA connector for composite video (yellow). Output shall produce video with ITU-R BT.500-11 quality scale of Grade 4 or higher.

8. RF Dynamic Range (Sensitivity)

Equipment shall achieve a bit error rate (BER) in the transport stream of no worse than 3×10^{-6} for input RF signal levels directly to the tuner from -83 dBm to -5 dBm over the tuning range. Subjective video/audio assessment methodologies could be used to comply with the bit error rate requirement.¹

Test conditions are for a single RF channel input with no noise or channel impairment. Refer to ATSC A/74 Section 4.1 for further guidance. (Note the upper limit specified here is different than that in A/74 4.1).

9. Phase Noise

Equipment shall achieve a bit error rate in the transport stream of no worse than 3×10^{-6} for a single channel RF input signal with phase noise of -80 dBc/Hz at 20 kHz offset. The input signal level shall be -28 dBm. Subjective video/audio assessment methodologies described above could be used to comply with the bit error rate requirement. Refer to ATSC A/74 Section 4.3 for further guidance.

10. Co-Channel Rejection

The receiver shall not exceed the thresholds indicated in **Table 1** for rejection of co-channel interference at the given desired signal levels. Refer to ATSC A/74 Section 4.4.1 for further guidance.

Table 1- Co-Channel Rejection Thresholds

Type of Interference	Co-Channel D/U Ratio (dB)	
	Weak Desired (-68 dBm)	Moderate Desired (-53 dBm)
DTV interference into DTV	+15.5	+15.5
NTSC interference into DTV	+2.5	+2.5

¹ Subjective evaluation methodologies use the human visual and auditory systems as the primary measuring “instrument.” These methods may incorporate viewing active video and audio segments to evaluate the performance as perceived by a human observer. For subjective measurement, the use of an expert viewer is recommended. The viewer shall observe the video and listen to the audio for at least 20 seconds in order to determine Threshold of Visibility (TOV) and Threshold of Audibility (TOA). Subjective evaluation of TOV should correspond with achievement of transport stream error rate not greater than a BER of 3×10^{-6} . If there is disagreement over TOV performance evaluation, it will be resolved with a measurement of actual BER.

Notes:

NTSC split 75% color bars with pluge bars and picture to sound ratio of 7 dB should be used for video source.

ATSC high definition moving video should be used for video source.

All NTSC values are peak power; all DTV values are average power.

11. First Adjacent Channel Rejection

The receiver shall not exceed the thresholds indicated in **Table 2** for rejection of adjacent channel interference at the given desired signal levels. Refer to ATSC A/74 Section 4.4.2 for further guidance.

Table 2- Adjacent Channel Rejection Thresholds

Type of Interference	Adjacent Channel D/U Ratio (dB)		
	Weak Desired (-68 dBm)	Moderate Desired (-53 dBm)	Strong Desired (-28 dBm)
Lower DTV interference into DTV	=> -33	-33	-20
Upper DTV interference into DTV	=> -33	-33	-20
Lower NTSC interference into DTV	=> -40	-35	-26
Upper NTSC interference into DTV	=> -40	-35	-26

Notes:
NTSC split 75% color bars with pluge bars and picture to sound ratio of 7 dB should be used for video source.
ATSC high definition moving video should be used for video source.
All NTSC values are peak power; all DTV values are average power.

12. Taboo Channel Rejection

The receiver shall not exceed the thresholds indicated in **Table 3** for rejection of taboo channel interference at the given DTV desired and undesired signal levels. Refer to ATSC A/74 Section 4.4.3 for further guidance.

Table 3- Taboo Channel Rejection Thresholds for DTV Interference into DTV

Channel	Taboo Channel D/U Ratio (dB)		
	Weak Desired (-68 dBm)	Moderate Desired (-53 dBm)	Strong Desired (-28 dBm)
N+/- 2	=> -44	-40	-20
N+/- 3	=> -48	-40	-20

N+/-4	=> -52	-40	-20
N+/- 5	=> -56	-42	-20
N+/- 6 to N+/- 13	=> -57	-45	-20
N +/- 14 and N+/- 15	=> -46	-45	-20
<i>Notes: ATSC high definition moving video should be used for video source. All DTV values are average power.</i>			

13. Burst Noise

Equipment shall tolerate a noise burst of at least 165 μ s duration at a 10 Hz repetition rate without visible errors. The noise burst shall be generated by gating a white noise source with average power -5 dB, measured in the 6 MHz channel under test, referenced to the average power of the DTV signal. The input DTV signal level shall be -28 dBm. Refer to ATSC A/74 Section 4.4.4 for further guidance

14. Field Ensembles

Equipment shall demonstrate that it can successfully demodulate, with two or fewer errors, 30 of the 50 field ensembles available from ATSC in conjunction with ATSC A/74. Error counts are not expected to include inherent errors associated with the start and end or looping of field ensembles for playback.

Refer to ATSC A/74 Section 4.5.2 for further guidance.

15. Single Static Echo

Equipment shall comply with either **CRITERIA A** or **CRITERIA B**, below.

CRITERIA A:

Equipment shall tolerate a single static echo with the magnitude, relative to a desired DTV signal power of -28 dBm, and delay defined in **Table 4**.

CRITERIA B:

Equipment may demonstrate compliance by tolerating a single static echo with the magnitude, relative to a desired DTV signal power of -28 dBm, and delay defined in **Table 5**, if the equipment also demonstrates that it can receive 37 of the 50 field ensembles. See **Field Ensembles** requirement.

CRITERIA A:
Table 4 Maximum Single Static Echo Delay

Echo Delay	Desired to Echo Ratio
-50 μ s	16 dB
-40 μ s	12 dB

CRITERIA B:
Table 5 - Minimum Single Static Echo Delay

Echo Delay	Desired to Echo Ratio
-50 μ s	16 dB
-40 μ s	16 dB

-20 μ s	6 dB
-10 μ s	5 dB
-5 μ s	2 dB
0 μ s	1 dB
10 μ s	2 dB
20 μ s	3 dB
40 μ s	10 dB
50 μ s	16 dB

-20 μ s	7.5 dB
-10 μ s	5 dB
-5 μ s	2 dB
0 μ s	1 dB
10 μ s	2 dB
20 μ s	3 dB
40 μ s	16 dB
50 μ s	16 dB

16. Channel Display

Equipment must display all channels, including multicast channels, broadcast by a digital television station that can be displayed on an analog TV receiver.

17. Closed Captioning, Emergency Alert System (EAS) and Parental Controls (V-Chip)

Equipment must display (1) EAS message broadcast pursuant to 47 C.F.R. §11.117 of the FCC Rules; (2) parental control information as required by the FCC Rules in 47 C.F.R. §15.120 and incorporate the EIA/CEA-766-A standard; and (3) Close Captioning information as required by the FCC Rules in 47 C.F.R. §15.122 and incorporate the CEA 708/608 standard.

18. Remote Control

A remote control to operate the equipment shall be provided with batteries. Standard codes will be used and provided so the consumer can program an existing remote control to, at a minimum, change channels and turn on and off the converter box and the consumer's existing analog television receiver.

19. Audio Outputs

The RF output must be modulated with associated audio program information; the RCA audio connectors must provide stereo left/right, when broadcast.

20. Energy Standards

The equipment shall use no more than two watts of electricity in the "Sleep" state. Sleep state power shall be measured in accordance with industry standard CEA-2013-A. Eligible equipment shall provide the capability to automatically switch from the On state to the Sleep state after a period of time without user input. This capability shall be enabled at the factory as the default setting for the device. The default period of inactivity before the equipment automatically switches to the Sleep state shall be four hours. Eligible equipment may allow the current program to complete before switching to the Sleep state. The default energy related settings shall not be altered during the initial user set-up process and shall persist unless the user chooses at a later date to manually: (a) disable the "automatic switching to Sleep state" capability, or (b) adjust the default time period from 4 hours to some other value.

21. Owner's Manual

An owner's manual shall be include information regarding the remote control codes used to permit the consumer to program a universal remote control. The owner's manual will include information regarding the availability of the main audio channel and other associated audio channels on the RF and left/right audio outputs.

22. LED Indicator

The equipment shall contain an LED to indicate when the unit is turned on.

23. RF Cable

The equipment will include at least one RF cable to connect the unit with its associated analog television receiver.

24. Signal Quality Indicator

The equipment will display on the television receiver signal quality indications such as signal strength per ATSC A/74, Section 4.7.

**TECHNICAL APPENDIX 2--NTIA Coupon-Eligible Converter Box (CECB):
Permitted and Disqualifying Features**

Feature	<i>Permitted Feature</i>	<i>Disqualifying Feature</i>
General Requirements		<p>Any device or capability which provides for more than simply converting a digital over-the-air television signal (ATSC) for display on an analog television receiver (NTSC), including, but not limited to:</p> <p>Integrated video display; Video or Audio recording or playback capability such as VCR, DVD, HDDVD, Blue Ray, etc.</p>
Antenna Inputs	<p>Smart Antenna interface connector (CEA 909 Smart Antenna Control Interface standard)</p> <p>The manufacturer may supply a 300 ohm connector or a matching transformer to connect 300 ohm ribbon leads to the required RF antenna input.</p>	
Antenna Pass-Through	<p>Equipment may pass through a NTSC analog signal from the antenna to the TV receiver</p> <p>By-pass switch to permit NTSC pass-through</p>	
Bundling Antenna and Converter Box	<p>Equipment and Smart Antenna may be sold together at promotional prices</p>	<p>Equipment cannot be sold conditioned on the purchase of a Smart Antenna or other equipment.</p>

Feature	<i>Permitted Feature</i>	<i>Disqualifying Feature</i>
Outputs (General)	S-Video	Digital Video Interface (DVI); Component video (YPbPr); High-Definition Multimedia Interface (HDMI); Computer video (VGA); USB IEEE-1394 (iLink or Firewire) Ethernet (IEEE-802.3) Wireless (IEEE0802.11)
Outputs (Audio)	Equipment may process associated audio services described in Section 6.6 of A/54 RF output may provide monaural audio for the selected audio channel. RF output may provide BTSC stereo for the selected audio channels.	
Automatic Software Repair/Upgrade	Equipment is able to receive and process software pursuant to ATSC A-97	
Program Information	Equipment may contain software and hardware modifications necessary to display other program information as determined by the manufacturer	
Remote Control	Manufacturers may include a programmable universal remote control to operate the equipment and other existing video and audio equipment Remote control may have dedicated keys to provide direct access to closed captioning and descriptive video functions	

Feature	<i>Permitted Feature</i>	<i>Disqualifying Feature</i>
Other Features	<p>Equipment may be operated on battery power as well as external AC/DC power</p> <p>Manufacturer may supply additional cables, such as a cable with 3 female RCA connectors for composite video (yellow connector) and stereo left and right audio (white and red connectors)</p> <p>Equipment may display on the television receiver additional signal quality information as determined by the manufacturer</p>	
Energy Standards	Equipment may comply with standards established by the EPA Energy Star program or state regulatory authorities	

Dated: March 9, 2007

John M. R. Kneuer

Assistant Secretary for Communications and Information