

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 1, 27, and 73

[Docket No. 12–268; FCC 12–118]

Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: In the Notice of Proposed Rulemaking, “Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions” (NPRM), released October 2, 2012, the Commission considers matters related to the implementation of Congress’s mandate to conduct an incentive auction of broadcast television spectrum as set forth in the Middle Class Tax Relief and Job Creation Act of 2012 (Spectrum Act).

DATES: Comments for this proceeding are due on or before December 21, 2012; reply comments are due on or before February 19, 2012. Written PRA comments on the proposed information collection requirements contained herein must be submitted by the public, Office of Management and Budget (OMB), and other interested parties on or before January 22, 2013.

ADDRESSES: You may submit comments, identified by Docket No. 12–268 and/or FCC 12–118, by any of the following methods:

- *Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.

- *Federal Communications Commission’s Web Site:* <http://www.fcc.gov/cgb/ecfs/>. Follow the instructions for submitting comments.

- *Mail:* Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail.) All filings must be addressed to the Commission’s Secretary, Office of the Secretary, Federal Communications Commission.

- *People with Disabilities:* Contact the FCC to request reasonable accommodations (accessible format documents, sign language interpreters, CART, etc.) by email: FCC504@fcc.gov or phone: 202–418–0530 or TTY: 202–418–0432.

For detailed instructions for submitting comments and additional information on the rulemaking process, see the **SUPPLEMENTARY INFORMATION** section of this document.

In addition to filing comments with the Secretary, a copy of any PRA comments on the proposed collection requirements contained herein should be submitted to the Federal Communications Commission via email to PRA@fcc.gov and to Cathy.Williams@fcc.gov and also to Nicholas A. Fraser, Office of Management and Budget, via email to Nicholas_A_Fraser@omb.eop.gov or via fax at 202–395–5167.

FOR FURTHER INFORMATION CONTACT: For further information about this NPRM, please contact Jennifer Manner at (202) 418–3619, Jennifer.Manner@fcc.gov. For additional information concerning the Paperwork Reduction Act information collection requirements contained in this document, send an email to PRA@fcc.gov or contact Cathy Williams at (202) 418–2918, or via email at Cathy.Williams@fcc.gov.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission’s Notice of Proposed Rulemaking, FCC 12–118, Docket No. 12–268, adopted on September 28, 2012, and released on October 2, 2012. The full text of this document is available for public inspection and copying during regular business hours in the FCC Reference Center, Federal Communications Commission, 445 12th Street SW., CY–A257, Washington, DC 20554. These documents will also be available via ECFS (<http://www.fcc.gov/cgb/ecfs/>). (Documents will be available electronically in ASCII, Word 97, and/or Adobe Acrobat.) The complete text may be purchased from the Commission’s copy contractor, 445 12th Street SW., Room CY–B402, Washington, DC 20554. To request this document in accessible formats (computer diskettes, large print, audio recording, and Braille), send an email to fcc504@fcc.gov or call the Commission’s Consumer and Governmental Affairs Bureau at (202) 418–0530 (voice), (202) 418–0432 (TTY).

Pursuant to §§ 1.415 and 1.419 of the Commission’s rules, 47 CFR 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using: (1) The Commission’s Electronic Comment Filing System (ECFS), (2) the Federal Government’s eRulemaking Portal, or (3) by filing paper copies. See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- *Electronic Filers:* Comments may be filed electronically using the Internet by accessing the ECFS: <http://www.fcc.gov/cgb/ecfs/> or the Federal eRulemaking

Portal: <http://www.regulations.gov>. Filers should follow the instructions provided on the Web site for submitting comments.

- For ECFS filers, if multiple docket or rulemaking numbers appear in the caption of this proceeding, filers must transmit one electronic copy of the comments for each docket or rulemaking number referenced in the caption. In completing the transmittal screen, filers should include their full name, U.S. Postal Service mailing address, and the applicable docket or rulemaking number. Parties may also submit an electronic comment by Internet email. To get filing instructions, filers should send an email to ecfs@fcc.gov, and include the following words in the body of the message, “get form.” A sample form and directions will be sent in response.

- *Paper Filers:* Parties who choose to file by paper must file an original and four copies of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail). All filings must be addressed to the Commission’s Secretary, Office of the Secretary, Federal Communications Commission.

- The Commission’s contractor will receive hand-delivered or messenger-delivered paper filings for the Commission’s Secretary at FCC Headquarters building located at 445 12th Street SW., Room TW–A325, Washington, DC 20054. The filing hours at this location are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building.

- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.

- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street SW., Washington DC 20554.

To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an email to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202–418–0530 (voice), 202–418–0432 (tty).

To view or obtain a copy of this information collection request (ICR) submitted to OMB: (1) Go to this OMB/GSA Web page: <http://www.reginfo.gov/public/do/PRAMain>, (2) look for the section of the Web page called "Currently Under Review," (3) click on the downward-pointing arrow in the "Select Agency" box below the "Currently Under Review" heading, (4) select "Federal Communications Commission" from the list of agencies presented in the "Select Agency" box, (5) click the "Submit" button to the right of the "Select Agency" box, and (6) when the list of FCC ICRs currently under review appears, look for the OMB control number of this ICR as shown in this section (or its title if there is no OMB control number) and then click on the ICR Reference Number. A copy of the FCC submission to OMB will be displayed.

Initial Paperwork Reduction Act of 1995 Analysis

This document contains proposed revised information collection requirements. As part of its continuing effort to reduce paperwork burden and as required by the Paperwork Reduction Act (PRA) of 1995 (44 U.S.C. 3501–3520), the Federal Communications Commission invites the general public and other Federal agencies to comment on the following information collection(s). Public and agency comments are due January 22, 2013. Comments should address: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimates; (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 the respondents, including the use of automated collection techniques or other forms of information technology. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107–198, see 44 U.S.C. 3506(c)(4), we seek specific comment on how we might "further reduce the information collection burden for small business concerns with fewer than 25 employees."

OMB Control Numbers: 3060–XXXX.
Title: Reimbursement of Repacking Expenses, Section 73.3700, FCC Form 399.

Form Numbers: FCC Form 399.

Type of Review: New collection.

Respondents: Business or other for profit entities; Not for profit institutions; State, local or Tribal government.

Number of Respondents/Responses: 4,166 respondents; 4,166 responses.

Estimated Hours per Response: 0.5–2 hours.

Frequency of Response: One time reporting requirement; On occasion reporting requirement.

Total Annual Burden: 7,124 hours.

Total Annual Cost: \$249,600.

Obligation To Respond: Required to obtain benefits. The statutory authority for this information collection is contained in sections 1, 4(i) and (j), 7, 154(i), 301, 302, 303, 307, 308, 309, 312, 316, 318, 319, 324, 325, 336 and 337 of the Communications Act of 1934, as amended.

Nature and Extent of Confidentiality: There is no need for confidentiality with this collection of information.

Privacy Act Assessment: No impact(s).

Needs and Uses: In the Notice of Proposed Rulemaking (NPRM), FCC 12–118, released by the Commission on October 2, 2012, it is proposed that, following the completion of the incentive auction process, eligible stations (full power and Class A television) that are repacked and multichannel video programming distributors (MPVDs) that incur expenses as a result of repacking will be eligible for reimbursement. The *Incentive Auction NPRM* adopts the following proposed information collection requirements:

47 CFR 73.3700—All effected entities will be required to file FCC Form 399. It is proposed that stations and MVPDs will have the option of choosing to either be reimbursed with an advance payment based on estimated expenses or reimbursed for their actual, documented expenses. Stations and MVPDs will have to submit a reimbursement request and those requesting advance payments will have to later certify that all funds were properly expended.

OMB Control Numbers: 3060–XXXX.

Title: Channel Sharing Agreements, Section 73.3700.

Form Numbers: Not applicable.

Type of Review: New collection.

Respondents: Business or other for profit entities; Not for profit institutions; State, local or Tribal government.

Number of Respondents/Responses: 2,254 respondents; 2,254 responses.

Estimated Hours per Response: 1 hr.

Frequency of Response: One time reporting requirement.

Total Annual Burden: 2,254 hours.

Total Annual Cost: \$1,217,400.

Obligation To Respond: Required to obtain benefits. The statutory authority for this information collection is contained in sections 1, 4(i) and (j), 7,

154(i), 301, 302, 303, 307, 308, 309, 312, 316, 318, 319, 324, 325, 336 and 337 of the Communications Act of 1934, as amended.

Nature and Extent of Confidentiality: There is no need for confidentiality with this collection of information.

Privacy Act Assessment: No impact(s).

Needs and Uses: In the Notice of Proposed Rulemaking (NPRM), FCC 12–118, released by the Commission on October 2, 2012, it is proposed that channel sharing bidders be required to include certain terms in their channel sharing agreements (CSAs) and to file their CSAs with the Commission. The *NPRM* adopts the following proposed information collection requirements:

47 CFR 73.3700—Channel sharing bidders be required to include certain terms in their CSAs and to file their CSAs with the Commission.

OMB Control Numbers: 3060–XXXX.

Title: Band Transition Activity Station Report, Section 73.3700; FCC Form 390.

Form Numbers: FCC Form 390.

Type of Review: New collection.

Respondents: Business or other for profit entities; Not for profit institutions; State, local or Tribal government.

Number of Respondents/Responses: 4,508 respondents; 4,508 responses.

Estimated Hours per Response: 1–85 hours.

Frequency of Response: On occasion reporting requirement; one time reporting requirement.

Total Annual Burden: 87,719 hours.

Total Annual Cost: \$134,400.

Obligation To Respond: Required to obtain benefits. The statutory authority for this information collection is contained in sections 1, 4(i) and (j), 7, 154(i), 301, 302, 303, 307, 308, 309, 312, 316, 318, 319, 324, 325, 336 and 337 of the Communications Act of 1934, as amended.

Nature and Extent of Confidentiality: There is no need for confidentiality with this collection of information.

Privacy Act Assessment: No impact(s).

Needs and Uses: In the Notice of Proposed Rulemaking (NPRM), FCC 12–118, released by the Commission on October 2, 2012, it is proposed that, following the completion of the incentive auction process, stations that are repacked to new channel assignments will be required to conduct consumer education, including on-air announcements of their new channel assignments, and to submit a Form 390 to report on their activities. The *NPRM* adopts the following proposed information collection requirements:

47 CFR 73.3700—Stations that are repacked to new channel assignments will be required to conduct consumer

education, including on-air announcements of their new channel assignments, and to submit a Form 390 to report on their activities.

OMB Control Numbers: 3060-XXXX.

Title: MVPD Notice, Section 73.3700.

Form Numbers: Not applicable.

Type of Review: New collection.

Respondents: Business or other for profit entities; Not for profit institutions; State, local or Tribal government.

Number of Respondents/Responses: 2,254 respondents; 2,254 responses.

Estimated Hours per Response: 1–2 hours.

Frequency of Response: One time reporting requirement; Third party disclosure requirement.

Total Annual Burden: 4,283 hours.

Total Annual Cost: \$135,000.

Obligation To Respond: Required to obtain benefits. The statutory authority for this information collection is contained in sections 1, 4(i) and (j), 7, 154(i), 301, 302, 303, 307, 308, 309, 312, 316, 318, 319, 324, 325, 336 and 337 of the Communications Act of 1934, as amended.

Nature and Extent of Confidentiality: There is no need for confidentiality with this collection of information.

Privacy Act Assessment: No impact(s).

Needs and Uses: In the Notice of Proposed Rulemaking (NPRM), FCC 12–118, released by the Commission on October 2, 2012, it is proposed that, following the completion of the incentive auction process, stations that are repacked to new channel assignments will be required to provide notice to multichannel video programming distributors (MVPDs) so that MVPDs can make the necessary changes to their channel lineups. The NPRM adopts the following proposed information collection requirements:

47 CFR 73.3700—The MVPD Notice would be provided in the form of a letter by stations to the MVPD and would need to contain certain information.

OMB Control Numbers: 3060–0027.

Title: Application for Construction Permit for Commercial Broadcast Station, FCC Form 301; 47 CFR Section 73.3700.

Form Numbers: FCC Form 301.

Type of Review: Revision of a currently approved collection.

Respondents: Business or other for profit entities; Not for profit institutions; State, local or Tribal government.

Number of Respondents/Responses: 6,387 respondents; 9,823 responses.

Estimated Hours per Response: 1–6.25 hours.

Frequency of Response: On occasion reporting requirement; One time

reporting requirement; Third party disclosure requirement.

Total Annual Burden: 31,195 hours.

Total Annual Cost: \$107,372,573.

Obligation To Respond: Required to obtain benefits. The statutory authority for this information collection is contained in sections 154(i), 303 and 308 of the Communications Act of 1934, as amended.

Nature and Extent of Confidentiality: There is no need for confidentiality with this collection of information.

Privacy Act Assessment: No impact(s).

Needs and Uses: In the Notice of Proposed Rulemaking (NPRM), FCC 12–118, released by the Commission on October 2, 2012, it is proposed that, following the completion of the incentive auction process, all repacked full power television stations will need to file FCC Form 301 for their new channel facility. The NPRM adopts the following proposed information collection requirements:

47 CFR 73.3700—Repacked full power television stations will need to file FCC Form 301 for their new channel facility.

OMB Control Numbers: 3060–0932.

Title: Application for Authority to Construct or Make Changes in a Class A Television Broadcast Station, FCC Form 301–CA; 47 CFR Section 74.793(d); 47 CFR Section 73.3700.

Form Numbers: FCC Form 301–CA.

Type of Review: Revision of a currently approved collection.

Respondents: Business or other for profit entities; Not for profit institutions; State, local or Tribal government.

Number of Respondents/Responses: 871 respondents; 871 responses.

Estimated Hours per Response: 2.50–7 hours.

Frequency of Response: On occasion reporting requirement; One time reporting requirement; Third party disclosure requirement.

Total Annual Burden: 8,275 hours.

Total Annual Cost: \$5,483,360.

Obligation To Respond: Required to obtain benefits. The statutory authority for this information collection is contained in sections 154(i), 307, 308, 309 and 319 of the Communications Act of 1934, as amended.

Nature and Extent of Confidentiality: There is no need for confidentiality with this collection of information.

Privacy Act Assessment: No impact(s).

Needs and Uses: In the Notice of Proposed Rulemaking (NPRM), FCC 12–118, released by the Commission on October 2, 2012, it is proposed that, following the completion of the incentive auction process, all repacked Class A television stations will need to

file FCC Form 301–CA for their new channel facility. The *Incentive Auction NPRM* adopts the following proposed information collection requirements:

47 CFR 73.3700—Repacked Class A television stations will need to file FCC Form 301–CA for their new channel facility.

OMB Control Numbers: 3060–0928.

Title: Application for Class A Television Broadcast Station Construction Permit or License, FCC Form 302–CA; 47 CFR Section 73.3700.

Form Numbers: FCC Form 302–CA.

Type of Review: Revision of a currently approved collection.

Respondents: Business or other for profit entities; Not for profit institutions; State, local or Tribal government.

Number of Respondents/Responses: 521 respondents; 521 responses.

Estimated Hours per Response: 2 hours.

Frequency of Response: On occasion reporting requirement; one time reporting requirement.

Total Annual Burden: 1,042 hours.

Total Annual Cost: \$148,485.

Obligation To Respond: Required to obtain benefits. The statutory authority for this information collection is contained in sections 154(i), 307, 308, 309 and 319 of the Communications Act of 1934, as amended.

Nature and Extent of Confidentiality: There is no need for confidentiality with this collection of information.

Privacy Act Assessment: No impact(s).

Needs and Uses: In the Notice of Proposed Rulemaking (NPRM), FCC 12–118, released by the Commission on October 2, 2012, it is proposed that, following the completion of the incentive auction process, all channel sharing Class A stations will need to file FCC Form 302–CA for their shared channel facility. The NPRM adopts the following proposed information collection requirements:

47 CFR 73.3700—Channel sharing Class A stations will need to file FCC Form 302–CA for their shared channel facility.

OMB Control Numbers: 3060–0837.

Title: Application for DTV Broadcast Station License, FCC Form 302–DTV; 47 CFR Section 73.3700.

Form Numbers: FCC Form 302–DTV.

Type of Review: Revision of a currently approved collection.

Respondents: Business or other for profit entities; Not for profit institutions; State, local or Tribal government.

Number of Respondents/Responses: 2,083 respondents; 2,083 responses.

Estimated Hours per Response: 1–2 hours.

Frequency of Response: On occasion reporting requirement; One time reporting requirement.

Total Annual Burden: 2,561 hours.

Total Annual Cost: \$1,132,555.

Obligation To Respond: Required to obtain benefits. The statutory authority for this information collection is contained in sections 154(i), 303, and 308 of the Communications Act of 1934, as amended.

Nature and Extent of Confidentiality: There is no need for confidentiality with this collection of information.

Privacy Act Assessment: No impact(s).

Needs and Uses: In the Notice of Proposed Rulemaking (NPRM), FCC 12–118, released by the Commission on October 2, 2012, it is proposed that, following the completion of the incentive auction process, all channel sharing full power educational stations will need to file FCC Form 302–DTV for their shared channel facility. The NPRM adopts the following proposed information collection requirements:

47 CFR 73.3700—Channel sharing stations will need to file FCC Form 302–DTV for their shared channel facility.

OMB Control Numbers: 3060–0029.

Title: Application for Construction Permit for Reserved Channel Noncommercial Educational Broadcast Station, FCC Form 340; 47 CFR Section 73.3700.

Form Numbers: FCC Form 340.

Type of Review: Revision of a currently approved collection.

Respondents: Business or other for profit entities; Not for profit institutions; State, local or Tribal government.

Number of Respondents/Responses: 3,161 respondents; 3,161 responses.

Estimated Hours per Response: 1–6 hours.

Frequency of Response: On occasion reporting requirement; One time reporting requirement; Third party disclosure requirement.

Total Annual Burden: 7,746 hours.

Total Annual Cost: \$30,058,700.

Obligation To Respond: Required to obtain benefits. The statutory authority for this information collection is contained in sections 154(i), 303 and 308 of the Communications Act of 1934, as amended.

Nature and Extent of Confidentiality: There is no need for confidentiality with this collection of information.

Privacy Act Assessment: No impact(s).

Needs and Uses: In the Notice of Proposed Rulemaking (NPRM), FCC 12–118, released by the Commission on October 2, 2012, it is proposed that, following the completion of the incentive auction process, all repacked full power noncommercial educational

stations will need to file FCC Form 340 for their new channel facility. The NPRM adopts the following proposed information collection requirements:

47 CFR 73.3700—Repacked noncommercial educational stations will need to file FCC Form 340 for their new channel facility.

OMB Control Numbers: 3060–0016.

Title: Application for Authority to Construct or Make Changes in a Low Power TV, TV Translator or TV Booster Station, FCC Form 346; 47 CFR Section 74.793(d); Section 73.3700, LPTV Repacking Displacement Application.

Form Numbers: FCC Form 346.

Type of Review: Revision of a currently approved collection.

Respondents: Business or other for profit entities; Not for profit institutions; State, local or Tribal government.

Number of Respondents/Responses: 9,600 respondents; 9,600 responses.

Estimated Hours per Response: 2.5–9.5 hours.

Frequency of Response: One time reporting requirement; On occasion time reporting requirement; Third party disclosure requirement.

Total Annual Burden: 30,720 hours.

Total Annual Cost: \$15,844,800.

Obligation To Respond: Required to obtain benefits. The statutory authority for this information collection is contained in sections 154(i), 301, 303, 307, 308 and 309 of the Communications Act of 1934, as amended.

Nature and Extent of Confidentiality: There is no need for confidentiality with this collection of information.

Privacy Act Assessment: No impact(s).

Needs and Uses: In the Notice of Proposed Rulemaking (NPRM), FCC 12–118, released by the Commission on October 2, 2012, it is proposed that, following the completion of the incentive auction process, low power television stations and TV translator stations may be displaced from their current operating channel and will be afforded an opportunity to file a displacement application on FCC Form 346. The NPRM adopts the following proposed information collection requirements:

47 CFR 73.3700—Following the completion of the incentive auction process, low power television stations and TV translator stations may be displaced from their current operating channel and will be afforded an opportunity to file a displacement application on FCC Form 346. There is no change in the FCC Form 346 as a result of the proposed rulemaking being adopted by the Commission.

OMB Control Numbers: 3060–0386.

Title: Special Temporary Authorization (STA) Requests; Notifications; and Informal Filings; Sections 1.5, 73.1615, 73.1635, 73.1740 and 73.3598; CDBS Informal Forms; Section 74.788; Low Power Television, TV Translator and Class A Television Digital Transition Notifications; FCC Form 337; Section 73.3700, Service Rule Waiver in Lieu of Reimbursement.

Form Numbers: FCC Form 337.

Type of Review: Revision of a currently approved collection.

Respondents: Business or other for profit entities; Not for profit institutions; State, local or Tribal government.

Number of Respondents/Responses: 7,424 respondents; 7,424 responses.

Estimated Hours per Response: 0.5–4 hours.

Frequency of Response: On occasion reporting requirement; One time reporting requirement.

Total Annual Burden: 7,124 hours.

Total Annual Cost: \$2,382,585.

Obligation To Respond: Required to obtain benefits. The statutory authority for this information collection is contained in sections 1, 4(i) and (j), 7, 154(i), 301, 302, 303, 307, 308, 309, 312, 316, 318, 319, 324, 325, 336 and 337 of the Communications Act of 1934, as amended.

Nature and Extent of Confidentiality: There is no need for confidentiality with this collection of information.

Privacy Act Assessment: No impact(s).

Needs and Uses: In the Notice of Proposed Rulemaking (NPRM), FCC 12–118, released by the Commission on October 2, 2012, it is proposed that, following the completion of the incentive auction process, eligible stations that are repacked to new channel assignments may request a waiver of the service rules in lieu of seeking reimbursement of their repacking expenses by submitting an informal filing. In addition, stations that need additional time to relocate to their new channel assignments may be required to submit a request for extension of time (FCC Form 337), tolling notification, or request for Special Temporary Authority (STA). The *Incentive Auction NPRM* adopts the following proposed information collection requirements:

47 CFR 73.3700—Entities seeking a service rule waiver in lieu of reimbursement would be required to file a request for waiver using the informal filing system. Stations needing additional time to construct would be required to submit a request for extension of time (FCC Form 337), tolling notification, or request for Special Temporary Authority (STA).

There is no change in the FCC Form 337 as a result of the proposed rulemaking being adopted by the Commission.

OMB Control Number: 3060–XXXX.

Title: Sections 1.946, 1.949, 27.10, 27.12, 27.17, etc.—Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions—NPRM, FCC 12–118.

Form Number: N/A.

Type of Review: New collection.

Respondents: Business or other for-profit entities, and state, local, or tribal government.

Number of Respondents: 101 respondents; 101 responses.

Estimated Time per Response: 1 hour.

Frequency of Response: On occasion and once every 10 year reporting requirements, recordkeeping requirements, and other third party disclosure requirements.

Obligation To Respond: Required to obtain or retain benefits. Statutory authority for these collections are contained in 47 U.S.C. 310(b) of the Communications Act of 1934, as amended.

Total Annual Burden: 31 hours.

Total Annual Cost: \$0.

Privacy Impact Assessment: N/A.

Nature and Extent of Confidentiality: There is no need for confidentiality.

Needs and Uses: The Commission seeks Office of Management and Budget approval for this new information collection for a full three-year clearance. On September 28, 2012, the FCC adopted an Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, Notice of Proposed Rulemaking (NPRM), FCC 12–118, GN Docket No. 12–268.

The following is a description of each Wireless Broadband Service Rules section public reporting requirements for Licensees in the 600 MHz Band in the NPRM:

Section 1.946(d) requires 600 MHz licensees to file a construction notification and certify that they have met the applicable performance benchmarks.

Section 1.949 requires 600 MHz licensees to file license renewal applications. Included in the application should be a detailed description of the: (1) Provision of service during the entire license period; (2) level and quality of service provided; (3) date service commenced; (4) whether service was ever interrupted; (5) the duration of any interruption or outage; (6) the extent to which service is provided in rural areas; (7) access to spectrum and service provided to qualifying tribal lands; and (8) any other

factors associated with the level of service to the public.

Section 27.10(d) requires 600 MHz licensees to notify the Commission within 30 days if a 600 MHz licensee changes, or adds to, the carrier status on its license.

Section 27.12 requires 600 MHz licensees to comply with certain foreign ownership reporting requirements.

Section 27.17 requires 600 MHz licensees to notify the Commission within 10 days if they permanently discontinue service by filing FCC Forms 601 or 605 and requesting license cancellation.

30 Day Notice Requirement requires 600 MHz licensees, along with TV broadcasters in the 470–698 MHz band, to provide thirty days' notice to all incumbent fixed Broadcast Auxiliary Service (BAS) operations within interference range prior to commencing operations in the vicinity.

The Commission will use the information to ensure 600 MHz licensees' compliance with required filings of notifications, certifications, regulatory status changes, and meeting applicable performance benchmarks. Also, such information will be used to minimize interference, verify whether 600 MHz applicants are legally and technically qualified to hold licenses and to determine compliance with Commission's rules. Any submissions made through the Universal Licensing System (ULS) must be filed electronically.

These proposals are designed to provide for flexible use of this spectrum by allowing licensees to choose their type of service offerings, to encourage innovation and investment in mobile broadband use in this spectrum, and to provide a stable regulatory environment in which broadband deployment would be able to develop through the application of standard terrestrial wireless rules. Without this information, the Commission would not be able to carry out its statutory responsibilities.

OMB Control Number: 3060–XXXX.

Title: Application by a Broadcast Licensee to Participate in a Broadcast Spectrum Incentive Auction (BSIA), FCC Form 177; and Section 1.22002 (NPRM).

Form Number: FCC Form 177.

Type of Review: New collection.

Respondents: Business or other for-profit entities; Not-for-profit institutions; State, local or Tribal government.

Number of Respondents/Responses: 2,254 respondents; 2,254 responses.

Estimated Hours per Response: 3 hours.

Frequency of Response: One time reporting requirement.

Total Annual Burden: 6,762 hours.

Total Annual Cost: N/A.

Obligation To Respond: Required to obtain benefits. The statutory authority for this information collection is contained in sections 154(i) and 309 of the Communications Act of 1934, as amended.

Nature and Extent of Confidentiality: Pursuant to statute, pending the effective date of related license reassignments and spectrum reallocations, the Commission will take all reasonable steps necessary to protect the confidentiality of Commission-held data of a broadcast licensee participating in the broadcast spectrum incentive auction. The NPRM proposed adopting the following rule to comply with this mandate: 47 CFR 1.22006.

Privacy Act Assessment: N/A.

Needs and Uses: The Notice of Proposed Rulemaking, FCC 12–118, released October 2, 2012 (NPRM) proposes that any broadcast licensee choosing to participate in the broadcast spectrum incentive auction must provide information to demonstrate that it is legally, technically, and financially qualified to participate.

The NPRM proposed adopting the following rules regarding the collection of information collection from such parties: 47 CFR 1.22000 and 1.22004.

Information collection on the form will include information regarding the relevant broadcast license, information regarding parties with an ownership interest in the license, and if applicable, information regarding any agreement that the applicant may have to share a broadcast channel in the event that it relinquishes some of its spectrum usage rights through the auction.

OMB Control Number: 3060–0600.

Title: Application to Participate in a FCC Auction; FCC Form 175; 47 CFR Sections 1.2105, 1.2110 and 1.2112.

Form Number: FCC Form 175.

Type of Review: Revision of a currently approved collection.

Respondents: Business or other for-profit entities; Not-for-profit institutions; State, local or Tribal government.

Number of Respondents/Responses: 500 respondents; 500 responses.

Estimated Hours per Response: 90 minutes.

Frequency of Response: On occasion reporting requirement.

Total Annual Burden: 750 hours.

Total Annual Cost: N/A.

Obligation To Respond: Required to obtain or retain benefits. The statutory authority for this information collection

is contained in sections 154(i) and 309 of the Communications Act of 1934, as amended.

Nature and Extent of Confidentiality: There is no need for confidentiality with this collection of information.

Applicants may request confidential treatment of information collected in FCC Form 175 pursuant to 47 CFR 0.459 of the FCC's rules.

Privacy Act Assessment: N/A.

Needs and Uses: The Notice of Proposed Rulemaking, FCC 12–118, released October 2, 2012 (*NPRM*) proposes that any party applying to participate in any auction specified by statute must certify that it is not barred by the applicable statutory prohibition against specified parties participating in the auction. The *NPRM* proposed to adopting the following subparagraph to Commission rule 1.2105 regarding the collection of information collection from such parties: 47 CFR 1.2105(a)(2)(xii).

The Commission will revise the FCC Form 175, if the proposal is adopted, to require a party to certify compliance with the statutory requirement prior to submitting the Form.

Synopsis of Notice of Proposed Rulemaking

I. Introduction

1. In its Notice of Proposed Rulemaking, “*Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*” (*NPRM*), the Commission considers matters related to the implementation of Congress's mandate to conduct an incentive auction of broadcast television spectrum as set forth in the Middle Class Tax Relief and Job Creation Act of 2012, Public Law 112–96, §§ 6402, 6403, 125 Stat. 156 (2012) (Spectrum Act).

2. Congress's passage of the Spectrum Act set the stage for this proceeding and further expanded the Commission's ability to facilitate technological and economic growth. Wireless broadband is now a key component of economic growth, job creation and global competitiveness, and the explosive growth of wireless broadband services has created increased demand for wireless spectrum. Government entities and private industry alike have recognized the urgent need for more spectrum for wireless broadband services, and have been working to increase the availability of spectrum for these valuable uses. As part of the American Recovery and Reinvestment Act of 2009, Congress directed the FCC to develop a “national broadband plan” to ensure that every American has “access to broadband capability.” The

resulting National Broadband Plan emphasized the indispensable importance of wireless spectrum in achieving Congress's broadband goals, recommending that the Commission make 300 megahertz of spectrum available for mobile broadband use within five years, including by reallocating a portion of the broadcast television spectrum.

3. The Spectrum Act authorizes the Commission to conduct incentive auctions in which licensees may voluntarily relinquish their spectrum usage rights in order to permit the assignment by auction of new initial licenses subject to flexible use service rules, in exchange for a portion of the resulting auction proceeds. Section 6403 of the Spectrum Act, which is not codified in the Communications Act, requires the Commission to conduct an incentive auction of the broadcast television spectrum and includes specific requirements and safeguards for the required auction.

4. The purpose of the *NPRM* is to develop rules and policies for the incentive auction process. The incentive auction will have three major pieces: (1) A “reverse auction” in which broadcast television licensees submit bids to voluntarily relinquish certain broadcast rights in exchange for payments; (2) a reorganization or “repacking” of the broadcast television bands in order to free up a portion of the ultra-high frequency (UHF) band for other uses; and (3) a “forward auction” of initial licenses for flexible use of the newly available spectrum—the “600 MHz band.”

II. Proposed Auction Design

5. On October 2, 2012 the Commission released a Notice of Proposed Rulemaking, “*Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*” (*NPRM*), proposing rules and seeking comment on a variety of issues related to the implementation of the congressionally mandated incentive auction of broadcast television spectrum. An incentive auction is a voluntary, market-based means of repurposing spectrum by encouraging licensees to voluntarily relinquish spectrum usage rights in exchange for a share of the proceeds from an auction of new licenses to use the repurposed spectrum. The broadcast incentive auction will have three major pieces: (1) A “reverse auction” in which broadcast television licensees submit bids to voluntarily relinquish spectrum usage rights in exchange for payments; (2) a reorganization or “repacking” of the broadcast television bands in order to

free up a portion of the ultra high frequency (UHF) band for other uses; and (3) a “forward auction” of initial licenses for flexible use of the newly available spectrum in the UHF band.

6. In the *Incentive Auction NPRM*, the Commission addresses auction design issues for the broadcast television spectrum incentive auction. The reverse and forward auctions present different challenges, but both can be discussed in terms of three basic auction design elements: (1) Bid collection procedures that determine how bids in the auction are gathered, (2) assignment procedures that determine which bids are accepted, and (3) pricing procedures that determine what each bidder pays, or in the case of the reverse auction, receives in payment. The other major component of the incentive auction, the repacking, will help to determine which reverse auction bids the Commission accepts and, therefore, is discussed in connection with reverse auction assignment procedures.

7. The Commission discusses these auction design issues at a high level and seeks comment on them. The Commission invites broadcasters' input on how to design the incentive auction so as to facilitate their participation and make it as easy as possible for them to submit successful bids, as well as how to structure the auction and repacking to take into account the interests of broadcasters that will not participate in the auction. In considering the auction design issues, the Commission also asks commenters to keep in mind their interrelated nature, as well as the different trade-offs they pose.

A. Reverse Auction and Broadcaster Repacking

8. The reverse auction will collect information about the price at which broadcast television spectrum can be cleared. This information, together with information from the forward auction, will enable the Commission to identify a set of bidders that would voluntarily relinquish spectrum usage rights and the compensation each would receive. In economic terms, the reverse auction is the supply side of the market for repurposed broadcast television spectrum. The reverse auction will incorporate three basic auction design elements: it will collect bids, determine which bids are accepted as winning bids, and determine the payments made for those winning bids. The determination of which bids will be accepted depends, in part, on the repacking.

1. Bid Collection Procedures

9. The *Incentive Auction NPRM* discusses two options for the first auction design element that is, collecting bids to voluntarily relinquish spectrum usage rights in the reverse auction. These relinquishments may include going off the air, sharing a channel, or moving to a lower broadcast television band. The first option is a single round sealed bid procedure, in which bidders would specify, during a single bidding round, the payment they would be willing to accept in exchange for relinquishing various spectrum usage rights.

10. The second option is a multiple round, or dynamic, procedure in which bidders would indicate their willingness to accept iteratively lower payments in exchange for relinquishing rights. For example, in a descending clock auction prices would start high and decline over time. As the price ticks down, stations would indicate whether they would be willing to relinquish certain spectrum rights at the current prices. Those that would still be willing to relinquish rights would remain active in the clock auction, while those that found the current prices for all the relinquishment options too low would decline all the offers, exit the auction, and continue broadcasting in their pre-auction band. The exit decision would be irreversible. The Commission could also offer bidders the option of submitting a “proxy bid” in advance of the clock auction indicating the minimum payment they would be willing to accept in exchange for relinquishing spectrum rights, making it possible for bidders to submit bids just once. The clock auction would then use the proxy bid to generate and submit bids dynamically on behalf of the bidder.

11. From the point of view of bidders, a dynamic procedure such as a clock auction with the option of making proxy bids may be preferable to a single round sealed bid procedure. A dynamic format does not require broadcasters to determine an exact bid at the beginning of the auction. They only need to determine their willingness to relinquish rights at the current price, which may make participation simpler and less expensive for bidders. On the other hand, the single round sealed bid procedure may require less complex software than a multiple round auction and thus be easier for the Commission to implement. The Commission seeks comment on these and any other bid collection procedure options commenters may suggest. Commenters advocating a particular option should address its advantages and

disadvantages, including cost to bidders and how it would work with the other elements of the reverse auction.

2. Assignment Procedures

12. *Assignment Procedures in General.* The second auction design element—the assignment procedures used to decide which bids are accepted and which are rejected, thereby determining which stations remain on the air—is significantly more complicated in this reverse auction than in a typical auction. The Commission must solve a complex engineering problem by determining how stations that retain their current spectrum usage rights are assigned channels (“repacked”), taking into account relinquishment options including channel sharing and moves from a UHF to a VHF channel, and consistent with statutory requirements and other constraints. The *Incentive Auction NPRM* discusses the repacking process as it relates directly to the assignment procedures.

13. The Commission must also analyze whether and how to consider factors in addition to bid amounts in determining which bids are accepted and which are rejected. In a reverse auction where bidders are offering the same good, minimizing the cost of procuring that good leads to a straightforward rule for determining winners: the lowest bids win. When the goods being offered are not homogenous, however, bids are sometimes weighted or scored to account for factors in addition to bid amount. The goods offered in the reverse auction of broadcast television spectrum will not be homogenous. For example, some stations have larger coverage areas and serve greater populations than others, affecting both their economic value to broadcasters and the effect of repacking them. Broadcast stations’ bids in the reverse auction could be assigned a score incorporating such factors. Bids from stations that would make the repacking more difficult because they would block more potential channel assignments to other stations could receive a lower score, for example, making them more likely to have their bids accepted and, equivalently, less likely to be assigned a channel in their pre-auction band. The score could also be designed to reflect the fact that the value of a broadcasting license depends in part on its population served. For a bid to move to VHF, the score may also account for the scarcity of VHF spectrum in the station’s broadcast area. Selecting bids and paying winning bidders in relation to their population served or other

indicators of value may reduce the cost of clearing broadcast television spectrum.

14. *Incorporation of Repacking Into the Assignment Procedures.* Repacking stations, which involves determining whether it is feasible, given the applicable constraints, to assign a collection of stations channels in a particular band, is part of the process for determining which broadcaster bids will be accepted in the reverse auction, which bids will not be accepted and what channel numbers will be assigned to the stations that will remain on the air. It may be helpful to think of the repacking of stations with different service areas and bid values into the broadcast television spectrum as being analogous to the process of packing boxes into a trunk when these boxes have different sizes and values.

15. The Commission has considered two alternative assignment procedures. The first uses an integer programming “algorithm” (a mathematical recipe for solving a problem). The second uses a simpler mathematical recipe that the *Incentive Auction NPRM* refers to as a “sequential” algorithm. Each involves the application of objective criteria to determine, using the analogy above, the best way to pack the trunk.

16. *Integer Programming Algorithm Approach to Establishing Assignments.* The first procedure would use computer optimization software to try to find the most efficient way of clearing a specified amount of broadcast television spectrum while satisfying all applicable constraints. Integer programming is a collection of mathematical algorithms that work to find and prove that a feasible solution has the best objective value of all feasible alternatives. In this case the software would, for a specified amount of spectrum to be cleared, minimize the sum of the reverse auction bids accepted and the relocation costs of stations that are reassigned to new channels. Due to the complexity of the problem, an “ideal” or provably optimal repacking solution using an integer programming model may not be feasible in a timely manner. It may be possible, however, to calculate a close approximation to the optimal solution in a reasonable amount of computing time. The approximate repacking solution may be highly efficient—coming close to minimizing the total bids of the cleared stations, given the amount of spectrum cleared—but it may be less than fully transparent, since the results cannot easily be replicated. This procedure also does not generally minimize the Commission’s cost of clearing or maximize the amount of spectrum cleared if the pricing rule does

not pay winners their bid amounts, or if the pricing rule does pay winners their bid amounts but the bidders recognize their incentives to bid above their true values under this pricing rule.

17. *Sequential Algorithm Approach to Establishing Assignments.* A second approach whose results may be easier to replicate is to sequentially determine, again based on objective criteria, which stations should be assigned a channel, starting with stations that do not participate in the auction. For stations that do participate in the auction, the determination would be based on the scored bids from highest to lowest, as long as the station can feasibly be assigned a channel. In a descending clock auction, each bidder is faced with a declining sequence of price offers for relinquishing spectrum rights. The bidder can choose to accept an offer, or reject all offers. Once a bidder rejects all offers, it exits the auction and is assigned to its pre-auction band. Prior to each auction round, the auction software determines for each station that has not exited whether it can feasibly be assigned to its pre-auction band, given the assignments of other stations. If a station *cannot* feasibly be assigned to its pre-auction band, its compensation is set at the last price offer it accepted for its last preferred relinquishment option. Each station that *can* be assigned to its pre-auction band (but has not exited) submits a bid indicating its preferred relinquishment option at the (reduced) current prices. The rounds continue until every station has either exited the auction or can no longer be assigned to its pre-auction band. When the rounds stop, every bidder that has not exited receives its last preferred relinquishment option. Bidders that have exited and stations that did not participate are assigned specific channels in their pre-auction bands. This sequential algorithm can also be implemented in a sealed-bid auction. At the beginning of each step of the sequential algorithm, for each station that has not yet exited, it would be determined into which bands the station could be feasibly moved. Among all such feasible moves, the algorithm would implement the move that minimizes cost on a scored basis. The process would continue until either the available spectrum is fully packed or there are no more stations to consider. Stations not selected to remain on the air in their pre-auction band would be paid to voluntarily relinquish their broadcasting rights.

18. These alternative assignment algorithms present tradeoffs in terms of simplicity, transparency and efficiency that must be considered in determining

the auction design. The Commission seeks comment on these options.

19. The Commission further seeks comment on whether it should consider in the repacking and assignment procedures whether a given broadcaster going off the air would create areas without any commercial or noncommercial broadcast television service. Adding an additional technical constraint would increase the complexity of the repacking process, possibly requiring additional time and resources and limiting the efficiency of the outcome. The Communications Act mandates that the Commission distribute licenses to provide a fair, efficient and equitable distribution of service to the several States and communities. Pursuant to this mandate, the Commission has strongly disfavored modification of a broadcast station's facilities that would create a "white" or "gray" area (an area where the population does not receive any over-the-air television service on only one over-the-air service, respectively), or an "underserved" area (where the population in the loss area would receive less than five over-the-air television signals). How great is the risk of creating "white" or "gray" areas where the population receives little or no over-the-air television service as a result of the reverse auction? Should the Commission seek to address any such risk as an auction design matter or through other steps outside of the incentive auction?

20. Commission staff has continued work on repacking methodologies since June 2010, and further evaluation in light of the technical, policy and auction design issues discussed in the *Incentive Auction NPRM* will be required. The Commission recognizes that the approach to assigning broadcast television channels in this proceeding is novel, especially because it is part of the incentive auction process. The Commission also recognizes that it is vital to get input from all stakeholders. The Commission staff intends to reach out to engage all stakeholders on issues related to repacking methodologies, in order to ensure transparency and share ideas and information, and the Commission seeks comment on the best timing and agenda for such a process.

3. Procedures To Determine Payments

21. The reverse auction must also determine the amount paid to winning bidders for relinquishing their spectrum rights. Some reverse auctions pay the winning bidder the amount of its bid. Another mechanism, known as "threshold" pricing, would pay a winning bidder the highest amount it

could have bid and still have had its bid accepted, as illustrated in Appendix C of the *Incentive Auction NPRM*.

Threshold pricing gives bidders an incentive to bid its station's value regardless of the bids submitted by others: if it bids an inflated value, it may forfeit the opportunity to be bought out at a price at least as high as the station's value, and if it bids an understated value, it may relinquish its rights at a price below the station's value.

22. The *Incentive Auction NPRM* discusses options for conducting the reverse auction in a single round or in a multiple round clock format. The Commission anticipates that in a clock format, a bidder that has its bid to relinquish spectrum rights accepted would be paid the threshold price, which is the prevailing clock price at the time its bid is accepted. In a sealed bid format, the Commission could determine payment either using the bid amount, or the threshold price. In choosing between these payment procedures, the Commission will consider such factors as their likely impact on the cost to the government of clearing spectrum, the efficiency of assignment, whether they would increase the complexity of implementing the assignment process, what impact they may have on bidder incentives, and whether they would encourage participation in the reverse auction. The Commission seeks comment on these choices, the factors the Commission should consider in deciding between them, and on any other considerations it should take into account.

23. *Reserve Price.* The Commission also will consider implementing a reserve price, or maximum payment, that would be made to broadcasters relinquishing spectrum usage rights. This reserve price could take the form of a maximum dollar payment to a broadcaster based on characteristics of the station such as population or viewership. The Commission seeks comment on the use of a reserve price, and the way it should be calculated.

B. Forward Auction

24. The forward auction will identify the prices that potential users of repurposed spectrum would pay for new licenses to use the spectrum. With this information, together with information from the reverse auction, the Commission can determine the winning bidders for new flexible use licenses and the prices those bidders would pay. In economic terms, whereas the reverse auction defines the supply side of the market, the forward auction defines the demand side. The forward

auction piece of the broadcast television spectrum incentive auction will differ from the typical spectrum license auction in which a fixed quantity of spectrum is licensed based on a band plan defined in the service rules. The licenses available in the forward auction will depend upon how much spectrum the reverse auction clears in specific geographic areas. That interrelationship may require that the forward auction be conducted in stages, with bids collected for different numbers of potentially available licenses.

25. The forward auction will incorporate the three basic auction design elements discussed above: bid collection procedures, assignment procedures, and procedures to determine the prices that winning bidders will pay.

1. Bid Collection Procedures

26. *Items Available for Bid.* The Commission's typical spectrum license auctions have collected bids specific to a frequency block in a geographic area. That is, in auctions with multiple blocks of spectrum available, bids were collected separately for each block in each geographic area. Alternatively, where there are multiple blocks of spectrum available in a geographic area, as the Commission expects to be the case in the forward auction, it could collect bids for one or more "generic" categories of licenses, such as paired or unpaired licenses, in a geographic area. Rather than indicating that a bid is for a specific frequency block in an area, bidders would indicate their interest in, for example, one or more paired 5 megahertz uplink and 5 megahertz downlink ("5 + 5") blocks.

27. *Multiple Round Bidding Formats.* The Commission proposes to collect forward auction bids using a dynamic auction design format, for the same reasons that it typically uses a multiple round ascending auction design in spectrum license auctions. Multiple rounds permit a process of price discovery, allowing bidders to modify their bidding strategies in response to changes over the course of the auction in the absolute and relative prices of different licenses.

28. Two dynamic format options for the forward auction are a simultaneous multiple round ascending (SMR) auction and an ascending clock auction. In each, a bidder would indicate the license or licenses it seeks in a series of ascending price rounds, and would be required to satisfy an activity requirement, which provides an incentive for consistent bidding throughout the auction. The two formats differ in several ways.

29. Bidders submit price bids for specific licenses in the SMR design typical of past Commission auctions. At the end of each round the Commission identifies a provisionally winning bidder for each license that has received bids. When the auction closes (typically after a round passes where there are no new bids on any licenses), the provisionally winning bids become final.

30. In contrast, in an ascending clock auction format the Commission would announce prices for generic licenses in each category in each geographic area, and bidders would submit quantity bids for the number of licenses they seek. Prices may differ across categories and geographic areas, but within each category in each geographic area every license would sell at the same price. If total demand for the licenses in a category exceeds supply, the price would be increased for the next round, but no provisional winners would be chosen. The rounds would continue until demand for licenses no longer exceeds supply. In a clock auction, when prices are increased between rounds, the quantity of licenses sought by bidders could fall so much in a category that instead of exceeding the supply, the demand is less than the supply. This possibility of overshooting can be avoided by permitting intra-round bidding, whereby bidders can indicate their change in demand in each category at specified prices between the opening and closing prices in each round.

31. Bidding for generic blocks would be expected to speed up the forward auction, reducing the time and, therefore, the cost of bidder participation, since bidders would no longer need to iteratively bid on the least expensive of several specific but substitutable licenses, as in a typical Commission SMR auction. The Commission believes that speed is important to the successful design of the incentive auction for a number of reasons, including the interdependence of the reverse and forward auctions.

32. *Package Bidding.* Bid collection procedures in the forward auction could include provisions for package bidding—that is, bidders could be permitted to indicate a single, all-or-nothing bid amount that would apply to a group of licenses, such as more than one block in a geographic area or the same block in multiple geographic areas. Package bidding could be particularly helpful to bidders that face a risk of winning certain licenses but losing complementary licenses they consider essential to their business plans. Package bidding options

generally complicate an auction, although such complexity can be limited if certain restrictions apply to the ways bidders can group licenses. Package bidding could take a number of specific forms, and its feasibility and potential usefulness to bidders would depend on auction design details. The Commission seeks comment on whether bidders are likely to have interests that may be addressed by package bidding, and on how package bidding options might work with the other auction design elements.

2. Assignment Procedures

33. For the forward auction, the assignment procedures will determine which bidders win which new licenses to use repurposed broadcast television spectrum, with the number of available licenses in the forward auction depending on the quantity of spectrum recovered from the reverse auction. In general, winning forward auction bidders will be those that place the highest bids on the available licenses. If bidders are allowed to specify packages or other contingencies, the assignment procedures would take those conditions into account in determining a set of best bids that are consistent with the Commission's forward auction objective of maximizing the aggregate amount of the bids that the Commission accepts for the available licenses.

34. The Commission anticipates that if generic blocks are made available in the forward auction, the assignment procedures would assign contiguous blocks to bidders that bid for multiple blocks in the same geographic area and could take into account the need to coordinate frequencies across adjacent areas. There could also be an additional auction phase to assign specific frequencies for generic licenses, which could be based on accepting additional bids. The specific frequencies that will be available in each area will be determined by the incentive auction process itself, and bidding on generic blocks facilitates conducting an auction given those interdependencies. Further, bidding based on generic blocks will speed completion. The Commission invites comment on these proposals and, alternatively, on how it could conduct an auction that would allow bids on specific frequencies rather than generic blocks.

3. Procedures To Determine License Prices

35. Generally, under the two forward auction design formats discussed in the *Incentive Auction NPRM*, the SMR-type auction and a clock auction, final license prices would be the highest

amount bid for the license. If there is an additional auction phase to assign specific frequencies for generic licenses, the Commission would need additional procedures to determine license prices. The Commission invites comment on these issues.

C. Integration—Putting the Reverse and Forward Auction Components Together

36. The reverse and forward auctions must be integrated to determine how much broadcast television spectrum is to be cleared and licensed for new uses. The timing of the reverse and forward auctions will affect the information available when bidding in each auction, and may also affect the length of the auction process.

37. An option that would provide reverse and forward auction bidders relevant information from the other side of the market while they are bidding would be to run the reverse and forward auctions concurrently in a series of stages. In each stage, the Commission would specify a provisional quantity of spectrum to be cleared in the reverse auction and a corresponding quantity of new licenses available in the forward auction. The first stage would be conducted with the provisional quantities set at the maximum possible amount of spectrum. The Commission would compare the provisional outcomes of the forward and reverse auctions and determine whether the auction closing conditions had been met—for example, the closing conditions would fail if total clearing costs in the reverse auction were greater than the revenue from the forward auction. If the closing conditions are met, the incentive auction process would end. If not, the Commission would continue running the forward auction to see if the closing conditions can be met. If the closing conditions cannot be met, another auction stage would be run, this time using a smaller provisional quantity of cleared spectrum and correspondingly smaller number of licenses available in the forward auction. If closing conditions were met at the end of this stage, the process would end. If not, additional stages would be run with the quantity of spectrum sought to be cleared further reduced, until the auction results met them. In addition to providing both reverse and forward auction participants with relevant information from the other side of the market while they are bidding, this approach is likely to take less time than conducting the auctions sequentially.

38. If the reverse and forward auctions are run sequentially, conducting the reverse auction first may be preferable,

because it would allow greater certainty about the number of licenses available in each geographic area in the forward auction, based on broadcaster participation in the reverse auction. The Commission invites comment on these issues.

39. *Closing Conditions.* Section 6403(c)(2) of the Middle Class Tax Relief and Job Creation Act of 2012, Public Law 112–96, 125 Stat. 156 (2012) (Spectrum Act) requires that the forward auction generate proceeds sufficient to pay successful bidders in the reverse auction, cover the Commission's administrative costs, and cover the estimated costs of reimbursements required by the statute. The Commission seeks comment on the best way to implement this statutory requirement, and whether there are additional statutory, policy or other considerations that should be addressed in establishing the closing conditions.

40. *Auctionomics and Power Auctions Report.* The Commission has attached, as Appendix C of the *Incentive Auction NPRM*, a proposal developed by its team of expert auction consultants. It suggests an integrated approach to the broadcast television spectrum incentive auction: a reverse auction using a descending clock auction procedure using a sequential algorithm approach for repacking to determine supply; a forward auction using an ascending clock auction format to determine demand; and a clearing rule which links the outcome of the forward and reverse auctions by establishing closing conditions. This proposal illustrates one potential approach to addressing the auction design issues discussed in the *Incentive Auction NPRM*, and the Commission invites comment on it, as well as other proposed approaches.

41. *Cost-Effectiveness Analysis.* In connection with its Regulatory Impact Analysis, the Commission also seeks comment on the cost-effectiveness of the various auction design elements. In particular, are there auction design choices the Commission can make that would make it significantly less costly for bidders to participate in either the reverse or the forward auction? Are there hidden costs associated with any of the auction design elements of which the Commission should be aware?

III. Reverse Auction—Eligibility and Bid Options

A. Eligibility

42. The *Incentive Auction NPRM* proposes to propose to limit participation in the reverse auction to full power and Class A television licensees and to exclude non-Class A

low power television stations and TV translators (collectively, “low power television stations”). The Spectrum Act definitions and its repacking and reimbursement provisions limit participation to only full power and Class A television licensees. Further, because low power television stations have secondary interference rights, these facilities do not impede the band clearing and repacking process, and therefore there is no reason to facilitate their relinquishment through participation in the reverse auction. The *Incentive Auction NPRM* proposes that Class A television licensees whose status has been changed from Class A to low power television will be ineligible to participate in the reverse auction—like all other low power television stations.

43. It is proposed that noncommercial educational television stations may participate in the reverse auction. The Spectrum Act does not prohibit participation and the prohibition on subjecting NCEs to auction in Section 309(j) of the Communications Act would not apply because the reverse auction is being conducted under a separate Section 309(j) provision. Allowing NCEs to participate will ensure greater participation in the reverse auction and a return of a greater number of television channels for reallocation.

44. The *Incentive Auction NPRM* proposes that entities with original construction permits be allowed to participate in the reverse auction if they become licensees before the deadline for submission of the application to participate in the auction. There are only a very few entities in this category, and allowing the few original construction permit holders to participate in the incentive auction, so long as they receive a license by the deadline specified above, will maximize the amount of spectrum available for auction.

45. For the reverse auction bidding, it is proposed that the Commission only examine the spectrum usage rights held by stations in their licenses as of February 22, 2012. This conforms to the mandate in Section 6403 of the Spectrum Act that the Commission protect in repacking the coverage area and population served by a licensee as of the Spectrum Act enactment date. In contrast, it is proposed that full power and Class A television licensees with expired, cancelled or revoked licenses are ineligible to participate in the reverse auction. The *Incentive Auction NPRM* seeks comment on these matters.

46. For a new station permittee not licensed on February 22, 2012 (but

auction eligible because it becomes licensed by the pre-auction application filing deadline), the Commission proposes to evaluate its bid based on the spectrum usage rights authorized in the construction permit it held on February 22, 2012. This approach conforms with the Commission's proposal to extend repacking protections on public policy grounds to the facilities authorized in a construction permit for a new station on February 22, 2012. In order to conform with the mandate in Section 6403 of the Spectrum Act mandate to make all reasonable efforts to preserve the coverage area and population served of each television licensee only as of the Spectrum Act enactment date (February 22, 2012), any modifications made after February 22, 2012 to a licensed facility or to the construction permit of a new station will not be considered in evaluating a licensee's spectrum relinquishment offer. The Commission proposes a different approach for Class A stations that have not completed their digital transition based on the unique circumstances involved. For a Class A licensee with no digital license as of the date of commencement of the reverse auction process, the Commission proposes to evaluate a reverse auction bid based on the licensed analog facility as of February 22, 2012. The *Incentive Auction NPRM* seeks comment on these proposals.

47. Although the Commission seeks to maximize the spectrum reclaimed in the reverse auction process, it does not want to compensate a broadcaster for relinquishing spectrum rights to which it may no longer be entitled as the result of its license having expired, or having been cancelled or revoked in an enforcement proceeding. Therefore, the Commission proposes that any full power or Class A station with an expired, cancelled or revoked license should not be eligible to bid in the reverse auction. On the other hand, the Commission does not want to let the existence of such pending proceedings impede the auction process. The Commission seeks comment on how to address enforcement actions that are pending against a station whose bid to relinquish all usage rights is accepted (winning license termination bidder). The Commission seeks to identify processes that would accommodate both its interest in structuring an efficient auction mechanism and its interest in enforcing broadcasters' compliance with their legal obligations. As one possible approach to pending enforcement actions, the Commission seeks comment on whether license termination bidders should be required to enter into escrow

arrangements to cover the potential costs of forfeitures. In this regard, the Commission seeks comment on whether to require license termination bidders to enter into such escrow arrangements either as a qualification for bidding in the auction, or after being selected as a winning license termination bidder. Should a ceiling for the escrow amount that a bidding station could face (in total or per violation) in the event it is a winning license termination bidder be established in advance, so that stations would be able to consider that maximum exposure in advance of developing a reverse auction bid? As an alternative for winning license termination bidders, the Commission seeks comment on the option to settle any pending enforcement proceedings at a fixed amount based on the nature of the alleged violation. Are there other approaches that would enable disposal of pending cases in an expedited fashion, while not delaying or overburdening the auction process? Should the same procedures apply to a winning license termination bidder that will continue to hold other broadcast station licenses? Are there other options for handling pending enforcement actions that would address the concerns and priorities identified above, short of offering to close the enforcement actions pending against a winning license termination bidder, with the legal and policy issues that would raise.

B. Bid Options

48. Section 6403(a)(2) of the Spectrum Act provides that the reverse auction of broadcast television spectrum "shall include" three bid options for participants: (1) Voluntary relinquishment of "all usage rights with respect to a particular television channel without receiving in return any usage rights with respect to another television channel * * *" (license termination bid); (2) voluntary relinquishment of "all usage rights with respect to an ultra high frequency television channel in return for receiving usage rights with respect to a very high frequency television channel * * *" (UHF to VHF bid); and (3) voluntary relinquishment of "usage rights in order to share a television channel with another licensee" (channel sharing bid). The Commission invites comment on whether to establish additional bid options for participants in the reverse auction. Regarding option (2) above, comment is invited on whether to also allow UHF to VHF bidders to limit their bids to a "high VHF channel" (channels 7–13). The Commission proposes allowing stations to participate in the reverse auction by

agreeing to relinquish a "high VHF channel" (channels 7–13) in exchange for a "low VHF channel" (channels 2–6). Because high VHF spectrum may be more desirable than low VHF spectrum to a UHF to VHF bidder, making additional high VHF spectrum available by encouraging high VHF to low VHF moves may result in a greater reverse auction participation.

49. The Commission also seeks comment on whether to allow licensees to participate in the reverse auction by relinquishing spectrum usage rights through the acceptance of additional interference from other broadcast stations or reduce their service area or population covered by a set amount. If licensees were allowed to participate in the reverse auction by bidding to accept interference from which they otherwise would be entitled to protection, then would the Commission be able to accommodate more broadcast stations in the same amount of spectrum during the repacking process, enabling the clearing of more spectrum? Similarly, if broadcast licensees were allowed to bid to reduce their service areas or populations served, could it accommodate tighter repacking of the broadcast stations? 88. Similarly, should broadcasters be allowed to bid to accept additional interference from wireless broadband providers, or to accept a different antenna pattern or to deploy a distributed transmission system in order to reduce their signal strength in portions of their service areas and reduce the size of their service areas? By permitting this type of creative arrangement, the Commission believes it can potentially create an unencumbered wireless broadband service area license while still permitting a broadcast licensee to cover a portion of its service area. Commenters are invited to address these and other potential bid options in addition to those required by the statute, as well as the potential costs and benefits associated with them.

50. The Commission also proposes to prohibit a licensee to effectuate a channel sharing arrangement that would result in a change in the station's community of license and/or DMA. The Commission proposes this limitation because it believes that allowing changes in community of license in addition to changes in channel assignments would raise section 307(b) issues such as the fair, efficient, and equitable distribution of service, and would complicate its repacking efforts. The Commission proposes that a winning reverse auction bidder that relinquishes all of its spectrum usage rights with respect to its pre-incentive auction television channel will retain no

further rights with regard to that channel. For Class A bidder, since that service has not completed its transition to digital, the Commission proposes that a Class A licensee operating paired facilities must relinquish both if it is a winning license termination bidder. On the other hand, the Commission proposes to allow winning Class A channel sharing and UHF to VHF bidders that have paired facilities to continue operation of their analog facilities on a secondary basis until the analog facilities are predicted to interfere with a primary service, or until the September 1, 2015 digital transition deadline for Class A stations, whichever comes first.

IV. Repacking

51. It is critical, to enable repacking of the broadcast spectrum, that the Commission determine how to preserve the coverage area and population served as required by the Spectrum Act. Accordingly, the Commission seeks comment on engineering and other technical aspects of the repacking process, in particular Congress's mandate in Section 6403(b)(2) of the Spectrum Act that it make all reasonable efforts to preserve the coverage area and population served of television stations in the repacking. The broadcast television spectrum incentive auction and the associated repacking process could impact both the coverage area and the population served of television stations. If a station is assigned to a different channel, then its technical facilities must be modified in order to replicate its coverage area, because radio signals propagate differently on different frequencies. These varying propagation characteristics also mean that a new channel assignment may change the areas within a station's noise-limited service area affected by terrain loss. Channel reassignments, and stations going off the air as a result of the reverse auction, also may change the interference relationships between stations, which relationships in turn affect population served. Stations going off the air can eliminate existing interference to the stations that remain on the air. Likewise, new channel assignments generally will eliminate interference that the reassigned stations are now causing or receiving. At the same time, new channel assignments create a potential for new interference between nearby stations on the same channel or a first adjacent channel. The Commission seeks comment on a repacking methodology that takes in account all of these impacts in order to carry out Congress's mandate in section 6403(b)(2).

52. The Commission proposes that, during repacking, it would only preserve the service areas of full power and Class A television stations with regard to stations' facilities that were licensed, or for which an application for license to cover authorized facilities already was on file with the Commission, as of February 22, 2012. Further, the Commission proposes to protect the facilities set forth in unbuilt construction permits for new full power television stations as of February 22, 2012. It did not propose to protect the facilities contained in pending facility modification applications. The Commission found that consideration of all pending facility modification applications would greatly complicate the repacking analysis by increasing the amount of facilities under consideration in the repacking process. Additionally, protection of both a licensed facility and a modification thereto that would expand or alter the station's service area would further encumber the spectrum.

53. *Coverage Area.* The Commission proposes to interpret the statutory term "coverage area" to mean a full power television station's "service area" as defined in section 73.622(e) of the Commission's rules. The rules governing Class A stations do not define a "service area" for such stations. The Commission proposes to use a Class A station's "protected contour"—the area within which it is protected from interference under our rules—as its "coverage area" for purposes of the repacking. The Commission's Office of Engineering and Technology has software that calculates the power and antenna pattern adjustments necessary to replicate a station's coverage area on a different channel. The Commission proposes to use that software in the repacking methodology to replicate the coverage areas of stations assigned to different channels. Construction of a transmitting antenna that matches precisely the antenna pattern created by the software is impractical in some cases, and that the closest practical design might slightly extend a station's coverage contour (that is, the area within which the station is protected from interference) in some directions and decrease it in others. To address such circumstances, the Commission proposes that a station assigned to a new channel in the repacking be allowed to continue to use the station's existing antenna pattern, and to adjust its power level so that the station's coverage area in total square kilometers is the same as it was before the repacking, without regard to whether that area is served or unserved by the

station's existing operation. The Commission also proposes to allow stations to propose alternative transmission facilities to those specified by its replication software, provided that such facilities would not extend the coverage area in any direction beyond those specified by the replication software or cause new interference. 102. The fact that signal propagation characteristics vary from channel to channel also means that new channel assignments may change the portions of a station's coverage area that are affected by terrain losses. Therefore, the Commission seeks comment on whether it would be consistent with the Spectrum Act to consider a station's signal to be receivable at all locations within its noise-limited or protected contour (depending on whether it is a full power or Class A station) for purposes of the repacking. If the Commission does not adopt this approach, how should it accommodate stations whose coverage areas change as a result of new channel assignments?

54. *Population Served.* The Commission proposes three alternative approaches to fulfilling the requirement to make all reasonable efforts to preserve population served in the repacking process. The first approach would allow no new interference to a station's population served as of February 22, 2012. Under this approach, the Commission would apply the existing standard in section 73.616 that treats interference of 0.5 percent or less as "no new interference" in evaluating potential channel reassignments. In the second approach, the statutory mandate would be interpreted to require all reasonable efforts to preserve service to the same specific viewers for each eligible station. Under this approach, no individual channel reassignment, considered alone, could reduce another station's specific population served on February 22, 2012 by more than 0.5 percent. The second approach differs from the first approach in two ways. First, it allows "replacement interference" only where interference existed as of February 22, 2012. Second, it is calculated on a station-to-station rather than aggregate basis. The Commission seeks comment on this second approach, including whether to calculate interference on a per station basis if this approach is adopted. The Commission also seeks comment on a third option that, like the second option, would consider interference on a station-to-station, rather than an aggregate, basis. Under this approach, any interference between two individual stations, considered by themselves, that

existed on February 22, 2012, would continue to be allowed regardless of whether the stations are assigned to different channels in the repacking.

55. For each of the options, the *Incentive Auctions NPRM* seeks comment on the costs and benefits, including quantitative estimates, of each repacking option in comparison to the others. In that regard, commenters are invited to address the computational complexity of the channel assignment process under the first, second and third options—in determining whether a particular channel assignment is permissible, the second and third options would require examination of interference only between channel pairs, whereas the first option would require examination of all channel assignments—and how that factor should be considered. In addition, commenters are invited to suggest additional approaches that would fulfill the statutory mandate while permitting an efficient repacking of stations. Commenters are invited to submit appropriate economic studies to support their views or proposals on these issues. The Commission anticipates that whatever approach adopted to preserving population served will have a significant impact on the amount of spectrum available to repurpose for mobile broadband use, as well as on the overall costs of clearing broadcast television spectrum. For each of the three options proposed above, therefore, the *Incentive Auctions NPRM* invites comment on those assumptions, and on the potential magnitude of the impact on the amount of spectrum made available for mobile broadband, as well as the cost of doing so.

56. *Protection of Certain Authorized Facilities.* In the repacking process, the Commission proposes to protect the facilities authorized in unbuild construction permits for new full power television stations as of February 22, 2012. The Commission proposes that Class A stations elect which facilities they would like protected in repacking. Because Class A stations are in the middle of a Commission-mandated digital transition that will not conclude until September 1, 2015, the Commission found that failing to offer repacking protection to those digital transition facilities not licensed by February 22, 2012 would be fundamentally unfair. Moreover, failure to protect these facilities could make it impossible for certain Class A stations to effectuate their conversion plans, thus stalling the digital transition. The Commission seeks comment on this proposed procedure, as well as whether any other authorized full power or Class

A television station facilities should be protected in the repacking process. The Commission does not propose to extend any protection to facilities proposed in pending petitions for rulemaking for which a notice of proposed rulemaking has not been issued, nor does it propose to extend protection in the repacking process to low power television and translator stations.

V. Forward Auction—Reconfiguring the UHF Band

A. Allocations

57. Prior to the enactment of the Spectrum Act, the Commission sought comment in ET Docket No. 10–235 on adding new fixed and mobile allocations to the UHF and VHF bands. The Commission seeks further comment on its proposals in light of the Spectrum Act's passage. Its goal is to adopt a band plan that will provide for flexible use of these bands for new wireless broadband services while continuing to support existing uses. In particular, the Commission invites comment on the views expressed by broadcasters advocating retention of some of the UHF and VHF television bands exclusively for broadcast use. What are the benefits and drawbacks of such an approach? What effect would it have on the Commission's future flexibility to manage the spectrum? As a practical matter, how could such an approach be implemented, given that the amount of broadcast spectrum recovered in any specific geographic area depends on the results of the broadcast television spectrum incentive auction?

58. In addition, the Commission considers whether to relocate existing radio astronomy and wireless medical telemetry systems on channel 37 (608–614 MHz) to new spectrum. In the event that it decides to do so, it also proposes to add fixed and broadcast allocations to the channel 37 spectrum and modify the existing land mobile allocation in the UHF band, which is limited to medical telemetry and telecommand, to the more general mobile allocation. Similarly, if the Commission were to make changes to allocations for the channel 37 spectrum, it asks whether it should remove the radio astronomy allocation from that spectrum.

B. 600 MHz Band Plan

59. *600 MHz Spectrum Band.* We seek comment on the establishment of a 600 MHz band plan approach using 5 megahertz blocks, in which the uplink band begins at channel 51 (698 MHz), and, depending on the amount of spectrum available from the spectrum usage rights that broadcasters

voluntarily relinquish in the reverse auction, will expand downward toward channel 37. Similarly, the downlink band would begin at channel 36 (608 MHz) and expand downward based on the amount of reclaimed spectrum. Under this approach, the downlink band would start at channel 36, in order to take advantage of the natural separation between television and wireless operations, given that channel 37 is presently used for non-broadcast operations. We also propose establishing guard bands between mobile broadband use and broadcast use when necessary to create spectrum blocks that are as technically and functionally interchangeable as possible to allow for enhanced substitutability among building blocks and flexibility in our auction design choices. We propose to make the guard band spectrum available for unlicensed use. We seek comment on this proposal, and on alternative uses for the guard bands, including approaches that involve licensing and/or auctioning this spectrum. We note that the Spectrum Act constrains the Commission to guard bands “no larger than is technically reasonable to prevent harmful interference between licensed services outside the guard bands,” and requires a forward auction in which “the Commission assigns licenses for the use of the spectrum that the Commission reallocates.” See Spectrum Act at 6407(b), 6403(c). Under these provisions, we must license the spectrum we recover through the broadcast television spectrum reorganization, with the exception of guard bands.

1. Spectrum Block Size

60. To allow for the greatest amount of flexibility and efficiency, we propose to license the 600 MHz spectrum in 5 megahertz “building blocks.” Five megahertz blocks can support a variety of wireless broadband technologies. Licensing spectrum in 5 megahertz blocks also promotes efficiency in converting broadcast television licenses to flexible-use mobile channels because it is close in size to the 6 megahertz television channels that will be relinquished. Five megahertz blocks will optimize efficiency in the rebanded spectrum, allowing wireless spectrum demand in a given market to more closely match the amount of spectrum supplied by participating broadcasters. We seek comment on our proposal and whether this block size offers the best opportunity to use the spectrum efficiently.

61. We also seek comment on licensing the 600 MHz spectrum in six

megahertz blocks. One advantage of six megahertz blocks is that they precisely correspond to the size of digital television broadcast channels relinquished. Because six megahertz blocks do not precisely map onto the channel sizes used for most wireless broadband technologies in the market at this time, use of such blocks may result in spectrum inefficiency. Further, using six megahertz blocks may reduce the number of blocks auctioned in some circumstances. We seek comment on the relative costs and benefits of licensing the blocks in 6 megahertz increments.

62. Some prospective 600 MHz licensees may want to obtain spectrum in larger spectral units—for example, in 10 megahertz blocks. As discussed above, we are seeking comment on auction design options that would facilitate the aggregation of larger contiguous blocks composed of multiple 5 megahertz building blocks. We also anticipate that licensees could aggregate larger blocks post auction through the secondary market or using technological approaches such as channel aggregation. With these aggregation mechanisms in mind, we seek comment on the extent to which bidders view 5 megahertz building blocks as an acceptable balance between network performance and our ability to convert the 6 megahertz broadcast spectrum blocks into terrestrial wireless spectrum. Would the use of larger blocks (e.g., 10 megahertz blocks) reduce the amount of spectrum that could be reclaimed in an auction? Do secondary markets or carrier aggregation technologies provide sufficient options for aggregating 5 megahertz building blocks?

2. Block Configuration

63. Our proposed band plan provides a general framework that will allow us to license different amounts of wireless spectrum in different license areas. We propose to offer a uniform amount of downlink spectrum nationwide on spectrum formerly allocated for broadcast use with no in-band television stations, so that wireless service providers can use uniform mobile device filters and so we can ensure that there is no interference between television and wireless services. We also propose to offer varying amounts of uplink spectrum in each service area, depending on the amount of spectrum available, due to the greater flexibility to accommodate different filters in base stations than in mobile terminals. Thus, our band plan aims to pair spectrum for FDD operations when possible, but may yield varying amounts of unpaired downlink spectrum blocks in different areas.

64. *Paired Blocks.* Existing transmission procedures for mobile broadband FDD operations generally operate on paired spectrum bands, so pairing spectrum, where possible, will allow mobile broadband providers to deploy and expand 4G wireless broadband services quickly and efficiently. We seek comment on our proposal to pair licensed spectrum when possible. Where we are able to make paired spectrum blocks available, we propose to auction and license these blocks on a paired basis. Are there any advantages to ensuring that a certain amount of spectrum is paired in each license area?

65. *Unpaired Spectrum.* Although we plan to provide paired spectrum blocks wherever possible, the relinquished broadcast television spectrum usage rights that allow us to offer wireless spectrum licenses will not always fit neatly into pairs in each license area. In order to maximize the amount of spectrum we can make available, as described above, where we have excess wireless spectrum that cannot be paired we propose to offer unpaired downlink spectrum that can serve as supplemental downlink expansion for FDD operations. In keeping with our proposed approach of offering a uniform amount of downlink spectrum nationwide, while allowing variable amounts of uplink spectrum on a more local basis, we propose to license the unpaired downlink spectrum in 5 megahertz increments too. These downlink expansion blocks would be located immediately adjacent to the downlink portion of paired blocks to minimize interference issues. We seek comment on our proposal to license unpaired spectrum blocks for downlink expansion. Alternatively, we seek comment on whether we should auction and license uplink and downlink spectrum separately. In discussing the amount of paired and unpaired spectrum that should be allocated for wireless broadband, commenters should discuss the relative costs and benefits of each approach.

66. Because wireless broadband traffic tends to be asymmetrical (i.e., downlink Internet traffic is greater than uplink traffic because users download more data than they upload), we anticipate that wireless providers could use this excess downlink spectrum to support their wireless broadband services in this spectrum band, or supplement their spectrum holdings in other bands. We seek comment on the extent to which mobile wireless traffic today is symmetrical or asymmetrical and on how these patterns are expected to evolve in the future. To what extent do

traffic patterns support the notion of unpaired downlink expansion blocks?

67. *Block Locations.* In deciding where to place the uplink and downlink spectrum bands, we aim to provide the best technical solution to reduce interference issues between adjacent bands and wireless operations. We propose an uplink band starting at channel 51 (698 MHz), and a downlink band beginning at channel 36 (608 MHz) to greatly reduce interference concerns, and consequently, our need for guard bands. Specifically, the 600 MHz uplink band will be adjacent to the 700 MHz uplink band, and therefore we are not proposing a guard band between the two uplink bands. In addition, we do not anticipate needing a guard band between the downlink band and existing channel 37 operations (radio astronomy and wireless medical telemetry), because they currently operate adjacent to broadcast television bands without interference. By designating downlink and uplink operations in specific frequencies, we reduce potential interference with adjacent operations, thus minimizing the need for guard bands; and we also minimize interference between wireless operations. We seek comment on this proposal, including the expected costs and benefits.

3. Offering Different Amounts of Spectrum in Different Markets

68. As explained above, our proposed band plan approach would accommodate non-uniform amounts of relinquished broadcast TV spectrum in each geographic area. The alternative—requiring the same amount of broadcast spectrum to be cleared in all markets—would limit the total amount of spectrum usage rights that broadcasters can choose to relinquish and that wireless providers can use for wireless broadband services.

69. On the other hand, proliferation of band plans is often considered undesirable from a technical perspective. Multiple band plans are undesirable because each band plan typically requires a different design of the filters and/or duplexers in mobile devices to support those band plans. To balance these two goals, we propose creating “families” of related band plans, and depending on the amount of spectrum that is relinquished, “extended families” of band plans.

a. Band Plan “Families” With Consistent Nationwide Downlink Bandwidth

70. A band plan “family” is a group of possible band plans with a consistent amount of nationwide downlink

spectrum to allow for market-by-market differences in the quantity of uplink spectrum. This concept ensures that user devices can operate nationwide with common receive filter components. The variable amount of uplink blocks means, however, that base stations in different markets may require different receive filtering. We believe that due to form factor, power, and other requirements, it is less costly to implement differential receive filtering in the base station than in the mobile device. We seek comment on this premise.

71. For example, if we reclaim 10 broadcast television channels in most areas, but fewer channels in some areas, we can only offer the minimum amount of paired blocks available nationwide if we offer the same amount of uplink spectrum, even though there is more available wireless spectrum in some areas. In contrast, if we allow for a variation in the amount of uplink spectrum offered in each area (with a minimum of one uplink block offered in each area), we can offer more spectrum: four paired blocks in areas where we clear 10 channels, three paired blocks where we clear 9 channels, and two paired blocks in areas where we clear 8 channels. Because we must clear the same amount of downlink spectrum nationwide for technical reasons, we propose to offer the unpaired downlink blocks for downlink expansion.

72. In areas where minimal spectrum usage rights are reclaimed through the reverse auction, we could choose to not clear any spectrum of broadcast usage rights instead of limiting the amount of downlink wireless spectrum available nationwide by the amount cleared in these areas. For example, if we could clear at least 10 TV channels in every market but one, where we can clear only 3 TV channels, we could choose not to clear any channels in that market and instead offer wireless spectrum licenses in all other markets. This would help us to maximize the amount of wireless spectrum that we can license overall while avoiding unnecessary disruption of broadcast television service. Where we choose to clear no TV channels and offer no wireless licenses on these frequencies, mobile devices operating in these geographic areas will need to operate on another frequency band (through other assets of the operator or roaming agreements, for example); therefore, TV stations in the band will not interfere with those mobile devices.

b. "Extended Families" Using Multiple Downlink Band Plans

73. If broadcasters voluntarily relinquish spectrum usage rights in

more spectrum than can be supported in one pass band due to current technical limitations, we may need to support two downlink band plans from the outset.

74. In this case, mobile devices would need two filters rather than one filter to support service in the entire band. Because two filters are necessary due to technical limitations, there is no additional cost incurred to support a second band, provided it aligns with the installed filters. There is a fixed relationship between the two families, however, because the second family must align with the upper filter of the first family. Due to this alignment, it is not possible to arbitrarily combine any two families; only ones that align by having the number of downlink channels cleared in the smaller family align with one of the filters used in the larger family. We refer to these sets of families as "extended families."

75. Supporting extended families of band plans significantly increases the amount of market variation that can be accommodated by the band plan. There is also significant variation in the uplink to downlink mix by market in a way that is more variable and uneven than in the single family case, however. For example, a market with 10 channels cleared is fully symmetric, while a market with 11 channels cleared is highly asymmetric.

76. Supporting these extended families has certain benefits, but also some drawbacks. It will extend the range of market clearing options supported by the band plan, possibly enabling us to allow more broadcasters to voluntarily relinquish their spectrum usage rights by allowing us more flexibility for dealing with market variation in the number of television channels we can clear in each market. However, this approach adds complexity to the process and requires us to make assumptions about filter capability to align the families into extended families. Supporting two band classes also results in additional interoperability concerns. We seek comment on supporting extended families of band plans. Should we assume that certain amounts of spectrum will require two or three filters to implement? If we make this assumption, should we vary the amount of 600 MHz spectrum available by market based on the expected number and bandwidth of the required filters? What are the benefits and drawbacks of this approach?

4. Geographic Area Licensing

77. We propose to license the 600 MHz band using a geographic area licensing approach, and we seek

comment on this proposal. A geographic area licensing approach is well suited for the types of fixed and mobile services that would likely be deployed in this band. Additionally, geographic licensing is consistent with the licensing approach adopted for other bands that support mobile broadband services. In the event that interested parties do not support geographic licensing for the 600 MHz spectrum, those commenters should explain their position, identify any alternative licensing proposal and the costs and benefits associated with that alternative.

78. Section 6403(c)(3) of the Spectrum Act directs the Commission to "consider assigning licenses that cover geographic areas of a variety of different sizes." We discuss below appropriate geographic areas for licensing the 600 MHz spectrum and seek comment on how we should take account of this directive. The Commission has previously used a variety of geographic area sizes to license spectrum, ranging from nationwide and large regional areas such as Regional Economic Area Groups (REAGs) and Major Economic Areas (MEAs) to medium-sized geographic areas such as Economic Areas (EAs) and Component Economic Areas (CEAs), to smaller areas such as Metropolitan Statistical Areas/Rural Statistical Areas (MSAs/RSAs).

79. We are concerned that licensing the 600 MHz spectrum on a nationwide, or large regional, basis would require the Commission to reclaim an equal amount of spectrum nationwide, or throughout large regions. As a result, if only a few broadcasters in one geographic market voluntarily relinquish their spectrum usage rights, we would be constrained by that amount of available spectrum as the baseline for offering wireless spectrum in the broader area. Thus, the spectrum may not be put to its highest valued use, if broadcasters in other markets within the area want to relinquish spectrum usage rights and wireless providers want to purchase licenses for those rights, but cannot because of the uncleared market. Similarly, using REAGs would present the same problem of limiting the amount of spectrum that could be repurposed for wireless broadband because there are only 6 REAGs in the continental United States.

80. On the other hand, the use of small geographic license areas, such as MSAs/RSAs, could potentially support much greater variation in the amount of reclaimed spectrum from area to area, but impose different tradeoffs. While it is more likely that we can license more wireless spectrum that is not encumbered by potential interference

with nearby remaining broadcast television spectrum, having a large number of very small licenses may raise implementation risks for the auction designs contemplated in this proceeding. Moreover, more licenses could complicate potential bidders' efforts to plan for, and participate in, the auction for such licenses, as well as subsequent roll-out of service.

81. EAs, which the Bureau of Economic Analysis defines as "one or more economic nodes—metropolitan areas or similar areas that serve as centers of economic activity—and the surrounding counties that are economically related to the nodes," represent a natural market unit for local or regional service areas. *Final Redefinition of the BEA Economic Areas*, 60 FR 13114 (1995). EAs nest within and may be aggregated up to larger license areas, such as Major Economic Areas (MEAs) and Regional Economic Area Groupings (REAGs) for operators seeking larger service areas. Depending on the licensing mechanism we adopt, licensees may aggregate or otherwise adjust their geographic coverage through auction or through secondary markets. We believe that for this spectrum, EA licensing strikes an appropriate balance between geographic granularity from a spectrum reclamation standpoint and having a manageable number of licenses from an auction design standpoint. We propose to license the 600 MHz band on an EA basis and seek comment on this approach. See 47 CFR 27.6. We ask commenters to discuss and quantify the economic, technical, and other public interest considerations of licensing on an EA basis, as well as the impacts this approach may have on auction design, rural service, and competition.

82. We also seek comment on whether we should use geographic areas other than EAs. Specifically, we seek comment on using geographic areas such as CEAs or MSAs/RSAs, which have a greater number of service areas throughout the United States and the reasons why using these geographic license sizes are more advantageous than using EAs. We also seek comment on whether there are certain circumstances in which using larger—nationwide or regional—licenses would be more appropriate or advantageous. For example, if we are able to reclaim a large amount of broadcast television spectrum nationwide or regionally, should we license a portion of the spectrum on a nationwide or regional basis? We encourage commenters to consider the auction design implications of any proposed

geographical licensing scheme, as well as any associated costs and benefits.

83. In addition, we seek comment on whether and how to license areas outside of the continental United States as the Commission typically has done. Although we note that the Spectrum Act makes no special provisions for Alaska and Hawaii, we seek comment on whether any modifications to our proposed or current regulations are necessary to accommodate licensing spectrum in these areas. Similarly, if we decide to include the United States territories in the incentive auction, are any changes necessary? Finally, should we include the Gulf of Mexico in our licensing scheme for this spectrum? Should the Gulf of Mexico be part of another service area(s) or should we separately license a service area(s) to cover the Gulf of Mexico. Commenters who advocate a separate service area(s) to cover the Gulf of Mexico should discuss what boundaries should be used, and whether special interference protection criteria or performance requirements are necessary due to the unique radio propagation characteristics and antenna siting challenges that exist for Gulf licensees.

5. Technical Considerations

a. Guard Bands

84. In order to minimize interference between dissimilar adjacent operations, we propose to create guard bands in which there are no high powered operations. These guard bands may be used for low-powered unlicensed operations that are secondary and cannot cause interference. To determine the appropriate size of these guard bands, we must take into account two primary considerations. First, the guard bands must be large enough to ensure that wireless spectrum blocks adjacent to television operations or other adjacent high powered operations will support wireless broadband services to the same level of performance as spectrum blocks adjacent only to other spectrum blocks used for wireless broadband service. As described above, we propose creating spectrum blocks that are as similar and technically interchangeable as possible to allow for enhanced substitutability across blocks. Second, section 6407(b) of the Spectrum Act requires that the "guard bands shall be no larger than is technically reasonable to prevent harmful interference between licensed services outside the guard bands." We propose to establish guard bands that meet this requirement.

85. We seek comment on the appropriate size for guard bands. We ask

commenters to provide detailed engineering analysis and data in support of the guard bands they propose.

86. *No Guard Band between 600 MHz Uplink and 700 MHz Uplink Spectrum.* The 600 MHz uplink band is adjacent to the lower 700 MHz A block (698 MHz to 704 MHz), which is used for terrestrial uplink services. Because both bands are designed for terrestrial uplink systems, the new 600 MHz block and the lower 700 A blocks are harmonized. Generally, we do not allocate any spectrum for guard bands when adjacent operations are harmonized. Therefore, we are not proposing a guard band between the 600 MHz uplink spectrum and the lower 700 MHz spectrum.

87. *No Guard Band between 600 MHz Downlink and Channel 37 (Assuming Existing Channel 37 Operations).* In our proposed band plan, the upper edge of the downlink band borders channel 37, which is not allocated for broadcast television, but radio astronomy and wireless medical telemetry. Currently, there is no guard band between television stations in channels 36 and 38 and the services in channel 37. Because the proposed in-band and out-of-band emissions of the 600 MHz downlink band are significantly lower than those of the television stations, we do not propose a guard band between the 600 MHz downlink band and channel 37.

88. *Guard Band between 600 MHz Uplink and Television.* At the lower edge of the 600 MHz uplink band, the adjacent systems—television channels used for downlink transmissions and 600 MHz uplink transmissions from mobile devices—are not harmonized. Interference can occur at either the television receiver or the mobile broadband base station receiver, either by out-of-band emissions (OOBE) or by receiver overload ("blocking") from the adjacent service. We seek comment on the appropriate guard band size at the lower edge of the 600 MHz uplink spectrum to protect both remaining television stations and new wireless broadband licensees from interference. The Commission has previously found six megahertz of spectrum separation is sufficient to protect digital television receivers against 1 MW DTV transmitters. We propose a six megahertz guard band to protect television operations and 600 MHz uplink operations. Additionally, below we propose to add "remainder" spectrum to the guard bands to further mitigate any potential interference concerns. We also invite comment on how much guard band would be sufficient to prevent harmful interference between licensed services

outside the guard bands, as well as how to interpret Congress's mandate that guard bands be "no larger than technically reasonable."

89. Specifically, we ask commenters to analyze 600 MHz uplink interference into digital television receivers within the television station's protected contour, for receivers using indoor antennas and receivers using rooftop antennas, as considered in OET 69. *OET Bulletin No. 69, Longley-Rice Methodology for Evaluating TV Coverage and Interference*, page 9 (Feb. 6, 2004) available at <http://www.fcc.gov/encyclopedia/oet-bulletins-line>.

Likewise, we ask commenters to analyze television station interference into 600 MHz base station receivers. In addition, we seek input on the types of user equipment (UE) likely to be deployed in the 600 MHz band (e.g., handheld, laptops, tablets, fixed modems) and their operations to assist in determining the likelihood and severity of potential interference. We also seek information on device characteristics such as EIRP, antenna gain, body losses at 600 MHz, and the effects of power control on average UE power level. We also seek data on environmental factors such as typical interior/exterior wall penetration losses and polarization mismatch. Furthermore, we invite comments on potential improvements through the use of filters on digital television transmitters to reduce OOB into 600 MHz base station receivers and improvements needed to prevent blocking. Could broadcasters be reimbursed under the Spectrum Act for installing the improved filters because such filters would increase the amount of relinquished spectrum that could be made available to wireless providers?

90. *Guard Band between 600 MHz Downlink and Television*. The lower edge of the 600 MHz downlink band and the adjacent television systems are harmonized to the degree that both systems are downlink, meaning that each produces transmissions from higher power fixed stations to smaller, more portable, and more numerous receivers. They are not fully harmonized, however, because broadcast television stations operate at a considerably higher power than what we are proposing for 600 MHz base stations, and television receivers are used differently than we anticipate 600 MHz devices will be. We seek comment on the appropriate guard band size to prevent harmful interference to the 600 MHz mobile broadband and DTV services. Similar to the guard bands between television and 600 MHz uplink, we propose a guard band of six megahertz plus remainder spectrum,

where available. We also invite comment on how much guard band would be sufficient to prevent harmful interference between licensed services outside the guard bands, as well as how to interpret Congress's mandate that guard bands be "no larger than technically reasonable."

91. Specifically, we ask commenters to analyze interference from 600 MHz base stations into digital television receivers within the television station's protected contour for digital receivers using indoor and rooftop antennas. Additionally for this guard band, we are requesting commenters to analyze interference from television stations into 600 MHz mobile devices. We also invite comments on potential improvements through the use of filters on digital television transmitters to reduce OOB into 600 MHz mobile receivers and improvements needed to prevent blocking. With respect to analyzing interference to 600 MHz downlink from television stations, we ask that commenters provide data to evaluate several scenarios for filtering and colocation, including: (1) Using existing mask digital television transmit filters with 600 MHz base station and television facilities not colocated; (2) using existing mask DTV transmit filters with 600 MHz base station and television facilities colocated; and (3) using improved mask digital television transmit filters, with 600 MHz base station and television facilities colocated. To support this analysis, commenters should provide data on the types of user equipment, their operational use, and device receiver characteristics such as antenna gain, body losses, adjacent channel rejection and blocking characteristics. In addition, commenters should justify any assumptions they make in their analysis.

b. Interoperability Considerations

92. Each band plan supported by a device requires a separate duplexer (or filter, in the case of Time Division Duplex (TDD) bands), and associated components. So, if we choose to clear different amounts of downlink spectrum in different markets, mobile device manufacturers would need to create separate duplexers for different markets or risk interference in areas where we cleared less spectrum for wireless use (to and from remaining broadcast television operations, for example). Supporting multiple band plans would increase the cost, size, and/or complexity of these devices. We seek comment on whether we should minimize the number of band plans that need to be supported in mobile devices

using the 600 MHz spectrum by creating uniform downlink spectrum nationwide. Given that most user devices already support many bands, is the burden of adding one more band to support 600 MHz service significantly different from the burden of adding multiple bands to support 600 MHz operations? What is the maximum number of band plans we should offer in this spectrum?

93. In addition to potentially increasing a device's cost, size, and/or complexity, multiple band plans can also reduce interoperability. For example, if a provider's license area covers only two of the four band plans available nationwide, it might choose to support only that subset of bands in its devices. As explained above, one of our goals in deciding how best to license this wireless spectrum is encouraging interoperability. Interoperability has often been important in ensuring rapid and widespread deployment of mobile devices in a new spectrum band. Do our proposals sufficiently encourage and ensure interoperability in the 600 MHz band? Alternatively, should we require interoperability by adopting a specific interoperability rule? We seek comment on this issue.

94. As discussed above, to balance our goals of making more wireless spectrum available by clearing different amounts of spectrum in different areas and minimizing the burden of multiple band plans, we propose creating "families" of related band plans, where the same downlink band is available nationwide but the amount of spectrum cleared for uplink use will differ among areas. By keeping the same downlink spectrum nationwide, all user devices on the 600 MHz spectrum can potentially be supported with a single receive filter in the mobile device, thereby minimizing the costs associated with user devices and promoting interoperability. To obtain these benefits, however, the mobile device must be able to use a single duplexer for all the band plans. This will not result in interference, however, because the mobile devices will only operate where the network instructs it to transmit.

95. Given the variation in uplink spectrum, however, base stations will require different receive filters in different areas. We believe that creating a band plan that requires different filters on base stations results in fewer problems and is less costly to resolve than requiring multiple filters in mobile devices because providers use fewer base stations, the stations are fixed, and there is more physical room in a base station to install multiple receive filters. We seek comment on this proposition.

96. *Channel 51 Early Relocation.* Some have argued that we should consider interoperability because of the experience with lower 700 MHz A Block licensees. They further contend that exclusion zones designed to protect broadcasting have presented significant deployment challenges for lower 700 MHz A Block licensees. We seek comment on these arguments and on resolving issues related to coexistence of Lower A Block operations and channel 51 even before we commence the incentive auction by facilitating requests for channel relocation associated with voluntary agreements between affected parties addressing these issues.

c. Duplex Gap

97. One important parameter in determining the band plan is the required separation between the uplink and downlink bands, referred to as the duplex gap. We seek comment on the necessary size of the duplex gap. In the LTE bands specified by 3GPP, the smallest duplex gap is 10 megahertz for Band 8 (880–915 MHz and 925–960 MHz bands), with gaps ranging up to 355 megahertz for Band 4 (AWS–1). The size of the duplex gap relative to the width of the pass band is often considered more important than the absolute size, however, as filter roll off is generally proportional to frequency. Other factors can affect the appropriate duplex gap as well, such as the pass band width relative to the center frequency of the pass band, the duplex spacing between the transmitted and received signals, and allowances for temperature and manufacturing variation in components. In our proposed band plan, the duplex spacing is 90 megahertz, but we are not proposing a specific size for the duplex gap. Instead, we seek comment on the appropriate size of the duplex gap, and whether it should be specified as a minimum number of megahertz, a percentage of the pass band, another metric, or a combination of such metrics.

d. Pass Band Size

98. In our band plan proposal we have aimed to create large amounts of contiguous spectrum in a single band, minimize fragmentation of spectrum, and minimize proliferation of separate bands for flexible use spectrum. We recognize that there may be technical limitations on the maximum size of a band that can be supported, however.

99. Filters commonly used in mobile devices may have an upper limit on the pass band size they can support. Examination of the bands defined for LTE show the largest pass band for an

FDD band is Band 3 (1710–1785 MHz and 1805–1880 MHz band), where the pass band is 4.2% of the center frequency. Larger pass bands may be possible, however. For example, Band 41 (2496–2690 MHz band), which is used for TDD operations, has a pass band of 7.5%. IWPC indicates that SAW filters using an alternative manufacturing process with Lithium and Niobium can support pass bands of up to 6% of the pass band center frequency. See *IWPC presentation to the FCC “IWPC Mobile RF Filter Group”* March 11, 2011 at 14, available at <http://www.iwpc.org/ResearchLibrary.aspx?ArchiveID=165&Display=doc>.

100. In our proposed band plan, we may reach a potential technical limit of 4–6% of the pass band if we make 10 or more 5 megahertz blocks available for auction. We also recognize that there may be other technical limitations on band size, due to antennas or other components, and seek comment on any other limiting factors. We seek comment on any technical limitations on pass band size. Does current filter technology limit the pass band size to no more than 4% of the pass band center frequency, no more than 6% of the pass band center frequency, or some other limit? Are there other limitations on pass band size due to other components of the system? Are these hard limits or soft limits, that is, what are the consequences of slightly exceeding any stated limit? Are these limits likely to change by the time the 600 MHz band is deployed, or in the future, and how should we allow for any potential changes in configuring our band plan?

101. Even if the maximum size of a band is limited by current technologies, we believe it is better long-term spectrum policy to clear larger bands that can take advantage of future technology innovations. We seek comment on this issue. We also seek comment on how these limits may relate to the duplex gap, duplex spacing, and guard bands. Does increasing the size of the guard bands allow support of a larger pass band? If so, should we consider setting the minimum guard band size relative to the pass band size? Do the relatively large duplex gap and duplex spacing in our proposed band plan allow large pass bands?

e. Border Issues

102. As explained below, we recognize that TV broadcast operations in Canada and Mexico may reduce the amount of spectrum fully cleared for wireless use. We seek comment on how to address these border issues, particularly given the disparate timeframes for conversion to digital

television in Canada and Mexico. For example, in specific license areas, should we place the 600 MHz uplink bands only in the available channels in channels 38–51 where wireless broadband operations will not be affected by remaining TV operations in the border areas? How can downlink spectrum be maximized in the border areas?

6. Additional Band Clearing Considerations

a. Interchangeable Blocks

103. Although we posit that creating spectrum blocks that are interchangeable will be advantageous to wireless bidders, we also seek comment on whether wireless bidders would prefer access to a greater amount of spectrum, even if not all blocks are protected equally from interference. For example, if we adopt a plan that allows for non-nationwide clearing of broadcast television stations, only a portion of a wireless broadband service area may be cleared in some areas because the contour of a broadcast station and the contour of a wireless license service area are not identical. If interchangeability is more important than quantity, we could choose not to offer wireless broadband licenses in these types of areas. We seek comment on whether we should refrain from offering blocks in areas where part of the spectrum is encumbered. If we offer only non-encumbered spectrum blocks, however, we will be able to offer fewer blocks of spectrum for wireless use, particularly along border areas. Alternatively, should we offer these encumbered blocks to interested bidders? If so, how? Should we establish a threshold (e.g., a percentage of a license area's population or geography) for determining whether a license is considered “clear” even if some portion of the license area has incumbent operations that must be protected? If so, how would such a concept affect the auction design? If we decide not to license certain heavily encumbered blocks, should we make the “cleared” spectrum available for unlicensed use? For example, if 90 percent of the geographic area of a spectrum block is encumbered by broadcasters, should we make the remaining 10 percent available for unlicensed use? We seek comment on potential approaches to address this issue.

b. Remainder Spectrum for Unlicensed Use

104. In order to maximize the number of valuable blocks for licensing, to improve the interference environment

for mobile operations, and to increase the substitutability of blocks in the auction, we propose to add “remainder” spectrum to the guard bands, which would be available for unlicensed use. The downlink and uplink 600 MHz bands would each be organized into 5 megahertz blocks, which can be aggregated by licensees into larger contiguous blocks as needed. Because 5 megahertz blocks match the prevailing channelization increments of modern cellular systems, this block size could enable a greater quantity of usable licensed blocks in any given market as compared to other approaches. The cleared TV broadcast stations operate on 6 megahertz wide channels, however, and as explained above, some spectrum from broadcasters’ relinquished spectrum usage rights must serve as guard bands. Therefore, to determine the number of wireless spectrum blocks available for downlink and for uplink in each market, we look at the total amount of spectrum cleared, divide that number by 2, subtract the guard band, divide by 5 (megahertz), and round down. Because we must round down to a number divisible by 5 to create the wireless spectrum blocks, we will have 0 to 4 megahertz of “remainder” spectrum in any given market for each half of the duplex pairing. For the reasons described above, we believe that licensing in 5 megahertz increments is ideal from a technological perspective, and we propose auctioning interchangeable blocks of equal size to allow for enhanced substitutability among building blocks, which may give us more flexibility in our auction design choices. Therefore, we must find an alternative use for the “remainder” spectrum.

105. As discussed above, we propose a minimum of 6 megahertz guard bands between wireless and broadcast operations. Because we may have no “remainder” spectrum available in some areas, we must ensure that our proposed minimum size for guard bands is sufficient to protect against interference between broadcast and wireless operations. As noted above, providing additional guard band protection beyond 6 megahertz would further improve any potential interference concerns, and therefore, we propose to add this remainder spectrum to the guard bands. For example, if we clear 30 megahertz for downlink operations, and the guard band between wireless downlink and television is 6 megahertz, then the number of spectrum blocks available is four. Thus, in that market, we can offer four 5 megahertz blocks, and the remaining 4 megahertz of

spectrum will be added to the 6 megahertz guard band, and offered for additional unlicensed use. Under this proposal, there could be between 6 and 10 megahertz of spectrum between the television channels and the 600 MHz uplink band in a market. In addition, there could be another 6 to 10 megahertz of spectrum between the television channels and the 600 MHz downlink band in a market. We seek comment on this approach. We also seek comment on alternative ways to make use of the remainder spectrum. For example, we note that it may be possible, when the remainders total 5 megahertz or more, to apportion some or all of the remainder spectrum to one half of the duplex pairing, *e.g.*, the downlink. This would increase the total number of 5 megahertz blocks available for licensing, but would have a tendency to reduce the number of uplink blocks and increase the asymmetry of the band plan. We seek comment on the advantages and disadvantages of various approaches to remainder spectrum.

7. Alternative Band Plan Approaches

106. In our proposed band plan, we have tried to balance flexibility with certainty while maximizing the amount of spectrum we can make available for wireless broadband services in each geographic area. We recognize that other band plans are possible that may achieve these goals. Below we discuss a few possible alternatives, compare them to our lead proposal, and seek comment on these approaches. In addition, we invite commenters to offer variations on our proposed band plan, address the alternative band plans we discuss below, or propose their own band plan. We also invite commenters to address whether there are other advances in technology that would improve efficiency in the band, and allow more flexibility in the band plan, perhaps similar to the manner in which the development of cognitive radio and the ability to query databases enabled the development of television white spaces devices. Commenters should discuss and quantify the costs and benefits of their proposed band plan, explain why their band plan better serves the public interest and our policy goals than our lead proposal, and discuss which proposed technical rules would need to be modified to accommodate their proposal.

a. Down From Channel 51

107. Using an alternative approach to our lead band plan proposal, we could clear broadcast television channels starting at channel 51 and expand

downward. Under this approach, we would organize the cleared spectrum into an uplink portion, a downlink portion, and any necessary guard bands. Adopting this alternative would require us to designate a quantity of spectrum as a duplex gap between the uplink and downlink bands, which would not be used for licensed wireless broadband operations. As a result, this alternative band plan requires a tradeoff between the duplex gap size and the amount of licensed spectrum. Minimizing the duplex gap size would increase the amount of spectrum available for licensing but could have a negative impact on mobile performance. A wider duplex gap, conversely, could enhance mobile performance. We anticipate that regardless of the size of the duplex gap, some portion of the spectrum could also be available for unlicensed operations. We seek comment on whether, with a wider duplex gap, as with the alternative approach in which the downlink starts at channel 36, it may be possible to leave some television operations, as well. We seek comment on this alternative band plan proposal, and its relative costs and benefits in making spectrum available for broadband, including both licensed and unlicensed uses.

108. *Channel 37 Services Fixed.* If the existing wireless medical telemetry and radio astronomy operations remain fixed in channel 37, and if we clear more than 84 megahertz of spectrum, the channels above and below channel 37 would need to be cleared under this alternative band plan because channel 37 would be located in the downlink band. If we decide not to move incumbent channel 37 services, then this alternative is less advantageous than our lead proposal, which places the downlink band against channel 37, and assumes that existing channel 37 operations will remain in that frequency band.

b. Relocating Existing Channel 37 Operations

109. As described above, section 6403(b)(4)(A)(iii) of the Spectrum Act gives us authority to reimburse the move of incumbent operations in channel 37, with certain constraints. Our proposed band plan does not require us to move channel 37 operations, and instead, attempts to benefit from allowing existing channel 37 operations to remain in that frequency band by using channel 37 as a guard band between television operations and mobile broadband operations. If we decide to relocate channel 37 operations, however, should we consider other alternative band

plans, which may be just as spectrum-efficient? For example, we could consider placing the downlink band at channel 32 instead of channel 36, which allows for symmetry between the amount of potential uplink and downlink spectrum. We seek comment on these alternatives and the costs and benefits associated with adopting them and in making spectrum available for broadband, including both licensed and unlicensed uses.

c. In From Channels 51 and 21

110. Another alternative approach is to situate the 600 MHz uplink band adjacent to the 700 MHz uplink spectrum (as in our lead proposal), and situate the downlink band at the lower end of the broadcast television spectrum, at channel 21. The uplink spectrum would expand downward, and the downlink spectrum would expand upward. Similar to our proposed band plan, this alternative allows us to keep existing channel 37 operations on that channel, because channel 37 sits in the duplex gap. Further, like our lead band plan proposal, we would not need to create a duplex gap, because the remaining broadcast television operations would operate in the duplex gap. We would need to create guard bands where the mobile broadband operations and television operations meet, however. We would also need to determine whether such a large pass band size would be able to be supported by one band plan. We seek comment on this approach and the costs and benefits associated with adopting it and in making spectrum available for broadband, including both licensed and unlicensed uses.

d. Prioritizing Paired Spectrum

111. Our lead proposal allocates equal amounts of downlink spectrum and possibly different amounts of uplink spectrum in each market. Such an approach would maximize the amount of downlink spectrum available nationwide as well as the total amount of spectrum reallocated from television broadcasting to flexible use. In some circumstances, however, the proposed approach might result in highly asymmetrical markets. An alternative approach might prioritize the pairing of spectrum nationwide rather than the amount cleared in each individual market. Under this approach, the number of channels reallocated would be the same in every market and the spectrum cleared would be evenly split between paired downlink and uplink spectrum, with any residual blocks used to create no more than one block of unpaired downlink spectrum. Like our

primary proposal, this approach would create a uniform downlink band plan to help ensure interoperability, and nationwide guard bands that could be used by unlicensed white space devices, at least on a secondary basis. On the other hand, such an approach might constrain overall spectrum recovery by limiting the amount of flexible use spectrum to the spectrum that can be recovered in the “lowest common denominator” markets. As a third possibility, could we allow two families of paired spectrum, one nationwide and another in less congested markets? Such an approach might increase the total amount of spectrum reallocated for flexible use, while prioritizing the pairing of spectrum. We seek comment on these alternatives, including the costs and benefits of prioritizing the pairing of spectrum versus maximizing the total number of megahertz reallocated.

e. Designating Spectrum for TDD Use

112. We recognize that TDD technologies can also be used to provide wireless broadband service and seek comment on whether the Commission should allow for TDD use in the 600 MHz band. For example, should we set aside a separate TDD-only block in our band plan or allow TDD operations throughout the entire band? If we set aside a TDD-only block, should it be contingent on creating a certain number of paired FDD spectrum blocks first? What is the minimum block size (e.g., 5 megahertz, 10 megahertz) necessary for TDD operators to effectively provide mobile broadband service? What is the ideal geographic area license size for this type of service? If we allow for TDD operations throughout the band, what other considerations should we take into account in establishing block size and geographic area license size?

113. Furthermore, if we allow for TDD in the 600 MHz band, what technical rules should we adopt to accommodate TDD technologies while minimizing interference concerns? For example, if we allow TDD operations, is it necessary to establish a guard band where a TDD block adjoins an FDD block or another TDD block? If a guard band is necessary, should we require the TDD bidder to internalize that guard band or otherwise mitigate interference to those adjacent blocks? What other technical issues arise from allowing TDD in the 600 MHz band? We seek comment on this issue, and the costs and benefits of allowing for TDD technologies in this band. Commenters are also invited to discuss how such issues have been resolved in other countries where TDD systems

have been licensed or are expected to be deployed (e.g., India and China).

C. Technical Rules

1. OOB Limits

114. Under the proposed band plan, we plan to license 600 MHz spectrum in paired 5 + 5 megahertz blocks as well as unpaired 5 megahertz downlink expansion blocks, using Economic Area licenses. Therefore, we must consider how to address interference between adjacent blocks within the 600 MHz band, and between 600 MHz spectrum and adjacent bands.

115. *Emission limits.* The Commission has previously concluded that attenuating transmitter out-of-band emissions (OOBE) by $43+10\log_{10}(P)$ dB, where P is the transmit power in watts, is appropriate to minimize harmful electromagnetic interference between operators. This is consistent with the service rules that the Commission has adopted for other bands, including the lower 700 MHz band, that are used for wireless broadband services. 47 CFR 27.53(g). To fully define an emissions limit, the Commission's rules generally specify details on how to measure the power of the emissions, such as the measurement bandwidth. For the lower 700 MHz band, the measurement bandwidth used to determine compliance with this limit for both mobile stations and base stations is 100 kHz, with some modification within the first 100 kHz. 47 CFR 27.53(g). Similarly, we believe that it is reasonable to apply this procedure to both mobile and base transmissions in the 600 MHz band.

116. *Proposal.* To address potential harmful electromagnetic interference within the 600 MHz band, we propose to apply section 27.53(g) of the Commission's rules, which includes OOBE attenuation of $43+10\log_{10}(P)$ dB and the associated measurement procedure, to the 600 MHz band. We seek comment on this proposal. Commenters should discuss and quantify the costs and benefits of this proposal and any proposed alternative approaches.

117. *Interference to Adjacent Lower 700 MHz operations.* The upper end of the 600 MHz uplink band is adjacent to the lower portion of the lower 700 MHz band, which is also being used for mobile uplink operations. As a result, the interference environment between these two bands will be nearly indistinguishable from interference within either band and we believe that our proposal to adopt the lower 700 MHz OOBE limits will protect adjacent lower 700 MHz operations.

118. *Interference to Adjacent DTV operations.* Under our proposed band plan, the 600 MHz band will be adjacent to DTV operations on the lower end of both the uplink and downlink bands. The interference environment is similar to what currently exists between the lower 700 MHz band and DTV stations. It is beneficial to maintain comparable emissions limits among commercial bands so as not to disadvantage one band over another. In the event that a specific incidence of harmful interference occurs, the Commission, under section 27.53(i) of its rules, may impose higher emissions limits as a remedy. By applying the same OOB limits as currently exist between the lower 700 MHz band and DTV stations, 600 MHz licensees will provide similar protection as exists today.

119. *Interference to Channel 37 Operations.* Under the proposed band plan, downlink operations would be permitted adjacent to the lower edge of Channel 37. Depending on the amount of spectrum that broadcasters relinquish, uplink operations from mobiles could be permitted on the upper edge of Channel 37. Currently, DTV stations operate adjacent to Channel 37 without any guard bands, which indicates that the OOB and power limitations required of DTV stations are sufficient to protect Channel 37 services. Both the emissions and power limits that are permitted by DTV operations under current regulations are higher than those proposed for the 600 MHz band. Therefore, if we adopt the proposed 600 MHz OOB and power limits, 600 MHz services should provide as much or more protection to Channel 37 than they currently receive from DTV operations.

2. Power Limits

120. We propose to generally apply power limits for the 600 MHz band that are consistent with the lower 700 MHz band. *See* 47 CFR 27.50(c). However, we will need to modify the lower 700 MHz rules because the proposed band plan for the 600 MHz band has a predetermined uplink and downlink so different power limits are applied to each band.

121. *600 MHz Downlink Operations.* We propose to limit fixed and base station power for downlink operations in non-rural areas to 1000 watts per MHz ERP for emission bandwidths less than 1 MHz and to 1000 watts per MHz ERP for emission bandwidths greater than 1 megahertz, and to double these limits (2000 watts ERP) in rural areas. We will not apply the power flux density requirements of section 27.55(b) to the 600 MHz service. *See* 47 CFR

27.55. That requirement is designed to protect base station receivers from other high powered (50 kW) base stations nearby. Because high powered base stations are not allowed in the 600 MHz band, this requirement is unnecessary. We seek comment on this proposal, including the costs and benefits of the proposal.

122. *600 MHz Uplink Operations.* The upper part of the 600 MHz band plan is designated for uplink operations and is directly adjacent to the lower 700 MHz uplink operations. We propose to adopt the same power limit of 3 watts ERP for both portables and mobiles that apply to the lower 700 MHz band and prohibit fixed and base station operations, which are allowed in the lower 700 MHz band. 47 CFR 27.50(c)(10). In addition, as this band is intended for delivery of commercial wireless broadband services, no provision will be made for high power control stations used by specialized public safety applications. We seek comment on this approach, including the costs and benefits of the proposal.

3. Antenna Height Restrictions

123. We propose to apply the 700 MHz flexible antenna height rules, as set forth in section 27.50(c) of the Commission's rules to the 600 MHz band. Although the existing antenna rules do not set specific antenna height restrictions, ERP reductions will be required for base or fixed stations whose height above average terrain (HAAT) exceeds 305 meters. In addition, other rules effectively limit antenna heights. For example, all part 27 services are subject to section 27.56 of our rules, which prevents antenna heights that would be a hazard to air navigation. Also, our proposed co-channel interference rules effectively limit antenna heights because of the limitation on field strength at the boundary of a licensee's service area. We believe that the general antenna height restrictions are sufficient so we are not proposing any band-specific limitations. We seek comment on this approach, including the costs and benefits.

4. Co-Channel Interference Among 600 MHz Systems

124. Since we propose to license the 600 MHz bands using geographic service areas, we need to ensure that 600 MHz licensees do not cause interference to co-channel systems operating along common geographic borders. The 700 MHz rules address the possibility of harmful co-channel interference between geographically adjacent licenses by setting a field

strength limit of 40 dBμV/m at the edge of the license area. *See* 47 CFR 27.55(a)(2). Due to the similarities between the 700 MHz and 600 MHz spectrum, we propose that this same signal strength limit is appropriate for the 600 MHz band. Therefore, we propose to apply 47 CFR 27.55(a)(2) to the 600 MHz spectrum. We seek comment on this proposal, including the associated costs and benefits.

5. Canadian and Mexican Coordination

125. Section 27.57(b) of our rules indicates that 700 MHz operations are subject to international agreements with Mexico and Canada. These arrangements establish 700 MHz wireless operations on a co-primary basis with foreign television operations. The arrangements do not however, establish criteria for the protection of wireless services from foreign television stations. Wireless services are essentially protected by default, given that the U.S. and Canada, and Mexico have agreed not to authorize new television services in the 700 MHz band. We note that modification of the 700 MHz band arrangements or the creation of new separate arrangements pertaining to the 600 MHz spectrum will be necessary to implement 600 MHz operations in areas along the common border and to protect these 600 MHz operations from cross-border interference. In addition, modified domestic rules might be necessary in order to comply with any future agreements with Canada and Mexico regarding the use of the 600 MHz band. We seek comment on these issues, including alternative approaches, and the costs and benefits of any proposal to address these issues.

6. Other Technical Issues

126. There are several additional technical rules applicable to all part 27 services, which are: equipment authorization, RF safety, frequency stability, antennas structures; air navigation safety, and disturbance of AM broadcast station antenna patterns. *See* CFR 27.51, 27.52, 27.54, 27.56, 27.63. Because the 600 MHz band will be licensed as a part 27 service, we propose that these rules should also apply to 600 MHz licensees, including licensees who acquire their licenses through partitioning or disaggregation. We seek comment on this approach, including associated costs and benefits.

VI. Other Services in the UHF Band

A. Channel 37 Services

127. TV channel 37 is not used for TV broadcasting but rather is allocated for

use by radio astronomy and medical telemetry equipment. TV channel 37 is situated in the spectrum such that it could affect the viability of certain band plans for wireless broadband service that would be most viable from a technical and economic standpoint. The Commission's proposed band plan does not require that existing channel 37 operations be relocated, and instead, attempts to benefit from allowing existing channel 37 operations to remain in that frequency band by using channel 37 as a guard band between television operations and mobile broadband operations.

1. Radio Astronomy

128. In light of the band plan proposals in the *Incentive Auction NPRM* and other considerations raised in this proceeding about channel 37 operations, the Commission seeks comment on whether RAS in channel 37 should be relocated to other spectrum and, if so, to what spectrum. In order to properly analyze this issue, the Commission needs to be aware of all observers in channel 37. The Commission understands that the ten VLBA sites, as well as the Green Bank and Arecibo telescopes, are the only radio telescopes currently observing channel 37 within the United States at this time. Additionally, we note that the Expanded Very Large Array in New Mexico will resume observations in channel 37 in late 2012. The Commission seeks comment as to whether any other sites within the United States currently perform or have plans to perform RAS observations in channel 37. In addition, it seeks comment regarding whether any foreign telescopes located near the United States or its territories, such as the Dominion Radio Astrophysical Observatory in Penticton, British Columbia, currently perform or have plans to perform RAS observations in channel 37. The Commission notes that because this band has only contained passive services and WMTS, which does not require individual licenses in the United States or Canada, channel 37 is not included in any cross-border agreements.

129. Because RAS applications involve observation of very low power radiation from space, a key requirement for RAS receivers is high sensitivity. However, this same property which enables reception of these low signals levels also makes the receivers susceptible to interference. The Commission asks commenters consider this issue in addressing whether we should relocate RAS and where. It also asks commenters to consider the various

band plan options discussed in the *Incentive Auction NPRM*.

130. The Commission also invites comment on whether the RAS needs to keep a subset of the 500–700 MHz range available for RAS continuum observations. In addition, it seeks comment on the nature of the spectrum needed for such measurements. Because the VLBA relies on data from multiple receive sites, does it require a single interference-protected band throughout the entire United States? Further, as radio astronomy relies on extremely sensitive receivers, it seeks comment on whether a single, contiguous band is needed or RAS requirements can be satisfied through the use of multiple small, noncontiguous bands? In addition, it seeks comment on the cost of relocating RAS users from channel 37 to elsewhere in the 500–700 MHz range.

131. Further, the Commission seeks comment on whether there is a particular band within the 500–700 MHz range that would be the most desirable for RAS use, both from a scientific and an economic viewpoint. One alternative to the lead band plan proposal in the *Incentive Auction NPRM* would shift WMTS operations to the 578–584 MHz band (channel 32). Would this band also be desirable for RAS operations? Alternatively, what would the advantages and disadvantages be in relocating RAS to the lower (2–6) or upper (7–13) channels of the VHF band? Would such a band be as useful for RAS observations? Would relocation costs be comparable? What are the advantages and disadvantages of reserving another 6 megahertz-wide band for RAS use, as compared to a narrower or wider band?

132. The Commission also invites comment on any international implications of relocating the RAS band. How would relocating RAS from channel 37 affect foreign RAS operations, such as at the Penticton Observatory in British Columbia? Are there any foreign radio telescopes observing in channel 37 that would be subject to unwanted interference? The Commission recognizes that some RAS operations require coordinated observations with multiple telescopes in other countries. What would be the impact, if any, on these observations if we were to reallocate the RAS stations in channel 37? Finally, the Commission observes that any new RAS band in the United States would require coordination to protect it from unwanted interference from foreign sources and, if such a step is necessary, it proposes that United States stations be subject to the provisions of any negotiated cross-border agreement.

2. Wireless Medical Telemetry Service

133. In light of the band plan options set forth in the *Incentive Auction NPRM*, the Commission seeks comment on whether to relocate WMTS users from channel 37 and, if so, to what spectrum. Commenters should address their band plan preference and provide details on the relative costs and benefits of their preferred course of action. Is the ASHE estimate for sunk investment in WMTS systems correct and what would be the cost of relocation? To avoid unlimited increases in possible relocation costs, should we only consider relocating WMTS systems that were contained in the ASHE database by a date certain (e.g., the effective date of this NPRM)? Would the funds available for reimbursement of relocation costs, which the Spectrum Act limits to \$300 million for all channel 37 incumbents, be sufficient?

134. The Commission also seeks comment on spectrum that could support WMTS. Specifically, it seeks comment on whether relocating WMTS to a nearby television channel, such as channel 32, may be less expensive than moving WMTS to more distant spectrum. It also seeks comment on whether the WMTS systems could simply be retuned to a new spectrum band for WMTS or whether new equipment would be required. If retuning is possible, is it possible to retune outside of the UHF band and if so, what would be the costs of retuning? In addition, the Commission seeks comment on whether all WMTS operations could be accommodated in the WMTS bands at 1395–1400 MHz and 147–1432 MHz.

135. The Commission also seeks comment on the time frame and process for possible relocation of WMTS. First, should relocation occur for WMTS under comparable facilities, as has been the Commission's past practice? If so, how would the Commission verify that the facility is comparable? If not, what standard should the Commission utilize, and what would be the legal basis for that standard? What would be the appropriate time frame for relocation? The Commission asks parties to provide estimates of the time required for equipment to be available to support any such relocation. Further, the Commission seeks comment on the impact of relocation on WMTS users if they were given a longer time frame for relocation, and if we were to freeze the issuance of new WMTS registrations. If WMTS users have a sufficiently long transition, would the cost of transition decrease because the WMTS equipment

will have reached the end of its useful life?

136. Finally, the Commission notes, that the United States Department of Veterans Affairs makes extensive use of the WMTS service. The NTIA Manual specifies that federal users of this band must follow the same procedures as non-federal users. The Commission seeks comment on whether, in the event that we decide to relocate channel 37 incumbents, federal users should be considered users for reimbursement purposes.

B. Television Fixed Broadcast Auxiliary Stations, Low Power Auxiliary Stations, and Unlicensed Wireless Microphones

1. Television Fixed Broadcast Auxiliary Stations

137. As a result of the repacking process, the amount of spectrum in the current VHF and UHF bands available for secondary licensing of fixed BAS operations is likely to diminish. We seek comment on whether and how we should address the availability of UHF band spectrum for secondary fixed BAS operations.

138. We propose to continue the licensing of fixed BAS on a secondary basis in the spectrum that remains available for television broadcast services nationwide. We recognize that coordinating and operating these point-to-point links, on a secondary basis, could be challenging in a more closely packed UHF band. Nevertheless, the number of fixed BAS licensees in the UHF band is relatively low, and we are unaware of any major interference problems to broadcast television service. Fixed BAS is directly tied to the provision of broadcast television service and competing broadcasters have successfully coordinated this service and other BAS operations, such as Electronic News Gathering in the 2 GHz band, for many years. We recognize that the continued feasibility of secondary, fixed BAS—whether for new links or for existing links that need to change frequencies to protect a repacked television station—may depend on the outcome of the repacking process. We invite comment on any relevant technical or operational implications of this proposal, including to television broadcasters and other post-auction users of the UHF band.

139. Consistent with past practice, we propose that secondary fixed BAS stations operating in the UHF band continue to be required to cease operating and relocate, at their own expense, to other frequency bands or to the repacked television band when a new 600 MHz wireless broadband

licensee intends to turn on a system within interference range of the incumbent.

140. Also consistent with past practice, we propose to require broadcast television or new licensees to provide thirty days' notice to all incumbent fixed BAS operations within interference range prior to commencing operations in the vicinity. By providing notice to existing secondary licensees that they must cease operations, this approach will provide an opportunity to make other arrangements for service if the licensee has not yet done so. With several other frequency bands available to BAS, as well as the repacked television band (under our above proposal), we anticipate that stations will be able to engineer in and successfully coordinate BAS stations to suit their needs. We seek comment on these proposals.

141. We do not propose to make available compensation to fixed BAS licensees for relocating to other frequencies because BAS stations operate on a secondary basis in the UHF band. Historically, the Commission has not required new stations to pay for secondary stations to relocate. Rather, the FCC generally requires secondary stations to cease operations and relocate at their own expense when a new primary licensee begins operation if the secondary station will interfere with the primary licensee's operation. We also note that the Spectrum Act does not provide for payment of any relocation costs incurred by these secondary stations as a result of the repacking. We seek comment on our proposal.

2. Low Power Auxiliary Stations and Unlicensed Wireless Microphones

142. The Commission seeks comment on what steps it should take, if any, to best accommodate wireless microphone operations along with other uses, as well as to ensure that the available spectrum is used efficiently and effectively by wireless microphones. It seeks comment with respect to both licensed LPAS and unlicensed operations.

143. In particular, the Commission seeks comment on the operations of wireless microphones in the repacked spectrum that continues to be used for broadcast television service. With less broadcast television spectrum available after the repacking, and the possibility that two channels may no longer be designated for wireless microphone use, are there additional steps that we should take to promote more efficient or effective operations of wireless microphones in this spectrum? For instance, to make more of this limited

spectrum usable for wireless microphones, should the Commission revise the rules for operating these devices on a co-channel basis with television stations in the UHF band by reducing the separation distance of 113 kilometers, a requirement established prior to the transition to digital television? Apart from reducing the separation distances generally, are there other, more precise methods that we should consider, such as permitting co-channel wireless microphone use even closer to television stations through use of a database that takes into account the particular interference conditions at that location? If so, should the Commission require that wireless microphone operations be registered in a database? Could this or other measures, such as coordination, enable more intensive use by wireless microphones of the broadcast television spectrum that is not available for white space devices? Are there other means of promoting more intensive use by wireless microphones of available spectrum while protecting broadcasting service?

144. In addition to requesting comment on wireless microphone operations in the repacked spectrum that continues to be used for broadcasting, the Commission seeks comment on operation of wireless microphones in the spectrum that would be established for the guard bands under the proposals set forth in the *Incentive Auction NPRM*. The band plan contemplates guard bands in which no high power operations would be permitted, and the Commission seeks comment on the use of such guard bands for unlicensed white space devices under the operational rules for those devices. The Commission seeks comment on wireless microphone operations in such guard band spectrum. To what extent could wireless microphone operations effectively be accommodated under any of these proposals? Have there been any technological advances that we should consider in this regard? The Commission also requests comment on how wireless microphone operations in the guard bands could co-exist with other users, including unlicensed white space devices. In particular, should wireless microphones be permitted to operate in the guard bands so long as they use the technologies required of white space device operations in these bands, including the ability to access a database (in order to identify the guard bands at particular locations) and to comply with other technical requirements, such as whatever power and emissions limits that we establish

for operations in these bands? Should wireless microphone operations only be permitted on an unlicensed basis in the guard bands, such that they would have the same status as the other unlicensed operations in these bands? To what extent should wireless microphone operators that currently qualify for registration and database protection have such protection extended to the guard bands? The Commission asks that commenters also discuss the costs and benefits associated with adoption of the proposals they discuss.

VII. White Space and Unlicensed Operations

145. The Commission seeks comment on proposals to enable a substantial amount of spectrum use by unlicensed devices, a significant portion of which use will be available on a nationwide basis. The Commission seeks comment on these proposals, including the technical and economic benefits and disadvantages on all relevant industries—the unlicensed industry, the wireless industry and broadcasters—and consumers. The Commission seeks comment on how to balance making spectrum available for use by unlicensed devices with our central goals in this proceeding of repurposing the maximum amount of UHF band spectrum for flexible use while preserving a healthy, diverse broadcast television service.

146. *White Space Devices.* The Commission proposes to continue to allow the operation of white space devices in the broadcast television spectrum on unused channels that are not repurposed for other uses under the current rules governing white space devices in the television bands. When spectrum is repurposed as a result of the incentive auction, the amount of broadcast television spectrum that will continue to be available for these white space devices may be reduced to some extent, in different markets, depending on the amount of spectrum that is recovered and other factors. Because unlicensed white space devices can adjust to whatever channels are available at any given location according to the white space database, however, the devices should be able to adapt to any reductions or changes in the available channels. Given that there is considerable white space available now in many areas—more than 100 megahertz in some markets—we expect that there will still be a substantial amount of spectrum available for use by these devices in the remaining broadcast television channels after the incentive auction. The Commission expects that there will continue to be more spectrum

available in areas outside of the central urban areas of the largest markets than within those areas. The Commission seeks comment on these views.

147. *Guard Band Availability for Unlicensed Use.* The Commission's proposed 600 MHz band plan includes guard band spectrum. The Commission proposes to make the guard band spectrum available for unlicensed white space device use on a non-interference basis. The Commission believes that this proposal could increase the spectrum available for unlicensed use in the urbanized areas of major markets where there may be little or no white space spectrum available now, spurring deployment, use and a national market for unlicensed devices and applications. It invites comment on this premise. It also seeks comment on its proposal to make the guard bands available for unlicensed use, and any alternative approaches for the guard bands.

148. The Commission also seeks comment on whether its existing power and emission limits for white space devices in the television bands are appropriate for unlicensed operations in the guard band spectrum to protect licensed operations.

149. The Commission's present rules for white space devices in the television bands utilize a database to inform devices in real time which television channels they may operate on. Should the same process be used to make guard band spectrum available for use by existing and/or future white space devices? What changes would be required to accommodate different amounts of guard band spectrum?

150. *Possible Use of Channel 37.* The Commission proposes to make channel 37 available for unlicensed use, while protecting WMTS and the Radio Astronomy Service. This proposal would increase the efficiency of use of this spectrum while expanding the amount of spectrum available for innovative unlicensed operations. The Commission seeks comment on information regarding appropriate protection criteria for WMTS and the Radio Astronomy Service.

151. *Possible Availability of Channels Designated for Wireless Microphones.* The Commission invites comment as to whether it should maintain the designation of two channels for wireless microphones following the broadcast television spectrum incentive auction or whether this spectrum should be made available for unlicensed use.

VIII. Auction Rules

152. The Commission proposes competitive bidding rules to govern the reverse auction of broadcast television

spectrum, and considers changes to the Commission's general competitive bidding rules that may be necessary or desirable to conduct the related forward auction for new spectrum licenses.

A. Competitive Bidding Process for Reverse Auction—Part 1 New Subpart

1. Purpose

153. The Commission proposes a general framework for the reverse auction of broadcast television spectrum. These proposed rules ultimately will govern how the auction process unfolds for broadcasters, *i.e.*, what applicants need to do to participate and when; how bids are collected, winners and incentive payments determined, and broadcast stations repacked; and how the results of the reverse auction for broadcasters are implemented, including disbursement of incentive payments. Consistent with the Commission's typical approach to spectrum license auctions, the proposed rules would provide a general framework to guide the development—through a series of public notices with opportunities for comment—of the detailed procedures and deadlines needed to conduct the auction. The public notice process would allow both the Commission and interested parties to focus and provide input on certain details of the auction design and the auction procedures after the rules have been established and the remaining procedural issues are better defined. The Commission's experience with spectrum license auctions demonstrates the value of this approach, so it anticipates following a similar approach here.

2. Pre-Auction Application Process

154. The Commission proposes to require submission of a pre-auction application by entities interested in participating in the reverse auction. Information provided on the pre-auction application would allow the Commission to evaluate whether the applicants are qualified to participate in accordance with the auction rules. The Commission envisions that the pre-auction application would be due on the dates specified by public notice and would be filed electronically in a process similar to that currently used for Commission spectrum license auctions. The Commission seeks comment on proposed rules regarding the contents of the pre-auction application for the reverse auction. The Commission also invites comment on measures that it should take to implement the statutory mandate to protect the confidentiality of

Commission-held data of licensees that participate in the reverse auction.

155. *Eligibility Requirements.* The Commission proposes that in order to participate in the reverse auction, a broadcast television licensee must be a full power or a Class A television station. The Commission proposes that a broadcast television licensee operating on a noncommercial educational (NCE) reserved channel, as well as a licensee operating with NCE status on a non-reserved channel, may participate. The Commission also proposes that the relevant license must be valid and not expired, cancelled, or revoked.

156. *Applicant.* Since the broadcast television “licensee” holds the relevant spectrum usage rights that may be relinquished in the reverse auction, in order to promote accountability and transparency, the Commission proposes that the applicant identified on the pre-auction application for the reverse auction must be the licensee. If the Commission adopts this proposal, a corporate parent would not be able to file one application for licenses held by different licensee subsidiaries; however, a licensee holding multiple licenses would only be required to file one application for all such licenses for which it wishes to submit bids in the reverse auction. The Commission seeks comment on this proposal and specifically asks commenters to address whether it should permit other persons or entities, such as the licensee’s parent company or persons or entities with control over the licensee, to be the applicant.

157. For broadcast television licensees agreeing to share a channel, the Commission proposes that only the “sharee(s)” —the station(s) that would relinquish their frequencies in order to move to the sharer’s frequencies—must apply to participate in the reverse auction. More than two stations may share a channel. Thus, although there would be only one sharer in each channel sharing relationship, there could be multiple sharees. Since the “sharer” station would not move as a part of the channel sharing arrangement, the Commission proposes that the sharer need not submit an application to participate in the reverse auction unless it intends to bid to relinquish other spectrum usage rights—for instance, depending on the available bidding options, the sharer might bid to move from a UHF to a VHF channel, or it might submit a contingent bid to relinquish all of its spectrum usage rights. The Commission seeks comment on this proposal. The Commission also asks commenters to address any costs and benefits that would result for the

auction and for the channel sharing relationship if, in the alternative, the Commission were to require all parties to a channel sharing agreement (*i.e.*, the sharee(s) and the sharer) to file pre-auction applications. Are there any other issues that the Commission should consider regarding channel sharing agreements that may affect who should apply to participate in the reverse auction?

158. *Information and Certifications Required in Application to Participate in Competitive Bidding.* The Commission seeks comment on what information applicants should be required to provide and what certifications they should be required to make in the pre-auction application regarding their qualifications to participate in the reverse auction.

159. Based on the Commission’s experience with spectrum license auctions, it proposes that the pre-auction application request the following information from the applicant: (1) The applicant’s name and contact information; (2) the license(s) (including station and channel information, full power or Class A status, and NCE status) and the associated spectrum usage rights that may be offered in the reverse auction (including whether the applicant intends to bid to relinquish all of its spectrum usage rights, to channel share, to move from UHF to VHF frequencies, and/or to offer any other permissible relinquishments); (3) any additional information required to assess the spectrum usage rights available for the reverse auction; (4) the identity of the individuals authorized to bid on the applicant’s behalf; (5) the applicant’s ownership information as set forth in 47 CFR 1.2112(a), and, for NCE stations, information regarding the licensee’s governing board and any educational institution or governmental entity with a controlling interest in the station, if applicable; (6) for a channel sharing applicant, the channel the parties intend to share and any necessary information regarding the channel sharing agreement; (7) an exhibit identifying any bidding agreements, bidding consortia, or other such arrangements to which the applicant is a party, if permitted; (8) any current delinquencies on any non-tax debt owed to any federal agency, but only if the Commission determines in this proceeding that such information is necessary in order to assess the licensee’s eligibility to participate in the reverse auction or if the Commission adopts a rule that would allow it to offset incentive payments by the amount of the licensee’s outstanding delinquencies; and (9) any additional

information that the Commission may require. The Commission seeks comment on this proposal. In particular, in lieu of requesting the ownership information set forth in 47 CFR 1.2112(a), should the Commission require reverse auction applicants to provide less detailed ownership information, and if so, what information should the Commission require? Should the Commission instead request the same ownership information that broadcast television licensees currently provide for the purposes of the multiple ownership rules, in which case attributable interests would need to be disclosed but non-attributable interests, such as certain insulated parties, would not need to be disclosed? If so, should the Commission merely require applicants to provide updated information to supplement existing disclosures on file with the Commission regarding media ownership, such as the information contained in the licensee’s most recently filed Form 323 or Form 323–E Biennial Ownership Report Form?

160. The Commission seeks comment on what information regarding channel sharing agreements it should request in order to assess an applicant’s eligibility to participate in the reverse auction. What information or documentation should the Commission require as a part of the pre-auction application? Should the Commission require submission of the channel sharing agreement with the pre-auction application?

161. The Commission also proposes and seeks comment on rules that would require applicants to certify on the pre-auction application that: (1) The applicant meets the statutory and regulatory requirements for participation in the reverse auction, including any requirements with respect to the applicant’s licenses for the spectrum usage rights offered in the reverse auction; (2) if the applicant is a Class A television station, that it is, and will remain during the pendency of its application(s), in compliance with the ongoing statutory eligibility requirements to remain a Class A station; (3) for a channel sharing applicant, that the channel sharing agreement is consistent with all Commission rules and policies, and that the applicant accepts any risk that the implementation of the channel sharing agreement may not be feasible for any reason, including any conflict with requirements for operation on the shared channel; (4) for a channel sharing applicant, that its shared channel facilities will continue to provide minimum coverage to its principal community of license as set

forth in the Commission's rules; (5) the applicant agrees that the bids it submits in the reverse auction are irrevocable, binding offers of the licensee; (6) the applicant agrees that it has sole responsibility for investigating and evaluating all technical and marketplace factors that may have a bearing on the bids it submits in the reverse auction; and (7) the individual submitting the application and providing the certifications is authorized to do so on behalf of the applicant. If the person submitting the application and providing the certifications on behalf of the applicant is not an officer, director, board member, or a controlling interest holder, the Commission proposes to require the applicant to submit evidence that such person has the authority to bind the applicant.

162. The Commission proposes that all parties to any channel sharing agreement—*i.e.*, the sharer and the sharee(s)—be required to make any necessary certifications with respect to the channel sharing agreement. The Commission seeks comment on this proposal and whether requiring all channel sharing parties to make any necessary certifications will encourage or discourage stations from entering into a channel sharing agreement in connection with the auction. In addition, the Commission seeks comment on any other issues that it should consider regarding certifications by licensees agreeing to channel share.

163. In addition, the Spectrum Act specifies that “a person who has been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant” may not participate in a system of competitive bidding that is required to be conducted by Title VI of the Spectrum Act. This national security restriction applies to the broadcast television spectrum reverse and forward auctions since Title VI requires the Commission to conduct both auctions.

164. The Commission proposes that on the pre-auction application for the reverse auction, the applicant must certify, under penalty of perjury, that it and all of the related individuals and entities required to be disclosed on the pre-auction application are not “person[s] who [have] been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant.” The Commission proposes to include an identical certification requirement on the short-form application for participation in the forward auction. The Commission requests comment on

this proposal. For the purposes of this certification, the Commission proposes to define “person” as an individual, partnership, association, joint-stock company, trust, or corporation. The Commission also proposes to define “reasons of national security” to mean matters relating to the national defense and foreign relations of the United States. The Commission seeks comment on these proposed definitions. What other issues, if any, should the Commission consider regarding this national security restriction?

165. *Procedures for Processing Pre-Auction Applications.* The Commission proposes that, similar to other auctions, if an applicant fails to make the required certifications, the application would be rejected, *i.e.*, dismissed with prejudice. The Commission also proposes that after the Commission's initial review of the pre-auction applications, applicants would have an opportunity to cure defects identified by the Commission, but if not corrected before the resubmission deadline, such applications would be dismissed. With respect to licensees whose pre-auction applications are dismissed, the Commission seeks comment on whether it should consider such licensees to be “applicants” and/or “participants” for the purposes of applying its reverse auction rules. For instance, should such licensees be considered “applicants” under the proposed rule prohibiting certain communications and “participants” under the proposed rule protecting confidential Commission-held data of licensees participating in the reverse auction?

166. The Commission proposes that whenever the information furnished in a pending pre-auction application is no longer substantially accurate and complete in all significant respects, the applicant must amend or modify the application as promptly as possible and in any event within five business days. The Commission proposes that certain minor changes would be permitted subject to a deadline specified by public notice, but major changes to the pre-auction application would not be permitted. Major amendments would include, but are not limited to, changes in ownership of the applicant or the licensee that would constitute an assignment or transfer of control. Precluding such changes in ownership after the submission of the application would ensure that all of the relevant parties are clearly identified for the purposes of applying the reverse auction rules, including the rule prohibiting certain communications. In addition, major amendments would include changes to any of the required

certifications and the addition or removal of licenses or authorizations identified on the pre-auction application for which the applicant intends to submit bids. Minor amendments would include any changes that are not major, such as correcting typographical errors and supplying or correcting information requested by the Commission to support the certifications made in the application. The Commission seeks comment on these proposals.

167. In typical spectrum license auctions, the Commission releases a public notice identifying qualified and non-qualified applicants. To protect the confidentiality of the identities of all reverse auction participants as required by the Spectrum Act, the Commission proposes to notify the applicants individually as to whether they are qualified bidders, *i.e.*, are qualified to participate in the reverse auction. The Commission seeks comment on this proposal. The Commission seeks comment on additional issues that arise from its statutory obligation to protect the confidentiality of Commission-held data of a licensee participating in the reverse auction.

3. Two Competing Participants Required

168. The Commission will share with winning bidders in the reverse auction a portion of the proceeds of the forward auction assigning licenses for spectrum usage rights relinquished in the reverse auction pursuant to section 309(j)(8)(G) of the Communications Act, as added by section 6402. Clause (ii) of subparagraph (G) requires that “[t]he Commission may not enter into an agreement for a licensee to relinquish spectrum usage rights in exchange for a share of auction proceeds * * * unless * * * at least two competing licensees participate in the reverse auction.” Accordingly, the Commission proposes a rule to incorporate this requirement into the competitive bidding rules for the broadcast television reverse auction and seeks comment on the parameters of such a rule. In particular, the Commission seeks comment on what should constitute “participation” for these purposes. Should the Commission consider a licensee to be a “participant” if it has submitted an application to participate in the reverse auction and after review of the application the Commission finds the applicant qualified to bid? Alternatively, should the Commission require a licensee to become a qualified bidder and submit a bid to be considered a participant in the reverse auction? Similarly, the Commission seeks comment on what constitutes “competing” for purposes of

this requirement. Is there any reason why multiple reverse auction participants bidding for payments from the same source of funds—*i.e.*, the proceeds of the forward auction—should not be considered to be “competing”?

4. Confidentiality and Prohibition of Certain Communications

169. *Confidentiality.* Section 6403(a)(3) of the Spectrum Act requires the Commission to “take all reasonable steps necessary to protect the confidentiality of Commission-held data of a licensee participating in the reverse auction * * * including withholding the identity of such licensee until the [spectrum] reassignments and reallocations (if any) * * * become effective, as described in subsection (f)(2).” That subsection provides that these reassignments and reallocations may not become effective “until the completion” of both the reverse and forward auctions. Unlike previous auctions for awarding spectrum licenses, which result in a winning bidder’s initiation of new services or expansion of existing operations, licensees participating in the reverse auction will submit bids to exit an ongoing business, or to make significant changes to that business (*e.g.*, by sharing or changing the channels on which they operate). Section 6403(a)(3) recognizes the potential competitive sensitivities of the information that such existing licensee bidders provide to the Commission in this context.

170. The Commission proposes a rule to incorporate this confidentiality requirement into the competitive bidding rules for the broadcast television reverse auction and seeks comment on the parameters of such a rule. For example, what types of information should the Commission withhold from public disclosure in order to protect the identities of licensees participating in the reverse auction? Should the Commission protect non-identifying information about licensees participating in the reverse auction, such as bid amounts? What interests would be served by protecting such additional licensee data? Alternatively, would disclosing such non-identifying information provide benefits for the auction process?

171. Moreover, what “reasonable steps” should the Commission take to protect confidentiality as required by the Spectrum Act? Specifically, what types of procedures should the Commission implement to safeguard confidential Commission-held licensee data in order to satisfy section 6403(a)(3) of the Spectrum Act? Further,

for how long should the Commission take such “reasonable steps”?

172. The statutory requirement extends until any reassignments and reallocations become “effective,” and they may not become “effective” until the “completion” of both the reverse and forward auctions. The Commission proposes that the reverse and forward auctions will each be “complete” when the Commission publicly announces that each auction, respectively, has ended. The Commission proposes that the reassignments and reallocations will be “effective” when the Commission publicly announces the results of the reverse auction, forward auction, and repacking. These announcements may be released sequentially or simultaneously. The Commission seeks comment on this proposal and on any alternatives.

173. In addition, the Commission asks commenters to address the advantages and disadvantages of extending the Commission’s obligation to take “reasonable steps” to protect confidential licensee data beyond the effectiveness of any reassignments and reallocations of broadcast television spectrum. After the statutory obligation in section 6403(a)(3) no longer applies, would the licensee data qualify for any exemptions from disclosure under the Freedom of Information Act (FOIA)? Should the duration of the protection afforded to confidential licensee data be different for participants that successfully bid to relinquish spectrum usage rights in the reverse auction, as opposed to participants whose bids are not accepted? Are there any other issues the Commission should consider regarding the “reasonable steps” it should take to protect confidentiality and the duration of such protection, such as the public policy interest in transparency?

174. The Commission also requests that commenters address whether the obligation to protect confidential Commission-held data should apply solely to the Commission, or extend to applicants in the reverse auction. Specifically, are there any legal or policy reasons to prohibit an applicant from announcing publicly or privately that it is participating in the reverse auction, or from releasing any of its identifiable information in connection with the auction? A reverse auction applicant may be prohibited by Commission rule from communicating its bid contents or bidding strategies to other applicants. Should applicants be entitled to note in the application that their information is not deemed by them to be “confidential” and that they waive any rights to protect it from disclosure?

If a licensee, permissibly or impermissibly, publicly releases information regarding its participation in the reverse auction, the Commission proposes that such information would no longer be “confidential[] * * * Commission-held data” and, thus, the Commission would not be bound to protect the already released information. In addition, should applicants be prohibited from disclosing information regarding other licensees’ participation in the reverse auction? The Commission seeks comment on these issues.

175. Auction participants may have legal obligations to disclose information that the Commission may be required to keep confidential pursuant to the Spectrum Act. For example, public companies must comply with the disclosure requirements of the Securities and Exchange Commission (SEC). More specifically, the SEC requires public companies to report on Form 8-K certain material, non-public events for purposes of shareholder disclosure. Of relevance here, the SEC requires that a public company disclose on Form 8-K any “Material Definitive Agreement.” A material definitive agreement is defined as “an agreement that provides for obligations that are material to and enforceable against the registrant [*i.e.*, the filing party], or rights that are material to the registrant and enforceable by the registrant against one or more other parties to the agreement, in each case whether or not subject to conditions.” If a public company has entered into a material definitive agreement, it must disclose on Form 8-K both (1) the date on which the agreement was entered into or amended, the identity of the parties to the agreement or amendment, and a brief description of any material relationship between the filing party or its affiliates and any of the parties, and (2) a brief description of the terms and conditions of the agreement or amendment that are material to the filing party. Does this reporting requirement apply in the context of a broadcast station participating in the reverse auction? Would this scenario create any conflict with the Commission’s confidentiality obligations under the Spectrum Act?

176. *Prohibition of certain communications.* In the interests of fairness and maximizing competition in the reverse auction process, the Commission proposes to prohibit applicants in the reverse auction from communicating with one another directly or indirectly regarding the substance of their bids or bidding strategies during a time period commencing on or after the pre-auction application deadline and ending on a

date specified by public notice. Communications among applicants concerning matters wholly unrelated to the reverse auction, such as discussions between a broadcast affiliate and its network programming supplier on issues unrelated to the reverse auction, would not fall within the communications prohibition. This proposal is consistent with the Commission's approach in spectrum license auctions. The Commission seeks comment on this proposal, particularly with respect to the scope of the prohibition. In particular, should the Commission limit the prohibition to applicants within the same geographic region? If so, how should the Commission define the relevant geographic region?

177. Also, for purposes of this prohibition, should the term "applicant" include all controlling interests in the entity submitting the pre-auction application, as well as all holders of partnership and other ownership interests and any stock interest amounting to ten percent or more of the entity, or outstanding stock, or outstanding voting stock of the entity submitting the pre-auction application, and all officers and directors of that entity? For NCE stations, should the "applicant" also include, where relevant, all members of the licensee's governing board?

178. Should the Commission adopt any specific exceptions to the communications prohibition for certain applicants in the reverse auction? In particular, recognizing that one party may have an attributable ownership interest in a number of different broadcast television licensees, should auction-related communications between applicants with attributable and/or controlling interests in one another be exempt from the communications prohibition? Are there any other issues regarding the ownership structure of broadcast television licensees that the Commission should consider? Should the Commission permit auction-related communications between applicants that have agreements or arrangements particular to the broadcast television industry, such as a local marketing agreement (LMA), a joint sales agreement (JSA), a shared services agreement (SSA), a network affiliation agreement, or another similar cooperative arrangement?

179. Instead of adopting specific exemptions for particular types of relationships, consistent with the Commission's approach in spectrum license auctions, should it provide a more general exception to the proposed

rule prohibiting certain communications that would allow parties to communicate with one another so long as they have entered into a partnership, joint venture, consortium, or other agreement, arrangement, or understanding relating to the spectrum usage rights being offered in the reverse auction if they have disclosed the existence of those relationships to the Commission? Would disclosure of such agreements to the Commission sufficiently alleviate anticompetitive concerns, even if the Commission does not disclose the existence of such agreements publicly or to other participants in the reverse auction? The Commission notes that even if its competitive bidding rules permit communications among certain reverse auction participants during the auction, participants must also adhere to any applicable antitrust laws. The Commission seeks comment on whether and how any applicable antitrust laws should affect a general exception to the prohibition of certain communications in the reverse auction.

180. In addition, how should the Commission's prohibited communications rule address channel sharing? To alleviate collusion and antitrust concerns related to channel sharing, should the Commission prohibit communications among parties to a channel sharing agreement concerning bids or bidding strategies during the time period specified for all prohibited communications regardless of whether such parties are "applicants" in the reverse auction? Should the Commission expand or contract the applicable time period for channel sharing stations and begin the application of the prohibition at an identified point in time before or after the pre-auction application deadline? In the alternative, recognizing that parties to a channel sharing agreement may prefer to share information with one another regarding their participation in the reverse auction, should the Commission grant an exception to the communications prohibition for communications among licensees agreeing to share a channel? Should channel sharing agreements fall under a general exception for agreements relating to spectrum usage rights offered in the reverse auction, so long as the agreements are disclosed to the Commission? In addition, even if the Commission determines in this proceeding that the sharer need not file a pre-auction application, given the sharer's indirect participation in the reverse auction through the sharee(s)' channel sharing bids, is there any

reason why the Commission should not apply the rule prohibiting certain communications to the sharer and the sharee(s) so that the sharer would be prohibited from communicating with other reverse auction applicants? Should any exception for communications among licensees agreeing to share a channel extend to a contingent offer by the sharer to relinquish all of its spectrum usage rights? The Commission seeks comment on these issues. The Commission also seeks comment on antitrust laws that may impact channel sharing stations' participation in the reverse auction, and asks commenters to address whether and how such laws should affect its proposed rule prohibiting certain communications.

181. The Commission also requests comment on whether to prohibit reverse auction applicants from communicating with applicants in the forward auction regarding the substance of their bids or bidding strategies. If the Commission adopts this approach, what would be the appropriate duration of the prohibition? Should the prohibition begin on or after the pre-auction application deadline for either the reverse or the forward auction—whichever is first—and end after both the reverse and forward auctions are complete? Would the benefits and/or the feasibility of prohibiting certain communications among applicants in both the reverse and forward auctions change depending on whether they are conducted simultaneously or sequentially? Also, to enforce this prohibition, should the Commission require applicants in the reverse auction to identify in their pre-auction applications any relationships with wireless companies (for example, ownership by the same parent company or cross-marketing agreements) since those companies may participate in the forward auction? Should the Commission also require applicants in the forward auction to identify in their short-form applications any relationships with broadcast television licensees?

182. The Commission further asks commenters to consider the potential impact that the Commission's obligation to withhold reverse auction participants' identities may have on its proposed communications prohibition. In prior auctions in which the Commission sought to limit the disclosure of certain bidding-related information, the Commission provided each applicant a list of the other applicants with which they were not permitted to cooperate, collaborate, or communicate—including discussing

bids, bidding strategies, or post-auction market structure. Since section 6403(a)(3) of the Spectrum Act requires the Commission to take reasonable steps to keep the identities of broadcast television licensees participating in the reverse auction confidential, how can the Commission notify an applicant of the other applicants with which it may not communicate without releasing the names or other identifying information about the other applicants? To apply a prohibition against communications while complying with the confidentiality requirements of the statute, should the Commission prohibit all applicants in the reverse auction process from discussing their bids and bidding strategies with *any* broadcast television licensee, regardless of whether the licensee is participating in the auction? Would it be possible to limit such a “blanket” prohibition to broadcast television licensees within the same geographic region, and if so, how should the Commission define the relevant geographic region? The Commission welcomes any insights commenters may have on ways it can provide applicants the information they need to comply with the communications prohibition without releasing any confidential Commission-held data concerning licensees participating in the auction.

5. Bidding Process Options

183. The *Incentive Auction NPRM* proposes rules that would enable the Commission to select among procedural options when finalizing the auction design and related processes.

184. *Reverse Auction Design Options.* The Commission proposes a rule that provides for the establishment of specific auction procedures governing bid collection, assignment of winning bids, and the determination of incentive payment amounts in the reverse auction. The reverse auction may use one or more rounds of bidding and/or contingent stages of bidding. The procedures may incorporate bids or offers that simply specify a price for an item, that indicate demand for an item at a specified price, or that are more complex. The Commission may determine the assignment of winning bids in the reverse auction based on bid amounts and a variety of other factors, including but not limited to the feasibility of assigning broadcast television channels to licensees retaining spectrum usage rights, as well as the bids submitted in and/or the results of the forward auction. The Commission also proposes a rule regarding procedures to determine the incentive payments that winning

bidders would receive. These proposed rules would enable the development of procedures for a specific auction design that is consistent with the various technical and policy requirements of the reverse auction as well as sound economic principles and practice and the needs of the Commission and the bidders. The Commission proposes that it may use real time bidding in all electronic auction designs. The Commission seeks comment on these proposals. Are there any additional auction design considerations that the Commission should take into account for the reverse auction?

185. *Sequencing.* The Spectrum Act does not require the reverse and forward auctions to occur in any particular order, and section 6403 expressly allows (but does not require) the broadcast television reverse and forward auctions to occur simultaneously. The Commission proposes a rule that enables the sequence of the reverse and forward auctions to be determined closer in time to the actual bidding. The Commission seeks comment on this proposal.

186. *Reserve Price.* The competitive bidding rules applicable to typical spectrum license auctions specify that the Commission may establish a reserve price or prices, either disclosed or undisclosed, below which a license or licenses subject to auction will not be awarded. The forward auction, as a spectrum license auction, would be subject to this rule. Similarly, the Commission proposes that it may establish a reserve price or prices for the reverse auction, either disclosed or undisclosed, above which bids to relinquish spectrum usage rights would not win in the reverse auction. The Commission proposes that the reserve price or prices for the reverse auction may be established for spectrum usage rights and/or licenses individually, in combination, or in the aggregate. The Commission seeks comment on the reserve price rule proposed for the reverse auction, and the Commission requests input on the factors that it should consider when setting a reserve price or prices for the reverse and forward auctions.

187. One factor that the Commission would consider when setting a reserve price or prices for the reverse and forward auctions would be the statutory minimum proceeds requirement. The Spectrum Act requires that the forward auction must yield proceeds greater than the sum of the following: (1) The total amount of compensation that the Commission must pay successful bidders in the reverse auction under section 6403(a)(1); (2) the cost of

administering the broadcast television spectrum incentive auction, an amount which the Commission is required to retain under section 6403(c)(2)(C) and 47 USC 309(j)(8)(B); and (3) the estimated amount of the relocation cost reimbursements that the Commission is required to pay to broadcast television licensees and MVPDs under section 6403(b)(4)(A). In addition, section 6413 anticipates that proceeds from the forward auction will be available for distribution into the Public Safety Trust Fund. Are there any other factors that the Commission should consider when setting a reserve price or prices for the reverse and forward auctions?

188. *Opening Bids and Bidding Increments.* The Commission proposes a rule providing for the use of maximum or minimum bid increments in dollar or percentage terms to be established before or during the reverse auction, as well as maximum or minimum opening bids. The Commission requests comment on these proposals and specifically asks commenters to address what factors should influence any maximum or minimum opening bids and bid increments.

189. *Stopping Rules.* The Commission proposes a rule providing for stopping procedures to be established before or during the reverse auction in order to terminate the auction within a reasonable time and in accordance with the goals, statutory requirements, and rules for the auction, including the reserve price or prices. The stopping rule would thereby permit the Commission to adopt criteria to determine, prior to terminating the auction, whether such requirements have been met. The Commission seeks comment on this proposal.

190. *Activity Requirement.* In the event the Commission uses a multiple round competitive bidding design, the Commission proposes a rule providing for activity procedures that would require a minimum amount of bidding activity during the reverse auction. The Commission requests input on issues that may affect the use of activity rules in the reverse auction context.

191. *Auction Delay, Suspension, or Cancellation.* The Commission proposes that, by public notice or by announcement during the auction, it may delay, suspend, or cancel the reverse auction in the event of natural disaster, technical obstacle, network disruption, administrative or weather necessity, evidence of an auction security breach or unlawful bidding activity, or for any other reason that affects the fair and efficient conduct of competitive bidding. The Commission further proposes that, in its sole

discretion, it could elect to resume the auction starting from the beginning of the current or some previous round, or cancel the auction in its entirety. Network interruption could cause the Commission to delay or suspend the auction. The Commission requests comment on this proposal.

6. Post-Auction Processing

192. The Commission seeks comment here on each step of the post-auction process. To the extent commenters disagree with a particular aspect of the proposed process, the Commission asks them to identify that with specificity, propose an alternative, and address any associated costs and benefits.

193. *Commission Notices.* Upon the conclusion of spectrum license auctions, the Commission typically issues a public notice declaring the bidding closed and identifying the winning bidders. The Commission proposes to do so for the reverse auction, as well; however it notes that the timing and the permissible contents of such public notice may depend on the conduct of the forward auction and how the Commission applies the statutory confidentiality restriction. The Commission invites comment on this proposal and asks commenters to address whether there are any other issues it should consider with respect to notifying auction participants and the public of the reverse auction results.

194. *Binding Obligations.* The Commission proposes that all bids submitted in the reverse auction are irrevocable, binding offers to relinquish spectrum usage rights. As a result, if a participant's bid is accepted in the reverse auction, the spectrum usage rights offered in the bid would be relinquished by a Commission-imposed deadline. The Commission seeks comment on this proposal.

195. *Post-Auction Information Submittals.* The Commission proposes to require all winning bidders to submit additional information to facilitate incentive payments, such as wiring instructions or other bank account information necessary to disburse funds to winning bidders. The Commission envisions that the information would be submitted on standardized incentive payment forms. The Commission seeks comment on this proposal.

196. The Commission further asks that commenters address the appropriate deadlines for filing post-auction submittals. The Commission also seeks comment on the procedures that it should apply to a winning bidder that fails to submit the required post-auction information by the established deadlines.

197. *Incentive Payments/Portion of Proceeds Shared with Incumbent Volunteers.* In accordance with section 309(j)(8)(G)(i) of the Communications Act, the Commission will share with successful bidders that voluntarily relinquish licensed spectrum usage rights a portion of the forward auction proceeds "based on the value of their relinquished rights as determined in [a] reverse auction." Section 6403(c) of the Spectrum Act provides that the amount of the proceeds that the Commission will share with a broadcast television licensee will not be less than the amount of the licensee's winning bid in the reverse auction. The Commission proposes to incorporate these statutory requirements into the competitive bidding rules for the reverse auction. The Commission seeks comment on this proposal.

198. The Commission proposes that generally, incentive payments would be distributed directly to the applicant. Elsewhere the Commission proposes that the applicant must be the licensee. The Commission seeks comment as to whether, even if it determines in this proceeding that the applicant may be an entity other than the licensee, the incentive payment should be distributed only to the licensee. In addition, the Commission proposes that for channel sharing bids, the applicant would be the sharee since the sharee would relinquish its frequencies in order to share a channel with the sharer. The Commission proposes that, even if it determines in this proceeding that both sharers and sharees should file applications and/or certain certifications prior to the reverse auction, the incentive payment would be distributed directly to the sharees. The Commission anticipates that the sharee(s) may choose to share the proceeds with the sharer based upon the contractual arrangements in their channel sharing agreement. Would this proposal affect a sharer's decision to participate in the reverse auction? Are there any other issues that the Commission should consider regarding the appropriate recipients of incentive payments for winning bids?

199. The Commission also seeks comment on the timing of the incentive payments. The only deadline in the Spectrum Act concerning payments to broadcast television licensees is the requirement in section 6403(b)(4)(D) that the Commission pay relocation costs within three years of the completion of the forward auction. This statutory deadline does not apply to incentive payments made to winning bidders in the reverse auction. Should the Commission identify a date by

which it should make all reasonable efforts to complete all incentive payments? If so, what would be an appropriate goal? Should incentive payments be distributed before, on, or after the date upon which the licensee relinquishes its spectrum usage rights? What impact, if any, would the timing of the incentive payments have on a broadcast television licensee's decision to participate in the reverse auction?

200. Typically, entities that are currently delinquent on any non-tax debt owed to any federal agency are not permitted to participate in spectrum license auctions. In addition, the Commission's red light procedures require that action on an application be withheld until full payment is made on any non-tax delinquent debt owed to the Commission. Given that one of the Commission's goals is to encourage widespread participation in the reverse auction by broadcast television licensees, the Commission seeks comment on whether it should add an exception to its red light procedures that would allow entities currently owing non-tax delinquent debt to the Commission or other federal agencies to participate in the reverse auction. If the Commission adopts this exception, it requests comment as to whether it should deduct the amount of any such delinquent debts from the entities' incentive payments and hold such funds in escrow pending the outcome of any such delinquency proceedings and/or forward those funds to the appropriate agencies for collection.

B. Competitive Bidding Process for Forward Auction—Modifications to Part 1 Subpart Q

201. The Commission considers changes to the Commission's general competitive bidding rules that may be necessary or desirable to conduct a forward auction for new licenses to use broadcast television spectrum made available for flexible use through the incentive auction process. The Commission proposes that those general competitive bidding rules would apply to resolve any mutually exclusive applications received for such licenses. The Commission's competitive bidding rules provide a framework from which it develops final procedures for the particular competitive bidding processes that it conducts. Accordingly, the Commission considers changes that might be necessary with respect to particular licenses likely to be made available through the broadcast television spectrum incentive auction process. The Commission notes that any changes made to its general competitive bidding rules in other Commission

proceedings would apply to the forward auction for new licenses made available through the incentive auction process.

1. Purpose

202. The Commission has been authorized to conduct competitive bidding to resolve mutually exclusive applications for certain types of licenses since 1993. Accordingly, the Commission has developed a framework of rules to facilitate the auctions that it has held to date. The Commission's new statutory authority to conduct incentive auctions introduces a new dimension to the competitive bidding process. The Commission proposes revisions to the existing competitive bidding rules to take into account that the spectrum covered by the licenses is the subject of the broadcast television spectrum incentive auction process. In addition, the Commission seeks comment on whether further rule changes may be required.

2. Applications Subject to Competitive Bidding

203. The Communications Act, as amended, mandates that the Commission use competitive bidding to resolve mutually exclusive applications for licenses, subject to exceptions specified in the statute. To date, the Commission has considered two or more parties seeking to bid for a particular license to present mutually exclusive applications for the license, irrespective of whether each party subsequently bids for the license. Where only one party seeks a particular license offered in competitive bidding, that license will be removed from the competitive bidding process and the Commission will consider that party's non-mutually exclusive application for the license through a process separate from the competitive bidding. This has worked well with respect to defined licenses that have parameters such as frequency and geography defined apart from and in advance of competitive bidding.

204. The Commission seeks comment on how to apply the requirement of mutual exclusivity in the context of the broadcast television spectrum forward auction. Specifically, if the spectrum to be offered in the forward auction consists of generic (non-frequency-specific) blocks, how should the Commission determine whether mutual exclusivity exists? In addition, the Commission asks commenters to address whether applications to participate in the reverse and forward auctions are "mutually exclusive applications" for "initial license[s]" since the reverse and forward auction

applicants will submit bids relating to mutually exclusive spectrum usage rights (*i.e.*, the spectrum currently used by broadcast television licensees). The Commission takes this opportunity to delete an outdated rule, 47 CFR 1.2102(c), that lists services that under current law are now subject to competitive bidding but previously were exempt consistent with prior law.

3. Bidding Credits

205. Section 309(j)(4) of the Communications Act requires that when the Commission prescribes regulations to establish a competitive bidding methodology for the grant of licenses through the use of competitive bidding, it must "ensure that small businesses, rural telephone companies, and businesses owned by members of minority groups and women are given the opportunity to participate in the provision of spectrum-based services." In addition, section 309(j)(3)(B) of the Act provides that in establishing eligibility criteria and bidding methodologies, the Commission shall promote "economic opportunity and competition * * * by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women."

206. In 1995 the Supreme Court decided *Adarand Constructors, Inc. v. Peña*, 515 U.S. 200 (1995), in which it held that any federal program wherein the "government treats any person unequally because of his or her race" must satisfy the "strict scrutiny" constitutional standard of review. In response to the Court's holding, the Commission decided to refrain from providing bidding credits to women- and/or minority-owned businesses until it developed a record that would provide the evidentiary support necessary to withstand these elevated standards of review. The Commission has noted that minority- and women-owned businesses that qualify as small businesses may take advantage of the provisions the Commission has adopted for small businesses.

207. The Commission defines eligibility requirements for small businesses on a service-specific basis, taking into account the capital requirements and other characteristics of each particular service in establishing the appropriate threshold. In light of the similarities with wireless licenses already assigned in the 700 MHz band, the Commission proposes to adopt here the same small business size standards the Commission adopted for 700 MHz.

Accordingly, the Commission proposes to define a small business as an entity with average annual gross revenues for the preceding three years not exceeding \$40 million, and a very small business as an entity with average annual gross revenues for the preceding three years not exceeding \$15 million. The Commission will coordinate these proposed small business size standards with the United States Small Business Administration. The Commission also proposes to provide small businesses with a bidding credit of 15 percent and very small businesses with a bidding credit of 25 percent. The bidding credits the Commission proposes here are those set forth in the standardized schedule in Part 1 of the Commission's rules. The Commission seeks comment on the use of these standards and associated bidding credits for applicants to be licensed in the forward auction for new flexible use licenses in the reallocated broadcast television spectrum, with particular focus on the appropriate definitions of small and very small businesses as they relate to the size of the geographic area to be covered and the spectrum allocated to each license. The Commission requests that commenters address the expected capital requirements for services in these bands and other characteristics of the service. The Commission invites commenters to use comparisons with other services for which the Commission has already established auction procedures as a basis for their comments regarding the appropriate small business size standards.

208. The Commission also seeks comment on whether the small business provisions it proposes are sufficient to promote participation by businesses owned by minorities and women, as well as rural telephone companies. To the extent that commenters propose additional provisions to ensure participation by minority-owned or women-owned businesses, they should address how such provisions should be crafted to meet the relevant standards of judicial review.

209. In addition, the Commission notes that under its Part 1 rules, a winning bidder for a market will be eligible to receive a bidding credit for serving a qualifying tribal land within that market, provided that it complies with the applicable competitive bidding rules. The Commission currently has under consideration various provisions and policies intended to promote greater use of spectrum over tribal lands. The Commission proposes to extend any rules and policies adopted in that proceeding to any licenses that may be issued through competitive bidding in

the forward auction. The Commission seeks comment on this proposal.

4. Competitive Bidding Design Options

210. The Commission's current rules list types of auction designs from which the Commission may choose when conducting competitive bidding for spectrum licenses. These options include sequential and simultaneous auctions, single and multiple round auctions, and auctions with combinatorial bidding. Since the Commission's Part 1 competitive bidding rules were originally adopted, auction design has evolved and continues to evolve in new directions, sometimes combining several of these listed auction design elements and sometimes utilizing different elements.

211. The Commission proposes to revise the current list of auction design options set forth in 47 CFR 1.2103. In particular, the Commission proposes a rule that provides for the establishment of specific auction procedures governing bid collection, assignment of winning bids, and the determination of payment amounts in spectrum license auctions. Such auctions may use one or more rounds of bidding and/or contingent stages of bidding; and may incorporate bids or offers that simply specify a price for an item, that indicate demand for an item at a specified price, or that are more complex. The Commission may determine the assignment of winning bids based on bid amounts and a variety of other factors, including but not limited to bids submitted in and/or the results of a separate competitive bidding process, such as an auction to establish incentive payments for relinquishment of spectrum usage rights. The Commission anticipates that procedures established to implement these broad auction design elements would take into account sound economic principles and practice and the needs of the Commission and the bidders. The Commission seeks comment on this proposal to amend 47 CFR 1.2103. In light of the Commission's authority to conduct the broadcast television spectrum incentive auction, are there any additional auction design considerations that it should take into account for the forward auction?

5. Competitive Bidding Mechanisms

212. 47 CFR 1.2104 sets forth various mechanisms that can be used in connection with any system of competitive bidding for Commission licenses. For example, the rules enable the Commission to determine how to sequence or group the licenses offered; whether to utilize reserve prices, minimum opening bids and minimum

or maximum bid increments; whether to establish stopping or activity rules; and how to determine payments required in the event of bid withdrawal, default, or disqualification. The Commission notes, however, that 47 CFR 1.2104 does not attempt to list exhaustively all potential aspects of the Commission's procedures for competitive bidding.

213. The Commission proposes to amend its current stopping rule contained in 47 CFR 1.2104 so that it would permit the Commission to establish stopping rules before or during multiple round auctions in order to terminate the auctions not only within a reasonable time, but also in accordance with the goals, statutory requirements, and rules for the auction, including the reserve price or prices. The stopping rule would thereby allow the Commission to adopt criteria to determine, prior to terminating the auction, whether such requirements have been met. The Commission seeks comment on this proposal and on any alternatives.

214. The Commission also seeks comment on whether it should make any other revisions to the competitive bidding mechanisms listed in 47 CFR 1.2104 in order to ensure compatibility with the requirements for the broadcast television spectrum forward auction. The Commission also asks commenters whether it should add any new mechanisms to the rule to facilitate the conduct of the forward auction.

6. Revisions to Other Part 1 Competitive Bidding Rules

215. The Commission's existing competitive bidding rules also establish additional procedures regarding the competitive bidding process. More specifically, the Commission's existing rules address applications to participate in competitive bidding, communications among applicants to participate, upfront payments from competitive bidding participants, down and final payments by winning bidders, and applications for licenses by winning bidders, as well as the processing of such applications and default by and disqualification of winning bidders. The Commission seeks comment on whether these existing rules require any revisions in connection with the conduct of the broadcast television spectrum forward auction.

216. The Commission's existing rules prohibit applicants for licenses in any of the same geographic areas from cooperating or communicating with one another regarding the substance of their bids or bidding strategies during the competitive bidding process unless they have notified the Commission that they

are members of a bidding consortium or other joint bidding arrangement. This rule seeks to prevent competing parties from reaching agreements that could reduce the competition in the auction. The Commission seeks comment on how to determine which parties are "competing" in the forward auction for the purpose of enforcing the communications prohibition, particularly if the spectrum licenses offered in the forward auction are generic blocks.

217. The Commission's existing rules also include various certifications that a party must make in any application to participate in competitive bidding. The Commission proposes that on the short-form application for the forward auction, the applicant must certify, under penalty of perjury, that it and all of the related individuals and entities required to be disclosed on the short-form application are not "person[s] who [have] been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant." As with other required certifications, failure to include the required certification by the applicable filing deadline would render the application unacceptable for filing, and the application would be dismissed with prejudice. The Commission seeks comment on this proposal.

218. Finally, the Commission invites commenters to address the potential regulatory impact of the proposed rules. In light of Congress's mandate to conduct a broadcast television spectrum incentive auction, the Commission asks that commenters address the cost effectiveness of the Commission's proposals and their own, both in relative and absolute terms. The Commission also asks that commenters be as detailed as possible with respect to claims based on any costs resulting from a proposal, and take into account any costs relative to the entire effect of the incentive auction, both on the party incurring the cost and as a whole.

IX. Post-Auction Issues

1. License Modification Procedures

a. Application Filing Requirements and Channel Substitution Opportunity

219. Section 316 of the Communications Act authorizes the Commission to modify any broadcast television station license in order to promote the public interest, convenience and necessity, and the Spectrum Act makes the right of a licensee to protest a proposed order of modification of its license under section 316 inapplicable in the case of a

modification under section 6403. The Commission proposes that once the reverse and forward auctions are complete and the repacking becomes effective, all stations that are reassigned to new channels would be required to file minor change applications for construction permits using FCC Forms 301-DTV, 301-CA or 340-DTV, with the exception of winning channel sharing bidders, who would be required to file only if their “sharer” channel—the channel to which they propose to move once they relinquish their spectrum usage rights—is reassigned in the repacking process. The Commission proposes a simplified, one-step process for implementing the post-auction and post-repacking channel changes. Rather than require stations to go through a prolonged two-step process of first amending the DTV Table of Allotments and then filing an application for its repacked facilities, the Commission is proposing simply to allow stations to file either a license application (for stations where no technical changes are proposed such as channel sharing) or a minor change application. The Commission proposes to expedite the processing of “check list” type applications that certify compliance with the technical rules and no substantial changes to their modified facilities. The streamlined procedures are meant to expedite the post auction licensing and to ensure a smooth post-auction transition and recovery of channels. The Commission anticipates that some stations receiving new channel assignments may wish to change their channels, and proposes that as soon as the staff has substantially completed its processing of the minor change applications required under the proposal above, the Commission will announce an opportunity for stations to request a substitute channel by filing an application to modify their construction permits, provided that they are able to identify an available channel. The Commission seeks comment on which licensees should be eligible for the proposed channel substitution opportunity. The Commission also seeks comment on appropriate procedures for the proposed channel substitution opportunity. Because implementation of a channel sharing arrangement does not involve construction of a new facility, the Commission proposes that channel sharing stations simply be required to file license applications (FCC Forms 302-DTV or 302-CA) for the shared facility upon commencement of shared operations. If a station that has agreed to share its channel with a winning channel sharing bidder is reassigned to

a new channel, the Commission proposes to require the sharing stations to file license applications to share the original, pre-auction channel until their new channel facility is constructed. The *Incentive Auctions NPRM* seeks comment on these proposed procedures.

b. Construction Deadline

220. In the *Incentive Auction NPRM*, the Commission seeks comment on the amount of time that stations would need to transition to their repacked channels. The Commission recognizes the need to recover channels from the auction to allow their use by new wireless entities but also that stations would need various amounts of time to modify their facilities to operate on their repacked channels depending upon the degree of changes needed. The Commission invites comment on whether to establish a single deadline for the completion of the transition. Under this proposal, winning license termination bidders would be required to cease broadcasting, and stations that remain on the air would be required to transition to any new channel assignments by a date certain after the completion of the reverse and forward auctions and the effective date of the repacking. The Commission recognizes that some stations may need additional time to complete their facilities. Would 18 months be a reasonable transition deadline? Should the deadline instead be tied to individual stations’ authorized construction periods? Should the three-year deadline for reimbursement of relocation costs imposed by the Spectrum Act be factored in, and if so, how? Commenters should explain the basis for their proposed deadlines, and address the potential costs and benefits associated with them. The Commission also seeks comment on creative approaches to the logistical challenges presented by the transition. Should a phased transition timetable be adopted, establishing different transition deadlines according to region (in light of weather/seasonal issues), individual station circumstances (e.g., the nature of the station modification involved), and/or other factors? Should the Commission establish earlier deadlines for winning license termination bidders, winning UHF to VHF bidders, and winning channel sharing licensees. Would it be reasonable to establish an earlier deadline for winning license termination bidders because they need not modify technical facilities in order to continue broadcasting? 326. Similarly, would it be reasonable to establish earlier deadlines for other winning reverse auction bidders

because they will have access to shared auction proceeds to help fund any necessary technical modifications and, with regard to winning channel sharing bidders, may have to make less complicated technical changes? Would such stations be in a meaningfully different position from stations that elect to request advance payment of their estimated relocation costs for purposes of completing their transitions? The Commission also seeks comment on appropriate measures to provide regulatory flexibility for broadcasters to complete the transition. Regardless of the criteria adopted for considering requests for additional time to construct, the Commission seeks comment on whether to limit all extensions to a period of not more than six months from grant of the extension.

2. Consumer Education

221. In order to inform the public of the transition that will occur following the conclusion of the incentive auction and implementation of repacking, the Commission seeks comment on the types of consumer education that stations should perform. The Commission cites the need to notify viewers of channel changes and changes to station facilities that might result in a loss of service. The Commission seeks comment on whether to require stations that are going to cease broadcasting or transition to new channels as a result of the broadcast television spectrum incentive auction to air viewer notifications, as well as the form any such notifications should be required to take and when they should be aired. Comments also are sought on the costs and benefits of consumer education requirements.

3. Notice to MVPDs

222. The Commission seeks comment on whether to require stations that receive new channel assignments or cease broadcasting as a result of the broadcast television spectrum incentive auction to provide notice to affected multichannel video programming distributors (MVPDs) of channel changes and other technical changes that could affect carriage. Specifically, the Commission seeks comment on whether to require such notice, what information should be provided, and what form it should take. Would a simple letter notification to the affected MVPDs be sufficient? The Commission also seeks comment on a time frame for any such notice in order to provide MVPDs with a reasonable opportunity to prepare for any necessary carriage or technical changes and, should they chose to do so, to provide notice to their

subscribers. Alternatively, would the announcement by the Commission of the reverse auction winners and newly repacked channel assignments provide sufficient notice to MVPDs? The Commission asks that commenters address the relative costs and benefits of any such notice requirements.

B. Payment of Relocation Costs

1. Payment of Eligible Broadcaster Costs

223. *Eligibility.* The Commission interprets the reimbursement mandate to apply only to full power and Class A television licensees that are involuntarily assigned to new channels in the repacking process; and it does not interpret it to require reimbursement of winning reverse auction bidders. The Commission seeks comment on this interpretation.

224. *Election of Estimated or Actual Cost Approach.* The Commission proposes to allow broadcasters to elect reimbursement of their eligible relocation costs based on either their estimated costs or their actual, out-of-pocket expenditures. Stations choosing to receive reimbursement based on the estimated cost approach would receive their reimbursement through an advance payment, while stations choosing reimbursement based on actual costs would receive reimbursement only after paying and documenting their costs.

225. Under our proposed approach, eligible television licensees that are involuntarily assigned to new channels in the repacking process could elect to request an advance payment based upon a predetermined amount to cover their relocation expenses. The Commission seeks comment on how to estimate relocation costs under the proposed approach. Should the estimated relocation costs be the same for all eligible stations, or should we establish tiers of fixed rates based on specified criteria such as the rank of the market to which the reassigned station is licensed, the type of channel change (e.g., within the UHF band, within the high VHF band, or within the low VHF band), and/or the extent of the technical modifications involved? The Commission also seeks comment on whether, under an estimated cost approach, the reimbursement amounts should differ depending on whether the broadcast licensee is a full power station operating under the Part 73 technical rules or a Class A station operating under the Part 74 technical rules. Finally, the Commission seeks comment on whether to require a station receiving an advance payment to report on whether they spent all of their

reimbursement funds and to promptly return any unused funds.

226. Stations also could elect to be reimbursed based upon their actual costs instead of their estimated costs. For stations that elect to be reimbursed based on actual costs, the Commission proposes to require documentation of all expenses. The Commission invites comment on this proposed approach, including the potential costs and benefits associated with it.

227. Alternatively, the Commission invites comment on whether to require all broadcasters to demonstrate their relocation costs before receiving reimbursement. Would such an approach necessarily result in a more efficient use of the TV Broadcaster Relocation Fund? Would any such benefits be offset by the administrative burdens associated with preparation and review of such showings? How would the Commission meet the statutory three-year deadline under such an approach? If the Commission adopts such an approach, should it also cap reimbursements and, if so, how should it determine the appropriate caps? Should it provide reimbursement in excess of the cap upon an appropriate showing? The Commission seeks comment on these issues, as well as the appropriate procedures to use for documenting costs.

228. *Determination of Eligible Broadcaster Costs.* Regardless of the reimbursement approach it adopts, the Commission invites comment on the types of relocation costs that stations are likely to incur, and how to determine whether costs are “reasonable” for purposes of the reimbursement mandate. What types of “hard” and “soft” costs are stations likely to incur to effectuate channel changes, and to what extent should such costs be eligible for reimbursement? What types of relocation costs did stations incur in the digital television transition? Is it reasonable to expect that stations assigned to new channels in the repacking process would incur similar expenses? In the 800 MHz rebanding program, the Commission adopted a “Minimum Necessary Costs Standard,” and limited reimbursement to the “minimum cost necessary to accomplish rebanding in a reasonable, prudent, and timely manner” in order to provide facilities comparable to those presently in use, clarifying that this did not mean the absolute lowest cost under any circumstances. The Commission seeks comment on whether to adopt a similar standard in this proceeding. Under such a standard, licensees would be able to recover only costs that are reasonable, prudent and the minimum necessary to

provide facilities and services comparable to those presently in use. The Commission also seeks comment on whether to permit licensees to request reimbursement for facility upgrades made while effectuating the channel changes. Some stations may not be able to replace older, legacy equipment and may be required to obtain upgraded or more expensive equipment in order to move to their new channels. Would permitting reimbursement of such equipment costs comport with the Spectrum Act mandate to reimburse only “reasonable” costs? The Commission also seeks comment on the point at which an upgrade would exceed the Spectrum Act mandate of “reasonable” and thus not be eligible for reimbursement.

229. The Spectrum Act prohibits reimbursements for “lost revenues.” The Commission seeks comment on how to interpret “lost revenues” for purposes of the reimbursement mandate.

230. The Commission also seeks comment on whether and how to prioritize requests for reimbursement in the event that the total eligible relocation costs exceed the statutory limit of \$1.75 billion. Should it consider reimbursement requests on a first-come, first-served basis? Should it prioritize requests on some other basis? The Commission invites commenters to address the potential costs and benefits associated with any prioritization methods that they advocate.

231. Further, the Commission seeks comment on whether to explore bulk purchasing opportunities or bulk services arrangements that could reduce the relocation costs incurred by individual television licensees as a result of the repacking. In addition, during the digital television transition, some stations were able to repurpose their own analog and pre-transition digital equipment, or that of another station, for post-transition use. The Commission seeks comment on methods to encourage broadcasters to make use of equipment that is no longer needed by a repacked or channel sharing licensee.

232. *Service Rule Waiver in Lieu of Reimbursement.* Pursuant to the Spectrum Act, instead of reimbursement for repacking costs, a television licensee may accept a waiver of the Commission’s service rules to permit it to make flexible use of its spectrum to provide non-broadcast services, so long as it “provides at least 1 broadcast television program stream on such spectrum at no charge to the public.” The Commission invites comment on the meaning and scope of this provision.

In particular, which of our rules should be eligible for waiver under this provision? What types of flexible uses by broadcasters should it consider appropriate in this context, and what factors should go into this analysis? How can the Commission assess whether flexible use operations by broadcasters would cause interference problems? Should waivers be granted on a permanent or temporary basis? If the latter, for how long should the waiver last? How should the Commission interpret the requirement of a "broadcast television program stream" provided "at no charge to the public"? Would use of a technology other than the ATSC digital television standard satisfy this requirement? If so, what steps would a licensee need to take to ensure the ability of "the public" to view the broadcast television program stream at no charge?

233. In addition, the Commission seeks comment on appropriate procedures for the filing and review of any such waiver requests. At what point should any such requests be entertained, and how should they be submitted? Should they be subject to public notice and an opportunity for comment? Should the Commission require submission of any waiver requests at the same time and using the same procedures as for reimbursement requests? How can we ensure that a licensee whose waiver request is not granted has an opportunity to obtain reimbursement for its eligible relocation costs?

2. Payment of Eligible MVPD Costs

234. The Commission seeks comment on the Spectrum Act mandate that the Commission reimburse, from the TV Broadcaster Relocation Fund, costs reasonably incurred by an MVPD in order to continue to carry the signal of a broadcast television licensee that has its channel changed as part of the repacking process or that relinquishes its spectrum usage rights through a winning UHF to VHF or channel sharing bid in the reverse auction. Should the Commission allow MVPDs to elect to be reimbursed by an advance payment based on estimated costs, as proposed above for broadcasters? If so, how should it estimate costs? Should all MVPDs be eligible for reimbursement based upon the same estimated amount per station change? If so, should there be one estimated rate or rate tiers? On what basis should the Commission choose different tiers? As with the broadcaster reimbursements, the Commission seeks comment on whether to require an MVPD receiving an advance payment to report on whether

they spent all of their reimbursement funds and to promptly return any unused funds. The Commission invites comment on these and any other issues raised by an estimated-cost reimbursement approach.

235. Regardless of whether it decides to allow MVPDs to elect to be reimbursed by an advance payment based on estimated costs, the Commission invites comment on reimbursing MVPDs based on actual costs. The Commission proposes to require documentation of all expenses under an actual-cost approach. MVPDs would be required to submit a showing, including appropriate documentation, detailing their costs, as well as a demonstration that all such costs are reasonable, prior to reimbursement. As with broadcaster reimbursement, the Commission seeks comment on whether to cap actual cost-based payments. If it sets such caps, how should it determine the appropriate limits? Should it provide reimbursement in excess of any caps upon an appropriate showing? The Commission seeks comment on the appropriate procedures to use for documentation of costs.

236. Further, the Commission seeks comment on the types of costs that MVPDs are likely to incur, and how to determine whether such costs are "reasonable" for purposes of the reimbursement mandate. For example, MVPDs incurred costs during the digital television transition in fulfilling the mandate that they "ensure that the transition went smoothly for their customers." Similarly, what costs will MVPDs likely incur to carry stations involuntarily assigned to new channels in the repacking process? Should the Commission interpret the statute to provide for reimbursement of costs incurred in carrying a channel sharing station from the shared location if the station previously did not qualify for carriage on the MVPD system?

3. Measures To Prevent Waste, Fraud and Abuse

237. The Commission seeks comment on potential waste, fraud and abuse of the TV Broadcaster Relocation Fund, and how to prevent it. What steps might be taken to prevent such abuse? If the Commission permits broadcasters and MVPDs to seek reimbursement based upon the estimated cost approach proposed above, it seeks comment on whether to require the receiving entity to report on whether they spent all of their reimbursement funds and to return any unused or misused funds.

238. The Commission seeks comment on whether appointment of a third-party auditor to over see the Relocation Fund

would help further its goals to prevent waste, fraud and abuse.

C. Regulatory Issues; Licensing and Operating Rules

1. Broadcast Issues

a. Multiple Ownership Rules

239. In fairness to entities with broadcast multiple ownership combinations that could be rendered out of compliance due to channel allotments or technical changes resulting from repacking, the NPRM proposes that such ownership combinations be permanently "grandfathered." The Commission proposes considering any other multiple ownership issues that result from the incentive auction in its ongoing quadrennial review proceeding.

240. The Commission also invites comment on measures that it might take outside of the context of the multiple ownership rules to address any impact on diversity that may result from the incentive auction.

b. Displacement of Low Power Television Stations

241. The Commission recognizes that low power television and TV translator stations may be greatly impacted by repacking. Because they have only secondary interference protection rights, LPTVs will not be permitted to participate in the reverse auction and will not be protected during repacking. Many stations will be displaced from their current operating channel. To ease the burden on these stations, the Commission proposes allowing displaced LPTV stations to have the first opportunity to submit a displacement application and propose a new operating channel. The Commission also cited the need to determine how to resolve mutually exclusive displacement applications filed by LPTV stations displaced by repacking. The Commission proposes adopting a set of priorities and seeks comment on the types of priorities to recognize. The Commission specifically seeks comment on the impact of such displacement of LPTV stations, and of the priorities by which displacement applications will be evaluated, on small, minority-owned, and women-owned LPTV stations. Comment is sought on suggestions for alternative criteria or procedures for allocating available channels among low power television and translator stations at risk of displacement following the incentive auctions.

c. Channel Sharing

242. The Commission seeks comment on several issues related to channel

sharing that were not resolved in the Commission's Channel Sharing Report and Order, ET Docket No. 10–235, Report and Order, 27 FCC Rcd 4616 (2012). For example, the Commission seeks comment on whether and when channel sharing agreements (CSAs) should be filed with the Commission and whether CSAs should be required to contain certain provision concerning access to, maintenance of, and modification of the shared transmission facilities. The Commission also seeks comment on how to resolve the termination of CSAs. Should the Commission require that CSAs grant approval rights or rights of first refusal to channel sharing stations in the event of a proposed assignment or transfer of the license held by the other station or stations. Alternatively, should the Commission mandate that CSAs require future buyers to assume the exiting party's rights and obligations under the CSA? Should all licensee parties to a CSA demonstrate assent to a proposed transaction in the assignment or transfer application related to that deal? Comment also is sought whether all parties to a CSA should be jointly responsible for compliance with certain of the Commission's rules. Comments is sought on proposals for retaining NCE status when an NCE licensee enters into a CSA with a commercial station. The Commission proposes that an NCE licensee, whether it relinquishes its reserved channel in order to share a non-reserved channel, or agrees to share its reserved channel with a commercial station, retain its NCE status on its license and be required to continue to comply with the rules and policies applicable to NCE licensees. Finally, the Commission proposes that the Spectrum Act provision on preservation of cable and satellite carriage would not affect the carriage rights of Class A stations. The Commission notes that the resolution of these issues is important in order to provide needed clarity to parties considering participating in the reverse auction through a channel sharing bid.

2. Wireless Issues

a. Flexible Use, Regulatory Framework, and Regulatory Status

(i) Flexible Use

243. We are proposing service rules for the 600 MHz band that permit a licensee to employ the spectrum for any use permitted by the United States Table of Frequency Allocations contained in part 2 of our rules, subject to our service rules. Congress recognized the potential benefits of flexibility in allocations of the

electromagnetic spectrum and amended the Communications Act in 1999 to add section 303(y). In addition, the Spectrum Act provides that any initial licenses for use of spectrum made available for assignment by the voluntary relinquishment of broadcast television licensees shall be subject to flexible-use service rules.

244. Thus, we propose that the 600 MHz band may be used for any fixed or mobile service that is consistent with the allocations for the band. If commenters think any restrictions are warranted, they should describe why such restrictions are needed, quantify the costs and benefits of any such restrictions, and describe how such restrictions would comport with the statutory mandates of section 303(y) of the Communications Act and sections 6402 and 6403 of the Spectrum Act.

(ii) Regulatory Framework

245. Consistent with flexible use of these bands, we also propose licensing the spectrum under the flexible regulatory framework of part 27 of our rules. Unlike other rule parts applicable to specific services, part 27 does not prescribe a comprehensive set of licensing and operating rules for the spectrum to which it applies. Rather, for each frequency band under its umbrella, part 27 defines permissible uses and any limitations thereon, and specifies basic licensing requirements. We seek comment on our proposal to license the 600 MHz band under part 27 service and licensing rules, and any associated costs or benefits of doing so.

(iii) Regulatory Status

246. We propose to apply the regulatory status provisions of section 27.10 of the Commission's rules to 600 MHz licensees. Under this rule, applicants who may wish to provide both common carrier and non-common carrier services (or switch between them) can request status as both a common carrier and a non-common carrier under a single license, and are able to provide all allowable services anywhere within their licensed area at any time, consistent with their regulatory status designated on their license application. Apart from this designation, applicants do not need to describe the services they seek to provide. We seek comment on this approach and the attendant costs and benefits.

247. We also propose that a licensee must notify the Commission of any change in regulatory status, as described in 47 CFR 27.10. Consistent with this rule, we propose to require that a licensee notify the Commission within

30 days of a change made without the need for prior Commission approval, except that a different time period may apply where the change results in the discontinuance, reduction, or impairment of the existing service. We seek comment on this proposal, including the costs and benefits of this proposal.

b. License Restrictions

(i) Foreign Ownership

248. We propose to apply the provisions of section 27.12 of the Commission's rules to applicants for licenses in the 600 MHz band. Section 27.12 implements section 310 of the Communications Act, including foreign ownership and citizenship requirements that restrict the issuance of licenses to certain applicants. An applicant requesting authorization to provide services in this band other than broadcast, common carrier, aeronautical en route, and aeronautical fixed services would be subject to the restrictions in section 310(a), but not to the additional restrictions in section 310(b). An applicant requesting authorization for broadcast, common carrier, aeronautical en route, or aeronautical fixed services would be subject to both sections 310(a) and 310(b). We do not believe that applicants for this band should be subject to different obligations in reporting their foreign ownership based on the type of service authorization requested in the application.

Consequently, we propose to require all applicants to provide the same foreign ownership information, which covers both sections 310(a) and 310(b), regardless of which service they propose to provide in the band. We note, however, that we would be unlikely to deny a license to an applicant requesting to provide exclusively services that are not subject to section 310(b), solely because its foreign ownership would disqualify it from receiving a license if the applicant had applied for authority to provide such services. However, if any such licensee later desires to provide any services that are subject to the restrictions in section 310(b) we would require the licensee to apply to the Commission for an amended license, and we would consider issues related to foreign ownership at that time. We request comment on this proposal, including any costs and benefits of this proposal.

(ii) Eligibility and Mobile Spectrum Holding Policies

249. We propose to adopt an open eligibility standard for the 600 MHz band. We believe that opening the 600

MHz band to as wide a range of licensees as possible will encourage efforts to develop new technologies, products and services, while helping to ensure efficient use of this spectrum. An open eligibility standard is consistent with the Commission's past practice for mobile wireless spectrum allocations, as well as with section 6404 of the recently adopted Spectrum Act, which provides that the Commission may not prevent a person from participating in a system of competitive bidding, provided that the person complies with all procedures and other requirements established to protect the auction process, and meets specified technical, financial, character, and citizenship qualifications or would do so prior to the grant of a license by means approved by the Commission. We seek comment on our open eligibility approach.

250. We note that an open eligibility approach would not affect citizenship, character, or other generally applicable qualifications that may apply under our rules. As discussed above, we propose to implement section 6004 of the Spectrum Act, which restricts auction participation for reasons of national security, by requiring applicants participating in the broadcast incentive auction to certify, under the penalty of perjury, that they are not "person[s] who [have] been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant." Section 6004 does not address eligibility to acquire licenses from holders thereof in auctioned (or any other) services. We seek comment on whether section 6004 permits or requires the Commission to restrict eligibility of the persons described therein to acquire licenses in the secondary market, and whether and to what extent the provisions of the Communications Act permit such restrictions. If such restrictions should be implemented, should we do so by requiring certifications in applications similar to those required under our rules for enforcement of the Anti-Drug Abuse Act of 1988? Would it be permissible and appropriate, as we do under our character policy, to address such situations on a case-by-case basis in light of the specific facts and circumstances? See 47 CFR 1.2001. Should we apply the same attribution rules in doing so, where the relevant person is not the sole owner of the proposed licensee?

251. Section 309(j)(3)(B) of the Communications Act provides that in designing systems of competitive bidding, the Commission shall "promot[e] economic opportunity and

competition and ensur[e] that new and innovative technologies are readily accessible to the American people by avoiding excessive concentration of licenses." More recently, section 6404 of the Spectrum Act recognizes the Commission's authority "to adopt and enforce rules of general applicability, including rules concerning spectrum aggregation that promote competition."

252. In the past, the Commission has sought comment on spectrum aggregation issues with respect to particular spectrum bands prior to auctioning spectrum licenses. We seek comment on what, if anything, the Commission should do to meet the statutory requirements of section 309(j)(3)(B) and promote the goals of the broadcast television spectrum incentive auction. For instance, we note that under current spectrum aggregation policies, the Commission would apply its spectrum screen and undertake its competitive analysis only after the auction. As discussed above, however, it is of particular importance to have certainty for bidders in this auction. As another example, section 309(j)(3)(B)'s direction to avoid excessive concentration of licenses might militate in favor of a rule that permits any single participant in the auction to acquire no more than one-third of all 600 MHz spectrum being auctioned in a given licensed area. Commenters may also discuss variations of that approach, including whether we should adopt thresholds that differ in urban and rural areas, whether we should adopt a threshold that recognizes the different characteristics of different spectrum bands, and/or whether we should adopt a threshold that would allow a licensee to acquire additional 600 MHz spectrum above that threshold so long as the licensee agrees to comply with certain conditions such as spectrum sharing through roaming and/or resale obligations, infrastructure sharing, or accelerated buildout requirements. We seek comment on the best means to achieve the goals established by Congress.

c. Secondary Markets

(i) Partitioning and Disaggregation

253. Part 27 rules for terrestrial wireless service provide that licensees may apply to partition their licensed geographic service areas or disaggregate their licensed spectrum at any time following the grant of their licenses. The rules also set forth the general requirements that apply with regard to approving applications for partitioning or disaggregation, as well as other specific requirements (e.g., performance

requirements) that would apply to licensees that hold licenses created through partitioning or disaggregation.

254. We propose to permit partitioning and disaggregation by licensees in the 600 MHz band. See 47 CFR 27.15. To ensure that the public interest would be served if partitioning or disaggregation is allowed, we also propose requiring each 600 MHz licensee who is a party to a partitioning, disaggregation, or combination of both, to independently meet the applicable performance and renewal requirements. We believe this approach would facilitate efficient spectrum use, while enabling service providers to configure geographic area licenses and spectrum blocks to meet their operational needs. We seek comment on these proposals. Commenters should discuss and quantify the costs and benefits of these proposals on competition, innovation, and investment.

255. We also seek comment on whether the Commission should adopt additional or different mechanisms to encourage licensees to partition and/or disaggregate 600 MHz spectrum that they are not utilizing and the extent to which such policies would promote additional wireless broadband service, especially in rural areas. Commenters should discuss and quantify the costs and benefits of promoting partitioning and disaggregation in the 600 MHz band, including the effects of the proposal on competition, innovation, and investment.

(ii) Spectrum Leasing

256. We propose that the spectrum leasing policies established in the *Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets* 68 FR 66232 (2003) and the *Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets* 69 FR 77522 (2004) proceedings be applied to the 600 MHz band in the same manner that those policies apply to other part 27 services. We seek comment on this proposal. Commenters should discuss the effects on competition, innovation and investment, and on extending our secondary spectrum leasing policies and rules to 600 MHz spectrum.

d. License Term, Performance Requirements, Renewal Criteria, and Permanent Discontinuance of Operations

(i) License Term

257. The Communications Act does not specify a term limit for wireless

radio services licenses, but the Commission has adopted 10-year license terms for most wireless licenses. We propose that in the 600 MHz band the license term similarly be 10 years. We seek comment on this proposal, and other proposals by commenters, including any costs and benefits of the proposals. In addition, commenters can submit their own proposal for the appropriate license term, which should similarly include a discussion on the costs and benefits. Further, we anticipate that wireless licenses would be issued by the completion of the broadcast transition discussed above, and it is our goal to issue most wireless licenses within 6–9 months of the completion of the auctions. We invite comment on whether this time frame is a reasonable goal.

258. Under our license term proposal, if a license in these bands is partitioned or disaggregated, any partitionee or disaggregatee would be authorized to hold its license for the remainder of the partitioner's or disaggregator's original license term. This approach is similar to the partitioning provisions the Commission adopted for BRS, for broadband PCS licensees, for the 700 MHz band licensees, and for AWS–1 licenses at 1710–1755 MHz and 2110–2155 MHz. We emphasize that nothing in our proposal is intended to enable a licensee, by partitioning or disaggregating, to be able to confer greater rights than it was awarded under the terms of its license grant; nor would any partitionee or disaggregatee obtain rights in excess of those previously possessed by the underlying Commission licensee. We seek comment on these proposals, including the cost and benefits of these proposals.

(ii) Performance Requirements

259. The Commission establishes performance requirements to promote the productive use of spectrum, to encourage licensees to provide service to customers in a timely manner, and to promote the provision of innovative services in unserved areas, particularly in rural areas. We propose adopting performance requirements for the 600 MHz band. We note that the propagation characteristics of the 600 MHz band should allow for robust coverage at a lower cost than some other comparable bands. We encourage commenters to account for these and other technical characteristics as they address the topic of performance requirements.

260. We seek comment on three aspects of performance requirements: (1) What type of construction requirements we should impose (e.g., a “substantial service” requirement or specific

quantifiable coverage target, measured as a percentage of a population or geographic area); (2) when we should measure compliance with the requirements (e.g., using interim benchmarks, an end-of-term goal, or multiple benchmarks); and (3) what sorts of penalties we should impose for licensees that fail to meet the requirements.

261. *Construction Requirements.* To ensure that licensees begin providing service to consumers in a timely manner, we propose adopting specific quantifiable benchmarks as an important component of our performance requirements. We seek comment on whether we should adopt an interim benchmark (e.g., at 3 or 4 years from the license issue date), an end-of-term benchmark, and/or multiple benchmarks throughout the license term. We propose to measure build-out progress according to percentage of population served within the license area. In the alternative, we seek comment on whether we should use geographic area served. We also seek comment on what percentages would be appropriate population- or geography-based targets.

262. *Penalties for Failure To Meet Construction Requirements.* Along with these benchmarks, we must have meaningful and enforceable consequences, or penalties, for failing to meet construction requirements. We seek comment on which penalties will most effectively ensure timely build-out. For example, we seek comment on whether a licensee's failure to meet an interim benchmark should result in a reduction of the overall length of the license term. We also seek comment on whether failure to meet an end-of-term benchmark should result in license cancellation, loss of authorization for the unserved portions of a license area, or alternatively, a requirement to offer any unused spectrum for lease. Is the threat of license cancellation for failing to meet a benchmark more effective at promoting timely build-out than other penalties the Commission has implemented historically? Are there other penalties that would be effective in promoting timely build-out? Commenters should discuss the appropriate penalties and the attendant costs and benefits of imposing such requirements.

263. *Build-Out Approaches.* In light of the variety of service benchmarks and penalties that we discuss above, we seek comment on the most effective combination for fostering build-out of the 600 MHz spectrum, including several approaches we have adopted for

other wireless broadband spectrum bands.

264. *PCS.* We seek comment on whether we should mirror the approach adopted in the broadband PCS services and subsequently adopted or proposed in other services (e.g., 2.3 GHz WCS band, AWS–4 NPRM), which includes specific interim and final build-out requirements with licenses automatically terminating if the licensee fails to construct.

265. *700 MHz.* We seek comment on whether we should adopt an approach similar to that used in the 700 MHz band. Specifically, we seek comment on whether we should adopt rules similar to those for Upper 700 MHz C-Block licensees, which require them to meet specific interim and end-of-term population-based benchmarks, and include reducing their license term for failing to meet the interim benchmark, thus requiring them to meet their end-of-term benchmark on an accelerated schedule. We also seek comment on whether we should adopt a “keep-what-you-use” re-licensing mechanism, under which a licensee that fails to meet its final construction benchmark loses authorization for unserved portions of its license area, which are then returned to the Commission for reassignment.

266. *“Triggered” Keep-What-You-Use.* We also seek comment on a variation of the “keep-what-you-use” rule, which was originally proposed in the 700 MHz context. Specifically, we ask whether the Commission, rather than reclaiming “unused” spectrum after a period of time, should reclaim spectrum only in the event that a third party seeks access to the licensed spectrum in an unserved portion of the license area. We seek comment on whether this triggered approach may offer a more efficient spectrum relicensing mechanism than the “keep-what-you-use” rule, because the Commission would only reclaim spectrum that a new licensee is ready to build. We further seek comment on two variations of this approach. In the first, as was proposed in 700 MHz, the achievement of a final build-out milestone would preclude third party applications for “unused” spectrum. In the second variation, and most similar to the original cellular construction rules, we would forego a final benchmark requirement, and simply allow licensees to only “keep-what-you-use” at the end of their license terms, regardless of how much of their license area they build out.

267. We also seek comment on the appropriate relicensing process under a triggered “keep-what-you-use” rule. For example, should we follow the process set forth in the 700 MHz rules? If so,

how should we address the variations that a “triggered keep-what-you-use” model establishes, such as what steps the Commission, or the licensee, should take to notify third parties about what “unserved” portions are available?

268. *“Use It or Lease It.”* We also seek comment on whether “keep-what-you-use” approaches are an effective means to provide additional service in unserved areas, including in rural areas, or whether another approach is advisable to meet this goal. For example, we seek comment on whether, instead of taking back unused portions of a license, we should require the licensee to lease the unused spectrum. Specifically, we ask whether licensees should be required to participate in good faith negotiations with third parties expressing an interest in spectrum leasing in license areas that have not been built-out at the end of the initial term. If so, what specific good faith negotiation process should we require? For all build-out approaches addressed in their comments, commenters should discuss and quantify how any supported build-out requirements will affect investment and innovation, as well as discuss and quantify other costs and benefits associated with their proposals.

269. *“Use It or Share It.”* In lieu of a “use it or lease it” approach, we also seek comment on whether, following the build-out term, we should permit third parties to make use of unused spectrum on a localized basis until a licensee deploys service in those areas. Specifically, for the 600 MHz spectrum, we seek comment on whether a “use it or share it” approach is feasible in areas where a licensee has failed to deploy service by the end of its build-out term. If we do adopt this approach, how should we permit third parties to gain access to unused spectrum? For example, should we allow unlicensed use of such spectrum through the white spaces database systems? What other processes should we consider?

270. *Other Approaches.* We also seek comment on any other construction models that might be appropriate to the 600 MHz context, including approaches used successfully in other spectrum bands.

271. *Compliance Procedures.* Assuming that we adopt interim and end-of-term construction benchmarks, we propose requiring licensees to demonstrate compliance with these performance requirements. We note that 600 MHz licensees would be subject to our generally applicable rules specifying that licensees file a construction notification within 15 days of the relevant benchmark certifying that they

have met the applicable performance benchmark. Consistent with the 700 MHz rules, we propose that if a licensee has not met our performance requirements, the licensee must file a description and certification for the areas for which they are providing service. If we adopt a triggered “keep-what-you-use” relicensing mechanism or another mechanism that requires licensees to make unserved areas available to third parties (such as “use it or lease it”), we seek comment on whether additional filing requirements are necessary. We believe that transparency is integral to the success of these approaches, and ask commenters to discuss what specific information we should require licensees to provide to ensure that third parties can determine what spectrum is available.

272. *Renewal.* We seek comment on how our approach to performance requirements can work effectively with our separate renewal criteria standard for 600 MHz licenses. While the distinctions between performance requirements and renewal standards are discussed in detail below, we seek comment on the costs and benefits of requiring separate filings to prove compliance with separate performance requirement and renewal standards. Further, if the Commission adopts a triggered “keep-what-you-use” or “use it or lease it” approach, how should we evaluate a licensee’s renewal application where a licensee has not met our build-out requirements but is otherwise required to make unused spectrum available to third parties?

(iii) Renewal Criteria

273. Pursuant to section 308(b) of the Communications Act, the Commission may require renewal applicants to “set forth such facts as the Commission by regulation may prescribe as to the citizenship, character, and financial, technical, and other qualifications of the applicant to operate the station” as well as “such other information as it may require.” We note that 600 MHz licensees would be subject to our generally applicable rules regarding renewal filings. We propose to adopt service-specific 600 MHz license renewal requirements consistent with those adopted in the *700 MHz First Report and Order* and which form the basis of the renewal paradigm proposed in the *WRS Renewal NPRM and Order*. See *Service Rules for the 698–746, 747–762 and 777–792 MHz Bands*, 72 FR 24238 (2007) (*700 MHz First Report and Order*); *Amendment of parts 1, 22, 24, 27, 74, 80, 90, 95, and 101 To Establish Uniform License Renewal, Discontinuance of Operation, and*

Geographic Partitioning and Spectrum Disaggregation Rules and Policies for Certain Wireless Radio Services, 75 FR 38959 (2010) (*WRS Renewal NPRM and Order*).

274. We emphasize that, as the Commission made clear in both of these items, a licensee’s performance showing and its renewal showing are two distinct showings. Broadly speaking, a performance showing provides a snapshot in time of the level of a licensee’s service. By contrast, a renewal showing provides information regarding the level and types of the licensee’s service offered over its entire license term. We propose that applicants for renewal of 600 MHz licenses file a “renewal showing,” in which they demonstrate that they have and are continuing to provide service to the public, and are compliant with the Commission’s rules and policies and [with] the Communications Act. In the *700 MHz First Report and Order*, the Commission explained that, in the renewal context, the Commission considers “a variety of factors including the level and quality of service, whether service was ever interrupted or discontinued, whether service has been provided to rural areas, and any other factors associated with a licensee’s level of service to the public.” The *WRS Renewals NPRM and Order* also proposed to consider the extent to which service is provided to qualifying tribal lands. We propose that these same factors should be considered when evaluating renewal showings for the 600 MHz band and seek comment on this approach. Commenters should discuss and quantify the costs and benefits of this approach on competition, innovation, and investment.

275. To further encourage licensees to comply with their performance obligations, we propose awarding renewal expectancies to 600 MHz licensees that meet their performance obligations, and have otherwise complied with the Commission’s rules and policies and the Communications Act during their license term. We seek comment on the above proposal and on whether 600 MHz licensees should obtain a renewal expectancy for subsequent license terms, if they continue to provide at least the level of service demonstrated at the final performance benchmark through the end of any subsequent license terms. In addition, we seek comment on how a licensee’s failure to meet its performance requirements should affect its ability to renew its license. Commenters should discuss and quantify the costs and benefits of each

approach on competition, innovation, and investment.

276. Finally, consistent with the *700 MHz First Report and Order* and the *WRS Renewals NPRM and Order*, we propose to prohibit the filing of mutually exclusive applications at the time of renewal, and that if a license is not renewed, the associated spectrum would be returned to the Commission for reassignment. We seek comment on these proposals, including the costs and benefits of these proposals.

(iv) Permanent Discontinuance of Operations

277. We also request comment on whether to apply to licensees in the 600 MHz band the Commission's rules governing the permanent discontinuance of operations, which are intended to afford licensees operational flexibility to use their spectrum efficiently while ensuring that spectrum does not lay idle for extended periods. Under 47 CFR 1.955(a)(3), an authorization will automatically terminate, without specific Commission action, if service is "permanently discontinued." For the 600 MHz band, we propose to define "permanently discontinued" as a period of 180 consecutive days during which a licensee does not operate and does not serve at least one subscriber that is not affiliated with, controlled by, or related to the provider. We believe this definition strikes an appropriate balance between our twin goals of providing licensees operational flexibility while ensuring that spectrum does not lie fallow. Licensees would not be subject to this requirement until the date of the first performance requirement benchmark so they will have adequate time to comply. In addition, consistent with § 1.955(a)(3) of the Commission's rules, we propose that, if a 600 MHz licensee permanently discontinues service, the licensee must notify the Commission of the discontinuance within 10 days by filing FCC Form 601 or 605 and requesting license cancellation. An authorization will automatically terminate without specific Commission action if service is permanently discontinued even if a licensee fails to file the required form.

e. Other Operating Requirements

278. Even though licenses in the 600 MHz band may be issued pursuant to one rule part, licensees in this band may be required to comply with rules contained in other parts of the Commission's rules, depending on the particular services they provide. For example:

- Applicants and licensees would be subject to the application filing procedures for the Universal Licensing System, set forth in part 1 of our rules.

- Licensees would be required to comply with the practices and procedures listed in part 1 of our rules for license applications, adjudicatory proceedings, etc.

- Licensees would be required to comply with the Commission's environmental provisions, including 47 CFR 1.1307.

- Licensees would be required to comply with the antenna structure provisions of part 17 of our rules.

- To the extent a licensee provides a Commercial Mobile Radio Service, such service would be subject to the provisions of part 20 of the Commission's rules, including 911/E911 and hearing aid-compatibility (HAC) requirements, along with the provisions in the rule part under which the license was issued. Part 20 applies to all CMRS providers, even though the stations may be licensed under other parts of our rules.

- To the extent a licensee provides interconnected VoIP services, the licensee would be subject to the E911 service requirements set forth in part 9 of our rules.

- The application of general provisions of parts 22, 24, 27, or 101 would include rules related to equal employment opportunity, etc.

279. We seek comment on whether we need to modify any of these rules to ensure that 600 MHz licensees are covered under the necessary provisions. We seek comment on applying these rules to the 600 MHz spectrum and specifically on any rules that would be affected by our proposal to apply elements of the framework of these parts, whether separately or in conjunction with other requirements.

Initial Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended ("RFA")¹ the Commission has prepared this present Initial Regulatory Flexibility Analysis ("IRFA") concerning the possible significant economic impact on small entities by the policies and rules proposed in this *NPRM*. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for

¹ See 5 U.S.C. 603. The RFA, see 5 U.S.C. 601 et. seq., has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 ("SBREFA"), Public Law 104-121, Title II, 110 Stat. 847 (1996). The SBREFA was enacted as Title II of the Contract With America Advancement Act of 1996 ("CWAAA").

comments indicated on the first page of the *NPRM*. The Commission will send a copy of the *NPRM*, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).² In addition, the *NPRM* and IRFA (or summaries thereof) will be published in the **Federal Register**.³

A. Need for and Objectives of the Proposed Rules

2. In the *NPRM*, the Commission considers matters related to the implementation of Congress's mandate to conduct an incentive auction of broadcast television spectrum as set forth in the Middle Class Tax Relief and Job Creation Act of 2012, Public Law 112-96, §§ 6402, 6403, 125 Stat. 156 (2012) (Spectrum Act). Congress's passage of the Spectrum Act set the stage for this proceeding and further expanded the Commission's ability to facilitate technological and economic growth. Wireless broadband is now a key component of economic growth, job creation and global competitiveness, and the explosive growth of wireless broadband services has created increased demand for wireless spectrum. Government entities and private industry alike have recognized the urgent need for more spectrum for wireless broadband services, and have been working to increase the availability of spectrum for these valuable uses. As part of the American Recovery and Reinvestment Act of 2009, Congress directed the FCC to develop a "national broadband plan" to ensure that every American has "access to broadband capability." The resulting National Broadband Plan emphasized the indispensable importance of wireless spectrum in achieving Congress's broadband goals, recommending that the Commission make 300 megahertz of spectrum available for mobile broadband use within five years, including by reallocating a portion of the broadcast television spectrum.

3. The Spectrum Act authorizes the Commission to conduct incentive auctions in which licensees may voluntarily relinquish their spectrum usage rights in order to permit the assignment by auction of new initial licenses subject to flexible use service rules, in exchange for a portion of the resulting auction proceeds. Section 6403 of the Spectrum Act, which is not codified in the Communications Act, requires the Commission to conduct an incentive auction of the broadcast television spectrum and includes

² See 5 U.S.C. 603(a).

³ See *id.* sec. 603(a).

specific requirements and safeguards for the required auction.

4. The purpose of the NPRM is to develop rules and policies for the incentive auction process. The incentive auction will have three major pieces: (1) A “reverse auction” in which broadcast television licensees submit bids to voluntarily relinquish certain broadcast rights in exchange for payments; (2) a reorganization or “repacking” of the broadcast television bands in order to free up a portion of the ultra-high frequency (UHF) band for other uses; and (3) a “forward auction” of initial licenses for flexible use of the newly available spectrum.

5. Section 6403 of the Spectrum Act directs the Commission to conduct an incentive auction of broadcast television spectrum and includes special requirements for such an auction.⁴ The incentive auction will have two competitive bidding components: (1) A “reverse auction” in which broadcast television licensees submit bids to voluntarily relinquish certain broadcast rights in exchange for payments; and (2) a “forward auction” of initial licenses for flexible use of the newly available spectrum.⁵ In order to implement this congressional mandate to conduct an incentive auction of broadcast television spectrum, the NPRM proposes and seeks comment on proposals to devise auction design and competitive bidding rules to govern the reverse auction, and considers changes to the Commission’s general competitive bidding rules in Part 1 that may be necessary or desirable to conduct the related forward auction for new spectrum licenses. For example, the Commission will be seeking comment on: (i) Bid collection procedures that determine how bids in the auction are gathered, (ii) assignment procedures that determine which bids are accepted, and (iii) pricing procedures that determine what each bidder pays, or in the case of the reverse auction, receives in payment. The other major component of the incentive auction—the repacking—will help to determine which reverse auction bids will be accepted. In addition, consistent with the Commission’s typical approach to spectrum license auctions, the proposed rules and Part 1 rule revisions provide a general framework to guide the development—through a series of

public notices with opportunities for comment—of the detailed procedures and deadlines needed to conduct the auction. The public notice process will allow both the Commission and interested parties to focus and provide input on certain details of the auction design and the auction procedures after the rules have been established and the remaining procedural issues are better defined.

6. To assist small entities in competitive bidding in the forward auction, the NPRM proposes to establish small business size standards that were adopted in the 700 MHz band, as well as bidding credits that are set forth in the standardized schedule in Part 1 of the Commission’s rules. Specifically, the NPRM proposes to define a “small business” as an entity with average annual gross revenues for the preceding three years not exceeding \$40 million, and a “very small business” as an entity with average annual gross revenues for the preceding three years not exceeding \$15 million. The NPRM also proposes to provide small businesses with a bidding credit of 15 percent and very small businesses with a bidding credit of 25 percent.

7. The NPRM proposes to limit participation in the reverse auction to full power and Class A television licensees and to exclude non-Class A low power television stations and TV translators (collectively, “low power television stations”). The Spectrum Act definitions and its repacking and reimbursement provisions limit participation to only full power and Class A television licensees. Further, because low power television stations have secondary interference rights, these facilities do not impede the band clearing and repacking process, and therefore there is no reason to facilitate their relinquishment through participation in the reverse auction.

8. It is proposed that noncommercial educational television stations may participate in the reverse auction. The Spectrum Act does not prohibit participation and the prohibition on subjecting NCEs to auction in Section 309(j) of the Communications Act would not apply because the reverse auction is being conducted under a separate Section 309(j) provision. Allowing NCEs to participate will ensure greater participation in the reverse auction and a return of a greater number of television channels for reallocation.

9. The NPRM proposes that entities with original construction permits be allowed to participate in the reverse auction if they become licensees before the deadline for submission of the

application to participate in the auction. There are only very few entities in this category, and allowing the few original construction permit holders to participate in the incentive auction, so long as they receive a license by the deadline specified above, will maximize the amount of spectrum available for auction.

10. For the reverse auction bidding, it is proposed that the Commission only examine the spectrum usage rights held by stations in their licenses as of February 22, 2012. This conforms to the mandate in Section 6403 of the Spectrum Act that the Commission protect in repacking the coverage area and population served by a licensee as of the Spectrum Act enactment date.

11. For a new station permittee not licensed on February 22, 2012 (but auction eligible because it becomes licensed by the pre-auction application filing deadline), the Commission proposes to evaluate its bid based on the spectrum usage rights authorized in the construction permit it held on February 22, 2012. This approach conforms with the Commission’s proposal to extend repacking protections on public policy grounds to the facilities authorized in a construction permit for a new station on February 22, 2012. In order to conform with the mandate in Section 6403 of the Spectrum Act to make all reasonable efforts to preserve the coverage area and population served of each television licensee only as of the Spectrum Act enactment date (February 22, 2012), any modifications made after February 22, 2012 to a licensed facility or to the construction permit of a new station will not be considered in evaluating a licensee’s spectrum relinquishment offer.

12. Although the Commission seeks to maximize the spectrum reclaimed in the reverse auction process, it does not want to compensate a broadcaster for relinquishing spectrum rights to which it may no longer be entitled as the result of its license having expired, or having been cancelled or revoked in an enforcement proceeding. On the other hand, the Commission does not want to let the existence of such pending proceedings impede the auction process. Therefore, the Commission proposes that any full power or Class A station with an expired, cancelled or revoked license should not be eligible to bid in the reverse auction.

13. In the NPRM, the Commission proposes allowing stations to participate in the reverse auction by agreeing to relinquish a “high VHF channel” (channels 7–13) in exchange for a “low VHF channel” (channels 2–6). Because high VHF spectrum may be more

⁴ See Spectrum Act § 6403.

⁵ See *id.* at secs. 6403(a)–(c). See also *id.* at secs. 6001(16), (30) (defining “forward auction” and “reverse auction,” respectively). Note that the incentive auction of broadcast television spectrum has a third component—a reorganization or “repacking” of the broadcast television spectrum bands in order to free up a portion of the UHF band for other uses.

desirable than low VHF spectrum to a UHF to VHF bidder, making additional high VHF spectrum available by encouraging high VHF to low VHF moves may result in a greater reverse auction participation.

14. The Commission also seeks comment on whether to allow licensees to participate in the reverse auction by relinquishing spectrum usage rights through the acceptance of additional interference. By permitting this type of creative arrangement, the Commission believes it can potentially create an unencumbered wireless broadband service area license while still permitting a broadcast licensee to cover a portion of its service area.

15. The Commission also proposes to prohibit a licensee to effectuate a channel sharing arrangement that would result in a change in the station's community of license and/or DMA. The Commission proposes this limitation because it believes that allowing changes in community of license in addition to changes in channel assignments would raise section 307(b) issues such as the fair, efficient and equitable distribution of service,⁶ and would complicate its repacking efforts.

16. It is critical, to enable repacking of the broadcast spectrum, that the Commission determine how to preserve the coverage area and population served as required by the Spectrum Act. Accordingly, the Commission seeks comment on engineering and other technical aspects of the repacking process, in particular Congress's mandate in Section 6403(b)(2) of the Spectrum Act that it make all reasonable efforts to preserve the coverage area and population served of television stations in the repacking. The broadcast television spectrum incentive auction and the associated repacking process could impact both the coverage area and the population served of television stations. If a station is assigned to a different channel, then its technical facilities must be modified in order to replicate its coverage area, because radio signals propagate differently on different frequencies. These varying propagation characteristics also mean that a new channel assignment may change the areas within a station's noise-limited service area affected by terrain loss. Channel reassignments, and stations going off the air as a result of the reverse auction, also may change the interference relationships between stations, which relationships in turn affect population served. Stations going off the air can eliminate existing interference to the stations that remain

on the air. Likewise, new channel assignments generally will eliminate interference that the reassigned stations are now causing or receiving. At the same time, new channel assignments create a potential for new interference between nearby stations on the same channel or a first adjacent channel. The Commission seeks comment on a repacking methodology that takes in account all of these impacts in order to carry out Congress's mandate in section 6403(b)(2).

17. The Commission recently adopted rules to enable unlicensed devices to operate in parts of the TV spectrum that are unused at any given location. The availability of spectrum in the TV bands for unlicensed devices is an important part of supporting a robust wireless marketplace. To this end, the NPRM explores several ways to further improve the availability of the TV broadcast spectrum for unlicensed uses.

18. The Commission is developing a band plan for the incentive auction process that balances flexibility with certainty, accommodating varying amounts of available wireless spectrum in different geographic areas rather than requiring that a uniform set of television channels be cleared nationwide. Specifically, the Commission seeks comment on whether to keep the downlink spectrum band consistent nationwide while allowing variations in the amount of uplink spectrum available in any geographic area. With this approach, the Commission believes it can ensure as a technical matter that wireless providers will be able to offer mobile devices that can operate across the country, which should minimize device cost and interoperability concerns, and allow for greater economies of scale. The Commission also proposes designating specific uplink and downlink blocks, pairing them where possible, to support expansion of cutting-edge wireless broadband technologies.

19. TV channel 37 is not used for TV broadcasting but rather is allocated for use by radio astronomy and medical telemetry equipment. TV channel 37 is situated in the spectrum such that it could affect the viability of certain band plans for wireless broadband service that would be most viable from a technical and economic standpoint. The Commission's proposed band plan does not require that existing channel 37 operations be relocated, and instead, attempts to benefit from allowing existing channel 37 operations to remain in that frequency band by using channel 37 as a guard band between television operations and mobile broadband operations.

20. The Commission proposes that, during repacking, it would only preserve the service areas of full power and Class A television stations with regard to stations' facilities that were licensed, or for which an application for license to cover authorized facilities already was on file with the Commission, as of February 22, 2012. Further, the Commission proposes to protect the facilities set forth in unbuilt construction permits for new full power television stations as of February 22, 2012. It did not propose to protect the facilities contained in pending facility modification applications. The Commission found that consideration of all pending facility modification applications would greatly complicate the repacking analysis by increasing the amount of facilities under consideration in the repacking process. Additionally, protection of both a licensed facility and a modification thereto that would expand or alter the station's service area would further encumber the spectrum.

21. As it did with respect to reverse auction bids by Class A stations, the Commission also proposed that Class A stations elect which facilities they would like protected in repacking. Because Class A stations are in the middle of a Commission-mandated digital transition that will not conclude until September 1, 2015, the Commission found that failing to offer repacking protection to those digital transition facilities not licensed by February 22, 2012 would be fundamentally unfair. Moreover, failure to protect these facilities could make it impossible for certain Class A stations to effectuate their conversion plans, thus stalling the digital transition.

22. In the NPRM, the Commission proposes to only reimburse full power television and Class A stations that are repacked their reasonable expenses (such as a new antenna or transmitter) incurred during the repacking. The Commission explains that the Spectrum Act mandates only that a "broadcast television licensee" receive reimbursement. Furthermore, only full power television and Class A stations have spectrum rights that must be protected in repacking. Therefore, the Commission believes that full power television and Class A licensees are the only stations that fall within the statutory definition of stations that were assigned a new channel in repacking and that should qualify for reimbursement.

23. The Commission also proposes to limit reimbursement to multichannel video programming distributors (MVPDs) as defined by section 602 of the Communications Act. This was the

⁶ See 47 U.S.C. 307(b).

definition set forth in the Spectrum Act and the Commission seeks comment on whether it is appropriate for determining reimbursement from the Relocation Fund.

24. In the NPRM, the Commission proposes allowing full power and Class A television stations and MVPDs to elect reimbursement of their eligible relocation costs based on either their estimated costs or their actual, out-of-pocket expenditures. Stations and MVPDs choosing to receive reimbursement based on the estimated cost approach would receive their reimbursement through an advance payment, while those choosing reimbursement based on actual costs would receive reimbursement only after incurring and documenting their costs.

25. The Commission seeks comment on the types of expenses incurred by stations and MVPDs that would qualify for reimbursement. The Commission proposes that stations and MVPDs would be able to recover only costs that are reasonable, prudent and the minimum necessary to provide facilities and services comparable to those presently in use. The Commission also seeks comment on whether to permit stations to request reimbursement for facility upgrades made while effectuating the channel changes.

26. The Commission proposes a simplified, one-step process for implementing the post-auction and post-repacking channel changes. Rather than require stations to go through a prolonged two-step process of first amending the DTV Table of Allotments and then filing an application for its repacked facilities, the Commission is proposing simply to allow stations to file either a license application (for stations where no technical changes are proposed such as channel sharing) or a minor change application. The Commission proposes to expedite the processing of “check list” type applications that certify compliance with the technical rules and no substantial changes to their modified facilities. The streamlined procedures are meant to expedite the post-auction licensing and to ensure a smooth post-auction transition and recovery of channels.

27. In the NPRM, the Commission seeks comment on the amount of time that stations would need to transition to their repacked channels. The Commission recognizes the need to recover channels from the auction to allow their use by new wireless entities but also that stations would need various amounts of time to modify their facilities to operate on their repacked channels depending upon the degree of

changes needed. The Commission also recognizes that some stations may need additional time to complete their facilities and sought comment on the procedures for allowing for extensions of time.

28. In order to inform the public of the transition that will occur following the conclusion of the incentive auction and implementation of repacking, the Commission seeks comment on the types of consumer education that stations should perform. The Commission cites the need to notify viewers of channel changes and changes to station facilities that might result in a loss of service.

29. In fairness to entities with broadcast multiple ownership combinations that could be rendered out of compliance due to channel allotments or technical changes resulting from repacking, the NPRM proposes that such ownership combinations be permanently “grandfathered.” The Commission proposes considering any other multiple ownership issues that result from the incentive auction in its ongoing quadrennial review proceeding.

30. The Commission recognizes that low power television and television translator stations may be greatly impacted by repacking. Because they have only secondary interference protection rights, LPTVs will not be permitted to participate in the reverse auction and will not be protected during repacking. Many stations will be displaced from their current operating channel. To ease the burden on these stations, the Commission proposes allowing displaced LPTV stations to have the first opportunity to submit a displacement application and propose a new operating channel. The Commission also cited the need to determine how to resolve mutually exclusive displacement applications filed by LPTV stations displaced by repacking. The Commission proposes adopting a set of priorities and seeks comment on the types of priorities to recognize. The Commission specifically seeks comment on the impact of such displacement of LPTV stations, and of the priorities by which displacement applications will be evaluated, on small, minority-owned, and women-owned LPTV stations.

31. The NPRM recognizes several issues related to channel sharing that were not resolved in the Commission’s Channel Sharing Report and Order, ET Docket No. 10–235, Report and Order, 27 FCC Rcd 4616 (2012). For example, the Commission seeks comment on whether and when channel sharing agreements (CSAs) should be filed with

the Commission and whether CSAs should be required to contain certain provisions concerning access to, maintenance of, and modification of the shared transmission facilities. The Commission also seeks comment on how to resolve the use of termination of CSAs and whether all parties to a CSA should be jointly responsible for compliance with certain of the Commission’s rules. Finally, the Commission proposes that the Spectrum Act provision on preservation of cable and satellite carriage would not affect the carriage rights of Class A stations. The Commission notes that the resolution of these issues is important in order to provide needed clarity to parties considering participating in the reverse auction through a channel sharing bid.

32. In proposing terrestrial service rules for the 600 MHz band, which include technical rules to protect against harmful interference, and licensing rules to establish geographic license areas and spectrum block sizes, we advance toward enabling widespread wireless broadband deployment in the band. We do so by proposing service, technical, assignment, and licensing rules for this spectrum that generally follow the Commission’s Part 27 rules that generally govern flexible use terrestrial wireless service. For example, the Commission proposes: (1) That the 600 MHz band may be used for any fixed or mobile service that is consistent with the allocations for the band; (2) licensing the spectrum under the flexible regulatory framework of Part 27 of the rules; (3) allowing 600 MHz band licensees to provide both common carrier and non-common carrier services (or switch between them) and to request status as both a common carrier and a non-common carrier under a single license; and (4) allowing 600 MHz licensees to provide all allowable services anywhere within their licensed area at any time, consistent with their regulatory status designated on their license application. These proposals are designed to provide for flexible use of this spectrum by allowing licensees to choose their type of service offerings, to encourage innovation and investment in mobile broadband use in this spectrum, and to provide a stable regulatory environment in which broadband deployment would be able to develop through the application of standard terrestrial wireless rules.

B. Legal Basis

33. The proposed action is authorized under Sections 4(i), 301, 302, 303(e), 303(f), 303(r) and 309(j) of the

Communications Act of 1934, as amended, 47 U.S.C. 154(i), 301, 302, 303(e), 303(f), 303(r) and 309(j).

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply

34. The RFA directs the Commission to provide a description of and, where feasible, an estimate of the number of small entities that will be affected by the proposed rules, if adopted.⁷ The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small government jurisdiction.”⁸ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.⁹ A small business concern is one which: (1) Is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.¹⁰

35. *Television Broadcasting.* This Economic Census category “comprises establishments primarily engaged in broadcasting images together with sound. These establishments operate television broadcasting studios and facilities for the programming and transmission of programs to the public.”¹¹ The SBA has created the following small business size standard for Television Broadcasting firms: those having \$14 million or less in annual receipts.¹² The Commission has estimated the number of licensed commercial television stations to be 1,384.¹³ In addition, according to Commission staff review of the BIA Advisory Services, LLC’s Media Access Pro Television Database on March 28,

2012, about 950 of an estimated 1,300 commercial television stations (or approximately 73 percent) had revenues of \$14 million or less.¹⁴ We therefore estimate that the majority of commercial television broadcasters are small entities.

36. We note, however, that in assessing whether a business concern qualifies as small under the above definition, business (control) affiliations¹⁵ must be included. Our estimate, therefore, likely overstates the number of small entities that might be affected by our action because the revenue figure on which it is based does not include or aggregate revenues from affiliated companies. In addition, an element of the definition of “small business” is that the entity not be dominant in its field of operation. We are unable at this time to define or quantify the criteria that would establish whether a specific television station is dominant in its field of operation. Accordingly, the estimate of small businesses to which rules may apply does not exclude any television station from the definition of a small business on this basis and is therefore possibly over-inclusive to that extent.

37. In addition, the Commission has estimated the number of licensed noncommercial educational (NCE) television stations to be 396.¹⁶ These stations are non-profit, and therefore considered to be small entities.¹⁷

38. In addition, there are also 2,466 low power television stations, including Class A stations and 4,176 television translator stations.¹⁸ Given the nature of these services, we will presume that all of these entities qualify as small entities under the above SBA small business size standard.

39. *Cable Television Distribution Services.* Since 2007, these services have been defined within the broad economic census category of Wired Telecommunications Carriers; that category is defined as follows: “This industry comprises establishments primarily engaged in operating and/or providing access to transmission

facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies.”¹⁹ The SBA has developed a small business size standard for this category, which is: all such firms having 1,500 or fewer employees. Census data for 2007 shows that there were 1,383 firms that operated that year.²⁰ Of those 1,383, 1,368 had fewer than 100 employees, and 15 firms had more than 100 employees. Thus under this category and the associated small business size standard, the majority of such firms can be considered small.

40. *Cable Companies and Systems.* The Commission has also developed its own small business size standards, for the purpose of cable rate regulation. Under the Commission’s rules, a “small cable company” is one serving 400,000 or fewer subscribers nationwide.²¹ Industry data indicate that, of 1,076 cable operators nationwide, all but eleven are small under this size standard.²² In addition, under the Commission’s rules, a “small system” is a cable system serving 15,000 or fewer subscribers.²³ Industry data indicate that, of 6,635 systems nationwide, 5,802 systems have under 10,000 subscribers, and an additional 302 systems have 10,000–19,999 subscribers.²⁴ Thus, under this second size standard, most cable systems are small.

41. *Cable System Operators.* The Communications Act of 1934, as amended, also contains a size standard

⁷ *Id.* sec. 603(b)(3).

⁸ 5 U.S.C. 601(6).

⁹ *Id.* sec. 601(3) (incorporating by reference the definition of “small business concern” in 15 U.S.C. 632). Pursuant to 5 U.S.C. 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the **Federal Register**.” 5 U.S.C. 601(3).

¹⁰ 15 U.S.C. 632. Application of the statutory criteria of dominance in its field of operation and independence are sometimes difficult to apply in the context of broadcast television. Accordingly, the Commission’s statistical account of television stations may be over-inclusive.

¹¹ U.S. Census Bureau, 2007 NAICS Definitions, “515120 Television Broadcasting” (partial definition); <http://www.census.gov/naics/2007/def/ND515120.HTM#N515120>.

¹² 13 CFR 121.201, NAICS code 515120 (updated for inflation in 2010).

¹³ See FCC News Release, “Broadcast Station Totals as of June 30, 2012,” dated July 19, 2012; http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-315231A1.pdf.

¹⁴ We recognize that BIA’s estimate differs slightly from the FCC total given *supra*.

¹⁵ “[Business concerns] are affiliates of each other when one concern controls or has the power to control the other or a third party or parties controls or has to power to control both.” 13 CFR 21.103(a)(1).

¹⁶ See FCC News Release, “Broadcast Station Totals as of June 30, 2012,” dated July 19, 2012; http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db0106/DOC-315231A1.pdf.

¹⁷ See generally 5 U.S.C. 601(4), (6).

¹⁸ See FCC News Release, “Broadcast Station Totals as of June 30, 2012,” dated July 19, 2012; http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db0106/DOC-315231A1.pdf.

¹⁹ U.S. Census Bureau, 2007 NAICS Definitions, 517110 Wired Telecommunications Carriers, (partial definition), <http://www.census.gov/naics/2007/def/ND517110.HTM#N517110> (last visited Oct. 21, 2009).

²⁰ U.S. Census Bureau, 2007 Economic Census, Sector 51, 2007 NAICS code 517210 (rel. Oct. 20, 2009), http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-fds_name=EC0700A1&-skip=700&-ds_name=EC0751SSSZ5&-lang=en.

²¹ 47 CFR 76.901(e). The Commission determined that this size standard equates approximately to a size standard of \$100 million or less in annual revenues. *Implementation of Sections of the 1992 Cable Act: Rate Regulation*, Sixth Report and Order and Eleventh Order on Reconsideration, 10 FCC Rcd 7393, 7408 (1995).

²² These data are derived from: R.R. Bowker, *Broadcasting & Cable Yearbook 2006*, “Top 25 Cable/Satellite Operators,” pages A–8 & C–2 (data current as of June 30, 2005); Warren Communications News, *Television & Cable Factbook 2006*, “Ownership of Cable Systems in the United States,” pages D–1805 to D–1857.

²³ 47 CFR 76.901(c).

²⁴ Warren Communications News, *Television & Cable Factbook 2008*, “U.S. Cable Systems by Subscriber Size,” page F–2 (data current as of Oct. 2007). The data do not include 851 systems for which classifying data were not available.

for small cable system operators, which is “a cable operator that, directly or through an affiliate, serves in the aggregate fewer than 1 percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed \$250,000,000.”²⁵ The Commission has determined that an operator serving fewer than 677,000 subscribers shall be deemed a small operator, if its annual revenues, when combined with the total annual revenues of all its affiliates, do not exceed \$250 million in the aggregate.²⁶ Industry data indicate that, of 1,076 cable operators nationwide, all but ten are small under this size standard.²⁷ We note that the Commission neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed \$250 million,²⁸ and therefore we are unable to estimate more accurately the number of cable system operators that would qualify as small under this size standard.

42. Direct Broadcast Satellite (“DBS”) Service. DBS service is a nationally distributed subscription service that delivers video and audio programming via satellite to a small parabolic “dish” antenna at the subscriber’s location. DBS, by exception, is now included in the SBA’s broad economic census category, “Wired Telecommunications Carriers,”²⁹ which was developed for small wireline firms. Under this category, the SBA deems a wireline business to be small if it has 1,500 or fewer employees.³⁰ To gauge small business prevalence for the DBS service, the Commission relies on data currently available from the U.S. Census for the year 2007. According to that source, there were 3,188 firms that in 2007 were Wired Telecommunications Carriers. Of these, 3,144 operated with less than

1,000 employees, and 44 operated with more than 1,000 employees. However, as to the latter 44 there is no data available that shows how many operated with more than 1,500 employees. Based on this data, the majority of these firms can be considered small.³¹ Currently, only two entities provide DBS service, which requires a great investment of capital for operation: DIRECTV and EchoStar Communications Corporation (“EchoStar”) (marketed as the DISH Network).³² Each currently offers subscription services. DIRECTV³³ and EchoStar³⁴ each report annual revenues that are in excess of the threshold for a small business. Because DBS service requires significant capital, we believe it is unlikely that a small entity as defined by the SBA would have the financial wherewithal to become a DBS service provider.

43. Cable and Other Subscription Programming. This industry comprises establishments primarily engaged in operating studios and facilities for the broadcasting of programs on a subscription or fee basis. The broadcast programming is typically narrowcast in nature (e.g., limited format, such as news, sports, education, or youth-oriented). These establishments produce programming in their own facilities or acquire programming. The programming material is usually delivered to a third party, such as cable systems or direct-to-home satellite systems, for transmission to viewers.³⁵ The SBA size standard for this industry establishes³⁶ as small any company in this category which receives annual receipts of \$15 million or less. Based on U.S. Census data for 2007, in that year 469

establishments operated for the entire year. Of that 659, 197 operated with annual receipts of \$10 million a year or more. The remaining 462 establishments operated with annual receipts of less than \$10 million. Based on this date, the Commission estimates that the majority of establishments operating in this industry is small.³⁷

44. Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing. The Census Bureau defines this category as follows: “This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.”³⁸ The SBA has developed a small business size standard for Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing, which is: all such firms having 750 or fewer employees. According to Census Bureau data for 2007, there were a total of 939 establishments in this category that operated for part or all of the entire year. According to Census bureau data for 2007, there were a total of 939 firms in this category that operated for the entire year. Of this total, 912 had less than 500 employees and 17 had more than 1000 employees.³⁹ Thus, under that size standard, the majority of firms can be considered small.

45. Audio and Video Equipment Manufacturing. The SBA has classified the manufacturing of audio and video equipment under in NAICS Codes classification scheme as an industry in which a manufacturer is small if it has less than 750 employees.⁴⁰ Data contained in the 2007 U.S. Census indicate that 491 establishments operated in that industry for all or part of that year. In that year, 456 establishments had 99 employees or less; and 35 had more than 100

²⁵ 47 U.S.C. 543(m)(2); see 47 CFR 76.901(f) & nn. 1–3.

²⁶ 47 CFR 76.901(f); see Public Notice, *FCC Announces New Subscriber Count for the Definition of Small Cable Operator*, DA 01–158 (Cable Services Bureau, Jan. 24, 2001).

²⁷ These data are derived from: R.R. Bowker, *Broadcasting & Cable Yearbook 2006*, “Top 25 Cable/Satellite Operators,” pages A–8 & C–2 (data current as of June 30, 2005); Warren Communications News, *Television & Cable Factbook 2006*, “Ownership of Cable Systems in the United States,” pages D–1805 to D–1857.

²⁸ The Commission does receive such information on a case-by-case basis if a cable operator appeals a local franchise authority’s finding that the operator does not qualify as a small cable operator pursuant to section 76.901(f) of the Commission’s rules. See 47 CFR 76.909(b).

²⁹ See 13 CFR 121.201, NAICS code 517110 (2007). The 2007 NAICS definition of the category of “Wired Telecommunications Carriers” is cited above.

³⁰ 13 CFR 121.201, NAICS code 517110 (2007).

³¹ See http://www.factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-ds_name=EC0700A1&-skip=600&-ds_name=EC0751SSSZ5&-lang=en.

³² See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, Thirteenth Annual Report, 24 FCC Rcd 542, 580, para. 74 (2009) (“13th Annual Report”). We note that, in 2007, EchoStar purchased the licenses of Dominion Video Satellite, Inc. (“Dominion”) (marketed as Sky Angel). See Public Notice, “Policy Branch Information; Actions Taken,” Report No. SAT–00474, 22 FCC Rcd 17776 (IB 2007).

³³ As of June 2006, DIRECTV is the largest DBS operator and the second largest MVPD, serving an estimated 16.20% of MVPD subscribers nationwide. See 13th Annual Report, 24 FCC Rcd at 687, Table B–3.

³⁴ As of June 2006, DISH Network is the second largest DBS operator and the third largest MVPD, serving an estimated 13.01% of MVPD subscribers nationwide. *Id.* As of June 2006, Dominion served fewer than 500,000 subscribers, which may now be receiving “Sky Angel” service from DISH Network. See *id.* at 581, para. 76.

³⁵ <http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=515210&search=2007>.

³⁶ See 13 CFR 121.201, NAICS Code 515210.

³⁷ http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_51SSSZ1&prodType=table.

³⁸ The NAICS Code for this service 334220. See 13 CFR 121.201. See also http://factfinder.census.gov/servlet/IBQTable?_bm=y&-ds_name=EC0700A1&-geo_id=&-skip=300&-ds_name=EC0731SG2&-lang=en.

³⁹ http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_515A11&prodType=table.

⁴⁰ 13 CFR 121.201, NAICS Code 334310.

employees.⁴¹ Thus, under the applicable size standard, a majority of manufacturers of audio and video equipment may be considered small.

46. *Wireless Telecommunications Carriers (except satellite)*. This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular phone services, paging services, wireless Internet access, and wireless video services.⁴² The appropriate size standard under SBA rules is for the category Wireless Telecommunications Carriers. The size standard for that category is that a business is small if it has 1,500 or fewer employees.⁴³ Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees.⁴⁴ For this category, census data for 2007 show that there were 11,163 firms that operated for the entire year.⁴⁵ Of this total, 10,791 firms had employment of 999 or fewer employees and 372 had employment of 1000 employees or more.⁴⁶ Thus under this category and the associated small business size standard, the Commission estimates that the majority of wireless telecommunications carriers (except satellite) are small entities that may be affected by our proposed action.⁴⁷

47. *Fixed Microwave Services*. Microwave services include common carrier,⁴⁸ private-operational fixed,⁴⁹

and broadcast auxiliary radio services.⁵⁰ At present, there are approximately 31,549 common carrier fixed licensees and 89,633 private and public safety operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services. Microwave services include common carrier,⁵¹ private-operational fixed,⁵² and broadcast auxiliary radio services.⁵³ They also include the Local Multipoint Distribution Service (LMDS),⁵⁴ the Digital Electronic Message Service (DEMS),⁵⁵ and the 24 GHz Service,⁵⁶ where licensees can choose between common carrier and non-common carrier status.⁵⁷ The appropriate size standard under SBA rules is for the category Wireless Telecommunications Carriers (except satellite). The size standard for that category is that a business is small if it has 1,500 or fewer employees.⁵⁸ Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees.⁵⁹ For this category, census data for 2007 show that there were 11,163 firms that operated for the entire year.⁶⁰ Of this total, 10,991 firms had employment of 99 or fewer employees and 372 had employment of 1000 employees or more.⁶¹ Thus under

communications related to the licensee's commercial, industrial, or safety operations.

⁵⁰ Auxiliary Microwave Service is governed by Part 74 and Part 78 of Title 47 of the Commission's Rules. Available to licensees of broadcast stations, cable operators, and to broadcast and cable network entities. Auxiliary microwave stations are used for relaying broadcast television signals from the studio to the transmitter, or between two points such as a main studio and an auxiliary studio. The service also includes TV pickup and CARS pickup, which relay signals from a remote location back to the studio.

⁵¹ See 47 CFR part 101, subparts C and I.

⁵² See 47 CFR part 101, subparts C and H.

⁵³ Auxiliary Microwave Service is governed by Part 74 of Title 47 of the Commission's Rules. See 47 CFR part 74. Available to licensees of broadcast stations and to broadcast and cable network entities, broadcast auxiliary microwave stations are used for relaying broadcast television signals from the studio to the transmitter or between two points such as a main studio and an auxiliary studio. The service also includes mobile TV pickups, which relay signals from a remote location back to the studio.

⁵⁴ See 47 CFR part 101, subpart L.

⁵⁵ See 47 CFR part 101, subpart G.

⁵⁶ See *id.*

⁵⁷ See 47 CFR 101.533, 101.1017.

⁵⁸ 13 CFR 121.201, NAICS code 517210.

⁵⁹ 13 CFR 121.201, NAICS code 517210. The now-superseded, pre-2007 CFR citations were 13 CFR 121.201, NAICS codes 517211 and 517212 (referring to the 2002 NAICS).

⁶⁰ U.S. Census Bureau, Subject Series: Information, Table 5, "Establishment and Firm Size: Employment Size of Firms for the United States: 2007 NAICS Code 517210" (issued Nov. 2010).

⁶¹ *Id.* Available census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the

this category and the associated small business size standard, the Commission estimates that the majority of wireless telecommunications carriers (except satellite) are small entities that may be affected by our proposed action.⁶²

48. *Manufacturers of unlicensed devices*. In the context of this IRFA, manufacturers of Part 15 unlicensed devices that are operated in the UHF-TV band (channels 14–51) involve wi-fi services used in wireless data transfer and as such fall into the category of Radio and Television and Wireless Communications Equipment Manufacturing. The Census Bureau defines this category as follows: "This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment." ⁶³ The SBA has developed a small business size standard for this category, which is: all such firms having 750 or fewer employees. According to Census Bureau data for 2007, there were a total of 939 firms in this category that operated for the entire year. Of this total, 912 had less than 500 employees and 17 had more than 1000 employees.⁶⁴ Thus, under that size standard, the majority of firms can be considered small.

49. *Personal Radio Services/Wireless Medical Telemetry Service ("WMTS")*.

Personal radio services provide short-range, low power radio for personal communications, radio signaling, and business communications not provided for in other services. The Personal Radio Services include spectrum licensed under Part 95 of our rules.⁶⁵ These services include Citizen Band Radio Service ("CB"), General Mobile Radio Service ("GMRS"), Radio Control Radio Service ("R/C"), Family Radio Service ("FRS"), Wireless Medical Telemetry Service ("WMTS"), Medical Implant

largest category provided is for firms with "100 employees or more."

⁶² See http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_51SSSZ2&prodType=table.

⁶³ The NAICS Code for this service 334220. See 13 CFR 121.201. See also http://factfinder.census.gov/servlet/IBQTable?_bm=y&-fds_name=EC0700A1&-geo_id=&-skip=300&-ds_name=EC0731SG2&-lang=en.

⁶⁴ See http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-fds_name=EC0700A1&-skip=4500&-ds_name=EC0731SG3&-lang=en.

⁶⁵ 47 CFR part 90.

⁴¹ http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_311&prodType=table.

⁴² <http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517210&search=2007%20NAICS%20Search>.

⁴³ 13 CFR 121.201, NAICS code 517210.

⁴⁴ 13 CFR 121.201, NAICS code 517210. The now-superseded, pre-2007 CFR citations were 13 CFR 121.201, NAICS codes 517211 and 517212 (referring to the 2002 NAICS).

⁴⁵ U.S. Census Bureau, Subject Series: Information, Table 5, "Establishment and Firm Size: Employment Size of Firms for the United States: 2007 NAICS Code 517210" (issued Nov. 2010).

⁴⁶ *Id.* Available census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with "100 employees or more."

⁴⁷ See http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_51SSSZ2&prodType=table.

⁴⁸ 47 CFR Part 101 *et seq.* (formerly, part 21 of the Commission's Rules) for common carrier fixed microwave services (except MDS).

⁴⁹ Persons eligible under Parts 80 and 90 of the Commission's rules can use Private-Operational Fixed Microwave services. See 47 CFR Parts 80 and 90. Stations in this service are called operational-fixed to distinguish them from common carrier and public fixed stations. Only the licensee may use the operational-fixed station, and only for

Communications Service ("MICS"), Low Power Radio Service ("LPRS"), and Multi-Use Radio Service ("MURS").⁶⁶ There are a variety of methods used to license the spectrum in these rule parts, from licensing by rule, to conditioning operation on successful completion of a required test, to site-based licensing, to geographic area licensing. Under the RFA, the Commission is required to make a determination of which small entities are directly affected by the rules being proposed. Since all such entities are wireless, we apply the definition of Wireless Telecommunications Carriers (except Satellite), pursuant to which a small entity is defined as employing 1,500 or fewer persons.⁶⁷ For this category, census data for 2007 show that there were 11,163 firms that operated for the entire year.⁶⁸ Of this total, 10,791 firms had employment of 999 or fewer employees and 372 had employment of 1000 employees or more.⁶⁹ Thus under this category and the associated small business size standard, the Commission estimates that the majority of wireless telecommunications carriers (except satellite) are small entities.

50. However, we note that many of the licensees in these services are individuals, and thus are not small entities. In addition, due to the mostly unlicensed and shared nature of the spectrum utilized in many of these services, the Commission lacks direct information upon which to base a more specific estimation of the number of small entities under an SBA definition that might be directly affected by our action.

51. *Aeronautical Mobile Telemetry ("AMT")* Currently there are 9 AMT licenses in the 2360–2395 MHz band. It is unclear how many of these will be affected by our new rules. The Commission has not yet defined a small business with respect to aeronautical mobile telemetry services. For purposes of this analysis, the Commission applies the definition of Wireless Telecommunications Carriers (except

Satellite), pursuant to which a small entity is defined as employing 1,500 or fewer persons.⁷⁰ For this category, census data for 2007 show that there were 11,163 firms that operated for the entire year.⁷¹ Of this total, 10,791 firms had employment of 999 or fewer employees and 372 had employment of 1000 employees or more.⁷² Thus under this category and the associated small business size standard, the Commission estimates that the majority of wireless telecommunications carriers (except satellite) are small entities. The rules we adopt provide the flexibility to manufacturers, licensees and coordinators needed to accommodate changes in both AMT and Medical Body Area Network (MBAN) operations and to provide assurance to AMT users that their future access to the spectrum will not be hampered.⁷³

52. *Radio Astronomy.* The Commission has not developed a definition for radio astronomy. However the SBA has established a category into which Radio Astronomy fits, which is: All Other Telecommunications.⁷⁴ This U.S. industry comprises establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems. Establishments providing Internet services or voice over Internet protocol (VoIP) services via client-supplied telecommunications connections are also included in this industry.⁷⁵ The size standard for all establishments engaged in this industry is that annual receipts of \$25 million or less establish the firm as small.⁷⁶ Based on data in the 2007 U.S. Census, in 2007 there were 2,263 establishments that

operated in the All Other Telecommunications category. Of that 2,263, 145 establishments operated with annual receipts of more than \$10 million per year. The remaining 2,118 establishments operated with annual receipts of less than \$10 million per year.⁷⁷ Based on this data, the Commission estimates that the majority of establishments in the All Other Telecommunications category are small.

D. Description of Projected Reporting, Recordkeeping and Other Compliance Requirements

53. The NPRM proposes the following new or revised reporting or recordkeeping requirements.

54. In this NPRM, the Commission seeks comment on various reporting, record-keeping, and other compliance requirements for the parties that will participate in the broadcast television spectrum incentive auction. The Commission proposes, for example, that a television broadcaster interested in participating in the reverse auction component of the incentive auction process, whereby the broadcaster can offer to relinquish some or all of its spectrum usage rights in exchange for an incentive payment, must disclose certain information, such as its ownership, before becoming qualified to participate in the auction. In addition, the Commission asks whether a broadcaster that may offer to relinquish some of its spectrum usage rights and subsequently enter into a channel-sharing agreement, should be required to provide information regarding the channel sharing agreement, possibly including the channel sharing agreement itself.

55. The Commission also seeks comment on compliance requirements that will affect the parties interested in participating in the broadcast television spectrum incentive auction in order to obtain new licenses for the 600 MHz spectrum. The Commission proposes, for example, that a party interested in participating in the forward auction component of the incentive auction process, whereby the party may bid on such licenses, must disclose certain information, such as their ownership, before becoming qualified to participate in the auction.

56. Participants in both the reverse and the forward auction will also be required to report changes to information in their applications and any potential violations of the Commission's prohibition on certain

⁶⁶ The Citizens Band Radio Service, General Mobile Radio Service, Radio Control Radio Service, Family Radio Service, Wireless Medical Telemetry Service, Medical Implant Communications Service, Low Power Radio Service, and Multi-Use Radio Service are governed by subpart D, subpart A, subpart C, subpart B, subpart H, subpart I, subpart G, and subpart J, respectively, of part 95 of the Commission's rules. See generally 47 CFR part 95.

⁶⁷ 13 CFR 121.201, NAICS Code 517210.

⁶⁸ U.S. Census Bureau, Subject Series: Information, Table 5, "Establishment and Firm Size: Employment Size of Firms for the United States: 2007 NAICS Code 517210" (issued Nov. 2010).

⁶⁹ *Id.* Available census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with "100 employees or more."

⁷⁰ 13 CFR 121.201, NAICS Code 517210.

⁷¹ U.S. Census Bureau, Subject Series: Information, Table 5, "Establishment and Firm Size: Employment Size of Firms for the United States: 2007 NAICS Code 517210" (issued Nov. 2010).

⁷² *Id.* Available census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with "100 employees or more."

⁷³ See In The Matter of Amendment of The Commission's Rules to Provide Spectrum for the Operation of Medical Body Area Networks, ET Docket 08–59, 27 FCC Rcd. 6422, para 9 (2012).

⁷⁴ 13 CFR 121.202, NAICS Code 517919.

⁷⁵ <http://www.census.gov/cgi-bin/sssd/naics/naicsrch>.

⁷⁶ <http://www.census.gov/cgi-bin/sssd/naics/naicsrch>.

⁷⁷ http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_51SSSZ1&prodType=table.

communications relating to the auction process. In addition, any participant that has a bid for relinquishing spectrum usage rights or for a new license accepted will have additional reporting, record-keeping, and compliance requirements.

57. Because the overall design of the broadcast incentive auction has not been finalized, we do not yet have a more specific estimate of potential reporting, recordkeeping, and compliance burdens on small businesses. The Commission anticipates that commenters will address the reporting, record-keeping, and other compliance proposals made in the NPRM, and will provide reliable information on any costs or burdens on small businesses for inclusion in the record of this proceeding.

58. As it did with respect to reverse auction bids by Class A stations, the Commission also proposes that Class A stations be required to elect which facilities they would like protected in repacking. The Media Bureau will issue a Public Notice outlining the procedures for Class A stations to make their elections.

59. The Commission proposed that full power television stations, Class A television stations and MVPDs that qualify for reimbursement of the expenses incurred in repacking have the option of submitting a filing demonstrating their actual expenses and later be required to report on whether all reimbursement funds were properly dispensed. Alternatively, the Commission proposes to advance payments to stations and MVPDs based on estimated amounts and without first requiring documentation. This was proposed to ease the burden on stations and MVPDs and to expedite the reimbursement process.

60. Stations whose channel assignments are changed as a result of the reverse auction or repacking will be required to submit an application for construction permit or license to implement their channel change. The Commission proposes a simplified, one-step process for implementing the post-auction and post-repacking channel changes. Rather than require stations to go through a prolonged two-step process of first amending the DTV Table of Allotments and then filing an application for its repacked facilities, the Commission is proposing simply to allow stations to file either a license application (for stations where no technical changes are proposed such as channel sharing) or a minor change application. The Commission proposes to expedite the processing of “check list” type applications that certify

compliance with the technical rules and no substantial changes to their modified facilities. The streamlined procedures are meant to expedite the post auction licensing and to ensure a smooth post-auction transition and recovery of channels.

61. Stations that need additional time to relocate to their new channel assignments may be required to submit a request for extension of time (FCC Form 337), for tolling (informal filing) or for Special Temporary Authority (STA—informal filing).

62. The Commission proposes that all stations changing channel assignments as a result of the reverse auction or repacking be required to conduct consumer education including airing viewer notifications and submitting a report to the Commission on their consumer education efforts. The reports would be filed on existing FCC Form 388 (that was utilized for consumer education during the digital television transition) revised for use with the band transition. In addition, the Commission proposes that all stations changing channel assignments provide notice to MVPDs so that MVPDs can make the necessary changes to their channel lineups.

63. LPTV stations displaced as a result of repacking may be permitted to submit a displacement application (FCC Form 346). In addition to preparing and filing the application, the station may also be required to submit a new showing that it qualifies for priorities that will enable its application to be selected from a mutually exclusive group. It is expected that this requirement will have a greater effect on small entities because all LPTVs are small entities.

64. The Commission proposes that channel sharing bidders may be required to submit their channel sharing agreements (CSAs) with the Commission and be required to include certain provisions in their CSAs.

65. All 600 MHz licensees would be required to file a construction notification and certify that they have met any applicable performance benchmark.⁷⁸ They will also be required to file a license renewal application.⁷⁹ In addition, a 600 MHz licensee must notify the Commission of certain changes. Specifically, notification is required by licensees if they change their regulatory status,⁸⁰ their foreign

ownership status,⁸¹ or if they permanently discontinue service.⁸² Finally, 600 MHz licensees, along with TV broadcasters in the 470–698 MHz band, would need to provide thirty days’ notice to all incumbent fixed BAS operations within interference range prior to commencing operations in the vicinity.⁸³

E. Steps Taken To Minimize Significant Impact on Small Entities, and Significant Alternatives Considered

66. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) The establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities;⁸⁴ (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.⁸⁵

67. The proposed auction design and competitive bidding rules for the reverse auction resulting from the NPRM will apply to all entities in the same manner. Full power television and Class A stations will be permitted to participate in the reverse auction and the forward auction will be open to all entities. The Commission proposes changes to its Part 1 rules to deal with special issues that arise in the unique incentive auction process. For example, the Commission must consider the requirement of mutual exclusivity in the context of the broadcast television spectrum forward auction. Specifically, if the spectrum to be offered in the forward auction consists of generic (non-frequency-specific) blocks, how should the Commission determine whether mutual exclusivity exists? In addition, the Commission asks commenters to address whether applications to participate in the reverse and forward auctions are “mutually exclusive applications” for “initial license[s]” since the reverse and forward auction applicants will submit

Communications Act that would apply as a result of the change. 47 U.S.C. 310(b).

⁸¹ 47 U.S.C. 310(b).

⁸² The licensee must notify the Commission of the discontinuance within 10 days by filing FCC Form 601 or 605 and requesting license cancellation.

⁸³ See, e.g., 47 CFR 101.103(d) (30-day coordination “notice and wait” requirement).

⁸⁴ We note that all references to small entities in this IRFA apply also to minority- and women-owned small businesses.

⁸⁵ 5 U.S.C. 603(c)(1)–(c)(4).

⁷⁸ See 47 CFR 1.946(d).

⁷⁹ See 47 CFR 1.949.

⁸⁰ See 47 CFR 27.10(d); see also 47 CFR 27.66. A change in a licensee’s regulatory status would not require prior Commission authorization, provided the licensee was in compliance with the foreign ownership requirements of Section 310(b) of the

bids relating to mutually exclusive spectrum usage rights (i.e., the spectrum currently used by broadcast television licensees). With respect to bidding credits for the forward auction, the Commission seeks comment on the use of certain size standards and associated bidding credits for applicants to be licensed in the forward auction with particular focus on the appropriate definitions of small and very small businesses as they relate to the size of the geographic area to be covered and the spectrum allocated to each license. In the reverse auction, the Commission seeks comment on the Spectrum Act statutory provision requiring the Commission to take all reasonable steps necessary to protect the confidentiality of Commission-held data of a licensee participating in the reverse auction, including withholding the identity of such licensee. With respect to all proposed changes to the Part 1 rules, the Commission will apply them uniformly to all entities that choose to participate in spectrum license auctions, including the forward auction. The Commission believes that applying the same rules equally to all entities in these contexts promotes fairness. The Commission does not believe that the limited costs and/or administrative burdens associated with the rules or the proposed auction design will unduly burden small entities.

68. The proposed auction design and competitive bidding rules provide small businesses flexibility with respect to the ways in which they may participate in the reverse auction. For example, the NPRM proposes to allow a broadcast television licensee to relinquish some or all of its spectrum usage rights in at least three different ways: (1) It may relinquish all of its spectrum usage rights with respect to a particular television channel without receiving in return any usage rights with respect to another television channel; (2) it may relinquish spectrum usage rights in a UHF channel in return for receiving spectrum usage rights in a VHF channel; or (3) it may relinquish its spectrum usage rights in order to share a television channel with another licensee.

69. In addition, the NPRM recognizes the potential competitive sensitivities related to the information provided by licensees participating in the reverse auction either by submitting bids to exit an ongoing business, or by making significant changes to that business (*e.g.*, by sharing or changing the channels on which they operate). Specifically, as required by section 6403(a)(3) of the Spectrum Act, the NPRM proposes to take steps to protect the confidentiality

of Commission-held data of licensees participating in the reverse auction, including the licensees' identities.

70. In the NPRM, and in paragraph 6 of this IRFA, the Commission sought comment on its proposed size standards which define a "small business" as an entity with annual average revenues of \$40 million over the previous three years; and which define a "very small business" as an entity with an annual average revenues of \$15 million over the previous three years. In the NPRM and in this IRFA, the Commission also sought comment on providing small businesses with a bidding credit of 15 percent and on providing very small businesses with a bidding credit of 25 percent. We believe these proposals will provide an economic benefit to small entities by making it easier to acquire spectrum licenses or to access spectrum through secondary markets.

71. The proposal to limit reverse auction participation to only full power and Class A stations and to not permit participation by low power television stations will have a greater impact on small entities since all low power television stations are small entities. Alternatively, the Commission could allow low power television stations to participate in the reverse auction but this would have no practical use since low power television stations do not have to be protected in repacking and clearing them from their channels in the reverse auction would be unnecessary. The Commission believes the additional burden on low power stations is outweighed by the need to implement Spectrum Act provisions, to recover a sufficient amount of spectrum in the reverse auction and to complete the successful repacking full power and Class A stations.⁸⁶

72. In order to minimize the impact of the incentive auction and repacking processes on noncommercial educational (NCE) television stations, all of which are small entities, the Commission allowed these stations to participate in the incentive auction. It is expected that participation in the reverse auction will benefit small entities like NCEs by allowing them to strengthen their financial position through the use of auction proceeds. The Commission has decided to not bar NCEs from participating because that could limit the number of channels recovered in the reverse auction and thus negatively affect the outcome of the incentive auction process.

⁸⁶ As noted in paragraph 0, the Commission has asked for comment on establishing priorities applicable to displacement applications filed by LPTVs, many of which may be owned by small, minority and women applicants.

73. The NPRM proposes that entities with construction permits be allowed to participate in the reverse auction if they become licensees before the deadline for submission of the application to participate in the auction. This would require stations with unbuilt facilities to complete construction of their stations and seek a license prior to participating in the reverse auction. In addition, for a new station permittee not licensed on February 22, 2012 (but auction eligible because it becomes licensed by the pre-auction application filing deadline), the Commission proposes to evaluate its bid based on the spectrum usage rights authorized in the construction permit it held on February 22, 2012. There are only very few entities in this category, and all are full power television stations. Therefore, the proposal would have little adverse, if any, impact and would affect all entities equally.

74. For the reverse auction bidding, it is proposed that the Commission only examine the spectrum usage rights held by stations in their licenses as of February 22, 2012. All stations will be subject to this policy, and therefore, it is not expected to have a significant impact on small entities and, in any case, the impact would affect all entities equally.

75. The Commission's proposal to allow Class A stations to choose which facilities (analog or digital) to have evaluated for their reverse auction bids will benefit these small entities. Alternatively, the Commission could force many Class A stations to have their bids evaluated based on their licensed analog facilities. The Commission believes it would be unfair to those Class A licensees that have yet to convert to digital operation and that made transition plans in reliance on the rules we adopted just one year ago—months before passage of the Spectrum Act—to limit bid evaluations to only those Class A facilities licensed as of February 22, 2012. Class A stations will be permitted to relinquish the facilities with the greatest value, thus maximizing the return for their spectrum. This decision eliminates or minimizes adverse economic impact on Class A stations which are small.

76. Because they will apply in the same way to all stations, the Commission's proposals to not permit full power or Class A stations with an expired or cancelled license to participate in the reverse auction; to allow stations to participate in the reverse auction by agreeing to relinquish a "high VHF channel" (channels 7–13) in exchange for a "low VHF channel" (channels 2–6); and to allow licensees to participate in the reverse auction by

relinquishing spectrum usage rights through the acceptance of additional interference; would not have a significant impact on small entities and any impact would affect all entities equally.

77. The Commission's proposal to prevent a licensee from proposing a channel sharing arrangement in its reverse auction bid that would result in a change in the station's community of license and/or DMA would only affect full power television stations. The Commission believes that the burden on small entities of not being able to propose to change their communities of license in their reverse auction bid is greatly outweighed by the need to avoid complicated allocation and repacking issues. Following the conclusion of the incentive auction process, stations will once again be permitted to propose changes to their community of license.

78. As part of the rulemaking, we are seeking comment on the impact on broadcasters of the different repacking approaches we are exploring, including economic and other impacts. For example, the Commission considers engineering and other technical aspects of the repacking process, in particular Congress's mandate in Section 6403 of the Spectrum Act that the Commission make all reasonable efforts to preserve the coverage area and population served of television stations in the repacking. Channel reassignments, and stations going off the air as a result of the reverse auction, also may change the interference relationships between stations, which relationships in turn affect population served. The Commission's proposals must account for all of these impacts in order to carry out Congress's mandate in Section 6403.

79. The unlicensed devices operating in this spectrum are designed to adapt to whatever changes may occur in the spectrum that is available at any given location. Therefore, since the equipment is so flexible and will not have to be reconfigured, the Commission does not currently anticipate any adverse economic impact on the relatively few devices that are already deployed or devices that may be introduced in the future. In the NPRM, the Commission seeks comment on a variety of measures to ensure that spectrum in the TV bands will continue to be available for unlicensed use, including measures that may increase availability in many markets where little, if any, is available now. Increasing the availability of spectrum for unlicensed use will benefit small entities that use such spectrum for their various unlicensed devices.

80. In the NPRM, the Commission explores retaining the use of Channel 37

for wireless medical telemetry services and for radio astronomy, as well as the possibility to relocate these users. In the latter case, the Commission seeks comment on the possible economic and other impacts on small, minority-owned, and women-owned small businesses that such a relocation may have, including the availability of other spectrum to support these uses.

81. The Commission proposes to only preserve, during repacking, the service areas of television stations with regard to stations' facilities that were licensed, or for which an application for license to cover authorized facilities already was on file with the Commission, as of February 22, 2012. This proposal would have little impact and any impact would affect all entities equally. Alternatively, the Commission could protect facilities in all pending facility modification applications. However this would greatly complicate the repacking analysis by increasing the amount of facilities under consideration. Additionally, protection of both a licensed facility and a modification thereto that would expand or alter the station's service area would further encumber the spectrum, making it more difficult for the Commission to complete the repacking of the broadcast spectrum.

82. As it did with respect to reverse auction bids by Class A stations, the Commission also proposes that Class A stations elect which facilities they would like protected in repacking. This proposal will benefit small entities such as Class A stations by allowing these stations to choose which facilities to be protected in repacking. Alternatively, the Commission could only protect the Class A station's licensed facilities as of February 22, 2012, but the Commission found that that would be unfair since many Class A's are in the midst of their digital transition; and moreover, failure to protect these stations' unbuilt digital facilities could make it impossible for certain Class A stations to effectuate their conversion plans, thus stalling the digital transition.

83. The Commission proposes to only reimburse the expenses of full power television and Class A stations that are repacked. Alternatively, the Commission could reimburse low power television stations for their repacking expenses. However, that would mean reimbursing stations such as low power television stations that are secondary and that have no expectation of being protected in the repacking process and would also require an expenditure of reimbursement funds that could limit other eligible stations from being fully reimbursed. The burden to small entities such as low power television

stations of having to fund their own repacking expenses is outweighed by the intent of Congress to limit reimbursement to only full power and Class A television stations and that have spectrum rights that must be protected in repacking.

84. The Commission's proposal to limit reimbursement to multichannel video programming distributors (MVPDs) as defined by section 602 of the Communications Act⁸⁷ would not have a significant impact on small entities since the definition is very broad and will enable providers affected by the incentive auction and repacking processes to qualify to receive reimbursement.

85. The proposal to reimburse stations and MVPDs based upon pre-determined estimated amounts per station will benefit small entities that cannot afford the expense of having to prepare formal documentation for reimbursement. Alternatively, the Commission could require all stations and MVPDs to prepare and file formal documentation of all expenses. However, the benefit of having more accurate reimbursement amounts is outweighed by the burden on small entities to have to prepare and submit such a filing and the possible delay in the completion of the reimbursement process which has a three-year completion deadline.

86. The proposal to advance reimbursement payments to stations and MVPDs, rather than making them go out-of-pocket for their expenses and reimbursing them, would greatly benefit small entities that may not be in the position financial to go out-of-pocket for their reimbursement expenses. The alternative, to make stations pay for repacking costs out-of-pocket, could have a significant negative impact on small entities and could substantially delay repacking and make it more difficult to comply with the three-year reimbursement deadline set forth in Section 6403 of the Spectrum Act.

87. The proposal to use a simplified, one-step process for implementing the post-auction and post-repacking channel changes will benefit small entities with limited resources. Rather than requiring small entities to go through a prolonged two-step process of first amending the DTV Table of Allotments and then filing an

⁸⁷ The Communications Act defines MVPD "as a person such as, but not limited to, a cable operator, a multichannel multipoint distribution service, a direct broadcast satellite service, or a television receive-only satellite program distributor, who makes available for purchase, by subscribers or customers, multiple channels of video programming." 47 U.S.C. 522(13).

application for its repacked facilities, the proposal allow stations to file either a license application (for stations where no technical changes are proposed such as channel sharing) or a minor change application. In addition, the streamlined procedures are meant to expedite the post-auction licensing and to ensure a smooth post-auction transition and recovery of channels.

88. The proposal to allow stations to implement their post-auction and repacking facilities on a phased timeline will benefit small entities that may not have the resources to dedicate to the band transition process. Transitioning stations will be able to rely on either auction or reimbursement funds to construct their new facilities. Allowing flexibility in the transition schedule, including requests for additional time, will benefit small entities that may not be able to rely on in-house employees and may have to rely on outside contractors to complete construction of their new facilities.

89. The proposal to require all transitioning stations to inform the public of the transition that will occur following the conclusion of the incentive auction and implementation of repacking will have a greater impact on small entities that may have to expend funds to comply with the requirement or forego the airing of advertisements in lieu of viewer notifications. However, the burden on small entities is outweighed by the public's need to be informed of changes in stations' channel assignments.

90. The NPRM contains a proposal to allow existing ownership combinations rendered out of compliance due to channel allotments, or technical changes resulting from repacking, to be permanently "grandfathered." This proposal will benefit small entities that would otherwise be forced to sell one or more of their media interests in order to comply with the multiple ownership rules. A "forced" sale would have to be done on an expedited basis and at a reduced price thus resulting in a substantial burden on small entities.

91. To remediate the significant burden to low power television stations, all of which are defined as small entities, from being displaced as a result of repacking, the Commission proposes to allow these stations to have the first opportunity to submit a displacement application and propose a new operating channel. This proposal will benefit small entities by allowing them to identify one of the remaining channels and continue to operate their facilities and avoid having to go off the air.

92. The proposal to require that all channel sharing agreements be in writing; contain certain provisions concerning access to, maintenance of, and modification of the shared transmission facilities; and outline joint responsibility for compliance with certain of the Commission's rules; may have a greater impact on small entities because they may not have access to in-house personnel to prepare and review these agreements. However, the burden on small entities to prepare a channel sharing agreement with the requisite provisions is outweighed by the need to ensure that channel sharing stations comply with the Commission's rules and to prevent disputes that could result in a disruption of service to the public.

93. The proposal to license the 600 MHz band under Economic Areas (EA) geographic size licenses will provide regulatory parity with other bands that provide wireless broadband services that are licensed on an EA basis, such as the lower 700 MHz band licenses. Additionally, assigning 600 MHz licenses in EA geographic areas would allow 600 MHz licensees to make adjustments to suit their individual needs. EA license areas are small enough to provide spectrum access opportunities for smaller carriers. Depending on the licensing mechanism the Commission adopts, licensees may adjust their geographic coverage through auction or through secondary markets. This proposal should make it easier for 600 MHz providers to enter secondary market arrangements involving terrestrial use of their spectrum. The secondary market rules apply equally to all entities, whether small or large. As a result, we believe that this proposal will provide an economic benefit to small entities by making it easier for entities, whether large or small, to enter into secondary market arrangements for 600 MHz spectrum.

94. The NPRM makes several proposals to protect entities operating in nearby spectrum bands from harmful interference, which may include small entities. The proposed technical rules are based on the rules for 700 MHz spectrum, with specific additions or modifications designed to protect broadcast licensees, Radio Astronomy, and Wireless Medical Telemetry Services. The technical analysis contained in the NPRM also proposes that no additional rule modifications to protect other spectrum bands are necessary. This proposal may help minimize the impact on any small entities—both existing and potential small entities that may seek to provide services using 600 MHz spectrum—by

streamlining regulations for operations in these spectrum bands.

95. The NPRM also proposes to provide 600 MHz licensees with the flexibility to provide any fixed or mobile service that is consistent with the allocations for this spectrum. This proposal is consistent with other spectrum allocated or designated for licensed fixed and mobile services, e.g., Lower 700 MHz. The NPRM further proposes to license this spectrum under the Commission's market-oriented Part 27 rules. Proposals made pursuant to Part 27 include applying the Commission's secondary market policies and rules to all transactions involving the use of the 600 MHz band for terrestrial services, which will provide greater predictability and regulatory parity with bands licensed for terrestrial mobile broadband service. This proposal should make it easier for 600 MHz providers to enter secondary market arrangements involving terrestrial use of their spectrum. The secondary market rules apply equally to all entities, whether small or large. As a result, we believe that this proposal will provide an economic benefit to small entities by making it easier for entities, whether large or small, to enter into secondary market arrangements for 600 MHz spectrum.

F. Federal Rules Which Duplicate, Overlap, or Conflict With the Commission's Proposals

96. None.

List of Subjects

47 CFR Part 1

Administrative practice and procedure.

47 CFR Part 27

Communications common carriers. Radio.

47 CFR Part 73

Television.

Federal Communications Commission.

Marlene H. Dortch,
Secretary.

Rule Changes

For the reasons discussed in the preamble, the Federal Communications Commission proposes to amend 47 CFR parts 1, 27, and 73 as follows:

PART 1—PRACTICE AND PROCEDURE

1. The authority citation for part 1 is revised to read as follows:

Authority: 15 U.S.C. 79 *et seq.*; 47 U.S.C. 151, 154(i), 154(j), 155, 157, 225, 227, 303(r)

and 309; Secs. 6004, 6403, Pub. L. 112–96, 125 Stat. 156.

2. Section 1.949 is amended by adding paragraph (c) to read as follows:

§ 1.949 Application for renewal of license.

* * * * *

(c) *Renewal Showing.* An applicant for renewal of a geographic-area authorization in the 600 MHz band must make a renewal showing, independent of its performance requirements, as a condition of renewal. The showing must include a detailed description of the applicant's provision of service during the entire license period and address:

(1) The level and quality of service provided by the applicant (e.g., the population served, the area served, the number of subscribers, the services offered);

(2) The date service commenced, whether service was ever interrupted, and the duration of any interruption or outage;

(3) The extent to which service is provided to rural areas;

(4) The extent to which service is provided to qualifying tribal land as defined in § 1.2110(f)(3)(i); and

(5) Any other factors associated with the level of service to the public.

§ 1.2102 [Amended]

3. Section 1.2102 is amended by removing paragraph (c).

4. Section 1.2103 is revised to read as follows:

§ 1.2103 Competitive bidding design options.

(a) *Public notice of competitive bidding design options.* Prior to any competitive bidding conducted by the Commission, public notice shall be provided of the detailed procedures that may be used to implement auction design options.

(b) *Competitive bidding design options.* The public notice detailing competitive bidding procedures may establish procedures for collecting bids, assigning winning bids, and determining payments, including without limitation:

(1) *Procedures for collecting bids.* (i) Procedures for collecting bids in a single round or in multiple rounds.

(ii) Procedures allowing for bids that specify a price, indicate demand at a specified price, or provide other information as specified by the Commission.

(iii) Procedures allowing for bids for specific items or bids for a number of generic items in one or more categories of items.

(iv) Procedures allowing for bids that specify a bidder's willingness to accept

a price only in the event that other bids are also accepted or other conditions are met, such as for packages of licenses or contiguous licenses.

(v) Procedures to collect bids in any needed additional stage or stages following an initial single or multiple round auction, such as an assignment stage for generic items.

(2) *Procedures for assigning winning bids.* (i) Procedures that take into account one or more factors identified by the Commission in addition to the submitted bid amount, including but not limited to the amount of bids submitted in separate competitive bidding conducted by the Commission.

(ii) Procedures to incorporate public interest considerations into the process for assigning winning bids.

(3) *Procedures for determining payments.* (i) Procedures to determine the amount of any payments made to or by winning bidders consistent with other auction design choices.

(ii) Procedures that provide for payments based on the amount as bid or on the bid amount that would have been assigned winning status.

5. Section 1.2104 is amended by revising paragraph (e) to read as follows:

§ 1.2104 Competitive bidding mechanisms.

* * * * *

(e) *Stopping rules.* The Commission may establish stopping rules before or during multiple round auctions in order to terminate the auctions within a reasonable time and in accordance with the goals, statutory requirements, and rules for the auctions, including the reserve price or prices.

* * * * *

6. Section 1.2105 is amended by adding paragraph (a)(2)(xii) to read as follows:

§ 1.2105 Bidding application and certification procedures; prohibition of certain communications.

(a) * * *

(2) * * *

(xii) For auctions required to be conducted under Title VI of the Middle Class Tax Relief and Job Creation Act of 2012 (Pub. L. 112–96) or in which any spectrum usage rights for which licenses are being assigned were made available under 47 U.S.C. 309(j)(8)(G)(i), the Commission may require certification under penalty of perjury that the applicant and all of the person(s) disclosed under paragraph (a)(2)(ii) of this section are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. For the purposes of this

certification, the term “person” means an individual, partnership, association, joint-stock company, trust, or corporation, and the term “reasons of national security” means matters relating to the national defense and foreign relations of the United States.

* * * * *

7. Section 1.9005 is amended by adding paragraph (kk) to read as follows:

§ 1.9005 Included Services.

* * * * *

(kk) The 600 MHz band (part 27 of this chapter).

8. Subpart BB is added to part 1 to read as follows:

Subpart BB—Competitive Bidding—Broadcast Television Spectrum Reverse Auction

Sec.

1.22000 Definitions.

1.22001 Purpose.

1.22002 Competitive bidding design options.

1.22003 Competitive bidding mechanisms.

1.22004 Applications to participate in competitive bidding.

1.22005 Prohibition of certain communications.

1.22006 Confidentiality of Commission-held data.

1.22007 Two competing participants required.

1.22008 Public notice of auction completion and auction results.

1.22009 Binding obligations.

1.22010 Disbursement of incentive payments.

§ 1.22000 Definitions.

For purposes of this subpart:

(a) *Broadcast television licensee.* The term *broadcast television licensee* means the licensee of—

(1) A full-power television station; or

(2) A low-power television station that has been accorded primary status as a Class A television licensee under § 73.6001(a) of this chapter.

(b) *Forward auction.* The term *forward auction* means the portion of an incentive auction of broadcast television spectrum described in section 6403(c) of the Spectrum Act.

(c) *Relinquishment bid.* The term *relinquishment bid* means a bid to relinquish some or all of a broadcast television licensee's broadcast television spectrum usage rights. *Relinquishment bids* include a bid to relinquish all usage rights with respect to a particular television channel without receiving in return any usage rights with respect to another television channel; a bid to relinquish all usage rights with respect to an ultra high frequency television channel in return for receiving usage

rights with respect to a very high frequency television channel; a bid to relinquish usage rights in order to share a television channel with another licensee; and any other relinquishment bids permitted by the Commission.

(d) *Reverse auction*. The term *reverse auction* means the portion of an incentive auction of broadcast television spectrum described in section 6403(a) of the Spectrum Act.

(e) *Spectrum Act*. The term *Spectrum Act* means Title VI of the Middle Class Tax Relief and Job Creation Act of 2012 (Pub. L. 112–96).

§ 1.22001 Purpose.

The provisions of this subpart implement section 6403 of the Spectrum Act, which requires the Commission to conduct a reverse auction to determine the amount of compensation that each broadcast television licensee would accept in return for voluntarily relinquishing some or all of its broadcast television spectrum usage rights in order to make spectrum available for assignment through a system of competitive bidding under Subparagraph (G) of section 309(j)(8) of the Communications Act of 1934, as added by section 6402 of the Spectrum Act.

§ 1.22002 Competitive bidding design options.

(a) *Public notice of competitive bidding design options*. Prior to conducting competitive bidding in the reverse auction, public notice shall be provided of the detailed procedures that may be used to implement auction design options.

(b) *Competitive bidding design options*. The public notice detailing competitive bidding procedures for the reverse auction may establish procedures for collecting bids, assigning winning bids, and determining payments, including without limitation:

(1) *Procedures for collecting bids*. (i) Procedures for collecting bids in a single round or in multiple rounds.

(ii) Procedures for collecting bids for multiple relinquishment options.

(iii) Procedures allowing for bids that specify a price for a relinquishment option, indicate demand at a specified price, or provide other information as specified by the Commission.

(iv) Procedures allowing for bids that are contingent on specified conditions, such as other bids being accepted.

(v) Procedures to collect bids in an additional stage or stages, if needed, following an initial single or multiple round auction.

(2) *Procedures for assigning winning bids*. (i) Procedures for scoring bids by

factors in addition to bid amount, such as population coverage or geographic contour, or other relevant measurable factors.

(ii) Procedures to evaluate the technical feasibility of assigning a winning bid.

(A) Procedures that utilize mathematical computer optimization software, such as integer programming, to evaluate bids and technical feasibility, or that utilize other decision routines, such as sequentially evaluating bids based on a ranking of scored bids.

(B) Procedures that combine computer optimization algorithms with other decision routines.

(iii) Procedures to incorporate public interest considerations into the process for assigning winning bids.

(3) *Procedures for determining payments*. (i) Procedures to determine the amount of any incentive payments made to winning bidders consistent with other auction design choices.

(ii) Procedures that provide for incentive payments based on the amount as bid or on the highest bid amount that would have been assigned winning status.

§ 1.22003 Competitive bidding mechanisms.

(a) *Public Notice of competitive bidding procedures*. Detailed competitive bidding procedures shall be established by public notice prior to the commencement of the reverse auction.

(b) *Sequencing*. The Commission will establish the sequencing with which the reverse auction and the related forward auction assigning new spectrum licenses will occur.

(c) *Reserve price*. The Commission may establish reserve prices, either disclosed or undisclosed, above which relinquishment bids for various bidding options would not win in the reverse auction. The reserve prices may apply individually, in combination, or in the aggregate.

(d) *Opening bids and bid increments*. The Commission may, by announcement before or during the reverse auction, require maximum or minimum bid increments in dollar or percentage terms. The Commission also may establish maximum or minimum opening bids.

(e) *Stopping rules*. The Commission may establish stopping rules before or during the reverse auction in order to terminate the auction within a reasonable time and in accordance with the goals, statutory requirements, and rules for the auction, including the reserve price or prices.

(f) *Activity rules*. The Commission may establish activity rules which

require a minimum amount of bidding activity.

(g) *Auction delay, suspension, or cancellation*. By public notice or by announcement during the reverse auction, the Commission may delay, suspend, or cancel the auction in the event of a natural disaster, technical obstacle, network disruption, evidence of an auction security breach or unlawful bidding activity, administrative or weather necessity, or for any other reason that affects the fair and efficient conduct of the competitive bidding. The Commission also has the authority, at its sole discretion, to resume the competitive bidding starting from the beginning of the current or some previous round or cancel the competitive bidding in its entirety.

§ 1.22004 Applications to participate in competitive bidding.

(a) *Public notice of the application process*. All applications to participate must be filed electronically. The dates and procedures for submitting applications to participate in the reverse auction shall be announced by public notice.

(b) *Applicant*. The applicant identified on the application to participate must be the broadcast television licensee that would relinquish spectrum usage rights if it places a winning bid.

(c) *Information and certifications provided in the application to participate*. The Commission may require an applicant to provide the following information in its application to participate in the reverse auction:

(1) The following identifying information:

(i) If the applicant is an individual, the applicant's name and address. If the applicant is a corporation, the name and address of the corporate office and the name and title of an officer or director. If the applicant is a partnership, the name, citizenship, and address of all general partners, and, if a general partner is not a natural person, then the name and title of a responsible person for that partner, as well. If the applicant is a trust, the name and address of the trustee. If the applicant is none of the above, it must identify and describe itself and its principals or other responsible persons;

(ii) Applicant ownership and other information as set forth in section 1.2112(a) of this title; and

(iii) For NCE stations, information regarding the applicant's governing board and any educational institution or governmental entity with a controlling interest in the station, if applicable.

(2) The identity of the person(s) authorized to take binding action in the bidding on behalf of the applicant.

(3) For each broadcast television license for which the applicant intends to submit relinquishment bids:

(i) The identity of the station and the television channel;

(ii) Whether it is a full-power or Class A television station;

(iii) If the license is for a Class A television station, certification that it is and will remain in compliance with the ongoing statutory eligibility requirements to remain a Class A station;

(iv) Whether it is an NCE station, and if so, whether it operates on a reserved or non-reserved channel;

(v) The types of relinquishment bids that the applicant may submit; and

(vi) Any additional information required to assess the spectrum usage rights offered.

(4) For each broadcast television license for which the applicant intends to submit a bid to relinquish usage rights in order to share a television channel with another licensee:

(i) The identity of the television channel that the applicant has agreed to share with another licensee;

(ii) Any information regarding the channel sharing agreement required by the Commission;

(iii) Certification that the channel sharing agreement is consistent with all Commission rules and policies, and that the applicant accepts any risk that the implementation of the channel sharing agreement may not be feasible for any reason, including any conflict with requirements for operation on the shared channel; and

(iv) Certification that its shared channel facilities will continue to provide minimum coverage to its principal community of license as set forth in the Commission's rules.

(5) Certification under penalty of perjury that the applicant and all of the person(s) disclosed under paragraph (c)(1) of this section are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. For the purposes of this certification, the term "person" means an individual, partnership, association, joint-stock company, trust, or corporation, and the term "reasons of national security" means matters relating to the national defense and foreign relations of the United States.

(6) An exhibit, certified as truthful under penalty of perjury, identifying all parties with whom the applicant has entered into partnerships, joint

ventures, consortia, or other agreements, arrangements, or understandings of any kind relating to the spectrum usage rights being auctioned, including any such agreements relating to the post-auction market structure.

(7) Certification under penalty of perjury that the applicant has not entered and will not enter into any explicit or implicit agreements, arrangements, or understandings of any kind with any parties other than those identified pursuant to paragraph (c)(6) of this section regarding the amount of their bids, bidding strategies, or the particular relinquishment bids that they will or will not submit.

(8) An exhibit identifying all current delinquencies on any non-tax debt owed to any Federal agency.

(9) Certification that the applicant agrees that it has sole responsibility for investigating and evaluating all technical and marketplace factors that may have a bearing on the bids it submits in the reverse auction.

(10) Certification that the applicant agrees that the bids it submits in the reverse auction are irrevocable, binding offers by the applicant.

(11) Certification that the individual submitting the application to participate and providing the certifications is authorized to do so on behalf of the applicant, and if such individual is not an officer, director, board member, or controlling interest holder of the applicant, evidence that such individual has the authority to bind the applicant.

(12) Certification that the applicant is in compliance with all statutory and regulatory requirements for participation in the reverse auction, including any requirements with respect to the license(s) identified in the application to participate.

(13) Such additional information as the Commission may require.

(d) *Application processing.* (1) Any timely submitted application to participate will be reviewed by Commission staff for completeness and compliance with the Commission's rules. No untimely applications to participate shall be reviewed or considered.

(2) Any application to participate that does not contain all of the certifications required pursuant to this section is unacceptable for filing, cannot be corrected subsequent to the application filing deadline, and will be dismissed with prejudice.

(3) The Commission will provide bidders a limited opportunity to cure specified defects and to resubmit a corrected application to participate. During the resubmission period for curing defects, an application to

participate may be amended or modified to cure defects identified by the Commission or to make minor amendments or modifications. After the resubmission period has ended, an application to participate may be amended or modified to make minor changes or correct minor errors in the application to participate. Minor amendments may be subject to a deadline specified by public notice. Major amendments cannot be made to an application to participate after the initial filing deadline. Major amendments include, but are not limited to, changes in ownership of the applicant that would constitute an assignment or transfer of control, changes to any of the required certifications, and the addition or removal of licenses identified on the application to participate for which the applicant intends to submit relinquishment bids. Minor amendments include any changes that are not major, such as correcting typographical errors and supplying or correcting information requested by the Commission to support the certifications made in the application.

(4) Applicants who fail to correct defects in their applications to participate in a timely manner as specified by public notice will have their applications to participate dismissed with no opportunity for resubmission.

(5) Applicants shall have a continuing obligation to make any amendments or modifications that are necessary to maintain the accuracy and completeness of information furnished in pending applications to participate. Such amendments or modifications shall be made as promptly as possible, and in no case more than five business days after applicants become aware of the need to make any amendment or modification, or five business days after the reportable event occurs, whichever is later. An applicant's obligation to make such amendments or modifications to a pending application to participate continues until they are made.

(e) *Notice to qualified and non-qualified applicants.* The Commission will notify each applicant as to whether it is qualified or not qualified to participate in the reverse auction.

§ 1.22005 Prohibition of certain communications.

(a) *Definition of applicant.* For purposes of this section, the term "applicant" shall include the entity submitting an application to participate in the reverse auction, all controlling interests in the entity submitting the application to participate, as well as all

holders of partnership and other ownership interests and any stock interest amounting to ten percent or more of the entity, or outstanding stock, or outstanding voting stock of the entity submitting the application to participate, and all officers and directors of that entity. For NCEs, the term “applicant” shall also include all members of the licensee’s governing board.

(b) *Certain communications prohibited.* After the deadline for submitting applications to participate in the reverse auction, an applicant is prohibited from cooperating or collaborating with any other applicant with respect to its own, or one another’s, or any other applicant’s bids or bidding strategies, and is prohibited from communicating with any other applicant directly or indirectly in any manner the substance of its own, or one another’s, or any other applicant’s bids or bidding strategies, until a date specified by public notice.

(c) *Duty to report potentially prohibited communications.* An applicant that makes or receives a communication that may be prohibited under paragraph (b) of this section shall report such communication in writing to Commission staff immediately, and in any case no later than five business days after the communication occurs. An applicant’s obligation to make such a report continues until the report has been made.

(d) *Procedures for reporting potentially prohibited communications.* Particular procedures for parties to report communications that may be prohibited under paragraph (b) of this section may be established by public notice. If no such procedures are established by public notice, the party making the report shall do so in writing to the Chief of the Auctions and Spectrum Access Division, Wireless Telecommunications Bureau, by the most expeditious means available, including electronic transmission such as email.

§ 1.22006 Confidentiality of Commission-held data.

The Commission will take all reasonable steps necessary to protect the confidentiality of Commission-held data of a broadcast television licensee participating in the reverse auction, including withholding the identity of such licensee, until the reassignments and reallocations (if any) under section 6403(b)(1)(B) of the Spectrum Act become effective.

§ 1.22007 Two competing participants required.

The Commission may not enter into an agreement for a broadcast television licensee to relinquish broadcast television spectrum usage rights in exchange for a share of the proceeds from the related forward auction assigning new spectrum licenses unless at least two competing broadcast television licensees participate in the reverse auction.

§ 1.22008 Public notice of auction completion and auction results.

Public notice shall be provided when the reverse auction is complete and when the forward auction is complete. Public notice shall be provided of the results of the reverse auction, forward auction, and repacking, and shall indicate that the reassignments of television channels and reallocations of broadcast television spectrum are effective.

§ 1.22009 Binding obligations.

A bidder in the reverse auction assumes an irrevocable, binding obligation to relinquish its spectrum usage rights upon placing a winning bid. Winning bidders will relinquish the spectrum usage rights associated with any winning bids by a date specified by public notice.

§ 1.22010 Disbursement of incentive payments.

A winning bidder shall submit to the Commission the necessary financial information to facilitate the disbursement of the winning bidder’s incentive payment. Specific procedures for submitting financial information, including applicable deadlines, will be set out by public notice.

PART 27—MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES

9. The authority citation for part 27 continues to read as follows:

Authority: 47 U.S.C. 154, 301, 302, 303, 307, 309, 332, 336, and 337 unless otherwise noted.

10. Section 27.1 is amended by adding paragraph (b)(10) to read as follows:

§ 27.1 Basis and purpose.

* * * * *

(b) * * *

(10) Spectrum in the 470–698 MHz UHF band that has been reallocated and redesignated for flexible fixed and mobile use pursuant to Section 6403 of the Middle Class Tax Relief and Job

Creation Act of 2012, Public Law 112–96, 125 Stat. 156.

* * * * *

11. Section 27.4 is amended by adding in alphanumeric order the definition entitled “600 MHz service” to read as follows:

§ 27.4 Terms and definitions.

600 MHz service. A radiocommunication service licensed pursuant to this part for the frequency bands specified in § 27.5(j).

* * * * *

12. Section 27.5 is amended by adding paragraph (j) to read as follows:

§ 27.5 Frequencies.

* * * * *

(j) *600 MHz band.* In accordance with the terms and conditions established in Docket No. 12–268, pursuant to Section 6403 of the Middle Class Tax Relief and Job Creation Act of 2012, Public Law 112–96, 125 Stat. 156, the following frequencies are available for licensing pursuant to this part in the 600 MHz band:

(1) [XX] channel blocks of 5 megahertz each are available for assignment for uplink communications (hereinafter the 600 MHz uplink band).

(2) [XX] channel blocks of 5 megahertz each are available for assignment for downlink communications (hereinafter the 600 MHz downlink band).

Note to paragraph (j): The specific frequencies and number of channel blocks will be determined in light of further proceedings pursuant to Docket No. 12–268 and the rule will be updated accordingly.

13. Section 27.6 is amended by adding paragraph (i) to read as follows:

§ 27.6 Service areas.

* * * * *

(i) *600 MHz band.* Service areas for the 600 MHz band prescribed in § 27.5 are based on Economic Areas (EAs) as defined in paragraph (a) of this section.

14. Section 27.11 is amended by adding paragraph (j) to read as follows:

§ 27.11 Initial authorization.

* * * * *

(j) *600 MHz band.* Initial authorizations for the 600 MHz band shall be for 5 megahertz of spectrum in accordance with § 27.5(j). Authorizations will be based on Economic Areas (EAs), as specified in § 27.6(a).

15. Section 27.13 is amended by adding paragraph (i) to read as follows:

§ 27.13 License period.

* * * * *

(i) *600 MHz band*. Authorizations for the 600 MHz band will have a term not to exceed ten years from the date of issuance or renewal.

16. Section 27.14 is amended by revising the first sentence of paragraph (f) to read as follows:

§ 27.14 Construction requirements; criteria for renewal.

* * * * *

(f) Comparative renewal proceedings do not apply to WCS licensees holding authorizations for the 600 MHz, 698–746 MHz, 747–762 MHz, and 777–792 MHz bands. * * *

* * * * *

17. Section 27.15 is amended by revising paragraph (d)(1)(i); adding paragraph (d)(1)(iii); revising paragraph (d)(2)(i), and adding paragraph (d)(2)(iii) to read as follows:

§ 27.15 Geographic partitioning and spectrum disaggregation.

* * * * *

(d) * * *

(1) * * *

(i) Except for WCS licensees holding authorizations for the 600 MHz band, Block A in the 698–704 MHz and 728–734 MHz bands, Block B in the 704–710 MHz and 734–740 MHz bands, Block E in the 722–728 MHz band, Blocks C, C1, or C2 in the 746–757 MHz and 776–787 MHz bands, or Block D in the 758–763 MHz and 788–793 MHz bands, the following rules apply to WCS and AWS licensees holding authorizations for purposes of implementing the construction requirements set forth in § 27.14. Parties to partitioning agreements have two options for satisfying the construction requirements set forth in § 27.14. Under the first option, the partitioner and partitionee each certifies that it will independently satisfy the substantial service requirement for its respective partitioned area. If a licensee subsequently fails to meet its substantial service requirement, its license will be subject to automatic cancellation without further Commission action. Under the section option, the partitioner certifies that it has met or will meet the substantial service requirement for the entire, pre-partitioned geographic service area. If the partitioner subsequently fails to meet its substantial service requirement, only its license will be subject to automatic cancellation without further Commission action.

* * * * *

(iii) For licensees in the 600 MHz band, the following rules apply for purposes of implementing the construction requirements set forth in § 27.14. Each party to a geographic

partitioning must individually meet any service-specific performance requirements (*i.e.*, construction and operation requirements).

(2) * * *

(i) Except for WCS licensees holding authorizations for the 600 MHz band, Block A in the 698–704 MHz and 728–734 MHz bands, Block B in the 704–710 MHz and 734–740 MHz bands, Block E in the 722–728 MHz band, Blocks C, C1, or C2 in the 746–757 MHz and 776–787 MHz bands, or Block D in the 758–763 MHz and 788–793 MHz bands, the following rules apply to WCS and AWS licensees holding authorizations for purposes of implementing the construction requirements set forth in § 27.14. Parties to disaggregation agreements have two options for satisfying the construction requirements set forth in § 27.14. Under the first option, the disaggregator and disaggregatee each certifies that it will share responsibility for meeting the substantial service requirement for the geographic service area. If the parties choose this option and either party subsequently fails to satisfy its substantial service responsibility, both parties' licenses will be subject to forfeiture without further Commission action. Under the second option, both parties certify either that the disaggregator or the disaggregatee will meet the substantial service requirement for the geographic service area. If the parties choose this option, and the party responsible subsequently fails to meet the substantial service requirement, only that party's license will be subject to forfeiture without further Commission action.

* * * * *

(iii) For licensees holding authorizations in the 600 MHz band, the following rules apply for purposes of implementing the construction requirements set forth in § 27.14. Each party to a spectrum disaggregation must individually meet any service-specific performance requirements (*i.e.*, construction and operation requirements).

18. Section 27.17 is added to read as follows:

§ 27.17 Discontinuance of service in the 600 MHz band.

(a) *Termination of Authorization*. A licensee's authorization in the 600 MHz band will automatically terminate, without specific Commission action, if it permanently discontinues service after meeting the interim buildout requirements.

(b) Permanent discontinuance of service is defined as 180 consecutive days during which a 600 MHz licensee

does not operate or, in the case of a commercial mobile radio service provider, does not provide service to at least one subscriber that is not affiliated with, controlled by, or related to the providing carrier.

(c) *Filing Requirements*. A licensee of the 600 MHz band that permanently discontinues service as defined in this section must notify the Commission of the discontinuance within 10 days by filing FCC Form 601 or 605 requesting license cancellation. An authorization will automatically terminate, without specific Commission action, if service is permanently discontinued as defined in this section, even if a licensee fails to file the required form requesting license cancellation.

19. Section 27.50 is amended by revising paragraphs (c) introductory text, (c)(5), (c)(9), (c)(10), and the heading to Tables 1 through 4 to read as follows:

§ 27.50 Power limits and duty cycle.

* * * * *

(c) The following power and antenna height requirements apply to stations transmitting in the 698–746 MHz band and the 600 MHz downlink band:

* * * * *

(5) Licensees, except for licensees operating in the 600 MHz downlink band, seeking to operate a fixed or base station located in a county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, and transmitting a signal at an ERP greater than 1000 watts must:

* * * * *

(9) Control and mobile stations are limited to 30 watts ERP in the 698–746 MHz band and 3 watts ERP in the 600 MHz uplink band but are precluded in the 600 MHz downlink band;

(10) Portable stations (hand-held devices) are limited to 3 watts ERP in the 698–746 MHz band and the 600 MHz uplink band but are precluded in the 600 MHz downlink band; and

* * * * *

Table 1 to § 27.50—Permissible Power and Antenna Heights for Base and Fixed Stations in the 757–758 and 775–776 MHz Bands and for Base and Fixed Stations in the 600 MHz, 698–757 MHz, 758–763 MHz, 776–787 MHz and 788–793 MHz Bands Transmitting a Signal With an Emission Bandwidth of 1 MHz or Less

* * * * *

Table 2 to § 27.50—Permissible Power and Antenna Heights for Base and Fixed Stations in the 600 MHz, 698–757 MHz, 758–763 MHz, 776–787 MHz and 788–

793 MHz Bands Transmitting a Signal With an Emission Bandwidth of 1 MHz or Less

* * * * *

Table 3 to § 27.50—Permissible Power and Antenna Heights for Base and Fixed Stations in the 600 MHz, 698–757 MHz, 758–763 MHz, 776–787 MHz and 788–793 MHz Bands Transmitting a Signal With an Emission Bandwidth Greater than 1 MHz

* * * * *

Table 4 to § 27.50—Permissible Power and Antenna Heights for Base and Fixed Stations in the 600 MHz, 698–757 MHz, 758–763 MHz, 776–787 MHz and 788–793 MHz Bands Transmitting a Signal With an Emission Bandwidth Greater than 1 MHz

* * * * *

20. Section 27.53 is amended by revising paragraph (g) to read as follows:

§ 27.53 Emission limits.

* * * * *

(g) For operations in the 600 MHz and 698–746 MHz bands, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

* * * * *

21. Section 27.55 is amended by revising paragraphs (a)(2) and (b) to read as follows:

§ 27.55 Power strength limits.

* * * * *

(a) * * *

(2) 600 MHz, 698–758, and 775–787 MHz bands: 40 dBμV/m.

* * * * *

(b) *Power flux density limit for stations operating in the 698–746 MHz band and the 600 MHz band.* For base and fixed stations operating in the 698–746 MHz band and the 600 MHz band in accordance with the provisions of § 27.50(c)(6), the power flux density that would be produced by such stations through a combination of antenna height and vertical gain pattern must not exceed 3000 microwatts per square meter on the ground over the area extending to 1 km from the base of the antenna mounting structure.

* * * * *

22. Subpart O is added to part 27 to read as follows:

Subpart O—Competitive Bidding Procedures for the 600 MHz Band

Sec.

27.1401 600 MHz band subject to competitive bidding.

27.1402 Designated entities in the 600 MHz band.

§ 27.1401 600 MHz band subject to competitive bidding.

Mutually exclusive initial applications for licenses in the 600 MHz band (*i.e.*, the frequency bands specified in § 27.5(j)) are subject to competitive bidding. The general competitive bidding procedures set forth in part 1, subpart Q of this chapter will apply unless otherwise provided in this subpart.

§ 27.1402 Designated entities in the 600 MHz band.

(a) *Eligibility for small business provisions.* (1) A small business is an entity that has average attributable gross revenues, as determined pursuant to § 1.2110 of this chapter, not exceeding \$40 million for the preceding three years.

(2) A very small business is an entity that has average attributable gross revenues, as determined pursuant to § 1.2110 of this chapter, not exceeding \$15 million for the preceding three years.

(b) *Bidding credits.* (1) A winning bidder that qualifies as a small business, as defined in this section, or a consortium of small businesses may use the bidding credit specified in § 1.2110(f)(2)(iii) of this chapter.

(2) A winning bidder that qualifies as a very small business, as defined in this section, or a consortium of very small businesses may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter.

PART 73—RADIO BROADCAST SERVICES

23. The authority citation for part 73 continues to read:

Authority: 47 U.S.C. 154, 303, 334, 336, and 339.

24. Section 73.3572 is amended by adding paragraph (a)(4)(vi) to read as follows:

§ 73.3572 Processing of TV broadcast, Class A TV broadcast, low power TV, TV translators, and TV booster applications.

* * * * *

(a) * * *

(4) * * *

(vi) Low power television and TV translators displaced as a result of the

broadcast television incentive auction set forth in 47 CFR 73.3700 shall be permitted to submit an application for displacement relief in a restricted filing window announced by the Media Bureau by Public Notice. Priority processing shall be afforded to mutually exclusive applications filed by low power television stations or TV translators that provide the only local over-the-air television service within their protected service area as set forth in § 74.792 of this chapter.

* * * * *

25. Section 73.3700 is revised to read as follows:

§ 73.3700 Reverse auction provisions.

(a) *Definitions.* (1) *High VHF Channel.* For purposes of this paragraph, “High VHF Channel” means a television channel located between the frequencies from 174 MHz to 216 MHz (television channels 7 through 13).

(2) *Reverse auction.* For purposes of this paragraph, “reverse auction” means the auction set forth in Section 6403(a) of the Middle Class Tax Relief and Job Creation Act of 2012.

(3) *Low VHF Channel.* For purposes of this paragraph, “Low VHF Channel” means a television channel located between the frequencies from 54 MHz to 72 MHz and 76 MHz to 88 MHz (television channels 2 through 6).

(4) *MVPD.* For purposes of this paragraph, “MVPD” means a person such as, but not limited to, a cable operator, a multichannel multipoint distribution service, a direct broadcast satellite service, or a television receive-only satellite program distributor, who makes available for purchase, by subscribers or customers, multiple channels of video programming as set forth in section 602 of the Communications Act of 1934 (47 U.S.C. 522).

(5) *Repacking.* For purposes of this paragraph, “repacking” means the reorganization of the broadcast television spectrum, including the reassignment of channels in conjunction with the reverse auction, as set forth in Section 6403(b) of the Middle Class Tax Relief and Job Creation Act of 2012.

(6) *Television station.* For purposes of this paragraph, “television station” means full power television stations and Class A television stations.

(7) *Ultra High Frequency Television Channel.* For purposes of this paragraph, “ultra high frequency television channel” (“UHF”) means a television channel that is located in the portion of the electromagnetic spectrum between the frequencies from 470 MHz to 698 MHz (television channels 14 through 51).

(8) *Very High Frequency Television Channel*. For purposes of this paragraph, “very high frequency television channel” (“VHF”) means a television channel that is located in the portion of the electromagnetic spectrum between the frequencies from 54 MHz to 72 MHz, from 76 MHz to 88 MHz, or from 174 MHz to 216 MHz (television channels 2 through 13).

(b) *Participation in reverse auction*.

(1) A television station licensee or holder of a construction permit for a newly authorized unbuilt station, may participate in the reverse auction so long as it holds a license for the spectrum it seeks to relinquish prior to the date it submits its application to participate in the reverse auction.

(2) Noncommercial educational (NCE) television stations may participate in the reverse auction.

(3) Television stations may participate in the reverse auction regardless of whether they are subject to any pending complaints or investigations related to the spectrum being contributed to the incentive auction, unless such complaints or investigations have resulted in a revocation or non-renewal of the station's license.

(c) *Channel sharing*. Each licensee participating in a channel sharing arrangement shall continue to be licensed and operated separately, have its own call sign and be separately subject to all of the Commission's obligations, rules, and policies applicable to the television service.

(1) *Channel sharing arrangements involving full power television and class A television stations*.

(i) Channel sharing is permissible between full power television stations, between Class A television stations and between full power and Class A television stations.

(ii) A Class A television station that relinquishes usage rights to its channel in order to share a channel with a full power television station pursuant to this paragraph will be licensed with the technical facilities of the full power television station, but must comply in all other respects with the rules and policies applicable to Class A stations as set forth in the Community Broadcasters Protection Act of 1999 and 47 CFR subpart J.

(iii) A full power television station that relinquishes usage rights to its channel in order to share a channel with a Class A television station pursuant to this paragraph will be licensed with the part 74 technical facilities of the Class A television station as set forth in part 74 of this chapter but must continue to comply with the provisions in part 73, subpart E except for those that are

inconsistent with the part 74 technical requirements.

(iv) A Class A television station sharing a channel with a full power television station pursuant to this paragraph may only qualify for the cable carriage rights afforded “qualified low power television stations” in 47 CFR 76.56(b)(3).

(2) *Channel Sharing Between Commercial and Noncommercial Educational Television Stations*.

(i) Channel sharing is permissible between commercial and NCE television stations.

(ii) An NCE television station licensee that relinquishes a channel reserved for NCE use to share a channel that has not been reserved for NCE use will retain its NCE status while operating on the non-reserved channel and must continue to comply with the requirements set forth in 47 CFR 73.621 and Commission policies related to NCE television stations. The NCE licensee may only assign or transfer its shared license to an entity qualified in that rule section to become an NCE television licensee.

(iii) An NCE television station licensee sharing a channel reserved for NCE use with a commercial television station licensee will retain its NCE status and the commercial licensee will retain its commercial status. The NCE licensee must continue to comply with the requirements set forth in 47 CFR 73.621 and Commission policies related to NCE television stations, and may only assign or transfer its shared license to an entity qualified in that rule section to become an NCE television licensee.

(3) *Required channel sharing agreement provisions*. Channel Sharing Agreements shall contain provisions that:

(i) Ensure that each licensee shall retain sufficient spectrum usage rights to operate one Standard Definition (SD) program stream.

(ii) Ensure that each licensee has reasonable access rights to its shared transmission facilities and is able to operate without limitation.

(iii) Set forth each licensee's rights and responsibilities with respect to maintenance of the shared transmission facilities.

(iv) Specify procedures for licensees to propose and implement modifications to shared transmission facilities.

(v) Provide for the rights of each licensee in the event of assignment or transfer of one of the channel sharing stations to a third party.

(4) *Changes to community of license or market designation*. Stations may not propose any channel sharing arrangement that would result in a

change in the stations' community of license or DMA.

(5) *Preservation of carriage rights*. A broadcast television station that voluntarily relinquishes spectrum usage rights under this paragraph in order to share a television channel and that possessed carriage rights under section 338, 614, or 615 of the Communications Act of 1934 (47 U.S.C. 338; 534; 535) on November 30, 2010, shall have, at its shared location, the carriage rights under such section that would apply to such station at such location if it were not sharing a channel.

(d) *Protection of licensed facilities during repacking*. Only the licensed facilities of television stations as they existed on February 22, 2012 shall be protected during the repacking of the broadcast television spectrum.

(1) *Class A television stations*. A Class A television station that has not completed its conversion to digital operations shall be afforded an opportunity prior to completion of the repacking process to specify an authorized digital facility for which it requests protection during repacking.

(2) [Reserved].

(e) *Post-auction licensing*. (1) *Applications*. Following the announcement of the results of the reverse auction and repacking plan, all stations that have been reassigned to a new channel (excluding a channel sharing station moving to a channel that has not been repacked) must file a minor change application for a construction permit using FCC Forms 301-DTV, 301-CA or 340-DTV by the date specified. Channel sharing stations must each file an application for license using FCC Form 302-DTV by the date specified.

(2) *Deadlines*. (i) *Stations relinquishing channels*. A television station licensee that wins its reverse auction bid to relinquish a channel without receiving in return any usage rights with respect to another channel must comply with the notification and cancellation procedures in 47 CFR 73.1750 and terminate operations on the relinquished channel within [XX] months of notification that it is a winning bidder.

(ii) *Channel-sharing stations*. A licensee that wins its reverse auction bid to relinquish a channel pursuant to a CSA must comply with the notification and cancellation procedures in 47 CFR 73.1750 and terminate operations on the relinquished channel within [XX] months of issuance of notification that it is a winning bidder, even if the shared channel has also been repacked.

(iii) *Stations moving from a UHF to VHF channel and repacked stations.* A licensee that wins its reverse auction bid to move from a UHF to a VHF channel, and a station reassigned to a new channel in the repacking plan, must terminate operation on its former channel and begin operation on its new channel within 18 months of issuance of notification that it is a winning bidder or that it has been assigned a new channel during repacking.

(3) *Requests for additional time to complete construction.* Stations subject to the deadlines in § 73.3700(e)(2) may seek additional time to terminate operations on their former channel facilities and, where applicable, to complete construction of their new channel facilities.

(4) *Consumer education.* Stations subject to the deadlines in § 73.3700(e)(2) must provide notice to their viewers of their planned termination of operations and, if applicable, relocation to a new channel.

(5) *Notice to MVPDs.* Winning bidders in the reverse auction and repacked stations shall notify MVPDs in writing of any changes to the stations' channel or technical facilities that could affect carriage. Such notification shall be provided not less than [XX] days prior to implementation of changes in conjunction with the channel sharing arrangement.

(f) *Compensation.* (1) Television stations are eligible for reimbursement of the costs reasonably incurred as a result of their channels being reassigned through repacking.

(2) MPVDs are eligible for reimbursement of the costs reasonably incurred in order to continue to carry

the signal of a television station that has its channel changed as part of repacking or that relinquishes its spectrum rights through the incentive auction.

(3) *Amount of reimbursement.* (i) Television stations may elect to be reimbursed through an advance payment based upon an estimated rate per station or may submit a showing and be reimbursed based upon their actual expenditures incurred in the repacking process.

(ii) MVPDs may elect to be reimbursed through an advance payment based upon an estimated rate per station change or may submit a showing and be reimbursed based upon their actual expenditures incurred to accommodate changes that result from the reverse auction or repacking processes.

(4) In lieu of receiving reimbursement of their costs reasonably incurred as a result of their channels being reassigned through repacking, a television station may accept a waiver of the service rules to permit the television station to provide services other than broadcast television services. Such waiver shall only remain in effect while the licensee provides at least one broadcast television program stream on such spectrum at no charge to the public.

26. Section 73.6012 is revised to read as follows:

§ 73.6012 Protection of Class A TV, low power TV and TV translator stations.

An application to change the facilities of an existing Class A TV station will not be accepted if it fails to protect other authorized Class A TV, low power TV and TV translator stations and applications for changes in such stations

filed prior to the date the Class A application is filed, pursuant to the requirements specified in § 74.707 of this chapter. The protection of other authorized low power TV and TV translator stations and applications for changes in such stations shall not apply in connection with any application filed by a Class A TV station to implement the reorganization of broadcast spectrum authorized in section 6403(b) of the Middle Class Tax Relief and Job Creation Act of 2012.

27. Section 73.6019 is revised to read as follows:

§ 73.6019 Digital Class A TV station protection of low power TV, TV translator, digital low power TV and digital TV translator stations.

An application for digital operation of an existing Class A TV station or to change the facilities of a digital Class A TV station will not be accepted if it fails to protect authorized low power TV, TV translator, digital low power TV and digital TV translator stations in accordance with the requirements of § 74.793 (b) through (d) and (h) of this chapter. This protection must be afforded to applications for changes filed prior to the date the digital Class A station is filed. The protection of other authorized low power TV, TV translator, digital low power TV and digital TV translator stations shall not apply in connection with any application filed by a Class A TV station to implement the reorganization of broadcast spectrum authorized in section 6403(b) of the Middle Class Tax Relief and Job Creation Act of 2012.

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