

SUPPORTING STATEMENT

A. Justification

1. 47 CFR 73.686 establishes measurement procedures for determining the strength of a digital broadcast television (DTV) signal at any specific location. These procedures will be used for determining whether households are eligible to receive distant DTV network signals retransmitted by satellite carriers, pursuant to the provisions of the Satellite Television Extension and Localism Act of 2010 (STELA).

47 CFR 73.686 describes a method for measuring signal strength at a household so that the satellite and broadcast industries would have a uniform method for making an actual determination of the signal strength that a household received. The information gathered as part of the Grade B contour¹ signal strength tests will be used to indicate whether a household is “unserved” by over-the-air network signals.

Satellite and broadcast industries making field strength measurements for formal submission to the Commission in rulemaking proceedings,² or making such measurements upon the request of the Commission, shall follow the procedure for making and reporting such measurements which shall be included in a report to the Commission and submitted in affidavit form, in triplicate. The report shall contain the following information:

(a) Tables of field strength measurements, which for each measuring location; (b) U.S. Geological Survey topographic maps; (c) All information necessary to determine the pertinent characteristics of the transmitting installation; (d) A list of calibrated equipment used in the field strength survey; (e) A detailed description of the calibration of the measuring equipment, and (f) Terrain profiles in each direction in which measurements were made.

47 CFR 73.686 also requires satellite and broadcast companies to maintain a written record describing, for each location, factors which may affect the recorded field (i.e., the approximate time or measurement, weather, topography, overhead wiring, heights and types of vegetation, buildings and other structures, the orientation of the measuring location, objects of such shape and size that cause shadows or reflections, signals received that arrived from a direction other than that of the transmitter, survey, list of the measured value field strength, time and date of the measurements and signature of the person making the measurements).

¹ Grade B contour generally refers to a geographic area within which viewers normally will be able to receive service from a broadcast station.

² Except as provided for in 47 CFR 73.612, television broadcast stations shall not be protected from any type of interference or propagation effect. Persons desiring to submit testimony, evidence or data to the Commission for the purpose of showing that the technical standards in 47 CFR Section 73.686 do not properly reflect the levels of any given type of interference or propagation effect may so only so only in appropriate rulemaking proceedings concerning the amendment of such technical standards.

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47 CFR 73.686(e) describes the procedures for measuring the field strength of digital television signals. These procedures will be used to determine whether a household is eligible to receive a distant digital network signal from a satellite television provider, largely rely on existing, proven methods the Commission has already established for measuring analog television signal strength at any individual location, as set forth in Section 73.686(d) of the existing rules, but include modifications as necessary to accommodate the inherent differences between analog and digital TV signals. The new digital signal measurement procedures include provisions for the location of the measurement antenna, antenna height, signal measurement method, antenna orientation and polarization, and data recording.

Therefore, satellite and broadcast industries making field strength measurements shall maintain written records and include the following information:³ (a) A list of calibrated equipment used in the field strength survey, which for each instrument specifies the manufacturer, type, serial number and rated accuracy, and the date of the most recent calibration by the manufacturer or by a laboratory. Include complete details of any instrument not of standard manufacture; (b) A detailed description of the calibration of the measuring equipment, including field strength meters, measuring antenna, and connecting cable; (c) For each spot at the measuring site, all factors which may affect the recorded field, such as topography, height and types of vegetation, buildings, obstacles, weather, and other local features; (d) A description of where the cluster measurements were made; (e) Time and date of the measurements and signature of the person making the measurements; (f) For each channel being measured, a list of the measured value of field strength (in units of dB μ after adjustment for line loss and antenna factor) of the five readings made during the cluster measurement process, with the median value highlighted.

The Commission is requesting that the Office of Management and Budget (OMB) approve a three year extension for this currently approved information collection.

History:

On November 17, 1998, the Commission released a *Notice of Proposed Rulemaking*, In the Matter of Satellite Delivery of Network Signals to Unserved Households for Purposes of the Satellite Home Viewer Act; and Definition and Measurements of Signals of Grade B Intensity (“NPRM”). This proceeding originated with the Petitions filed by the National Rural Telecommunications Cooperative and by EchoStar Communications Corporation, two direct-to-home (“DTH”) satellite companies. The petitions asked the Commission to examine the way it defines, measures, and predicts signal intensity under the Satellite Home Viewer Act (“SHVA”). We sought to promote competition among multichannel video programming distributors (“MPVDs”) where that is possible under SHVA, and we recognized the important role that network affiliates play in their local communities.

³ These recordkeeping requirements are set forth in the Commission’s existing rules, FCC 99-14, as they apply to analog TV signals. The Commission made modifications as necessary to accommodate the inherent differences between analog and digital TV signals (new digital signal measurement procedures) in FCC 10-195.

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On February 2, 1999, the Commission released a *Report and Order*, In the Matter of Satellite Delivery of Network Signals to Unserved Households for Purposes of the Satellite Home Viewer Act, Part 73 Definition and Measurement of Signals of Grade B Intensity, FCC 99-14, that adopted a rule describing a method for measuring signal strength at a household so that the satellite and broadcast industries and consumers would have a uniform method for making an actual determination of the signal strength that a household received. The Commission also endorsed a computer model to predict whether a household is likely to be able to receive a signal of the required strength.

On May 26, 2000, the Commission's Office of Engineering and Technology, released a *First Report and Order*, Establishment of an Improved Model for Predicting the Broadcast Television Field Strength Received at Individual Locations, ET Docket No. 00-11, 15 FCC Rcd 1843 (2002). The *First Report and Order* prescribed an improved point-to-point predictive model (Individual Location Longley-Rice (ILLR)) for determining the ability of locations to receive an over-the-air television broadcast signal of a specific intensity through the use of a conventional, outdoor rooftop receiving antenna. In the absence of on-site measurements of signal intensity, this model provided a reliable and presumptive means for determining whether the over-the-air signal of a network affiliated television station can be received at an individual location. We also provided for the model's continued refinement by the use of additional data as it becomes available. In prescribing the improved predictive model, we complied with statutory requirements set forth in the Satellite Home Viewer Improvement Act of 1999 (SHVIA).

On November 23, 2010, the Commission's Office of Engineering and Technology, released a Report and Order, Measurement Standards for Digital Television Signals Pursuant to the Satellite Home Viewer Extension and Reauthorization Act of 2004, ET Docket No. 06-94; FCC 10-195. The Report and Order adopted rules establishing measurement procedures for determining the strength of a digital broadcast television (DTV) signal at any specific location. These procedures will be used for determining whether households are eligible to receive distant DTV network signals retransmitted by satellite carriers, pursuant to the provisions of the Satellite Television Extension and Localism Act of 2010 (STELA).⁴ This Report and Order implements DTV signal measurement procedures proposed in the Commission's *Notice of Proposed Rulemaking (SHVERA NPRM)* and *Further Notice of Proposed Rulemaking (STELA FNRPM)* in this proceeding with minor modifications.⁵

⁴ See Satellite Television Extension and Localism Act of 2010, Title V of the "American Workers, State, and Business Relief Act of 2010," Pub. L. 111-175, 124 Stat. 1218 (2010) (STELA). The STELA reauthorizes and updates the expired Satellite Home Viewer Extension and Reauthorization Act of 2004 (SHVERA). See Satellite Home Viewer Extension and Reauthorization Act of 2004, Pub. L. No. 108-447, § 204, 118 Stat 2809, 3393 3423-24, (2004), codified at 47 U.S.C. §339(c)(1). The SHVERA was enacted as Title IX of the "Consolidated Appropriations Act, 2005." On December 9, 2005, as required by Section 204(b) of the SHVERA, the Commission issued a Report to Congress. See, "*Report to Congress: Study of Digital Television Field Strength Standards and Testing Procedures*," ET Docket No. 05-182, 20 FCC Rcd. 19504 (2005) (*SHVERA Report*).

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This information collection does not affect individuals or households; thus, there are no impacts under the Privacy Act.

Statutory authority for this action is contained in the Satellite Home Viewer Act, 17 U.S.C. § 119. The Satellite Home Viewer Act is an amendment of the Copyright Act; and Satellite Television Extension and Localism Act of 2010, Title V of the “American Workers, State, and Business Relief Act of 2010,” Pub. L. 111-175, 124 Stat. 1218 (2010) (STELA).

2. The information gathered as part of the signal strength tests will be used to indicate whether consumers are “unserved” by over-the-air network signals. The written records of test results will be made after testing and predicting the strength of a television station’s signal.
3. The Commission has not yet implemented automated technological collection techniques for this collection of information. We will look into automating this collection of information in the future.
4. The Commission does not impose a similar information collection on the respondents. Therefore, the collection of information is not duplicative.
5. The Commission do not anticipate that this collection of information collection will impact small businesses or other small entities. Therefore, this information collection will not have a significant impact on a substantial number of small entities/businesses.
6. If the Commission did not sponsor this information collection, it would not be in compliance with the Satellite Home Viewer Act and Satellite Television Extension and Localism Act of 2010.
7. There are no special circumstances that apply to this collection of information.
8. The Commission published a Notice (81 FR 96452) in the Federal Register on December 30, 2016 seeking comments from the public on the information collection requirements contained in this supporting statement. No comments were received from the public.
9. There will be no payment or gifts given to respondents.
10. There is no need for confidentiality with this collection of information.

⁵ See *In the Matter of Measurement Standards for Digital Television Signals Pursuant to the Satellite Home Viewer Extension and Reauthorization Act of 2004*, ET Docket No. 06-94, *Notice of Proposed Rulemaking*, 21 FCC Rcd. 4735 (2006) (SHVERA NPRM). See also *Notice of Proposed Remaking and Further Notice of Proposed Rulemaking*, ET Docket Nos. 10-152 and 06-94, 25 FCC Rcd. 10474 (2010) (STELA FNPRM).

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11. This collection of information does not address matters of a sensitive nature.

12. The estimated public burden is as follows:⁶

Total Number of Annual Respondents: 848 Satellite/Broadcast Companies

Total Number of Annual Responses: 250,000 Written Reports/Records Kept (responses)

Total Annual Burden Hours:

250,000 written reports of test results and records kept x 0.50 hours⁷/written report/record kept = **125,000 hours**

Total Annual “In-house costs”: We estimate a field technician earning \$25.00/hour will test results of signal strength measurements and predictive models and will take one hour per written report/record kept.

250,000 written reports of test results/records kept x 0.50 hours/written report/record kept x \$25.00/hour = **\$3,125,000**

These estimates are based on Commission’s staff knowledge and familiarity with the availability of the data required.

13. Annual Cost Burden:

(a) Total annualized capital/startup costs: None

(b) Total annual costs (O&M): None

(c) Total annualized cost requested: None

⁶ The Commission is merely applying the requirements for making and maintaining measurements (recordkeeping) of TV signal strength are set forth in the Commission’s existing rules, FCC 99-14, as they apply to analog TV signals and making them also apply to digital TV signals with some modifications. Therefore, the same number of respondents and records will be kept. The respondents will merely choose to make measurements under the analog TV signals or DTV signals. This choice will not have an impact on the burden or cost for this information collection due to the same amount of time being taken to make and maintain records of the measurements.

⁷ This hourly burden accounts for the time it takes the staff at the satellite and broadcast companies to gather information for the written reports, prepare the reports, to file copies of the reports with the Commission and also to maintain and keep records of the reports.

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14. Cost to the Federal Government: The Commission will use staff at the GS-11 step 5 grade level, \$36.12/hr. to process reports received from satellite and broadcast companies.

250,000 written reports of test results x \$36.12/hour x 1 hour/report = \$9,030,000

Total Cost to the Federal Government: \$9,030,000

15. There are no program changes or adjustments to this information collection.

16. The data will not be published for statistical use.

17. The Commission does not seek approval to not display the expiration date for this collection of information.

18. There are no exceptions to the Certification Statement.

B. Collections of Information Employing Statistical Methods

No statistical methods are employed.