

**FCC FACT SHEET\***

**Updating References to Standards Related to the Commission’s Equipment Authorization Program; Modifying the Equipment Authorization Rules to Reflect the Updated Versions of the Currently Referenced ANSI C63.4 and ISO/IEC 17025 Standards**

Notice of Proposed Rulemaking, ET Docket Nos. 21-363 and 19-48

**Background:** The Commission’s equipment authorization rules incorporate by reference various standards that have been established by standards-setting bodies, including, but not limited to, the American National Standards Institute (ANSI), Accredited Standards Committee (ASC) C63; the International Organization for Standardization (ISO); and the International Electrotechnical Commission (IEC). Incorporating external standards within the Commission’s rules has been a longstanding practice that reflects our desire to harmonize the rules with international standards and aligns the Commission’s rules with general federal agency guidance which urges government agencies to use industry developed standards rather than develop their own.

**What the Notice of Proposed Rulemaking Would Do:**

- Seek comment on a proposal to update existing equipment authorization rules to incorporate by reference a new technical standard: “American National Standard Validation Methods for Radiated Emission Test Sites; 1 GHz to 18 GHz” (ANSI C63.25.1:2018).
  - The incorporation of this standard would consolidate guidance from existing standards to clearly apply through higher frequency bands. The C63.25.1:2018 standard included in this proposal covers 1 to 18 GHz.
- Seek comment on a proposal to update existing equipment authorization rules to reflect a more recent version of the technical standard that is currently incorporated by reference: “American National Standards of Procedures for Compliance Testing of Unlicensed Wireless Devices” (ANSI C63.10:2020).
  - Updating the incorporation by reference of this standard would address changes in technology.
- Seek comment on a proposal to update existing equipment authorization rules to reflect more recent versions of the technical standards that are currently incorporated by reference: “Conformity assessment – Requirements for accreditation bodies accrediting conformity assessment bodies” (ISO/IEC 17011:2017) and “General requirements for the competence of testing and calibration laboratories” (ISO/IEC 17025:2017).
  - Updating the incorporation by reference of these standards would provide more comprehensive requirements for accreditation bodies and testing.

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\* This document is being released as part of a “permit-but-disclose” proceeding. Any presentations or views on the subject expressed to the Commission or its staff, including by email, must be filed in ET Docket No. 21-363 and ET Docket No. 19-48, which may be accessed via the Electronic Comment Filing System (<https://www.fcc.gov/ecfs/>). Before filing, participants should familiarize themselves with the Commission’s *ex parte* rules, including the general prohibition on presentations (written and oral) on matters listed on the Sunshine Agenda, which is typically released a week prior to the Commission’s meeting. See 47 CFR § 1.1200 et seq.

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of )
Updating References to Standards Related to the ) ET Docket No. 21-363
Commission’s Equipment Authorization Program )
Modifying the Equipment Authorization Rules to ) ET Docket No. 19-48
Reflect the Updated Versions of the Currently )
Referenced ANSI C63.4 and ISO/IEC 17025 )
Standards )

NOTICE OF PROPOSED RULEMAKING\*

Adopted: [ ]

Released: [ ]

Comment Date: 30 days after Federal Register Publication
Reply Comment Date: 60 days after Federal Register Publication

By the Commission:

I. INTRODUCTION

1. The rapid and widespread deployment of radiofrequency (RF) devices has enabled the communications sector to drive innovation, promote economic growth, and become integral to nearly all aspects of modern life. The Commission’s equipment authorization program is one of the principal ways the Commission ensures that the communications equipment people rely on every day, such as their cellphones and Wi-Fi devices, operate effectively without causing harmful interference and otherwise comply with the Commission’s rules.

2. In this Notice of Proposed Rulemaking, we propose targeted updates to our rules to incorporate four new and updated standards that are integral to the testing of equipment and accreditation of laboratories that test RF devices. Today’s RF devices are evolving more rapidly than ever before, and we anticipate that this evolution will continue and even accelerate. Keeping abreast of significant developments in the standards-setting community enables our equipment authorization program to keep pace with this evolution and ensure that the devices being used every day continue to comply with our technical rules.

\* This document has been circulated for tentative consideration by the Commission at its January 2022 open meeting. The issues referenced in this document and the Commission’s ultimate resolution of those issues remain under consideration and subject to change. This document does not constitute any official action by the Commission. However, the Chairwoman has determined that, in the interest of promoting the public’s ability to understand the nature and scope of issues under consideration, the public interest would be served by making this document publicly available. The FCC’s ex parte rules apply and presentations are subject to “permit-but-disclose” ex parte rules. See, e.g., 47 CFR §§ 1.1206, 1.1200(a). Participants in this proceeding should familiarize themselves with the Commission’s ex parte rules, including the general prohibition on presentations (written and oral) on matters listed on the Sunshine Agenda, which is typically released a week prior to the Commission’s meeting. See 47 CFR §§ 1.1200(a), 1.1203.

## II. BACKGROUND

3. Our proposals are limited to the incorporation by reference of standards that are associated with equipment authorization and the certification of Telecommunication Certification Bodies (TCBs). Incorporation by reference is the process that Federal agencies use when referring to materials published elsewhere to give those materials the same force and effect of law in the Code of Federal Regulations as if the materials' text had actually been published in the *Federal Register*.<sup>1</sup> By using incorporation by reference, we are able to give effect to technical instructions, testing methodologies, and other process documents that are developed and owned by standards development organizations. Referencing these documents in our rules substantially reduces the volume of material that we otherwise would have to publish in the *Federal Register* and the Code of Federal Regulations. It also permits us to more efficiently implement future standards updates. Once we have completed any necessary notice-and-comment rulemaking proceedings and applied our agency expertise to ensure that any standards we adopt are sound and appropriate, we need only update the references to the standards in our rules.

### A. Equipment authorization

4. Section 302 of the Communications Act of 1934, as amended (the Act), authorizes the Commission to make reasonable regulations governing the interference potential of devices that emit RF energy and can cause harmful interference to radio communications.<sup>2</sup> The Commission generally implements this authority by establishing technical rules for RF devices.<sup>3</sup> One of the primary ways in which the Commission ensures compliance with the technical rules is through the equipment authorization program for RF devices, procedures for which are codified in part 2 of our rules.<sup>4</sup> The Office of Engineering and Technology (OET) administers the day-to-day operation of the equipment authorization program.<sup>5</sup>

5. Part 2 of the Commission's rules provides two different approval procedures for RF devices subject to equipment authorization—certification and Supplier's Declaration of Conformity (SDoC).<sup>6</sup> Certification is a more rigorous approval process for RF devices with the greatest potential to cause harmful interference to other radio operations. A grant of certification is an equipment authorization issued by an FCC-recognized TCB based on an evaluation of the supporting documentation and test data submitted to the TCB.<sup>7</sup> SDoC allows a device to be marketed on the basis of testing performed in accordance with a Commission-approved methodology by the manufacturer, assembler, importer, or seller itself without the need to submit an application to a TCB.<sup>8</sup> While both processes

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<sup>1</sup> Office of the Federal Register, IBR Handbook 1 (July 2018), available at <https://www.archives.gov/files/federal-register/write/handbook/ibr.pdf>. See 5 U.S.C. § 552(a)(1) (providing that “matter reasonably available to the class of persons affected thereby is deemed published in the Federal Register when incorporated by reference therein with the approval of the Director of the Federal Register”).

<sup>2</sup> 47 U.S.C. § 302a(a).

<sup>3</sup> For example, part 15 of the Commission's rules sets forth the technical requirements for unlicensed devices; parts 22, 24, and 27 set forth the technical requirements for transmitters used in various commercial mobile radio services; and part 90 specifies the technical requirements for transmitters used in the private land mobile radio services. See 47 CFR parts 15, 22, 24, 27, and 90, respectively.

<sup>4</sup> See 47 CFR part 2 subpart J.

<sup>5</sup> See 47 CFR § 0.241(b) (delegating such authority to OET). As part of its administration of the equipment authorization rules, OET has developed a substantial body of supplemental guidance that is available via public notices and in our online Knowledge Database (KDB). Links to all of these can be found at the OET Laboratory Division's Equipment Authorization Page, <https://www.fcc.gov/engineering-technology/laboratory-division/general/equipment-authorization>; and the Knowledge Database webpage: <http://www.fcc.gov/labhelp>.

<sup>6</sup> 47 CFR § 2.901.

<sup>7</sup> 47 CFR § 2.907.

<sup>8</sup> 47 CFR § 2.906.

involve laboratory testing to demonstrate compliance with Commission requirements, testing associated with certification must be performed by an FCC-recognized accredited testing laboratory.<sup>9</sup>

6. Additionally, part 68 of the Commission's rules sets forth requirements to ensure that terminal equipment can be connected to the telephone network without harming its functioning and for the compatibility of hearing aids and land-line telephones so as to ensure that, to the fullest extent made possible by technology and medical science, people with hearing loss have equal access to communications services.<sup>10</sup> In furtherance of these goals, part 68 includes unique, but similar rules related to equipment approval, TCB review, and laboratory testing.<sup>11</sup>

## **B. Standards**

7. The Commission's equipment authorization rules incorporate by reference various standards<sup>12</sup> that have been established by standards-setting bodies including, but not limited to, the American National Standards Institute, Accredited Standards Committee (ASC) C63;<sup>13</sup> the International Organization for Standardization; and the International Electrotechnical Commission.<sup>14</sup> Incorporating external standards within the Commission's rules has been a longstanding practice that reflects our desire, where appropriate, to harmonize the rules with international standards and aligns the Commission's rules with general federal agency guidance which urges government agencies to use industry developed standards rather than develop their own.<sup>15</sup>

### **1. Measurement standards and laboratory testing procedures.**

8. Compliance testing is central to the equipment authorization program. Section 2.947 of the Commission's rules requires test data be measured in accordance with one of three types of standards and measurement procedures, including "[t]hose acceptable to the Commission and published by national engineering societies such as the Electronic Industries Association, the Institute of Electrical and Electronic[s] Engineers, Inc., and the American National Standards Institute."<sup>16</sup> Accordingly, we have incorporated by reference such standards into our rules when appropriate; use of these standards is intended to ensure the integrity of the measurement data associated with an equipment authorization. For

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<sup>9</sup> 47 CFR § 2.948(a).

<sup>10</sup> See 47 CFR § 68.1. Terminal equipment is defined as communications equipment located on customer premises at the end of a communications link, used to permit the stations involved to accomplish the provision of telecommunications or information services. 47 CFR § 68.3.

<sup>11</sup> 47 CFR part 68 subpart D.

<sup>12</sup> See, e.g., 47 CFR §§ 2.910, 2.950, and 15.38.

<sup>13</sup> American National Standards Institute, Accredited Standards Committee C63 (ASC C63) is a standards organization that is responsible for developing electromagnetic compatibility (EMC) measurement standards and testing procedures. ASC C63's standards are published by the American National Standards Institute under the ANSI nomenclature. The Commission's rules have referenced various versions of ASC C63-originated standards for more than a quarter century.

<sup>14</sup> The International Organization for Standardization (ISO) is an independent, non-governmental international organization that develops voluntary international standards, see <https://www.iso.org/home.html>. The International Electrotechnical Commission (IEC) develops international standards for all electrical, electronic, and related technologies. See <https://www.iec.ch>.

<sup>15</sup> See, e.g., *Procedure for measuring electromagnetic emissions from digital devices*, GEN Docket No. 89-44, Further Notice of Proposed Rulemaking, 6 FCC Rcd 600, 601, paras.7-8 (1991). See also OMB Circular A-119, Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities (updated Jan. 27, 2016), available at <https://www.whitehouse.gov/omb/information-for-agencies/circulars/>.

<sup>16</sup> 47 CFR § 2.947(a)(2).

example, certification applications for unlicensed part 15<sup>17</sup> intentional radiators<sup>18</sup> must include compliance measurement data that was obtained in accordance with the procedures specified in ANSI C63.10-2013, “American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices” (C63.10).<sup>19</sup> Other part 15 devices that are not designed to purposely transmit RF energy, unintentional radiators,<sup>20</sup> must be tested under procedures specified in ANSI C63.4-2014: “American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz” (C63.4).<sup>21</sup> In addition to measurement procedures, portions of C63.4 specify particular requirements for the characteristics of test sites that are referenced in our rules.<sup>22</sup> Specifically, these “test site validation” requirements are premised on the assumption that an open field test site provides the best conditions for field strength measurements of radiated emissions and “[t]est sites other than open field sites may be employed if they are properly calibrated so that the measurement results correspond to what would be obtained from an open field site.”<sup>23</sup>

## 2. Accreditation standards.

9. Compliance testing data associated with an application for certification must be obtained from a testing laboratory that has been accredited in accordance with the Commission’s rules.<sup>24</sup> Accreditation of test laboratories is currently based on the International Organization for Standardization/International Electrotechnical Commission (ISO/IEC) Standard 17025:2005(E), “General requirements for the competence of testing and calibration laboratories” (ISO 17025), and on the FCC requirements.<sup>25</sup> It is the responsibility of the accreditation body to review the qualifications of a test laboratory’s personnel, management systems, and record keeping and reporting practices; to send recognized experts to observe testing at the laboratory; and to verify the testing laboratory’s competence to perform tests in accordance with FCC-related measurement procedures. Section 2.949 of the Commission’s rules sets forth the requirements for the recognition of laboratory accreditation bodies.<sup>26</sup> An entity seeking to be recognized by the Commission as an accreditation body for test laboratories must demonstrate that it complies with applicable ISO and IEC standards and that it is competent in assessing test laboratories to perform measurements in support of the applicable FCC technical regulations.<sup>27</sup> The ISO/IEC standard currently used by the FCC for recognizing accreditation bodies is ISO/IEC 17011:2004(E), “Conformity assessment — General requirements for accreditation bodies accrediting

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<sup>17</sup> Part 15 compliant devices may be used without an individual Commission-issued radio license.

<sup>18</sup> An intentional radiator is a device that intentionally generates and emits radio frequency energy by radiation or induction. 47 CFR § 15.3(o).

<sup>19</sup> 47 CFR §§ 2.1041(a), 15.31(a)(3). The Commission references ANSI C63.26-2015, “American National Standard of Procedures for Compliance Testing of Transmitters Used in Licensed Radio Services” for acceptable testing procedures for RF devices used in association with a Commission-issued license and it will also consider testing performed under other procedures specified by OET or other national scientific or engineering groups. 47 CFR §§ 2.1041(b), 2.947.

<sup>20</sup> An unintentional radiator is a device that intentionally generates radio frequency energy for use within the device, or that sends radio frequency signals by conduction to associated equipment via connecting wiring, but which is not intended to emit RF energy by radiation or induction. 47 CFR § 15.3(z).

<sup>21</sup> 47 CFR §§ 2.1041(a), 15.31(a)(4).

<sup>22</sup> 47 CFR §§ 2.910(c)(1), 2.948(d).

<sup>23</sup> See 47 CFR § 15.31(d).

<sup>24</sup> 47 CFR § 2.948(a).

<sup>25</sup> 47 CFR § 2.948(e).

<sup>26</sup> 47 CFR § 2.949.

<sup>27</sup> 47 CFR § 2.949.

conformity assessment bodies” (ISO:17011).<sup>28</sup>

### III. DISCUSSION

10. In response to advancements in technologies and measurement capabilities, standards bodies periodically update their standards or adopt new standards to reflect best practices. Our proposals here are based on such developments, as further informed by petitions for rulemaking filed with the Commission. Specifically, we address two petitions filed by ASC C63: one seeking to incorporate by reference into our rules a new standard pertaining to test site validation;<sup>29</sup> and one proposing to incorporate by reference a newer version of a currently referenced standard that addresses a variety of compliance testing requirements.<sup>30</sup> We also clarify the status of two standards on which OET previously sought comment.<sup>31</sup> The four standards subject to our proposals are briefly summarized in the table below.

Standard	Standard being replaced	Proposed affected rule sections	Summary of rationale for proposed change
<b>C63.25.1:2018</b>	N/A New standard	2.910 2.948	Consolidates guidance from existing standards to clearly apply through higher frequency bands. The C63.25.1 standard included in this proposal covers 1 to 18 GHz.
<b>C63.10:2020</b>	C63.10:2013	15.31 15.38	Addresses changes in technology.
<b>ISO/IEC 17011:2017</b>	17011:2004	2.910 2.948 2.949 2.950 2.960 68.160	Provides more comprehensive requirements for accreditation bodies.
<b>ISO/IEC 17025:2017</b>	17025:2005	2.910 2.948 2.949 2.962 68.162	Provides more comprehensive requirements for testing and calibration labs.

#### A. “American National Standard Validation Methods for Radiated Emission Test

<sup>28</sup> 47 CFR §§ 2.949(b)(1), 2.910(d)(1).

<sup>29</sup> Paras. 11-13, *infra*.

<sup>30</sup> Paras. 14-16, *infra*.

<sup>31</sup> Paras. 18-24, *infra*. See also, *Office of Engineering and Technology Seeks Comment on Modifying the Equipment Authorization Rules to Reflect the Updated Versions of the Currently Referenced ANSI C63.4 and ISO/IEC 17025 Standards*, Public Notice, ET Docket No. 19-48, 34 FCC Red 1904 (OET 2019) (*Standards Update Notice*).

**Sites; 1 GHz to 18 GHz” (C63.25.1)**

11. On March 6, 2020, ASC C63 filed a petition for rulemaking<sup>32</sup> requesting that the Commission incorporate by reference into the test site validation requirements of section 2.948(d) of the Commission’s rules the ANSI C63.25.1-2018 standard, titled “American National Standard Validation Methods for Radiated Emission Test Sites; 1 GHz to 18 GHz” (C63.25.1).<sup>33</sup> Under our current rules, measurement facilities used to make radiated emission measurements from 30 MHz to 1 GHz must comply with the site validation requirements in ANSI C63.4-2014 (clause 5.4.4), and, for radiated emission measurements from 1 GHz to 40 GHz the site validation requirements in ANSI C63.4-2014 (clause 5.5.1 a) 1))<sup>34</sup> apply.<sup>35</sup> ASC C63 asks the Commission to adopt the C63.25.1 standard as an additional option for test site validation of radiated emission measurements from 1 GHz to 18 GHz.<sup>36</sup>

12. ASC C63 describes how the C63.25.1 standard consolidates guidance from existing standards to provide test site validation procedures from 1 GHz to 18 GHz while providing an additional testing methodology.<sup>37</sup> For example, the C63.25.1 standard includes a CISPR 16 technique known as the site voltage standing wave ratio (SVSWR) approach to validate test sites for frequencies above 1 GHz, which measures responses between antennas while varying their distances. C63.25.1 also introduces the option of using a new effective test validation method called time domain site validation (TDSV), which ASC C63 says is not yet available or recognized in comparable international standards.<sup>38</sup> ASC C63 states that while TDSV is similar to SVSWR, in that both measure responses between antennas, varying the distance between antennas is not necessary; thus, it asserts, the TDSV method provides a reduction in the sensitivity of test results caused by small test setup changes at higher frequencies where the associated wavelengths are relatively short.<sup>39</sup> Overall, ASC C63 asserts that TDSV improves measurement repeatability, provides additional information on the test site, and “reduces the sensitivity of the test results caused by small test setup changes due to statistical post processing incorporated in the TDSV method,” while requiring less time to perform the validation.<sup>40</sup> In short, ASC C63 has described reasons why, even though both SVSWR and TDSV use the same acceptance criterion, parties might want to use the TDSV method.

13. In consideration of ASC C63’s request, we propose to incorporate ANSI C63.25.1-2018

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<sup>32</sup> Petition of the American National Standards Institute, Accredited Standards Committee, C63 Requesting adoption of ANSI C63.25.1-2018 into the Commission’s Part 2 rules for EMC test site validation from 1 GHz – 18 GHz (filed March 6, 2020) <https://www.fcc.gov/ecfs/filing/10306816406385> (C63.25.1 Petition). On March 30, 2020, ASC C63 filed an Erratum correcting the caption as originally filed to properly reflect the 2018 adoption of the standard instead of 2019 as captioned in the original filing.

<sup>33</sup> C63.25.1 Petition at 2.

<sup>34</sup> Which are similar to the site validation criteria called out in CISPR 16-1-4:2010-04. CISPR 16-1-4:2010-04: “Specification for radio disturbance and immunity measuring apparatus and methods—Part 1-4: Radio disturbance and immunity measuring apparatus—Antennas and test sites for radiated disturbance measurements,” Edition 3.0, 2010-04 (CISPR 16-1). CISPR is a voluntary standards-making organization under the auspices of the International Electrotechnical Commission (IEC). CISPR is the acronym for Comité International Spécial des Perturbations Radioélectrique (International Special Committee on Radio Interference). CISPR adopts recommendations for limits and methods of measurement to control radio interference generated by computers and various other devices.

<sup>35</sup> 47 CFR § 2.948(d).

<sup>36</sup> C63.25.1 Petition.

<sup>37</sup> *Id.* at 2. ASC C63 states that it expects that future iterations of the C63.25 standard will cover additional frequencies. *Id.* at fn.2 (noting that “[i]n the future, C63.25 will cover test site validations up to 40 GHz. C63.25.2 will cover 30 MHz to 1 GHz; C63.25.3 will cover 9 kHz to 30 MHz; and C63.25.4 will cover 18 to 40 GHz”).

<sup>38</sup> *Id.* at 3.

<sup>39</sup> *Id.*

<sup>40</sup> *Id.* at 3-4.

into our rules, and to allow this standard to be used for test site validation of radiated emission measurements from 1 GHz to 18 GHz. We tentatively conclude that the availability of this additional option would provide useful options and potential benefits in site validation testing, particularly considering that parties could continue to use the procedures currently described in section 2.948(d) of our rules if they chose to do so. If we adopt this proposal, we tentatively conclude that it is appropriate to incorporate the entire standard by reference. However, we ask whether any procedures or techniques included in ANSI C63.25.1-2018 would not be appropriate for use in the context of demonstrating compliance with the Commission's equipment authorization rules. Commenters in this regard should provide details of their concerns and specifically cite any rule sections for which the new standard may be problematic. Additionally, for which other Commission rules would a reference to ANSI C63.25.1-2018 be appropriate? Because we are proposing to incorporate ANSI C63.25.1-2018 as an option to an already existing requirement, we tentatively conclude that there is no need to designate a transition period. We seek comment on these tentative conclusions.

**B. “American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices” (ANSI C63.10)**

14. On February 4, 2021, the Commission received a petition from ASC C63 requesting that it incorporate by reference ANSI C63.10-2020 “American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices”<sup>41</sup> into the rules. This standard, which was approved by ANSI on September 10, 2020, updates the measurement procedures set forth in ANSI C63.10-2013, which is currently referenced in sections 2.910(c)(2), 2.950(g) and 15.38(g)(3) of the Commission's rules.<sup>42</sup> The standard addresses “the procedures for testing the compliance of a wide variety of unlicensed wireless transmitters . . . including, but not limited to, remote control and security unlicensed wireless devices, frequency hopping and direct sequence spread spectrum devices, anti-pilferage devices, cordless telephones, medical unlicensed wireless devices, [U-NII] devices, intrusion detectors, unlicensed wireless devices operating on frequencies below 30 MHz, automatic vehicle identification systems, and other unlicensed wireless devices authorized by a radio regulatory authority.”<sup>43</sup>

15. Specifically, this recent version of the standard includes the following changes and updates:

- Frequency hopping spread spectrum procedures were updated to ensure complete on and off times are correctly considered;
- Digital transmission system (DTS) and unlicensed national information infrastructure (U-NII) device procedures were updated to align with the latest FCC KDB guidance;
- Millimeter wave measurement procedures were updated;
- TV White Space test methods were added to the standard;
- Pulse desensitization considerations for frequency-modulated continuous wave (FMCW) type signals are now addressed by the standard;
- Procedures were added for wireless power transfer (WPT) devices that transmit information on the charging frequency;

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<sup>41</sup> Petition of the American National Standards Institute, Accredited Standards Committee, C63 Requesting adoption of ANSI C63.10-2020 into the Parts 2 and 15 Rules for Compliance Testing Of Unlicensed Radio Devices (filed February 4, 2021). <https://www.fcc.gov/ecfs/filing/10204284915782> (C63.10 Petition).

<sup>42</sup> 47 CFR §§ 2.910(c)(2), 2.950(g), 15.38(g)(3).

<sup>43</sup> Daniel Hoolihan, *The American National Standards Committee on EMC – C63® - An Update on Recent Standards Development Activities* (June 30, 2021), <https://incompliancemag.com/article/the-american-national-standards-committee-on-emc-c63/>.



- Measurement procedures were generally updated to allow for more accurate analyzer sweep time settings where “auto” was previously required;
- Editorial corrections/updates were made;
- Requirements for including spectral plots were added; and
- An informative annex was included to provide an overview of dynamic frequency selection (DFS) for U-NII devices.<sup>44</sup>

16. In light of ASC C63’s request, we propose to incorporate ANSI C63.10-2020 into our rules to replace existing references to ANSI C63.10-2013. We tentatively conclude that it is appropriate to simply replace the existing standard references with references to the new standard, subject to an appropriate transition period. Are there any procedures or techniques included in ANSI C63.10-2020 that would not be appropriate for use in the context of demonstrating compliance with the Commission’s equipment authorization rules? Commenters in this regard should provide details of their concerns and specifically cite any rule sections for which the new standard may be problematic. Would a transition period during which either version of ANSI C63.10 could be used remedy these concerns? If so, what time period would be appropriate, and should it generally apply to all rules affected by the new reference? Would a two-year transition be appropriate or would a shorter period be sufficient?<sup>45</sup> Additionally, which, if any, of the Commission rules that do not currently reference ANSI C63.10-2013 should reference ANSI C63.10-2020?

**C. “Conformity assessment — Requirements for accreditation bodies accrediting conformity assessment bodies” (ISO/IEC 17011)**

17. Applications for RF devices that are subject to the certification requirements of part 2 of the Commission’s rules must be filed with, and approved by, an accredited TCB.<sup>46</sup> Additionally, terminal equipment intended for connection to the public switched telephone network must be subject to certification by a TCB or the Supplier’s Declaration of Conformity procedures as set forth in part 68 of the Commission’s rules.<sup>47</sup> Testing laboratories that provide compliance measurement data associated with part 2 certification applications also must be accredited.<sup>48</sup> In these instances, TCBs and testing laboratories are accredited by a “conformity assessment body,” that meets the requirements and conditions of ISO/IEC 17011:2004 “Conformity assessment — Requirements for accreditation bodies accrediting conformity assessment bodies.”<sup>49</sup> ISO/IEC 17011:2004 was incorporated into the Commission’s rules in 2014.<sup>50</sup> A new version of this standard, ISO/IEC 17011:2017, was published in November 2017. The revisions to the standard incorporate changes related to alignment with the International Organization for Standardization’s Committee on Conformity Assessment (CASCO) common structure for standards and incorporation of CASCO common elements in clauses on impartiality, confidentiality, complaints and appeal, and management system; recognition of proficiency testing as an accreditation activity; addition of new definitions; introduction of the concept of risk; and incorporation of competence criteria in the document, including an informative annex on knowledge and

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<sup>44</sup> *C63.10 Petition* at 2

<sup>45</sup> Testing laboratories are re-accredited every two years. Para. 24, *infra*. 47 CFR § 2.948(e).

<sup>46</sup> 47 CFR §§ 2.907, 2.960(b)

<sup>47</sup> 47 CFR § 68.201.

<sup>48</sup> 47 CFR § 2.948(a).

<sup>49</sup> 47 CFR §§ 2.960 and 2.949

<sup>50</sup> See *FCC Modifies Equipment Authorization Rules*, ET Docket No. 13-44, Report and Order, 29 FCC Rcd 16335, 16356-58, paras. 50-53 (2014).

skills.<sup>51</sup> We propose to replace the references to ISO/IEC 17011:2004(E) in sections 2.910, 2.948, 2.949, 2.950, 2.960, and 68.160 in the Commission’s rules with references to ISO/IEC 17011:2017(E), subject to a reasonable transition period.<sup>52</sup> Commenters with concerns related to updating any of these references should specifically cite any rule sections for which the updated standard may be problematic or portions of ISO/IEC 17011:2017(E) that should be excluded from the updated incorporation by reference and provide alternatives or a detailed explanation of their concerns. To ensure adequate time for the transition, we propose a two-year transition period during which both versions of ISO/IEC 17011 could be used. Is this time period sufficient and, if not, what would be an appropriate timeframe?

#### **D. Other Standards**

##### **1. 2019 Public Notice**

18. In April of 2019, OET sought comment<sup>53</sup> on updating the Commission’s rules to reflect recent changes to two standards: ISO/IEC 17025:2017(E) “General requirements for the competence of testing and calibration laboratories” and ANSI C63.4a-2017 “American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz, Amendment 1: Test Site Validation.”<sup>54</sup> In opening up the instant docket, we seek a fresh record on these matters, as set forth in the proposals that we lay out in detail below.<sup>55</sup>

##### **a. “General requirements for the competence of testing and calibration laboratories” (ISO/IEC 17025)**

19. Measurement data intended to demonstrate compliance with certain Commission requirements must be obtained from an accredited testing laboratory.<sup>56</sup> Currently, rule sections 2.910, 2.948, 2.949, 2.962, and 68.162 reference ISO/IEC 17025:2005(E) for the requirements related to test laboratory accreditation.<sup>57</sup> Laboratory accreditation bodies assess a variety of aspects of a laboratory, including the technical competence of staff; the validity and appropriateness of test methods; traceability of measurements and calibration to national standards; suitability, calibration, and maintenance of the testing environment; sampling, handling, and transportation of test items; and quality assurance of test and calibration data. In November 2017, ISO/IEC published ISO/IEC 17025:2017(E)—a new version of the test laboratory accreditation standard currently referenced in our rules. In addition to adding a definition of “laboratory,” the new version replaces certain prescriptive requirements with performance-based requirements and allows for greater flexibility in satisfying the standard’s requirements for

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<sup>51</sup> See International Organization for Standardization, *ISO/IEC 17011:2004(E): Conformity assessment—General requirements for accreditation bodies accrediting conformity assessment bodies*, First Edition, (September 2004); International Organization for Standardization, *ISO/IEC 17011:2017: Conformity assessment—Requirements for accreditation bodies accrediting conformity assessment bodies*, Second Edition (November 2017).

<sup>52</sup> 47 CFR §§ 2.910, 2.948, 2.949, 2.950, 2.960, and 68.160.

<sup>53</sup> The Chief of the Office of Engineering and Technology (OET) is delegated authority, by notice-and-comment rulemaking if required by statute or otherwise in the public interest, to issue an order amending rules in parts 2, 5, 15, or 18 of the Commission’s rules that reference industry standards to specify revised versions of the standards. This delegation is limited to modifying rules to reference revisions to standards that are already in the rules, limited to the approval of changes to the technical standards that do not raise major compliance issues, and does not include rule changes to incorporate a new standard. 47 C.F.R. § 0.241(a)(1)(ii). The inclusion in this NPRM of proposals to both incorporate new standards and update existing references is intended to promote administrative efficiency. We neither intend nor propose to modify the scope of OET’s delegated authority herein.

<sup>54</sup> See *Standards Update Notice*.

<sup>55</sup> Accordingly, we are terminating the docket that the *Standards Update Notice* had opened (i.e., ET Docket No. 19-48).

<sup>56</sup> 47 CFR § 2.948(a).

<sup>57</sup> 47 CFR §§ 2.910, 2.948, 2.949, 2.962, 68.162, and 95.2987.

processes, procedures, documented information, and organizational responsibilities.<sup>58</sup>

20. In the *Standards Update Notice*, OET proposed to update the Commission's rules by replacing references to ISO/IEC 17025:2005(E) with references to ISO/IEC 17025:2017(E).<sup>59</sup> All comments received were supportive of this updated reference.<sup>60</sup> ANSI ASC C63, while supportive, stated that "ASC C63 also supports the transition period (two years are remaining) to the mandatory use of ISO/IEC 17025:2017; provided however, that the FCC only accept test lab accreditations for labs that meet the requirements of Clause 8.1 - Option A of the standard, and that such accreditations explicitly state that the test lab is accredited only in accordance with Option A."<sup>61</sup>

21. We propose to incorporate by reference into our rules ISO/IEC 17025:2017 in its entirety, including Clause 8.1 - Option A and Option B.<sup>62</sup> No other party has raised concerns with the availability of two options and C63 did not provide detailed rationale to support their request to incorporate only Option A. In fact, Annex B of ISO/IEC 17025:2017 states that "[b]oth options are intended to achieve the same result in the performance of the management system and compliance with clauses 4 to 7." It is our understanding that Option B would allow laboratories to operate a quality management system that conforms to a certain standard from the International Organization for Standardization (i.e., ISO 9001) and that Option A of ISO/IEC 17025:2017 incorporates relevant requirements of that same standard. OET believes that Option A is more commonly used but Option B is available because some organizations have implemented an ISO 9001 system and would not need to take additional actions to demonstrate compliance.<sup>63</sup> We tentatively conclude that the flexibility of both options would enable entities who have already implemented a quality management system that would satisfy Option B to avoid the need to take further steps to demonstrate compliance. We seek comment on this tentative conclusion and seek comments on any concerns with providing both options.

22. While both ISO/IEC 17025:2005(E) and ISO/IEC 17025:2017(E) were considered valid during the transition period in effect at the time of the *Standards Update PN*, accreditations to ISO/IEC 17025:2005(E) became invalid after June 1, 2021.<sup>64</sup> In the *Standards Update PNOET* proposed to adopt a three-year transition period for use of the proposed updated standard.<sup>65</sup> In consideration of the time that has passed since publication of the *Standards Update PN*, combined with the facts that our rules require test laboratories to complete the accreditation process every two years<sup>66</sup> and that the prior standard has since become invalid within the standards body, we propose a two-year transition period for compliance

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<sup>58</sup> *Standards Update Notice*, 34 FCC Rcd at 1905 and n.8 (citing *ISO/IEC 17025 General requirements for the competence of testing and calibration laboratories*, ISO (2017), available at [https://www.ukas.com/download/brochures/ISO-17025-Brochure\\_EN\\_FINAL.pdf](https://www.ukas.com/download/brochures/ISO-17025-Brochure_EN_FINAL.pdf)).

<sup>59</sup> *Standards Update Notice* at 1905-06.

<sup>60</sup> E.g., Cisco/Intel Comments, CTA Comments, IBM Comments, IFIA, EMI, and HP Comments, ET Docket No. 19-48.

<sup>61</sup> Reply Comments of ASC C63, ET Docket No. 19-48, at 2.

<sup>62</sup> We also propose to update § 68.162(d)(1) to correct typographical errors in the reference of two standards: ISO/IEC 17065 and ISO/IEC 17025. See Appendix A, *infra*.

<sup>63</sup> International Organization for Standardization, *ISO/IEC 17025:2017: General requirements for the competence of testing and calibration laboratories* at Appendix B, Third Edition (November 2017).

<sup>64</sup> ISO and ILAC issued a joint communique re-confirming that a three-year transition period would be allowed for accredited laboratories to transition to the 2017 version of ISO/IEC 17025. That transition period was later extended until June 1, 2021. ILAC, "Transition Period for ISO/IEC 17025Extended" (June 11, 2020), [https://ilac.org/latest\\_ilac\\_news/transition-period-for-iso-iec-17025-extended/](https://ilac.org/latest_ilac_news/transition-period-for-iso-iec-17025-extended/). ILAC, the International Laboratory Accreditation Council, is an international organization for accreditation bodies involved in the accreditation of conformity assessment bodies. See <https://ilac.org/about-ilac/partnerships/international-partners/iso/>.

<sup>65</sup> *Standard Update Notice* at 1905-06.

<sup>66</sup> 47 CFR § 2.948(e).

with ISO/IEC 17025:2017(E).<sup>67</sup> We seek comment on the duration of this proposed transition period and how it should be reflected in any transition plans adopted by the Commission.

**b. “Addendum to the American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz, Amendment 1: Test Site Validation” (ANSI C63.4a-2017)**

23. In late 2017, ASC C63 published ANSI C63.4a-2017 “Addendum to the American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz, Amendment 1: Test Site Validation” (ANSI C63.4a-2017). ASC C63 requested that we incorporate by reference in our rules ANSI C63.4a-2017 to replace the existing ANSI C63.4-2014: “American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz” (ANSI C63.4).<sup>68</sup> Sections 2.910, 2.948, 2.950, 15.31, 15.35, and 15.38 of our rules reference ANSI 63.4 as an electromagnetic compatibility (EMC) measurement standard for unintentional radiators.<sup>69</sup> As described in ASC C63’s filing, the standard was updated to resolve certain normalized site attenuation issues (including the measurement of equipment under test that exceeds 2 meters in height) and make a variety of corrections, clarifications, and modifications.<sup>70</sup> In the *Standards Update Notice*, OET sought comment on incorporating by reference ANSI C63.4a-2017 in the appropriate rules.<sup>71</sup>

24. Some commenters supported incorporation of the amended standard.<sup>72</sup> However, we received several negative comments, generally citing costs associated with the procedure and stating that there were no problems with existing procedures that warrant adopting an alternative procedure.<sup>73</sup> Further, it is our understanding that ASC C63 has made substantial progress toward addressing these and other controversial issues in a pending modification.<sup>74</sup> Based on the comments received and the potential development of an additional modification to the standard, we tentatively conclude that ANSI C63.4 continues to sufficiently address current needs and that incorporation by reference of ANSI C63.4a-2017 into our rules is not warranted at this time. We seek comment on this tentative conclusion.

**2. Additional Updates: “Calibration and testing laboratory accreditation systems—General requirements for operation and recognition” (ISO/IEC Guide 58:1993(E)); “General requirements for assessment and accreditation of certification/registration bodies” (ISO/IEC Guide 61:1996(E)); and “General requirements for bodies operating product certification systems” (ISO/IEC Guide 65:1996(E))**

25. We note that our part 2 rules incorporate several references that have become outdated as a result of prior updates to standards that were phased in over specific transition periods.<sup>75</sup> Once the

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<sup>67</sup> Current KDB guidance recognizes the use of either ISO/IEC 17025:2005(E) or ISO/IEC 17025:2017(E) for accreditation. [KDB 853844](#).

<sup>68</sup> See ASC C63 Comments. ASC C63 originally filed in ET Docket No. 15-170. We subsequently moved this submission into ET Docket No 19-48.

<sup>69</sup> 47 CFR §§ 2.910, 2.948, 2.950, 15.31, 15.35, and 15.38.

<sup>70</sup> ASC C63 Comments at 3-4.

<sup>71</sup> *Standards Update Notice* at 1904-05.

<sup>72</sup> E.g., Consumer Technology Comments and Sony Electronics Comments in ET Docket No. 19-148.

<sup>73</sup> E.g., International Business Machines Corporation Comments at 3-4 and Teradata Corporation Comments at 2.

<sup>74</sup> “Status of C63@ Standards Date: July 23, 2021,” [http://www.c63.org/documents/misc/matrix/c63\\_standards.htm#C63\\_4](http://www.c63.org/documents/misc/matrix/c63_standards.htm#C63_4).

<sup>75</sup> See 47 CFR 2.910 and 2.950.

transition period passed, the newer standards became the only valid procedure for compliance with the Commission's rules, rendering the prior references no longer relevant. Accordingly, we propose to delete from section 2.910 of the Commission's rules references to: ISO/IEC Guide 58:1993(E), "Calibration and testing laboratory accreditation systems—General requirements for operation and recognition," First Edition 1993; ISO/IEC Guide 61:1996(E), "General requirements for assessment and accreditation of certification/registration bodies," First Edition 1996; and (6) ISO/IEC Guide 65:1996(E), "General requirements for bodies operating product certification systems." We also propose to delete the related transition periods provided in section 2.950.<sup>76</sup> We also propose to make administrative changes to our rules to reflect any necessary changes to rule cross references that would result from the proposed rule changes.

26. We seek comment on whether there are additional conforming or administrative updates to our rules that we should consider. Additionally, what other rule modifications, including updating other standards currently referenced in the rules or incorporating by reference additional standards not currently referenced in the rules, would be necessary to give full effect to our proposals? Because the standards-setting process is marked by ongoing work to create, review, and update standards,<sup>77</sup> we recognize that our proposals are part of a larger and continuing effort to ensure that our rules incorporate appropriate standards and reflect relevant standards updates. Commission staff actively monitors the work of standards development organizations, and we are aware that additional standards relevant to the telecommunications sector are in various stages of drafting, voting, and publication. While such developments may warrant our consideration in the future, we are not seeking comment on such standards within this Notice of Proposed Rulemaking.

27. *Digital Equity and Inclusion.* Finally, the Commission, as part of its continuing effort to advance digital equity for all,<sup>78</sup> including people of color, persons with disabilities, persons who live in rural or Tribal areas, and others who are or have been historically underserved, marginalized, or adversely affected by persistent poverty or inequality, invites comment on any equity-related considerations<sup>79</sup> and benefits (if any) that may be associated with the proposals and issues discussed herein. Specifically, we seek comment on how our proposals may promote or inhibit advances in diversity, equity, inclusion, and accessibility, as well as the scope of the Commission's relevant legal authority.

#### IV. PROCEDURAL MATTERS

28. *Initial Regulatory Flexibility Analysis.* As required by the Regulatory Flexibility Act of 1980 (RFA),<sup>80</sup> as amended (RFA), the Commission has prepared an Initial Regulatory Flexibility

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<sup>76</sup> 47 CFR 2.910(d)4-6 and 47 CFR §§ 2.950 (b), (c) and (d).

<sup>77</sup> For example, ANSI's procedures require that it take action to reaffirm, revise, or withdraw standards no later than five years from their date of publication. See Daniel D. Hoolihan, "The ANSI-Accredited Standards Committee on EMC – C63®," In Compliance (June 29, 2018), <https://incompliancemag.com/article/the-ansi-accredited-standards-committee-on-emc-c63/>.

<sup>78</sup> Section 1 of the Communications Act of 1934 as amended provides that the FCC "regulat[es] interstate and foreign commerce in communication by wire and radio so as to make [such service] available, so far as possible, to all the people of the United States, without discrimination on the basis of race, color, religion, national origin, or sex." 47 U.S.C. § 151.

<sup>79</sup> The term "equity" is used here consistent with Executive Order 13985 as the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality. See Exec. Order No. 13985, 86 Fed. Reg. 7009, Executive Order on Advancing Racial Equity and Support for Underserved Communities Through the Federal Government (January 20, 2021).

<sup>80</sup> See 5 U.S.C. § 603.

Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities of the proposals addressed in this Notice of Proposed Rulemaking. The IRFA is found in Appendix B. Written public comments are requested on the IRFA. These comments must be filed in accordance with the same filing deadlines for comments on the Notice of Proposed Rulemaking, and they should have a separate and distinct heading designating them as responses to the IRFA. The Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, will send a copy of this Notice of Proposed Rulemaking, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration, in accordance with the RFA.<sup>81</sup>

29. *Paperwork Reduction Act.* This document contains proposed modified information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on the information collection requirements contained in this document, as required by the Paperwork Reduction Act of 1995, Public Law 104-13. 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.

30. *Ex Parte Rules – Permit but Disclose.* Pursuant to section 1.1200(a) of the Commission's rules,<sup>82</sup> this Notice of Proposed Rulemaking shall be treated as a "permit-but-disclose" proceeding in accordance with the Commission's *ex parte* rules.<sup>83</sup> Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (e.g., .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

31. *Comment Period and Filing Procedures.* Pursuant to sections 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. All filings must refer to ET Docket No. 21-363.

- Electronic filers: Comments may be filed electronically using the Internet by accessing the Commission's Electronic Comment Filing System (ECFS): <https://www.fcc.gov/ecfs>. See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).
- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing.

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<sup>81</sup> See 5 U.S.C. § 603(a).

<sup>82</sup> 47 CFR § 1.1200(a).

<sup>83</sup> 47 CFR §§ 1.1200 *et seq.*

- Filings can be sent by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.
  - Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.
  - U.S. Postal Service first-class, Express, and Priority mail must be addressed to 45 L Street NE, Washington, DC 20554.
- Effective March 19, 2020, and until further notice, the Commission no longer accepts any hand or messenger delivered filings. This is a temporary measure taken to help protect the health and safety of individuals, and to mitigate the transmission of COVID-19. *See* FCC Announces Closure of FCC Headquarters Open Window and Change in Hand-Delivery Policy, Public Notice, DA 20-304 (March 19, 2020). <https://www.fcc.gov/document/fcc-closes-headquarters-open-window-and-changes-hand-delivery-policy>.

32. People with Disabilities: To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to [fcc504@fcc.gov](mailto:fcc504@fcc.gov) or call the Consumer and Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

33. Availability of Documents: Comments, reply comments, and *ex parte* submissions will be publicly available online via ECFS.<sup>84</sup> When the FCC Headquarters reopens to the public, these documents will also be available for public inspection during regular business hours in the FCC Reference Center, Federal Communications Commission, 45 L Street NE, Washington, DC 20554.

34. *Further Information.* For further information, contact Brian Butler of the Office of Engineering and Technology, at 202-418-2702 or [Brian.Butler@fcc.gov](mailto:Brian.Butler@fcc.gov)

## V. ORDERING CLAUSES

35. Accordingly, IT IS ORDERED, pursuant to the authority found in sections 4(i), 301, 302, and 303 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 301, 302a, 303, and sections 1.407 and 1.411 of the Commission's Rules, 47 CFR §§ 1.407, 1.411, that this Notice of Proposed Rulemaking IS HEREBY ADOPTED.

36. IT IS FURTHER ORDERED that the Petition of the American National Standards Institute, Accredited Standards Committee, C63 Requesting adoption of ANSI C63.25.1-2018 into the Commission's Part 2 rules for EMC test site validation from 1 GHz – 18 GHz (filed March 6, 2020) and the Petition of the American National Standards Institute, Accredited Standards Committee, C63 Requesting adoption of ANSI C63.10-2020 into the Parts 2 and 15 Rules for Compliance Testing of Unlicensed Radio Devices (filed February 4, 2021) ARE GRANTED to the extent set forth herein, and OTHERWISE DENIED.

37. IT IS FURTHER ORDERED that ET Docket No. 19-48 IS HEREBY TERMINATED.

38. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Notice of Proposed Rulemaking, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

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<sup>84</sup> Documents will generally be available electronically in ASCII, Microsoft Word, or Adobe Acrobat.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch  
Secretary



## APPENDIX A

## PROPOSED RULES

For the reasons set forth in the preamble, the Federal Communications Commission proposed to amend part 2, part 15, part 68, and part 73 of Title 47 of the Code of Federal Regulations as follows:

**Part 2 – Frequency Allocations and Radio Treaty Matters; General Rules and Regulations**

1. The authority citation for part 2 continues to read as follows:

**Authority:** 47 U.S.C. 154, 302a, 303, and 336.

2. Amend § 2.910 by revising paragraphs (b)(1), (c)(1), (c)(2), and (d) to read as follows:

**§ 2.910 Incorporation by Reference.**

\* \* \* \* \*

(b) \* \* \*

(1) CISPR 16-1-4:2010-04: “Specification for radio disturbance and immunity measuring apparatus and methods — Part 1-4: Radio disturbance and immunity measuring apparatus — Antennas and test sites for radiated disturbance measurements”, Edition 3.0, 2010-04, IBR approved for § 2.948(d).

\* \* \* \* \*

(c) \* \* \*

(1) ANSI C63.4-2014: “American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz,” ANSI approved June 13, 2014, Sections 5.4.4 through 5.5, IBR approved for § 2.948(d); and

(2) ANSI C63.25.1–2018, “American National Standard Validation Methods for Radiated Emission Test Sites, 1 GHz to 18 GHz,” ANSI approved December 17, 2018, IBR approved for § 2.948(d).

\* \* \* \* \*

(d) \* \* \*

(1) ISO/IEC 17011:2004(E), “Conformity assessment — General requirements for accreditation bodies accrediting conformity assessment bodies,” First Edition, 2004-09-01, IBR approved for §§ 2.948(e), 2.949(b), 2.950(a), and 2.960(c).

(2) ISO/IEC 17025:2005(E), “General requirements for the competence of testing and calibration laboratories,” Second Edition, 2005-05-15, IBR approved for §§ 2.948(e), 2.949(b), 2.950(b), and 2.962(c) and (d).

(3) ISO/IEC 17065:2012(E), “Conformity assessment — Requirements for bodies certifying products, processes and services,” First Edition, 2012-09-15, IBR approved for §§ 2.960(b), 2.962(b), (c), (d), (f), and (g).

(4) ISO/IEC 17011:2017, “Conformity assessment—Requirements for accreditation bodies accrediting conformity assessment bodies,” Second Edition, November 2017, IBR approved for §§ 2.948(e), 2.949(b), 2.950(a), and 2.960(c).

(5) ISO/IEC 17025:2017, “General requirements for the competence of testing and calibration laboratories,” Third Edition, November 2017, IBR approved for §§ 2.948(e), 2.949(b), 2.950(b), and 2.962(c) and (d).

3. Amend § 2.948 by revising paragraph (d) to read as follows:

**§ 2.948 Measurement facilities.**

\* \* \* \* \*

(d) When the measurement method used requires the testing of radiated emissions on a validated test site, the site attenuation must comply with the requirements of sections 5.4.4 through 5.5 of the following procedure: ANSI C63.4–2014 (incorporated by reference, see § 2.910). Measurement facilities used to make radiated emission measurements from 30 MHz to 1 GHz must comply with the site validation requirements in ANSI C63.4–2014 (clause 5.4.4); for radiated emission measurements from 1 GHz to 18 GHz must comply with either the site validation requirement of ANSI C63.25.1-2018 or ANSI C63.4–2014 (clause 5.5.1 a) 1)), such that the site validation criteria called out in CISPR 16–1–4:2010–04 (incorporated by reference, see § 2.910) is met; for radiated emission measurements from 18 GHz to 40 GHz must comply with the site validation requirement of ANSI C63.4–2014 (clause 5.5.1 a) 1)), such that the site validation criteria called out in CISPR 16–1–4:2010–04 (incorporated by reference, see § 2.910) is met. Test site revalidation must occur on an interval not to exceed three years.

\* \* \* \* \*

4. Amend § 2.950 to read as follows:

**§ 2.950 Transition periods.**

(a) Prior to [INSERT DATE 2 YEARS AFTER EFFECTIVE DATE OF FINAL RULE], an organization accrediting the prospective accredited testing laboratory must be capable of meeting the requirements and conditions of ISO/IEC 17011:2004 (incorporated by reference, see § 2.910) or ISO/IEC 17011:2017 (incorporated by reference, see § 2.910). On or after [INSERT DATE 2 YEARS AFTER EFFECTIVE DATE OF FINAL RULE], an organization accrediting the prospective accredited testing laboratory must be capable of meeting the requirements and conditions of ISO/IEC 17011:2017 (incorporated by reference, see § 2.910)

(b) Prior to [INSERT DATE 2 YEARS AFTER EFFECTIVE DATE OF FINAL RULE], an organization accrediting the prospective accredited testing laboratory must be capable of meeting the requirements and conditions of ISO/IEC 17025:2005 (incorporated by reference, see § 2.910) or ISO/IEC 17025:2017 (incorporated by reference, see § 2.910). On or after [INSERT DATE 2 YEARS AFTER EFFECTIVE DATE OF FINAL RULE], an organization accrediting the prospective accredited testing laboratory must be capable of meeting the requirements and conditions of ISO/IEC 17025:2017 (incorporated by reference, see § 2.910).

(c) All radio frequency devices that were authorized under the verification or Declaration of Conformity procedures prior to November 2, 2017, must continue to meet all requirements associated with the applicable procedure that were in effect immediately prior to November 2, 2017. If any changes are made to such devices after November 2, 2018, the requirements associated with the Supplier's Declaration of Conformity apply.

**Part 15 – Radio Frequency Devices**

5. The authority citation for part 15 continues to read as follows:

**Authority:** 47 U.S.C. 154, 302a, 303, 304, 307, 336, 544a, and 549.

6. Amend § 15.31 by revising paragraph (a)(3) to read as follows:

**§ 15.31 Measurement standards.**

(a) \* \* \*

\* \* \* \* \*

(3) Other intentional radiators must be measured for compliance using the following procedure: ANSI C63.10 (incorporated by reference, see § 15.38).

\* \* \* \* \*

7. Amend § 15.37 by adding paragraph (r) to read as follows

**§ 15.37 Transition provisions for compliance with this part.**

\* \* \* \* \*

(r) Prior to [INSERT DATE 2 YEARS AFTER EFFECTIVE DATE OF FINAL RULE], measurements for intentional radiators subject to section 15.31(a)(3) chapter must be made using the procedures in ANSI C63.10–2013 or ANSI C63.10–2020 (incorporated by reference, see §15.31(a)(3)). On or after [INSERT DATE 2 YEARS AFTER EFFECTIVE DATE OF FINAL RULE], measurements for intentional radiators subject to part 15 of this chapter must be made using the procedures in ANSI C63.10–2020 (incorporated by reference, see § 15.31(a)(3)).

8. Amend § 15.38 by adding paragraph (g)(4) to read as follows:

**§ 15.38 Incorporation by Reference.**

\* \* \* \* \*

(g) \* \* \*

\* \* \* \* \*

(4) ANSI C63.10–2020, “American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices,” ANSI approved January 29, 2021, IBR approved for § 15.31(a)(3).

\* \* \* \* \*

**Part 68 – Connection of Terminal Equipment to the Telephone Network**

9. The authority citation for part 68 continues to read as follows:

**Authority:** 47 U.S.C. 154, 303, and 610.

10. Amend § 68.160 by revising paragraph (c)(1) and adding (d)(2)(iii) to read as follows:

**§ 68.160 Designation of Telecommunication Certification Bodies (TCBs).**

\* \* \* \* \*

(c) \* \* \*

(1) Prior to [INSERT DATE 2 YEARS AFTER EFFECTIVE DATE OF FINAL RULE], the organization accrediting the prospective telecommunication certification body must be capable of meeting the requirements and conditions of ISO/IEC 17011:2014 or ISO/IEC 17011:2017 (incorporated by reference). On or after [INSERT DATE 2 YEARS AFTER EFFECTIVE DATE OF FINAL RULE], the organization accrediting the prospective telecommunication certification body must be capable of meeting the requirements and conditions of ISO/IEC 17011:2017 (incorporated by reference).

\* \* \* \* \*

(d) \* \* \*

(2) \* \* \*

(iii) ISO/IEC 17011:2017, “Conformity assessment—Requirements for accreditation bodies accrediting conformity assessment bodies,” Second Edition, November 2017, IBR approved for §68.160(c).

11. Amend § 68.162 by revising paragraphs (d)(1) and (i)(1)(i) to read as follows:

**§ 68.162 Requirements for Telecommunication Certification Bodies.**

\* \* \* \* \*

(d) \* \* \*

(1) In accordance with the provisions of ISO/IEC 17065 the evaluation of a product, or a portion thereof, may be performed by bodies that meet the applicable requirements of ISO/IEC 17025 and ISO/IEC 17065, in accordance with the applicable provisions of ISO/IEC 17065, for external resources (outsourcing) and other relevant standards. Evaluation is the selection of applicable requirements and the determination that those requirements are met. Evaluation may be performed by using internal TCB resources or external (outsourced) resources.

\* \* \* \* \*

(i) \* \* \*

(1) \* \* \*

(i) ISO/IEC 17025:2017, “General requirements for the competence of testing and calibration laboratories,” Third Edition, November 2017.

\* \* \* \* \*

**Part 73 – Radio Broadcast Services**

12. The authority citation for part 73 continues to read as follows:

**Authority:** 47 U.S.C. 154, 155, 301, 303, 307, 309, 310, 334, 336, 339.

13. Amend § 73.1660 by revising Note 1 to paragraph (a)(1) to read as follows:

**§ 73.1660 Acceptability of broadcast transmitters.**

\* \* \* \* \*

Note 1 to paragraph (a)(1): The verification procedure has been replaced by Supplier’s Declaration of Conformity. AM, FM, and TV transmitters previously authorized under subpart J of part 2 of this chapter may remain in use. See § 2.950 of this chapter.

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**APPENDIX B****INITIAL REGULATORY FLEXIBILITY ANALYSIS**

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),<sup>1</sup> the Commission has prepared this present Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in this Notice of Proposed Rule Making (Notice). 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 comments on the Notice provided on page 1 of the item. The Commission will send a copy of the Notice, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).<sup>2</sup> In addition, the Notice and IRFA (or summaries thereof) will be published in the Federal Register.<sup>3</sup>

**A. Need for, and Objectives of, the Proposed Rules**

2. The Commission's proposals are targeted updates to our rules limited to the incorporation by reference (IBR) of standards that are associated with equipment authorization and the certification of telecommunication bodies (TCBs). IBR is the process that Federal agencies use when referring to materials published elsewhere to give those materials the same force and effect of law in the Code of Federal Regulations as if the materials' text had actually been published in the Federal Register. By using IBR, we are able to give effect to technical instructions, testing methodologies, and other process documents that are developed and owned by standards development organizations. Referencing these documents in our rules substantially reduces the volume of material and also permits us to more efficiently implement updated standards because we only have to update our reference instead of making substantial modifications to our rules.

3. In this Notice, we address two petitions filed by The American National Standards Institute, Accredited Standards Committee C63(ASC C63): one seeking to reference a new standard in our rules pertaining to test site validation; and one proposing to incorporate a newer version of a currently referenced standard that addresses a variety of compliance testing requirements. We also update and clarify the status of two standards for which OET previously sought comment by proposing to update an accreditation standard for testing and calibration laboratories. Specifically, to maintain the high level of compliance and minimal interference from RF devices. It's essential that our equipment authorization (EA) program incorporates current applicable compliance standards. Therefore, the Commission proposes to modify certain Commission rules to reflect more recent standards that apply to the EA testing procedures and the accredited Telecommunication Certification Body (TCB) entities responsible for assessing and conducting the measurements necessary to demonstrate compliance with the Commission's RF device rules.

**B. Legal Basis**

4. The proposed action is taken pursuant to sections 4(i), 301, 302, and 303 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 301, 302a, 303, and sections 1.407 and 1.411 of the Commission's rules, 47 CFR §§ 1.407, 1.411,

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

5. The RFA directs agencies to provide a description of, and where feasible, an estimate of

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<sup>1</sup> 5 U.S.C. § 603. The RFA, 5 U.S.C. § 601 – 612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

<sup>2</sup> 5 U.S.C. § 603(a).

<sup>3</sup> 5 U.S.C. § 603(a).

the number of small entities that may be affected by the proposed rules, if adopted.<sup>4</sup> The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”<sup>5</sup> In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.<sup>6</sup> 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 Small Business Administration (SBA).<sup>7</sup>

6. *Small Businesses, Small Organizations, and Small Governmental Jurisdictions.* Our actions, over time, may affect small entities that are not easily categorized at present. We therefore describe here, at the outset, three broad groups of small entities that could be directly affected herein.<sup>8</sup> First, while there are industry specific size standards for small businesses that are used in the regulatory flexibility analysis, according to data from the Small Business Administration’s (SBA) Office of Advocacy, in general a small business is an independent business having fewer than 500 employees.<sup>9</sup> These types of small businesses represent 99.9% of all businesses in the United States, which translates to 31.7 million businesses.<sup>10</sup>

7. Next, the type of small entity described as a “small organization” is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”<sup>11</sup> The Internal Revenue Service (IRS) uses a revenue benchmark of \$50,000 or less to delineate its annual electronic filing requirements for small exempt organizations.<sup>12</sup> Nationwide, for tax year 2018, there were approximately 571,709 small exempt organizations in the U.S. reporting revenues of \$50,000 or less according the registration and tax data for exempt organizations available from the IRS.<sup>13</sup>

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<sup>4</sup> 5 U.S.C. § 603(b)(3).

<sup>5</sup> 5 U.S.C. § 601(6).

<sup>6</sup> 5 U.S.C. § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 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.”

<sup>7</sup> 15 U.S.C. § 632.

<sup>8</sup> See 5 U.S.C. § 601(3)–(6).

<sup>9</sup> See SBA, Office of Advocacy, *What’s New With Small Business?*, <https://cdn.advocacy.sba.gov/wp-content/uploads/2020/11/05122043/Small-Business-FAQ-2020.pdf> (October 2020).

<sup>10</sup> *Id.*

<sup>11</sup> 5 U.S.C. § 601(4).

<sup>12</sup> The IRS benchmark is similar to the population of less than 50,000 benchmark in 5 U.S.C § 601(5) that is used to define a small governmental jurisdiction. Therefore, the IRS benchmark has been used to estimate the number small organizations in this small entity description. See Annual Electronic Filing Requirement for Small Exempt Organizations — Form 990-N (e-Postcard), “Who must file,”

<https://www.irs.gov/charities-non-profits/annual-electronic-filing-requirement-for-small-exempt-organizations-form-990-n-e-postcard>. We note that the IRS data does not provide information on whether a small exempt organization is independently owned and operated or dominant in its field.

<sup>13</sup> See Exempt Organizations Business Master File Extract (EO BMF), “CSV Files by Region,” <https://www.irs.gov/charities-non-profits/exempt-organizations-business-master-file-extract-eo-bmf>. The IRS Exempt Organization Business Master File (EO BMF) Extract provides information on all registered tax-exempt/non-profit organizations. The data utilized for purposes of this description was extracted from the IRS EO BMF data for Region 1-Northeast Area (76,886), Region 2-Mid-Atlantic and Great Lakes Areas (221,121), and

(continued....)

8. Finally, the small entity described as a “small governmental jurisdiction” is defined generally as “governments of cities, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand.”<sup>14</sup> U.S. Census Bureau data from the 2017 Census of Governments<sup>15</sup> indicate that there were 90,075 local governmental jurisdictions consisting of general purpose governments and special purpose governments in the United States.<sup>16</sup> Of this number there were 36,931 general purpose governments (county,<sup>17</sup> municipal, and town or township<sup>18</sup>) with populations less than 50,000 and 12,040 special purpose governments – independent school districts<sup>19</sup> with enrollment populations of less than 50,000.<sup>20</sup> Accordingly, based on the 2017 U.S. Census of Governments data, we estimate that at least 48,971 entities fall into the category of “small governmental jurisdictions.”<sup>21</sup>

9. *Radio Frequency Equipment Manufacturers (RF Manufacturers)*. Neither the Commission nor the SBA has developed a small business size standard applicable to Radio Frequency Equipment Manufacturers (RF Manufacturers). There are several analogous SBA small entity categories applicable to RF Manufacturers—Fixed Microwave Services, Other Communications Equipment Manufacturing, and Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing. A description of these small entity categories and the small business size standards under the SBA rules are detailed below.

10. *Fixed Microwave Services*. Microwave services include common carrier,<sup>22</sup> private-

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Region 3-Gulf Coast and Pacific Coast Areas (273,702) which includes the continental U.S., Alaska, and Hawaii. This data does not include information for Puerto Rico.

<sup>14</sup> 5 U.S.C. § 601(5).

<sup>15</sup> See 13 U.S.C. § 161. The Census of Governments survey is conducted every five (5) years compiling data for years ending with “2” and “7.” See also Census of Governments, <https://www.census.gov/programs-surveys/cog/about.html>.

<sup>16</sup> See U.S. Census Bureau, 2017 Census of Governments – Organization Table 2. Local Governments by Type and State: 2017 [CG1700ORG02]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. Local governmental jurisdictions are made up of general purpose governments (county, municipal and town or township) and special purpose governments (special districts and independent school districts). See also Table 2. CG1700ORG02 Table Notes\_Local Governments by Type and State\_2017.

<sup>17</sup> See *id.* at Table 5. County Governments by Population-Size Group and State: 2017 [CG1700ORG05]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 2,105 county governments with populations less than 50,000. This category does not include subcounty (municipal and township) governments.

<sup>18</sup> See *id.* at Table 6. Subcounty General-Purpose Governments by Population-Size Group and State: 2017 [CG1700ORG06]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 18,729 municipal and 16,097 town and township governments with populations less than 50,000.

<sup>19</sup> See *id.* at Table 10. Elementary and Secondary School Systems by Enrollment-Size Group and State: 2017 [CG1700ORG10]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 12,040 independent school districts with enrollment populations less than 50,000. See also Table 4. Special-Purpose Local Governments by State Census Years 1942 to 2017 [CG1700ORG04], CG1700ORG04 Table Notes\_Special Purpose Local Governments by State\_Census Years 1942 to 2017.

<sup>20</sup> While the special purpose governments category also includes local special district governments, the 2017 Census of Governments data does not provide data aggregated based on population size for the special purpose governments category. Therefore, only data from independent school districts is included in the special purpose governments category.

<sup>21</sup> This total is derived from the sum of the number of general purpose governments (county, municipal and town or township) with populations of less than 50,000 (36,931) and the number of special purpose governments - independent school districts with enrollment populations of less than 50,000 (12,040), from the 2017 Census of Governments - Organizations Tables 5, 6, and 10.

<sup>22</sup> See 47 CFR Part 101, Subparts C and I.

operational fixed,<sup>23</sup> and broadcast auxiliary radio services.<sup>24</sup> They also include the Upper Microwave Flexible Use Service<sup>25</sup>, Millimeter Wave Service<sup>26</sup>, Local Multipoint Distribution Service (LMDS),<sup>27</sup> the Digital Electronic Message Service (DEMS),<sup>28</sup> and the 24 GHz Service,<sup>29</sup> where licensees can choose between common carrier and non-common carrier status.<sup>30</sup> There are approximately 66,680 common carrier fixed licensees, 69,360 private and public safety operational-fixed licensees, 20,150 broadcast auxiliary radio licensees, 411 LMDS licenses, 33 24 GHz DEMS licenses, 777 39 GHz licenses, and five 24 GHz licenses, and 467 Millimeter Wave licenses in the microwave services.<sup>31</sup> The Commission has not yet defined a small business with respect to microwave services. The closest applicable SBA category is Wireless Telecommunications Carriers (except Satellite)<sup>32</sup> and the appropriate size standard for this category under SBA rules is that such a business is small if it has 1,500 or fewer employees.<sup>33</sup> For this industry, U.S. Census Bureau data for 2012 show that there were 967 firms that operated for the entire year.<sup>34</sup> Of this total, 955 firms had employment of 999 or fewer employees and 12 had employment of 1000 employees or more.<sup>35</sup> Thus under this SBA category and the associated size standard, the Commission estimates that a majority of fixed microwave service licensees can be considered small.

11. The Commission does not have data specifying the number of these licensees that have more than 1,500 employees, and thus is unable at this time to estimate with greater precision the number of fixed microwave service licensees that would qualify as small business concerns under the SBA's small business size standard. Consequently, the Commission estimates that there are up to 36,708 common carrier fixed licensees and up to 59,291 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services that may be small and may be affected by the rules and policies discussed herein. We note, however, that the common carrier microwave fixed licensee category does include some large entities.

12. *Other Communications Equipment Manufacturing.* This industry comprises

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<sup>23</sup> See 47 CFR Part 101, Subparts C and H.

<sup>24</sup> 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.

<sup>25</sup> See 47 CFR Part 30.

<sup>26</sup> See 47 CFR Part 101, Subpart Q.

<sup>27</sup> See 47 CFR Part 101, Subpart L.

<sup>28</sup> See 47 CFR Part 101, Subpart G.

<sup>29</sup> See *id.*

<sup>30</sup> See 47 CFR §§ 101.533, 101.1017.

<sup>31</sup> These statistics are based on a review of the Universal Licensing System on September 22, 2015.

<sup>32</sup> See U.S. Census Bureau, *2017 NAICS Definition*, "517312 Wireless Telecommunications Carriers (except Satellite)," <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

<sup>33</sup> See 13 CFR § 121.201, NAICS Code 517312 (previously 517210).

<sup>34</sup> See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1251SSSZ5, *Information: Subject Series, Estab and Firm Size: Employment Size of Firms for the U.S.: 2012*, NAICS Code 517210, [https://data.census.gov/cedsci/table?text=EC1251SSSZ5&n=517210&tid=ECNSIZE2012.EC1251SSSZ5&hidePrev](https://data.census.gov/cedsci/table?text=EC1251SSSZ5&n=517210&tid=ECNSIZE2012.EC1251SSSZ5&hidePreview=false&vintage=2012)

<sup>35</sup> *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.



establishments primarily engaged in manufacturing communications equipment (except telephone apparatus, and radio and television broadcast, and wireless communications equipment).<sup>36</sup> Examples of such manufacturing include fire detection and alarm systems manufacturing, Intercom systems and equipment manufacturing, and signals (e.g., highway, pedestrian, railway, traffic) manufacturing.<sup>37</sup> The SBA has established a size standard for this industry as all such firms having 750 or fewer employees.<sup>38</sup> U.S. Census Bureau data for 2012 show that 383 establishments operated in that year.<sup>39</sup> Of that number, 379 operated with fewer than 500 employees and 4 had 500 to 999 employees.<sup>40</sup> Based on this data, we conclude that the majority of Other Communications Equipment Manufacturers are small.

13. *Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing.* This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment.<sup>41</sup> 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.<sup>42</sup> The SBA has established a size standard for this industry of 1,250 employees or less.<sup>43</sup> U.S. Census Bureau data for 2012 show that 841 establishments operated in this industry in that year.<sup>44</sup> Of that number, 828 establishments operated with fewer than 1,000 employees, 7 establishments operated with between 1,000 and 2,499 employees and 6 establishments operated with 2,500 or more employees.<sup>45</sup> Based on this data, we conclude that a majority of manufacturers in this industry are small.

#### **D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities**

14. The Commission's equipment authorization rules incorporate by reference various standards<sup>46</sup> that have been established by standards-setting bodies including, but not limited to, the

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<sup>36</sup> See U.S. Census Bureau, *2017 NAICS Definitions*, "334290 Other Communications Equipment Manufacturing," <https://www.census.gov/naics/?input=334290&year=2017&details=334290>.

<sup>37</sup> *Id.*

<sup>38</sup> See 13 CFR 121.201, NAICS Code 334290.

<sup>39</sup> See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1231SG2, *Manufacturing: Summary Series: General Summary: Industry Statistics for Subsectors and Industries by Employment Size: 2012*, NAICS Code 334290, <https://data.census.gov/cedsci/table?text=EC1231SG2&n=334290&tid=ECNSIZE2012.EC1231SG2&hidePreview=false&vintage=2012>.

<sup>40</sup> *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

<sup>41</sup> See U.S. Census Bureau, *2017 NAICS Definition*, "334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing," <https://www.census.gov/naics/?input=334220&year=2017&details=334220>.

<sup>42</sup> *Id.*

<sup>43</sup> See 13 CFR § 121.201, NAICS Code 334220.

<sup>44</sup> See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1231SG2, *Manufacturing: Summary Series: General Summary: Industry Statistics for Subsectors and Industries by Employment Size: 2012*, NAICS Code 334220, <https://data.census.gov/cedsci/table?text=EC1231SG2&n=334220&tid=ECNSIZE2012.EC1231SG2&hidePreview=false>.

<sup>45</sup> *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

<sup>46</sup> See, e.g., 47 CFR §§ 2.910, 2.950, and 15.38.

American National Standards Institute, Accredited Standards Committee (ASC) C63;<sup>47</sup> the International Organization for Standardization; and the International Electrotechnical Commission.<sup>48</sup> Compliance testing is central to the equipment authorization program. Section 2.947 of the Commission's rules requires test data be measured in accordance with one of three types of standards and measurement procedures, including "[t]hose acceptable to the Commission and published by national engineering societies such as the Electronic Industries Association, the Institute of Electrical and Electronic[s] Engineers, Inc., and the American National Standards Institute."<sup>49</sup> Accordingly, we have incorporated by reference such standards into our rules when appropriate; use of these standards is intended to ensure the integrity of the measurement data associated with an equipment authorization.

15. In this Notice, we propose to update part 2 of the Commission's rules which contains requirements that applications for RF devices subject to the certification requirements must be filed with, and approved by, an accredited TCB. Additionally, terminal equipment intended for connection to the public switched telephone network must be subject to certification by a TCB or the Supplier's Declaration of Conformity (SDOC). Compliance testing data associated with an application for certification must be obtained from a testing laboratory that has been accredited in accordance with the Commission's rules.<sup>50</sup> An entity seeking to be recognized by the Commission as an accreditation body for test laboratories must demonstrate that it complies with applicable ISO and IEC standards for recognizing such bodies and that it is competent in assessing test laboratories to perform measurements in support of the applicable FCC technical regulations.<sup>51</sup>

**E. Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered**

16. The RFA requires an agency to describe any significant, specifically small business, 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; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such 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 such small entities."<sup>52</sup>

17. In this proceeding, our proposals are consistent with (1), in that our goal is to seek comment on targeted updates to our rules to incorporate four new and updated standards that are integral to the testing of equipment and accreditation of laboratories that test RF devices. In response to advancements in technologies and measurement capabilities, standards bodies periodically update their standards or adopt new standards to reflect best practices. Our proposals here are based on such developments, as further informed by petitions for rulemaking filed with the Commission.

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<sup>47</sup> American National Standards Institute, Accredited Standards Committee C63 (ASC C63) is a standards organization that is responsible for developing electromagnetic compatibility (EMC) measurement standards and testing procedures. ASC C63's standards are published by the American National Standards Institute under the ANSI nomenclature. The Commission's rules have referenced various versions of ASC C63-originated standards for more than a quarter century.

<sup>48</sup> The International Organization for Standardization (ISO) is an independent, non-governmental international organization that develops voluntary international standards, see <https://www.iso.org/home.html>. The International Electrotechnical Commission (IEC) develops international standards for all electrical, electronic, and related technologies. See <https://www.iec.ch>.

<sup>49</sup> 47 CFR § 2.947(a)(2).

<sup>50</sup> 47 CFR § 2.948(a).

<sup>51</sup> 47 CFR § 2.949.

<sup>52</sup> 5 U.S.C. § 603(c)(1) – (c)(4).

- F. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules**
18. None.