

(diameter less than or equal to 1 inch) as defined in ANSI C79.1–2002 (incorporated by reference; see § 430.3), nominal overall length less than 12 inches, and that are not compact fluorescent lamps (as defined in this section);

(26) Traffic signal lamps;

(27) Incandescent reflector lamps.

*General service light-emitting diode (LED) lamp* means an integrated or non-integrated LED lamp designed for use in general lighting applications (as defined in this section) and that uses light-emitting diodes as the primary source of light.

*General service organic light-emitting diode (OLED) lamp* means an integrated or non-integrated OLED lamp designed for use in general lighting applications (as defined in this section) and that uses organic light-emitting diodes as the primary source of light.

\* \* \* \* \*

*Infrared lamp* means a lamp that is designed and marketed as an infrared lamp; has its highest radiant power peaks in the infrared region of the electromagnetic spectrum (770 nm to 1 mm); has a rated wattage of 125 watts or greater; and which has a primary purpose of providing heat.

\* \* \* \* \*

*Integrated lamp* means a lamp that contains all components necessary for the starting and stable operation of the lamp, does not include any replaceable or interchangeable parts, and is connected directly to a branch circuit through an ANSI base and corresponding ANSI standard lamp-holder (socket).

\* \* \* \* \*

*LED Downlight Retrofit Kit* means a product designed and marketed to install into an existing downlight, replacing the existing light source and related electrical components, typically employing an ANSI standard lamp base, either integrated or connected to the downlight retrofit by wire leads, and is a retrofit kit. LED downlight retrofit kit does not include integrated lamps or non-integrated lamps.

*Left-hand thread lamp* means a lamp with direction of threads on the lamp base oriented in the left-hand direction.

\* \* \* \* \*

*Light fixture* means a complete lighting unit consisting of light source(s) and ballast(s) or driver(s) (when applicable) together with the parts designed to distribute the light, to position and protect the light source, and to connect the light source(s) to the power supply.

\* \* \* \* \*

*Marine lamp* means a lamp that is designed and marketed for use on boats and can operate at or between 12 volts and 13.5 volts.

*Marine signal service lamp* means a lamp that is designed and marketed for marine signal service applications.

\* \* \* \* \*

*Mine service lamp* means a lamp that is designed and marketed for mine service applications.

\* \* \* \* \*

*Non-integrated lamp* means a lamp that is not an integrated lamp.

\* \* \* \* \*

*Other fluorescent lamp* means low pressure mercury electric-discharge sources in which a fluorescing coating transforms some of the ultraviolet energy generated by the mercury discharge into light and include circline lamps and include double-ended lamps with the following characteristics: Lengths from one to eight feet; designed for cold temperature applications; designed for use in reprographic equipment; designed to produce radiation in the ultra-violet region of the spectrum; impact-resistant; reflectorized or aperture; or a CRI of 87 or greater.

\* \* \* \* \*

*Pin base lamp* means a lamp that uses a base type designated as a single pin base or multiple pin base system.

\* \* \* \* \*

*Plant light lamp* means a lamp that is designed to promote plant growth by emitting its highest radiant power peaks in the regions of the electromagnetic spectrum that promote photosynthesis: Blue (440 nm to 490 nm) and/or red (620 to 740 nm), and is designed and marketed for plant growing applications.

\* \* \* \* \*

*Reflector lamp* means a lamp that has an R, PAR, BPAR, BR, ER, MR, or similar bulb shape as defined in ANSI C78.20–2003 (incorporated by reference; see § 430.3) and ANSI C79.1–2002 (incorporated by reference; see § 430.3) and is used to provide directional light.

\* \* \* \* \*

*Showcase lamp* means a lamp that has a T shape as specified in ANSI C78.20–2003 (incorporated by reference; see § 430.3) and ANSI C79.1–2002 (incorporated by reference; see § 430.3), is designed and marketed as a showcase lamp, and has a maximum rated wattage of 75 watts.

\* \* \* \* \*

*Sign service lamp* means a vacuum type or gas-filled lamp that has sufficiently low bulb temperature to permit exposed outdoor use on high-speed flashing circuits, is designed and

marketed as a sign service lamp, and has a maximum rated wattage of 15 watts.

*Silver bowl lamp* means a lamp that has an opaque reflective coating applied directly to part of the bulb surface that reflects light toward the lamp base and that is designed and marketed as a silver bowl lamp.

\* \* \* \* \*

*Specialty MR lamp* means a lamp that has an MR shape as defined in ANSI C79.1–2002 (incorporated by reference; see § 430.3), a diameter of less than or equal to 2.25 inches, a lifetime of less than or equal to 300 hours, and that is designed and marketed for a specialty application.

\* \* \* \* \*

*Traffic signal lamp* means a lamp that is designed and marketed for traffic signal applications and has a lifetime of 8,000 hours or greater.

\* \* \* \* \*

[FR Doc. 2016–32013 Filed 1–18–17; 8:45 am]

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## DEPARTMENT OF ENERGY

### 10 CFR Part 430

[Docket Number EERE–2013–BT–STD–0051]

RIN 1904–AD09

### Energy Conservation Program: Energy Conservation Standards for General Service Lamps

**AGENCY:** Office of Energy Efficiency and Renewable Energy, Department of Energy.

**ACTION:** Final rule.

**SUMMARY:** On March 17, 2016, the U.S. Department of Energy (DOE) published a notice of proposed rulemaking (NPR) proposing standards for general service lamps (GSLs) pursuant to the Energy Policy and Conservation Act of 1975 (EPCA), as amended. In this final rule DOE responds to comments received on the October 2016 NOPDDA regarding IRLs and amends the definition of GSL.

**DATES:** The effective date of this rule is January 1, 2020.

**ADDRESSES:** The docket, which includes **Federal Register** notices, public meeting attendee lists and transcripts, comments, and other supporting documents/materials, is available for review at [www.regulations.gov](http://www.regulations.gov). All documents in the docket are listed in the [www.regulations.gov](http://www.regulations.gov) index. However, some documents listed in the index may not be publicly available, such as those containing information that is exempt from public disclosure.

A link to the docket Web page can be found at: [https://www1.eere.energy.gov/buildings/appliance\\_standards/standards.aspx?productid=4](https://www1.eere.energy.gov/buildings/appliance_standards/standards.aspx?productid=4). This Web page contains a link to the docket for this document on the [www.regulations.gov](http://www.regulations.gov) site. The [www.regulations.gov](http://www.regulations.gov) Web page contains simple instructions on how to access all documents, including public comments, in the docket.

**FOR FURTHER INFORMATION CONTACT:** Ms. Lucy deButts, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Office, EE-2J, 1000 Independence Avenue SW., Washington, DC 20585-0121. Telephone: (202) 287-1604. Email: [ApplianceStandardsQuestions@ee.doe.gov](mailto:ApplianceStandardsQuestions@ee.doe.gov).

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##### I. Introduction

Title III, Part B of the Energy Policy and Conservation Act of 1975 (EPCA or the Act), Public Law 94-163 (42 U.S.C. 6291-6309, as codified) established the Energy Conservation Program for Consumer Products Other Than Automobiles, a program covering most major household appliances (collectively referred to as “covered products”).<sup>1</sup> Subsequent amendments expanded Title III of EPCA to include additional consumer products,

including general service lamps (GSLs)—the products that are the focus of this final rule.

In particular, amendments to EPCA in the Energy Independence and Security Act of 2007 (EISA 2007) directed DOE to engage in rulemakings regarding GSLs. (42 U.S.C. 6295(i)(6)(A)–(B)) EPCA, as amended by EISA 2007, directs DOE to initiate a rulemaking no later than January 1, 2014, to determine whether standards in effect for GSLs should be amended and determine whether exemptions for certain incandescent lamps should be maintained or discontinued. (42 U.S.C. 6295(i)(6)(A)(i)) The scope of the rulemaking is not limited to incandescent lamp technologies. (42 U.S.C. 6295(i)(6)(A)(ii)) Further, for this first cycle of rulemaking, the EISA 2007 amendments provide that DOE must consider a minimum standard of 45 lumens per watt (lm/W). (42 U.S.C. 6295(i)(6)(A)(ii)) If DOE fails to complete a rulemaking in accordance with 42 U.S.C. 6295(i)(6)(A)(i)–(iv) or a final rule from the first rulemaking cycle does not produce savings greater than or equal to the savings from a minimum efficacy standard of 45 lm/W, the statute provides a “backstop” under which DOE must prohibit sales of GSLs that do not meet a minimum 45 lm/W standard beginning on January 1, 2020. (42 U.S.C. 6295(i)(6)(A)(v))

In March 2016, DOE published a notice of proposed rulemaking (NOPR) that proposed a revised definition of GSL and energy conservation standards for certain GSLs (hereafter the “March 2016 GSL ECS NOPR”). 81 FR 14528 (March 17, 2016). In conjunction with the March 2016 GSL ECS NOPR, DOE also published on its Web site the complete technical support document (TSD) for the proposed rule, which described the analyses DOE conducted and included technical documentation for each analysis. The TSD also included the life cycle cost (LCC) spreadsheet, the national impact analysis spreadsheet, and the manufacturer impact analysis (MIA) spreadsheet.<sup>2</sup>

DOE held a public meeting on April 20, 2016, to hear oral comments on and solicit information relevant to the proposed rule. At this meeting, DOE heard concerns from stakeholders regarding the expansion of scope in the proposed GSL definition and DOE’s approach to analyzing the 22 GSIL exemptions. In addition, DOE received

written comments that reiterated these concerns, and also provided additional data for DOE’s consideration.

Specifically, the National Electrical Manufacturers Association (NEMA) provided new data and information on the 22 exempted lamp types to inform DOE’s evaluation of whether the exemptions should be maintained or discontinued as required by 42 U.S.C. 6295(i)(6)(A)(i)(II).

After the publication of the March 2016 GSL ECS NOPR, DOE analyzed the data submitted by NEMA and collected additional data where available. DOE published a notice of proposed definition and data availability (hereafter the “October 2016 NOPDDA”) to: (1) Propose a revised definition of GSL that included, among other lamp types, IRLs; (2) announce the availability of the NEMA data and supplemental data collected by DOE; (3) request public comment on proposed definitions and compiled data; and (4) request any additional data that stakeholders may have in support of this evaluation. 81 FR 71794 (October 18, 2016). DOE also held a public meeting on October 21, 2016 to hear oral comments and solicit information relevant to the October 2016 NOPDDA.

In a separate final rule being published in the same issue of the **Federal Register**, DOE has adopted a definition of GSL that reflects its discontinuation of certain exemptions and its maintaining of others, and its interpretation and application of certain clauses of the statutory definition of GSL (hereafter the “GSL definition final rule”). In that rule, DOE postponed its decision on the IRL exemption, which it had previously proposed to discontinue. Accordingly, that rule perpetuated the IRL exemption in DOE’s regulatory definition. In this final rule, DOE determines to discontinue the IRL exemption, and it is amending its definition of GSL accordingly.

The following sections of this final rule respond to comments received on the October 2016 NOPDDA and during the NOPDDA public meeting regarding IRLs in more detail.

##### II. Authority and Rulemaking Process

DOE is required under the EISA 2007 amendments to EPCA to undertake the present rulemaking. Under EPCA, DOE shall initiate a rulemaking to determine whether standards in effect for GSLs should be amended to establish more stringent standards; and determine whether exemptions for certain incandescent lamps should be maintained or discontinued. (42 U.S.C. 6295(i)(6)(A)(i)) In addition to that mandate, DOE has the authority to

<sup>1</sup> Part B was re-designated Part A on codification in the U.S. Code for editorial reasons.

<sup>2</sup> The spreadsheets developed for this rulemaking proceeding are available at: [https://www1.eere.energy.gov/buildings/appliance\\_standards/standards.aspx?productid=4](https://www1.eere.energy.gov/buildings/appliance_standards/standards.aspx?productid=4).

qualify lamps as general service lamps upon determining that they are “used to satisfy lighting applications traditionally served by general service incandescent lamps.” (42 U.S.C. 6291(30)(BB)(i)(IV))

An additional statute relevant to this rulemaking is section 312 of the Consolidated and Further Continuing Appropriations Act, 2016 (Pub. L. 114–113, 129 Stat. 2419; hereafter referred to as the “Appropriations Rider”) that prohibits expenditure of funds appropriated by that law to implement or enforce: (1) 10 CFR 430.32(x), which includes maximum wattage and minimum rated lifetime requirements for GSILs; and (2) standards set forth in section 325(i)(1)(B) of EPCA (42 U.S.C. 6295(i)(1)(B)), which sets minimum lamp efficiency ratings for incandescent reflector lamps (IRLs).<sup>3</sup>

This final rule constitutes a decision on whether to maintain or discontinue the exemption for IRLs, and include IRLs as GSLs if discontinued. This final rule does not determine whether DOE should impose or amend standards for any category of lamps, such as GSILs or GSLs.

As discussed in more detail, DOE is grounding the decision of whether to maintain or discontinue the IRL exemption on an assessment of whether IRLs would provide a convenient unregulated alternative to lamps that will be subject to energy conservation standards. In DOE’s view, EPCA exempted certain categories of lamps from the definition of GSL because, on the one hand, some lamps in those categories have specialty applications; and on the other hand, it was not clear, when these lamp provisions were enacted, whether those lamps were part of the broader lamp market to which Congress wished to apply energy conservation standards. For certain lamps exempted from regulation as a GSL, EPCA established standards. With regard to IRLs, EPCA imposed efficiency standards ranging from 10.5 to 15 lm/W. (42 U.S.C. 6295(i)(1)(B)). The purpose, then, of the decision that Congress entrusted to DOE, to maintain or to discontinue a given exemption, was that DOE should assess the role of lamps of that type in the broader lighting market, bearing in mind the evident statutory purpose of achieving energy

conservation by imposing efficiency standards for general lighting.

While the statute does not expressly state a criterion by which DOE should decide which exemptions to maintain—it simply identifies one important evidentiary input, sales data—DOE understands its instruction to be that DOE should maintain an exemption if doing so would be consistent with that statutory purpose, and discontinue the exemption if it would not. To carry out that instruction, DOE has assessed whether lamps within the IRL exemption are readily substitutable for lamps that are already categorized as general service lamps. Sales data, as the statute directs, are an important type of evidence informing that assessment.

The discontinuation of the IRL exemption will render the lamps within that exemption GSLs, to the extent they would otherwise qualify as GSLs. As the October 2016 NOPDDA observed, DOE will then either impose standards on these lamps pursuant to its authority to develop GSL standards or apply the backstop standard prohibiting the sale of lamps not meeting a 45 lm/W efficacy standard.

Commenters on the March 2016 GSL ECS NOPR and October 2016 NOPDDA contended that DOE lacked authority to discontinue exemptions in the way it proposed and objected to the procedures DOE had undertaken. DOE discussed those comments in the GSL definition final rule that is being published in the same issue of the **Federal Register**. In many ways, DOE’s interpretations of EPCA relevant to this final rule are similar to those in the GSL definition final rule; and the procedures are comparable in that this final rule proceeds from the same notices that led to the GSL definition final rule. That said, DOE’s decision regarding IRLs is independent from the decisions it made in the GSL definition final rule, and it has considered the comments and issues independently with respect to this rule. After reviewing those comments and issues again, DOE has come to the same conclusions as it did in the GSL definition final rule, for the reasons given in the preamble to that rule. For convenience, DOE does not repeat those discussions here, as the explanations provided in the GSL definition final rule—regarding which exemptions DOE has the authority to discontinue, what factors DOE is considering in a decision whether to discontinue an exemption, and what procedures DOE has followed—are adequate. In this rule, DOE discusses its consideration of comments and issues specifically related to IRLs.

Besides the 22 lamp types listed in section 6291(30)(D)(ii), which the GSL definition final rule addressed, DOE is also interpreting “the exemptions” in section 6291(i)(6)(A)(i)(II) to include the exemption in section 6291(30)(BB)(ii) for incandescent reflector lamps. Clause (i)(II) refers to “the exemptions for certain incandescent lamps”; and the (BB)(ii) carve-out for “incandescent reflector lamps” readily fits that description so long as it can properly be viewed as an “exemption.” In the GSL definition final rule that is being published in the same issue of the **Federal Register**, DOE explained its understanding of what clause (i)(II) means by an “exemption.” DOE adheres to its conclusion in the GSL definition final rule that the 22 lamp types listed in subparagraph (D)(ii) are “exemptions” for these purposes, and the language of the IRL carve-out is the same as that for the 22 types. Therefore, DOE believes it is also an “exemption.”

DOE recognizes that, as a commenter pointed out, IRLs are already subject to standards under EPCA. The GSL definition final rule that is being published in the same issue of the **Federal Register** explained DOE’s view that a lamp subject to some standards under EPCA can still be “exempt” for purposes of the clause (i)(II) rulemaking, because the “exemptions” that DOE is reviewing are exemptions from GSL regulation. DOE adheres to that view in this final rule.

For IRLs, the existing standards are much less stringent than the 45 lm/W backstop standard, and presumably less stringent than any standard that DOE might develop to achieve energy savings comparable to those from the 45 lm/W backstop standard. For example, when EISA 2007 was adopted, the standard for incandescent reflector lamps ranged from 10.5 to 15 lm/W. It seems unlikely that Congress would have considered that standard an adequate alternative to GSL standards. Therefore, DOE considers it consistent with the scheme of subsection (i)(6) that DOE should assess whether to subject to GSL regulation the lamps within the IRL exemption.

Commenters also argued that DOE cannot discontinue the exemption for IRLs because, the commenters observed, the statute exempts these lamps from being GSLs twice. First, “reflector lamps” are one of the 22 types of lamp exempted by section 6291(30)(BB)(ii)(I); and second section 6291(30)(BB)(ii)(II) specifically exempts incandescent reflector lamps. By exempting them twice, the commenters suggest, Congress made quite clear that incandescent

<sup>3</sup> This provision of the Consolidated and Further Continuing Appropriations Act, 2016 has been extended to the current appropriations authorization. See, The Continuing Appropriations and Military Construction, Veteran Affairs, and Related Agencies Appropriations Act, 2017 and Zika Response and Preparedness Act, 2017 (Pub. L. 114–223, 130 Stat. 908).

reflector lamps are not to be considered GSLs.

The interpretation that these commenters advance would significantly impair the standards regime established by EISA 2007. That statute's amendments to EPCA imposed standards for general service fluorescent lamps and incandescent reflector lamps, the two categories of lamp that subclause (30)(BB)(ii)(II) exempts from being GSLs. For general service fluorescent lamps, when EISA was enacted the standards ranged from 64 to 80 lm/W, substantially above the backstop that the EISA amendments specify as the default for GSLs. For incandescent reflector lamps, the standards when EISA 2007 was enacted ranged from 10.5 to 15.0 lumens per watt, well below the backstop. Today, incandescent reflector lamps are widely used for general illumination just as GSILs are. If EPCA mandated that IRLs continue being exempt from GSLs, then they would present a convenient alternative product, subject to much less stringent standards than GSLs. The GSL standards (potentially the backstop or standards developed by DOE) would save far less energy if consumers and manufacturers can switch many lighting applications to less-efficient IRLs. That outcome would be especially odd in light of the authority that Congress provided DOE to assess whether to maintain or discontinue exemptions—a decision that, as DOE has explained, DOE believes was meant to focus on which exempted lamps would be substitutes for regulated GSLs. DOE's interpretation, under which paragraph (i)(6) authorizes it to make the same sort of determination with respect to IRLs, is a more consistent and coherent interpretation of the EISA amendments.

Of course, if the statute unambiguously foreclosed that interpretation or indicated that DOE must not discontinue the IRL exemption, that command would trump the policy considerations just discussed. But with respect to IRLs, the statute does permit DOE's interpretation that the IRL exemption is one that DOE can discontinue in a subsection (i)(6)(A)(i)(II) rulemaking. As explained in the paragraphs that follow, through a careful exploration of sections 6291 and 6295, DOE believes the “reflector lamp” exemption in section 6291(30)(D)(ii) is not necessarily as broad as the IRL exemption. DOE believes “reflector lamp” was meant to encompass a different range of lamps, with a scope left to DOE to interpret, while IRL is a defined term with a broad scope. Thus, the “reflector lamp” and IRL exemptions are somewhat different in

nature, and EPCA calls on DOE to decide whether to maintain or discontinue each. DOE addressed the “reflector lamp” exemption, as applied to lamps that are not IRLs, in the GSL definition final rule that is being published in the same issue of the **Federal Register**.

Paragraph (30)(C) defines “incandescent lamp” to “includ[e] only the following”: “[a]ny lamp . . . that is not a reflector lamp” and meets certain criteria, such as a rated wattage between 30 and 199 watts; “[a]ny lamp (commonly referred to as a reflector lamp) which is not colored or designed for rough or vibration services applications, that contains an inner reflective coating on the outer bulb to direct the light,” and meets additional technical criteria like bulb shape; and “[a]ny general service incandescent lamp” rated above 199 watts. DOE notes that paragraph (30)(C) did not define “reflector lamp” to mean a lamp described in the terms just quoted; rather, paragraph (30)(C) noted that such lamps commonly are called reflector lamps. By contrast, paragraph (30)(F) does define the term IRL to mean “a lamp described in subparagraph (C)(ii).” Finally, paragraph (30)(D) defines GSIL, and that definition states that GSILs do not include any of 22 lamp types, one of which is “reflector lamps.”

From this set of definitions, DOE infers that “reflector lamp” does not necessarily mean the same thing as “incandescent reflector lamp.” Had Congress wanted to define “reflector lamp,” it could easily have done so. That it did not suggests that Congress left the term, as used in the list of 22 lamp types, for DOE to elaborate. Furthermore, if “reflector lamp” was meant to be necessarily coextensive with subparagraph (C)(ii), the definition of GSIL contains a curious circular redundancy. The statute defines “incandescent lamp” to include the lamps described in subparagraph (C)(ii); it defines “general service incandescent lamp” to be an incandescent lamp or halogen lamp with certain additional attributes; and then it says general service incandescent lamps do not include “reflector lamp[s].” If that usage of “reflector lamp” necessarily has the same scope as subparagraph (C)(ii), the statute included them in GSILs only to exclude them.

The context further suggests that “reflector lamp,” as used in the list of 22 exempted lamp types, was meant to exempt a scope different from, and in some respects narrower than, paragraph (C)(ii). Each of the other exemptions describes a narrow category of lamp, such as “mine service lamp,” “traffic

signal lamp,” or “vibration service lamp,” that has specialty applications and that Congress could have thought might have few or no general service applications. The statute does not reflect a final judgment on that point; instead it defers the decision for DOE to make in a section 6295(i)(6)(A)(i)(II) rulemaking. Still, the general character of the 22 exemptions is that they are lamp types about which such a judgment—whether the exempted lamps have substantial general service applications—would be necessary in deciding whether to impose general lamp standards. By contrast, subparagraph (C)(ii), which defines IRLs, encompasses a wide range of lamps which certainly had general service applications; and EPCA reflected that reality by imposing efficiency standards (ranging from 10.5 to 15 lm/W) on IRLs since 1995. Public Law 102–486, section 123(f), 106 Stat. 2824.

It bears mention also that EPCA first added “reflector lamps” among the 22 exempted lamp types as a result of EISA amendments in 2007. EISA 2007 section 321 also established the first statutory standards for GSILs. Public Law 110–140, section 321(a)(3), 121 Stat. 1577. While those standards were expressed in terms of a maximum wattage for a given range of lumen output, the minimum efficiency needed to satisfy those standards would be from 17 to 36 lm/W in the wattage range that includes IRLs.<sup>4</sup> If the “reflector lamp” exemption was necessarily coextensive with IRLs, then the statute imposing the new standard simultaneously created a major loophole by leaving IRLs—a category of lamp that already in 2007 was widely used for general illumination—subject only to the much older and lower efficiency standard effective at the time, which was 10.5 to 15 lm/W. That would be an odd outcome. Had Congress intended to undermine its own standard in that way, it could have done so explicitly by defining “reflector lamp” to have the same scope (with respect to incandescent lamps) as IRL. Instead, in a statute which tweaked subparagraph (C)(ii) and added definitions for various specific lamp types, it left “reflector lamp” undefined.

In light of these observations, DOE understands the definition of “general service lamp” as follows (as concerns reflector lamps and IRLs): Until DOE discontinued the relevant exemptions, no “reflector lamps,” as the term is used in section 6291(30)(D)(ii), were GSILs or

<sup>4</sup> The EISA section 321 standards imposed a maximum wattage of 29 watts for lamps between 310 and 749 lumens of output. Meanwhile IRLs, according to section 6291(30)(C)(ii), include only lamps above 40 watts.

GSLs. Depending on how DOE interprets the “reflector lamp” exemption, some IRLs may be GSILs (due to not falling in the possibly narrower “reflector lamp” exemption).<sup>5</sup> However, even those that are GSILs are not GSLs, because the definition of GSLs says they include GSILs but do not include IRLs.

In principle, then, DOE has had two tasks regarding exemptions relevant for reflector lamps. With respect to “reflector lamps,” it was to assess whether that one of the relatively narrow 22 listed lamp types—the scope of which the statute does not make clear—has uses in general illumination, and whether sales data and other evidence indicate that such lamps are ready substitutes for lamps that are already included as GSLs. DOE has finalized this analysis in a separate final rule, the GSL definition final rule. By contrast, as noted previously, the category of IRLs includes lamps that, as of 2007, it was already evident were being used in general lighting applications. However, DOE must still analyze whether, in light of sales data and other evidence, IRLs are an important enough substitute for lamps already included as GSLs to warrant discontinuing their exemption. This analysis is the subject of this final rule and discussed in more detail in the section that follows.

### III. Definition of General Service Lamp

#### A. Incandescent Reflector Lamps

The term general service lamp (GSL) includes general service incandescent lamps (GSILs), compact fluorescent lamps (CFLs), general service light-emitting diode (LED) and organic light-emitting diode (OLED) lamps, and any other lamps that DOE determines are used to satisfy lighting applications traditionally served by GSILs; however, GSLs do not include any lighting application or bulb shape that under 42 U.S.C. 6291(30)(D)(ii) is not included in the “general service incandescent lamp” definition, or any general service fluorescent lamp or incandescent reflector lamp. (42 U.S.C. 6291(30)(BB)) The October 2016 NOPDDA revisited the proposed definition of GSL from the March 2016 GSL ECS NOPR, including the exemptions contained in the GSIL and GSL definitions, and proposed a revised definition of “general service lamp” in § 430.2 to capture various criteria and delineate the lamp types considered to be GSLs. 81 FR 71806–71807. More specifically, DOE proposed

a definition for GSL in the October 2016 NOPDDA. A general service lamp, as proposed, would be a lamp that has an ANSI base, operates at any voltage, has an initial lumen output of greater than or equal to 310 lumens (or 232 lumens for modified spectrum general service incandescent lamps) and less than or equal to 4,000 lumens, is not a light fixture, is not an LED downlight retrofit kit, and is used in general lighting applications. General service lamps include, but are not limited to, general service incandescent lamps, compact fluorescent lamps, general service light-emitting diode lamps, and general service organic light-emitting diode lamps, but do not include general service fluorescent lamps; linear fluorescent lamps of lengths from one to eight feet; circline fluorescent lamps; fluorescent lamps specifically designed for cold temperature applications; impact-resistant fluorescent lamps; reflectorized or aperture fluorescent lamps; fluorescent lamps designed for use in reprographic equipment; fluorescent lamps primarily designed to produce radiation in the ultra-violet region of the spectrum; fluorescent lamps with a color rendering index of 87 or greater; R20 short lamps; specialty MR lamps; appliance lamps; black light lamps; bug lamps; colored lamps; infrared lamps; left-hand thread lamps, marine lamps, marine signal service lamps; mine service lamps; plant light lamps; sign service lamps; silver bowl lamps, showcase lamps, and traffic signal lamps.

In support of its analysis of whether to maintain or discontinue an exemption, in the October 2016 NOPDDA DOE presented estimated sales data. NEMA stated that sales for most of the exempted lamps are declining and that it was the intent of Congress to require that DOE find sales increasing as a prerequisite to discontinue an exemption. (NEMA, No. 83 at p. 34; NEMA No. 93 at p. 12) NEMA pointed to the petition process established under section 321 of EISA 2007 as indicative of that intent. (NEMA, No. 93 at pp. 12–13) NEMA and LEDVANCE noted that Congress required a demonstration of increased sales as a prerequisite for DOE to grant a petition submitted by the public to reconsider an exemption, and that DOE must be guided by the same consideration when determining whether an exemption should be maintained under 42 U.S.C. 6295(i)(6)(A)(i)(II). (NEMA, No. 83 at pp. 33–34; LEDVANCE, No. 90 at pp. 25–27) NEMA and LEDVANCE cited the requirement under 42 U.S.C.

6295(i)(6)(A)(i)(II) for DOE to consider, in part, “exempted lamp sales” collected by DOE as supporting the requirement for increased lamp sales in order to discontinue an exemption. (NEMA, No. 93 at 5; LEDVANCE, No. 90 at p. 26) NEMA and LEDVANCE added that a determination of lamp switching must be driven by data showing increased sales. (NEMA No. 93 at p. 13; LEDVANCE, No. 90 at pp. 25–27) NEMA and LEDVANCE concluded that the October 2016 NOPDDA did not provide data indicating that lamp switching was occurring, and rather data from the Energy Information Administration<sup>6</sup> shows that sales are decreasing. NEMA and LEDVANCE commented that if DOE was petitioned under section 325(i)(3)(E), it would not grant the petition or decide to regulate these specialty lamps and therefore any other action taken under section 325(i)(6)(A) is illogical. (NEMA, No. 93 at p. 13; LEDVANCE, No. 90 at pp. 25–27)

As DOE has explained in the GSL definition final rule that is being published in the same issue of the **Federal Register**, the petition process from EISA section 321(a)(3) is distinct from the decision that subparagraph (6)(A)(i)(II) calls for about maintaining or discontinuing exemptions. The statute does not require DOE to consider the same factors in the clause (i)(II) decision that it would in reviewing a petition. In particular, it does not restrict DOE to discontinuing an exemption only if sales of lamps within that exemption are increasing. While increases or decreases in lamp sales are an important consideration, DOE believes it can in some circumstances be appropriate to discontinue an exemption even at a time when sales of those lamps are decreasing. As described by GE, LEDVANCE, and Westinghouse, incandescent sales can be decreasing because consumers are purchasing LED versions of the same lamp. Thus, the lamp itself is not unpopular but rather is undergoing a shift in technology. For example, GE stated that sales of IRLs have been declining significantly over the last five years but that was in large part caused by the increasing sales of LED reflector lamps. (GE, No. 83 at pp. 38, 84–85; LEDVANCE, No. 90 at p. 35; Westinghouse, No. 83 at pp. 128–129) Consequently, it can in some circumstances be appropriate to

<sup>5</sup> DOE has not thus far articulated an interpretation of the “reflector lamp” exemption that would resolve the status of IRLs.

<sup>6</sup> See Energy Information Administration, Sales of specialty incandescent bulbs decline despite exemption from efficiency standards (April 2, 2013) available at: <http://www.eia.gov/todayinenergy/detail.php?id=10631>.

consider the overall volume of sales in assessing an exemption, even if the volume is currently decreasing.

DOE also considered the potential of lamp switching that may occur in response to any GSL standard. If an exempted lamp has the same utility to lamp users as a lamp subject to a standard as a GSL, DOE considered the potential increase in the use of the exempted lamp in response to a standard. As noted by commenters, prior to the effective date of any new standard the sales trends of exempted lamps do not necessarily capture the potential for lamp switching. As such, current lamp sale trends are only part of the consideration. DOE is permitted to account for future changes in consumer behavior so as to avoid the creation of loopholes.

DOE received several comments regarding whether a lamp could serve as a replacement for a GSL and therefore present a risk of lamp switching. California Investor Owned Utilities (CA IOUs) stated that evaluations of the exemptions should be based on whether the exempted lamp type could serve as a replacement for a general service lamp. (CA IOUs, No. 83 at p. 107) Westinghouse stated that there are low-cost products on the market that consumers do not use as replacements for GSLs because they are not the appropriate shape or design. Avalos noted that a couple of exempted lamp types could be considered GSILs but are not due to their lamp structure. (Westinghouse, No. 83 at p. 30; Avalos, No. 80 at p. 1)

GE and LEDVANCE stated that DOE should consider the traditional omnidirectional incandescent lamp when considering the potential for lamp switching. (GE, No. 83 at pp. 37–38; LEDVANCE No. 83 at p. 59) GE stated that the definition of GSIL (a type of GSL) describes a lamp with a medium

screw base, that produces between 310 and 2,600 lumens, and can operate on a voltage between 110 and 130 V, and that in order for a lamp to be considered as having the potential for “lamp switching” the lamp must maintain these same attributes. (GE, No. 88 at pp. 2–3) Westinghouse stated that consideration of lamp switching should be limited to whether a consumer could use an exempted lamp to replace a lamp that the consumer is currently using, and that consideration of how the use of fixtures may change in response to standards (e.g., changes in fixtures used in new home construction) would be inconsistent with EPCA. (Westinghouse, No. 83 at pp. 39–40)

Other commenters stated that consideration of lamp switching should include the ability of an exempted lamp to provide similar function as a traditional GSIL, regardless of the fixture traditionally used with GSILs. ASAP stated that the presence of directional lamps in residences in the U.S. has grown significantly over time due to changes in new construction. (ASAP, No. 83 at pp. 38–39) ASAP stated that lighting in homes that traditionally was provided by A shape lamps in floor and table fixtures is being provided in newer construction through reflector lamps in recessed can lighting. (ASAP, No. 83 at pp. 58–59)

As noted previously, DOE understands the purpose of the decision that EPCA calls for on maintaining or discontinuing exemptions to be to ensure that consumers and manufacturers do not switch to readily available substitutes once standards for GSLs come into force. In making this assessment, the potential for an exempted lamp to be placed in a fixture that traditionally used a GSIL, and the potential change in the fixtures used to provide lighting in an application that was traditionally served by a GSIL are

important considerations that DOE appropriately takes into account. As noted by commenters, the function traditionally provided by GSILs can, in some instances, be provided by more than one type of fixture. In order to minimize the potential for loopholes, DOE has considered the potential for a consumer to change the type of lamp used in an existing fixture, and the potential change in the type of fixture used to provide the same function as traditionally provided by a fixture using a GSIL.

CA IOUs stated that evaluations of the exemptions should also be based on whether the exempted lamp type can be made as an LED lamp. (That consideration would be relevant because it is almost certain that incandescent lamps will not be able to satisfy the 45 lm/W backstop standard if it comes into force.) (CA IOUs, No. 83 at p. 107) DOE is aware that LED replacements may exist for some of the exempt lamp categories. DOE did consider the existence or absence of LED replacements for IRLs, though not as the only reason to discontinue or maintain an exemption.

NEMA provided updated sales information for this final rule. NEMA provided sales data from four members, which represents a significant portion of the market, for each of the exemptions that DOE proposed to discontinue. NEMA stated that although not all members are included, it conferred with other members that did not provide data to confirm the general trend of decreasing sales and shipments of specialty incandescent lamps since standards went into effect for GSILs between 2010 and 2012. (NEMA, No. 93 at pp. 9–10) DOE has updated Table III.1 to reflect this new data.

Table III.1 summarizes the IRL exemption discontinued in this final rule.

TABLE III.1—DETERMINATION REGARDING IRLS

[Units annual sales]

| GSL exempt lamp category | Estimated sales data            | DOE's determination on exemption status |
|--------------------------|---------------------------------|---|
| IRLs .....               | Approximately 270 million ..... | Discontinue exemption.                  |

DOE believes that discontinuing the exemption for IRLs could lead to significant energy savings. As shown in Table III.1, IRLs have annual sales that are several times the sales of the largest-volume lamp category among those exemptions that DOE has already discontinued. See the GSL definition final rule for more information that is

being published in the same issue of the **Federal Register**.

In the October 2016 NOPDDA, DOE assessed data available for IRLs and preliminarily concluded that these lamps have high annual sales. Specifically, DOE estimated that the sales of IRLs are approximately 270 million units per year. DOE believed

IRLs are capable of providing overall illumination and could be used as a replacement for GSILs. Therefore, DOE found there was also high potential for lamp switching and subsequently creating a loophole. For these reasons, DOE proposed to discontinue the exemption for IRLs in the October 2016 NOPDDA. *Id.* at 71800.

As noted at the outset of this document, this final rule amending the definition of GSL does not establish standards for GSLs. Inclusion of IRLs in the definition of GSL does not amend the standards currently applicable to IRLs. EPCA directs DOE to consider whether to amend the standards for GSLs, and whether the definition of GSL should be amended. (42 U.S.C. 6295(i)(6)(A)(i)(II)) In order to evaluate any potential standards or amendments to standards for GSL, DOE must first determine the scope of the GSL definition. As explained previously, DOE has considered lamp sales and the potential for lamp switching in an effort to ensure all lamps that can be used in general lighting applications are included.

Of course, DOE makes this decision cognizant of the fact that IRLs are already subject to minimum efficiency standards. However, DOE does not believe section 6295(i)(6) reveals an intention that, because of those standards, DOE should maintain the IRL exemption from being regulated as GSLs. The IRL standards in the statute dating from 1992—which were the extant standards when EISA added subsection (i)(6)—are substantially less stringent than the standards that EISA section 321 specified for GSILs and even further less stringent than the GSL backstop. Given that some IRLs have long been used for general illumination, as discussed previously, it would be odd for Congress to have left open, unalterably, such a large loophole to its own standards. Rather, DOE believes that in enacting EISA 2007, Congress chose not to update the statutory standards for IRLs because instead it was directing DOE to decide whether to regulate those lamps as GSLs. Thus, the fact that IRLs are already subject to IRL-specific standards does not preclude DOE's decision in this final rule. It simply means that, consistent with EPCA, DOE is to perform a particular assessment for IRLs bearing in mind the existing standards. DOE has carried out that assessment.

DOE received several comments in support of its decision to expand the scope of the GSL definition to include IRLs. ASAP commented that they strongly supported covering IRLs in the scope of this rulemaking noting that hundreds of millions of IRLs are sold each year. ASAP stated that IRLs of all technology types are a growing presence in homes. ASAP noted that there are more efficient alternatives widely available at affordable prices, and including IRLs as GSLs is a step towards technological neutrality which will benefit the environment, industry and

consumers. ASAP added that the fact IRLs are regulated under their own standards does not preclude them from inclusion as GSLs. (ASAP, No. 83 at pp. 38–39; ASAP, No. 94 at pp. 1–2) NRDC and Utility Coalition supported DOE's proposal to include IRLs as GSLs. NRDC stated this was indicative of a shift to a technology-based approach which has been discussed at DOE for many years. NRDC and Utility Coalition added that including IRLs as GSLs will deliver significant energy and consumer savings when considering DOE's estimate of 270 million IRLs sold per year. (NRDC, No. 83 at p. 11; NRDC, No. 85 at p. 2; Utility Coalition, No. 95 at pp. 1–2) Soraa also supported DOE's proposal to include IRLs as GSLs noting that reflector lamps are used or can be used to provide overall illumination. (Soraa, No. 87 at p. 2)

CEC supported DOE's proposal to discontinue the exemption for reflector lamps due in part to their high lamp sales and potential for lamp switching. CEC agreed with DOE's estimate of the annual sales of IRLs of approximately 270 million units, noting that California's existing stock of medium screw base incandescent and halogen reflector lamps is estimated to be more than 60 million units with annual shipments in 2016 estimated at nearly 35 million units. CEC added that although LED reflector lamps are gaining market share from IRLs, CEC's recent general service LED lamps rulemaking determined that incandescent technology would represent the vast majority of medium screw base directional lamp shipments in 2029 if the IRL exemption were maintained. (CEC, No. 91 at pp. 4–5)

In contrast, GE recommended that reflector lamps (in GE's comment, primarily IRLs) continue to be regulated separately and that it is not appropriate to evaluate reflector type lamps as GSLs because these products cannot successfully be used to satisfy lighting applications traditionally served by GSILs. (GE, No. 88 at p. 2) GE added that each reflector lamp has unique optical properties that must be considered when applying a minimum efficacy requirement and noted that these products cannot meet the same efficiency limits designed for general service A shape lamps. (GE, No. 88 at p. 2) Westinghouse stated that while there is energy savings potential in regulating IRLs, it should be done in an IRL standards rulemaking rather than in a GSL standards rulemaking. (Westinghouse, No. 83 at pp. 21–22) Westinghouse stated it is not suggesting that LED versions for R20, BR30, and R40 shapes used in the residential

sector for general purposes are not suitable replacements. However, Westinghouse asserted that to ensure that efficiencies are achievable for this shape and due consideration is given to economic feasibility, IRLs should be considered in their own rulemaking. (Westinghouse, No. 83 at pp. 47–48; Westinghouse, No. 83 at pp. 55–56)

In support of their assertion that reflector lamps should be regulated separately, several commenters disagreed with DOE's determination that reflector lamps posed a risk of lamp switching. GE stated that while a large number of IRLs are still in use, sales have declined significantly over the past 5 years, in large part, due to a shift to LED reflector lamps. Further GE stated that reflector lamps would not fit in most fixtures in which GSILs are used. Even if a reflector lamp could fit in such a fixture it could not deliver the omnidirectional light output provided by the GSIL. Therefore, GE asserted reflector lamps would not be suitable replacements for the standard GSILs and needed to be evaluated in their own rulemaking. (GE, No. 83 at pp. 37–38) LEDVANCE agreed and stated that the consumer will not obtain effective light by putting a reflector lamp such as a PAR30 in a fixture that does not have some type of directional functionality. (LEDVANCE, No. 83 at pp. 59–61)

CA IOUs stated that while it may not be always be optimal, reflector lamps can be used in general service applications. (CA IOUs, No. 83 at p. 66) NRDC stated that reflector lamps can be used in applications other than down lights. NRDC pointed out that reflector lamps come in various shapes and there was nothing to prevent a manufacturer from altering the reflector lamp design so more light goes in different directions. (NRDC, No. 83 at p. 45) CA IOUs further noted that as the cheaper product, the use of IRLs in general service applications may increase due to new market pressures in 2020. (CA IOUs, No. 83 at p. 66) CEC agreed that medium screw base reflector lamps represent a lamp switching risk adding that lamp shape does not determine whether a lamp can provide general service lighting and general service lamps are not limited to omnidirectional lighting. (CEC, No. 91 at pp. 4–5) Utility Coalition also stated that LED lamps are suitable replacements for GSLs in many applications because they have the same base types and therefore represent a significant risk of undercutting the energy savings of the 45 lm/W standard if they are not included. (Utility Coalition, No. 95 at pp. 1–2)

Additionally, Utility Coalition commented that there are LED versions



of reflector lamps available in a wide variety of shapes and sizes, lumen outputs, CCT, beam angles, and base types and that decreasing prices and increasing efficiency make these products cost-effective to consumers. NRDC also noted that there are several cost-effective, dimmable LED lamps available that serve as excellent replacements for IRLs in a variety of form factors, light outputs, and colors and urged DOE to move forward with its proposal to remove the exemption for these lamps. (NRDC, No. 83 at pp. 45–46; Utility Coalition, No. 95 at pp. 1–2) CEC stated that as of June 15, 2015, 658 models of medium screw base reflector lamps complied with Tier 1 of the adopted California standard thus indicating that cost effective, highly-efficient LED alternatives exist. CEC added that making incremental improvements to existing LED reflector lamps was extremely cost-effective and technically feasible. (CEC, No. 91 at pp. 4–5) Soraa also stated that LED replacements that provide a wide variety of product features, such as color rendering index (CRI), CCT, beam angle, whiteness rendering, and low flicker, are available for the majority of existing IRLs. Soraa noted that customers in quality-sensitive fields such as high-end retail and hospitality have transitioned from halogen to LED technology. Soraa added while there are still some lamp types that are difficult to replicate in LED technology, incremental progress in technology will likely make these products available by 2020. Additionally, Soraa stated that the limit of 45 lm/W can be met by currently-existing products with higher-level features. (Soraa, No. 87 at p. 2)

As discussed previously in this document, DOE did not limit its consideration of lamp switching to the ability to replace a lamp in a fixture currently used by a consumer that had been using a traditional incandescent lamp. As indicated by comments from ASAP previously in this document, the presence of reflector lamps in residences in the U.S. has grown significantly over time due to changes in new construction. (ASAP, No. 83 at pp. 38–39) Lighting in homes that traditionally was provided by A shape lamps in floor and table fixtures is being provided in newer construction through reflector lamps in recessed lighting. (ASAP, No. 83 at pp. 58–59)

The basic design characteristic of an “incandescent reflector lamp,” as EPCA defines the term, is that it directs the light. But it is possible to direct the omnidirectional light from an incandescent filament into a somewhat more limited set of angles and still have

a lamp that provides general illumination. The reflector lamps now being widely used in recessed can lighting are an important example. In such an application (with the lamp mounted in the ceiling), the reflector redirects light that was initially emitted upward. But the resulting light distribution spreads broadly over the area downward from the lamp, so that a consumer can readily use the lamp to provide general illumination for a room. In light of these observations, DOE concludes that “omnidirectional illumination” is not a prerequisite for the traditional functions of incandescent lamps, as GE suggested. Rather, DOE may consider a lamp a ready substitute for GSLs—for purposes of assessing an exemption—if the lamp can provide the same sort of general illumination that GSLs provide.

As presented in Table III.1, DOE estimates that the sales of incandescent reflector lamps are approximately 270 million units per year. 81 FR 71794, 71800. DOE notes that incandescent reflector lamps have higher annual sales than any of the 22 exempt lamp types, thus indicating that these lamps are likely used in general lighting applications. In addition, because IRLs are capable of providing overall illumination and could be used as replacements for GSILs, there is also high potential for lamp switching. For these reasons, DOE is discontinuing the exemption from the GSL definition for IRLs.

LEDVANCE noted that in January 2015, DOE said it found new standards for IRLs not economically justified. 80 FR 4042, 4043 (Jan. 26, 2015). (LEDVANCE, No. 90 at pp. 6–7) NEMA asserted that inclusion of IRLs in the definition of GSL given DOE’s previous determination that standards for IRLs would not be economically justified or technically feasible can only be understood as an attempt by DOE to eliminate the product from the market, an outcome prohibited under EPCA. (NEMA, No. 93 at p. 14)

DOE acknowledges that a recent rulemaking was completed for IRLs. DOE completed a final rule in January 2015 that concluded that amended energy conservation standards for IRLs (other than ER30, BR30, BR40, and ER40 lamps of 50 W or less; BR30, BR40, and ER40 lamps of 65 W; and R20 lamps of 45 W or less) would not be economically justified. 80 FR 4042 (January 26, 2015). DOE notes that there are established test procedures for IRLs. See, Appendix R to 49 CFR 430 subpart B. While the recent IRL rulemaking considered energy conservation standards for a limited segment of IRLs,

this rule defines what is and is not a general service lamp. As such, DOE is addressing a fundamentally different question. The purpose of this rulemaking is not to establish energy conservation standards, but to determine whether certain lamps because of functional and design characteristics should be included in the definition of general service lamp.

DOE has determined that lamps of different shapes, even those that are not omnidirectional, can provide overall illumination. Therefore, even though reflector lamps are designed to direct the light they provide, DOE has concluded that they should be included as general service lamps. DOE’s previous conclusion regarding energy conservation standards for a subset of IRLs (less than half of the IRL market) has no bearing on their ability to be a general service lamp, assuming they meet the other criteria in the adopted definition.

Further, DOE notes that the conclusion reached in the previous rulemaking was based on an analysis of incandescent technology. The January 2015 IRL rulemaking concluded that an amended standard based on more efficient incandescent technology would not be economically justified. An analysis conducted under the general service lamps authority could well come to a different conclusion because more efficient replacements could use incandescent, fluorescent, or LED technology. Thus, the cost-benefit analysis would be different and the cost-benefit analysis from the January 2015 rulemaking is not applicable here.

DOE notes that incandescent reflector lamps have high annual sales, indicating that they are likely used in general lighting applications. Further, as noted by several commenters, IRLs that are currently exempt from standards have ballooned in sales and have gone from representing a minority of the market to a majority of the market. Thus, industry has shown that consumers of IRLs find various distributions of light acceptable in their applications because the ER- and BR-shaped lamps that increased in sales have broader distributions of light than the PAR-shaped lamps they replaced.

DOE also received comments regarding the impacts on manufacturers of including IRLs in the definition of GSL. NEMA noted that in response to the March 2016 ECS NOPR, it had commented that in 2020 manufacturers would have to supply the entire nation with general service LED lamps as incandescent lamps would not be available. NEMA had explained in its comment that this would mean a 300



percent increase in the steady state demand and require tripling capacity for only that year. NEMA stated that the proposed definitions in the October 2016 NOPDDA increased the scope of GSLs to a wider range of specialty products than what was proposed in the March 2016 GSL ECS NOPR. Hence the projected spike in demand in 2020 would now be even higher. Therefore, NEMA encouraged DOE to either not impose regulations or postpone them for a few years on niche products. (NEMA, No. 83 at pp. 157–158) LEDVANCE requested clarification on whether an employment impact analysis was conducted for IRLs given that DOE's proposal to remove the exemption for IRLs could have an impact on domestic manufacturing. (LEDVANCE, No. 83 at pp. 59–61)

DOE acknowledges that manufacturers may face a difficult transition if required to comply with a 45 lm/W standard, particularly for IRLs. Regarding concerns that the application of the backstop standard would eliminate domestic manufacturing of IRLs, DOE determined that manufacturers are already planning to close or move out of the country several domestic production facilities related to the manufacturing of IRLs due to reduced demand. In press releases regarding these closures, manufacturers noted that the market is moving away from traditional technologies, such as IRLs and other incandescent lamps, and transitioning to LED technology.<sup>7</sup>

DOE is committed to working with manufacturers to ensure a successful transition if the backstop standard goes into effect.<sup>8</sup> DOE will continue to have an active dialogue with industry, including meetings and other stakeholder outreach, throughout the period between publication of this rule and the compliance date of any backstop standard for general service lamps, including IRLs. During this period, DOE will keep stakeholders and

the public apprised of its plans for any broad exercise of enforcement discretion with respect to the standard.

#### *B. Summary and Regulatory Text Definition*

DOE is amending the definition of “general service lamp” in § 430.2 to include IRLs. A general service lamp is a lamp that has an ANSI base; is able to operate at a voltage of 12 volts or 24 volts, at or between 100 to 130 volts, at or between 220 to 240 volts, or of 277 volts for integrated lamps (as defined in this section), or is able to operate at any voltage for non-integrated lamps (as defined in this section); has an initial lumen output of greater than or equal to 310 lumens (or 232 lumens for modified spectrum general service incandescent lamps) and less than or equal to 3,300 lumens; is not a light fixture; is not an LED downlight retrofit kit; and is used in general lighting applications. General service lamps include, but are not limited to, general service incandescent lamps, compact fluorescent lamps, general service light-emitting diode lamps, and general service organic light-emitting diode lamps. General service lamps do not include:

- Appliance lamps;
- Black light lamps;
- Bug lamps;
- Colored lamps;
- G shape lamps with a diameter of 5 inches or more as defined in ANSI C79.1–2002;
- General service fluorescent lamps;
- High intensity discharge lamps;
- Infrared lamps;
- J, JC, JCD, JCS, JCV, JCX, JD, JS, and JT shape lamps that do not have Edison screw bases;
- Lamps that have a wedge base or prefocus base;
- Left-hand thread lamps;
- Marine lamps;
- Marine signal service lamps;
- Mine service lamps;
- MR shape lamps that have a first number symbol equal to 16 (diameter equal to 2 inches) as defined in ANSI C79.1–2002, operate at 12 volts, and have a lumen output greater than or equal to 800;
- Other fluorescent lamps;
- Plant light lamps;
- R20 short lamps;
- Reflector lamps (as defined in this section) that have a first number symbol less than 16 (diameter less than 2 inches) as defined in ANSI C79.1–2002 and that do not have E26/E24, E26d, E26/50x39, E26/53x39, E29/28, E29/53x39, E39, E39d, EP39, or EX39 bases;
- S shape or G shape lamps that have a first number symbol less than or equal to 12.5 (diameter less than or equal to

1.5625 inches) as defined in ANSI C79.1–2002;

- Sign service lamps;
- Silver bowl lamps;
- Showcase lamps;
- Specialty MR lamps;
- T shape lamps that have a first number symbol less than or equal to 8 (diameter less than or equal to 1 inch) as defined in ANSI C79.1–2002, nominal overall length less than 12 inches, and that are not compact fluorescent lamps (as defined in this section);
- Traffic signal lamps.

#### **IV. Effective Date**

For the changes described in this final rule, DOE is adopting a January 1, 2020 effective date.

#### **V. Procedural Issues and Regulatory Review**

##### *A. Review Under Executive Orders 12866 and 13563*

This final rule neither implements nor seeks to enforce any standard. Rather, this final rule merely defines what constitutes a GSL. Lamps that are GSLs will become subject to either a standard developed by DOE or to a 45 lm/W backstop standard, but this rule does not determine what standard will be applicable to lamps that are being newly included as GSLs. Accordingly, this action does not constitute a significant regulatory action under Executive Orders 12866 and 13563.

##### *B. Review Under the Regulatory Flexibility Act*

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires that when an agency promulgates a final rule under 5 U.S.C. 553, after being required by that section or any other law to publish a general NOPR, the agency shall prepare a final regulatory flexibility analysis (FRFA), unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. As required by Executive Order 13272, “Proper Consideration of Small Entities in Agency Rulemaking,” 67 FR 53461 (August 16, 2002), DOE published procedures and policies on February 19, 2003, to ensure that the potential impacts of its rules on small entities are properly considered during the rulemaking process. 68 FR 7990. DOE has made its procedures and policies available on the Office of the General Counsel’s Web site (<http://energy.gov/gc/office-general-counsel>).

DOE reviewed the definition of GSL amended in this final rule under the provisions of the Regulatory Flexibility

<sup>7</sup> See press releases from OSI and GE regarding domestic manufacturing closures available in the docket at: <https://www.regulations.gov/#!docketDetail;D=EERE-2013-BT-STD-0051>.

<sup>8</sup> In that vein, DOE also notes NEMA’s comment that because the backstop requires DOE to “prohibit sales,” it could present a substantial practical difficulty regarding compliance. For most products, NEMA states, after a standard comes into effect distributors can continue to sell inventory still on hand that complied with the previous standard. If, by contrast, distributors cannot sell old lamp inventory after January 1, 2020, that inventory will be stranded. Although it is premature for DOE to explain in detail how the backstop would work if it comes into force, DOE notes that under subsection (i)(2), “it shall not be unlawful for a manufacturer to sell a lamp which is in compliance with the law at the time such lamp was manufactured.” DOE expects it would interpret and apply the backstop with subsection (i)(2) in mind.

Act and the procedures and policies published on February 19, 2003. DOE certifies that this final rule does not have a significant economic impact on a substantial number of small entities. The factual basis for this certification is set forth in the following paragraphs.

For manufacturers of IRLs, the SBA has set a size threshold, which defines those entities classified as “small businesses” for the purposes of the statute. DOE used the SBA’s small business size standards to determine whether any small entities would be subject to the requirements of the rule. (See 13 CFR part 121.) The size standards are listed by NAICS code and industry description and are available at [http://www.sba.gov/sites/default/files/files/Size\\_Standards\\_Table.pdf](http://www.sba.gov/sites/default/files/files/Size_Standards_Table.pdf). Manufacturing of GSLs is classified under NAICS 335110, “Electric Lamp Bulb and Part Manufacturing.” The SBA sets a threshold of 1,250 employees or less for an entity to be considered as a small business for this category.

To estimate the number of companies that could be small businesses that manufacture IRLs covered by this rulemaking, DOE conducted a market survey using publicly available information. DOE’s research involved information provided by trade associations (e.g., NEMA<sup>9</sup>) and information from DOE’s CCMS Database,<sup>10</sup> previous rulemakings, individual company Web sites, SBA’s database, and market research tools (e.g., Hoover’s reports<sup>11</sup>). DOE used information from these sources to create a list of companies that potentially manufacture or sell IRLs and would be impacted by this rulemaking. DOE screened out companies that do not offer products covered by this rulemaking, do not meet the definition of a “small business,” or are completely foreign owned and operated. DOE determined that there are no small businesses that maintain domestic production facilities for IRLs.

DOE notes that this final rule merely includes IRLs in the regulatory definition of GSLs. Manufacturers of GSLs, including IRLs, are required to use DOE’s test procedures to make representations and certify compliance

with standards, if required. The effective date allows reasonable time for manufacturers to transition, while reducing the number of redesigns needed, should manufacturers need to comply with a 45 lm/W statutory standard beginning on January 1, 2020. For these reasons, DOE concludes and certifies that the new amended definition of GSL, which includes IRLs, does not have a significant economic impact on a substantial number of small entities, and the preparation of an FRFA is not warranted.

#### *C. Review Under the Paperwork Reduction Act*

Manufacturers of GSLs must certify to DOE that their products comply with any applicable energy conservation standards. In certifying compliance, manufacturers must test their products according to DOE test procedures for GSLs, including any amendments adopted for those test procedures. DOE has established regulations for the certification and recordkeeping requirements for all covered consumer products and commercial equipment. 76 FR 12422 (March 7, 2011). The collection-of-information requirement for the certification and recordkeeping is subject to review and approval by OMB under the Paperwork Reduction Act (PRA). This requirement has been approved by OMB under OMB control number 1910–1400. DOE requested OMB approval of an extension of this information collection for three years, specifically including the collection of information adopted in the present rulemaking, and estimated that the annual number of burden hours under this extension is 30 hours per company. In response to DOE’s request, OMB approved DOE’s information collection requirements covered under OMB control number 1910–1400 through November 30, 2017. 80 FR 5099 (January 30, 2015).

Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the PRA, unless that collection of information displays a currently valid OMB control number.

#### *D. Review Under the National Environmental Policy Act of 1969*

Pursuant to the National Environmental Policy Act (NEPA) of 1969, DOE has determined that the rule fits within the category of actions included in Categorical Exclusion (CX) B5.1 and otherwise meets the requirements for application of a CX. (See 10 CFR part 1021, App. B, B5.1(b);

1021.410(b) and App. B, B(1)–(5).) The rule fits within this category of actions because it is a rulemaking that changes the definition of a covered class of products for which there are existing energy conservation standards, and for which none of the exceptions identified in CX B5.1(b) apply. Therefore, DOE has made a CX determination for this rulemaking, and DOE does not need to prepare an Environmental Assessment or Environmental Impact Statement for this rule. DOE’s CX determination for this rule is available at <http://energy.gov/nepa/categorical-exclusion-cx-determinations-cx>.

#### *E. Review Under Executive Order 13132*

Executive Order 13132, “Federalism,” 64 FR 43255 (August 10, 1999), imposes certain requirements on federal agencies formulating and implementing policies or regulations that preempt state law or that have Federalism implications. The Executive Order requires agencies to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the states and to carefully assess the necessity for such actions. The Executive Order also requires agencies to have an accountable process to ensure meaningful and timely input by state and local officials in the development of regulatory policies that have Federalism implications. On March 14, 2000, DOE published a statement of policy describing the intergovernmental consultation process it will follow in the development of such regulations. 65 FR 13735. DOE has examined this rule and has determined that it would not have a substantial direct effect on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. EPCA governs and prescribes federal preemption of state regulations as to energy conservation for the products that are the subject of this final rule. States can petition DOE for exemption from such preemption to the extent, and based on criteria, set forth in EPCA. (42 U.S.C. 6297) Therefore, no further action is required by Executive Order 13132.

#### *F. Review Under Executive Order 12988*

With respect to the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, “Civil Justice Reform,” imposes on federal agencies the general duty to adhere to the following requirements: (1) Eliminate drafting errors and ambiguity; (2) write regulations to minimize litigation; (3)

<sup>9</sup> National Electric Manufacturers Association | Member Products | Lighting Systems | Related Manufacturers, <http://www.nema.org/Products/Pages/Lighting-Systems.aspx> (last accessed November 21, 2016).

<sup>10</sup> DOE’s Compliance Certification Database | Lamps—Bare or Covered (No Reflector) Medium Base Compact Fluorescent, <http://www.regulations.doe.gov/certification-data> (last accessed November 21, 2016).

<sup>11</sup> Hoovers | Company Information | Industry Information | Lists, <http://www.hoovers.com> (last accessed November 21, 2016).

provide a clear legal standard for affected conduct rather than a general standard; and (4) promote simplification and burden reduction. 61 FR 4729 (Feb. 7, 1996). Regarding the review required by section 3(a), section 3(b) of Executive Order 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) Clearly specifies the preemptive effect, if any; (2) clearly specifies any effect on existing federal law or regulation; (3) provides a clear legal standard for affected conduct while promoting simplification and burden reduction; (4) specifies the retroactive effect, if any; (5) adequately defines key terms; and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires Executive agencies to review regulations in light of applicable standards in section 3(a) and section 3(b) to determine whether they are met or it is unreasonable to meet one or more of them. DOE has completed the required review and determined that, to the extent permitted by law, this final rule meets the relevant standards of Executive Order 12988.

#### *G. Review Under the Unfunded Mandates Reform Act of 1995*

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA) requires each federal agency to assess the effects of federal regulatory actions on state, local, and tribal governments and the private sector. Public Law 104–4, sec. 201 (codified at 2 U.S.C. 1531). For a regulatory action likely to result in a rule that includes a Federal mandate that may result in the expenditure by State, local, and Tribal governments, in the aggregate, or by the private sector of \$100 million or more in any one year (adjusted annually for inflation), section 202 of UMRA requires a federal agency to publish a written statement that estimates the resulting costs, benefits, and other effects on the national economy. (2 U.S.C. 1532(a), (b)) The UMRA also requires a federal agency to develop an effective process to permit timely input by elected officers of state, local, and tribal governments on a proposed “significant intergovernmental mandate,” and requires an agency plan for giving notice and opportunity for timely input to potentially affected small governments before establishing any requirements that might significantly or uniquely affect them. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA. 62 FR 12820. DOE’s policy

statement is also available at [http://energy.gov/sites/prod/files/gcprod/documents/umra\\_97.pdf](http://energy.gov/sites/prod/files/gcprod/documents/umra_97.pdf).

DOE examined this final rule according to UMRA and its statement of policy and determined that the rule contains neither an intergovernmental mandate, nor a mandate that may result in the expenditure of \$100 million or more in any year, so these requirements do not apply.

#### *H. Review Under the Treasury and General Government Appropriations Act, 1999*

Section 654 of the Treasury and General Government Appropriations Act, 1999 (Pub. L. 105–277) requires federal agencies to issue a Family Policymaking Assessment for any rule that may affect family well-being. This rule would not have any impact on the autonomy or integrity of the family as an institution. Accordingly, DOE has concluded that it is not necessary to prepare a Family Policymaking Assessment.

#### *I. Review Under Executive Order 12630*

Pursuant to Executive Order 12630, “Governmental Actions and Interference with Constitutionally Protected Property Rights,” 53 FR 8859 (March 15, 1988), DOE has determined that this rule would not result in any takings that might require compensation under the Fifth Amendment to the U.S. Constitution.

#### *J. Review Under the Treasury and General Government Appropriations Act, 2001*

Section 515 of the Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516 note) provides for federal agencies to review most disseminations of information to the public under information quality guidelines established by each agency pursuant to general guidelines issued by OMB. OMB’s guidelines were published at 67 FR 8452 (Feb. 22, 2002), and DOE’s guidelines were published at 67 FR 62446 (Oct. 7, 2002). DOE has reviewed this final rule under the OMB and DOE guidelines and has concluded that it is consistent with applicable policies in those guidelines.

#### *K. Review Under Executive Order 13211*

Executive Order 13211, “Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use,” 66 FR 28355 (May 22, 2001), requires federal agencies to prepare and submit to OIRA at OMB, a Statement of Energy Effects for any significant energy action. A “significant energy action” is defined as any action

by an agency that promulgates or is expected to lead to promulgation of a final rule, and that: (1) Is a significant regulatory action under Executive Order 12866, or any successor order; and (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy, or (3) is designated by the Administrator of OIRA as a significant energy action. For any significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use should the proposal be implemented, and of reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use.

This regulatory action to amend a definition for GSL is not a significant regulatory action under Executive Order 12866. Moreover, it would not have a significant adverse effect on the supply, distribution, or use of energy, nor has it been designated as a significant energy action by the Administrator of OIRA. Therefore, it is not a significant energy action, and, accordingly, DOE has not prepared a Statement of Energy Effects.

#### *L. Review Under Section 32 of the Federal Energy Administration Act of 1974*

Under section 301 of the Department of Energy Organization Act (Pub. L. 95–91; 42 U.S.C. 7101), DOE must comply with section 32 of the Federal Energy Administration Act of 1974, as amended by the Federal Energy Administration Authorization Act of 1977. (15 U.S.C. 788; FEAA) Section 32 essentially provides in relevant part that, where a rule authorizes or requires use of commercial standards, the NOPR must inform the public of the use and background of such standards. In addition, section 32(c) requires DOE to consult with the Attorney General and the Chairman of the Federal Trade Commission (FTC) concerning the impact of the commercial or industry standards on competition. DOE has not incorporated by reference any industry standards in this rulemaking that were not already incorporated and therefore there is no impact on competition.

#### *M. Congressional Notification*

As required by 5 U.S.C. 801, DOE will report to Congress on the promulgation of this rule prior to its effective date. The report will state that it has been determined that the rule is not a “major rule” as defined by 5 U.S.C. 804(2).

#### **VI. Approval of the Office of the Secretary**

The Secretary of Energy has approved publication of this final rule.

**List of Subjects in 10 CFR Part 430**

Administrative practice and procedure, Confidential business information, Energy conservation, Household appliances, Imports, Incorporation by reference, Intergovernmental relations, Small businesses.

Issued in Washington, DC, on December 29, 2016.

**David Nemptow,**

*Acting Deputy Assistant Secretary for Energy Efficiency, Energy Efficiency and Renewable Energy.*

For the reasons set forth in the preamble, the final rule for part 430 of chapter II, subchapter D, of title 10 of the Code of Federal Regulations effective beginning January 1, 2020, is amended as set forth below:

**PART 430—ENERGY CONSERVATION PROGRAM FOR CONSUMER PRODUCTS**

■ 1. The authority citation for part 430 continues to read as follows:

**Authority:** 42 U.S.C. 6291–6309; 28 U.S.C. 2461 note.

■ 2. In § 430.2, the definition for general service lamp is amended by removing paragraph (27).

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