[6450-01-P]

DEPARTMENT OF ENERGY

10 CFR Part 430

Docket Number EERE–2010–BT–PET–0047

RIN: 1904–AC57

Energy Conservation Program: Request for Exclusion of 100 Watt R20 Short Incandescent Reflector Lamp from Energy Conservation Standards

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

ACTION: Notice of proposed rulemaking (NOPR).

SUMMARY: The Energy Policy and Conservation Act of 1975 (EPCA), as amended, prescribes energy conservation standards for various consumer products and certain commercial and industrial equipment, including incandescent reflector lamps (IRLs). The U.S. Department of Energy (DOE) received a petition from the National Electrical Manufacturers Association requesting the initiation of a rulemaking to exclude from coverage under EPCA standards a certain type of IRL marketed for use in pool and spa applications. Specifically, the lamp at issue is a 100-watt R20 short (having a maximum overall length of 3 and 5⁄8 or 3.625 inches) IRL ("R20 short lamp"). DOE published this petition and a request for comment in the Federal Register on December 23, 2010. From its evaluation of the petition and careful consideration of the public comments, DOE

decided to grant the petition for rulemaking. DOE published a request for information in the Federal Register on September 8, 2011. Based on the comments received and additional data gathered by DOE, DOE proposes to exclude R20 short lamps from coverage under the EPCA energy conservation standards.

DATES: DOE will accept comments, data, and information regarding this NOPR no later than [**INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**]. See section V Public Participation for details.

ADDRESSES: Any comments submitted must identify the NOPR for Energy Conservation Standards for R20 Short Lamps, and provide docket number EERE–2010–BT–PET–0047 and/or regulatory information number (RIN) number 1904-AC57. Comments may be submitted using any of the following methods:

1. Federal eRulemaking Portal: www.regulations.gov. Follow the instructions for submitting comments.
2. Email: ShortLampsPetition-2010-PET-0047@ee.doe.gov. Include the docket number and/or RIN in the subject line of the message.
3. Mail: Ms. Brenda Edwards, U.S. Department of Energy, Building Technologies Program, Mailstop EE-2J, 1000 Independence Avenue, SW., Washington, DC, 20585-0121. If possible, please submit all items on a CD. It is not necessary to include printed copies.

4. Hand Delivery/Courier: Ms. Brenda Edwards, U.S. Department of Energy, Building Technologies Program, 950 L'Enfant Plaza, SW., Suite 600, Washington, DC, 20024. Telephone: (202) 586-2945. If possible, please submit all items on a CD, in which case it is not necessary to include printed copies.

Written comments regarding the burden-hour estimates or other aspects of collection-of-information requirements may be submitted to Office of Energy Efficiency and Renewable Energy through the methods listed above and by email to Chad_S_Whiteman@omb.eop.gov

For detailed instructions on submitting comments and additional information on the rulemaking process, see section V of this document (Public Participation).

Docket: The docket is available for review at www.regulations.gov, including Federal Register notices, comments, and other supporting documents/materials. All documents in the docket are listed in the www.regulations.gov index. However, not all documents listed in the index may be publicly available, such as information that is exempt from public disclosure.

The regulations.gov webpage will contain simple instructions on how to access all documents, including public comments, in the docket. See section V.A for more information on how to submit comments through www.regulations.gov.

For further information on how to submit a comment or review other public comments and the docket, contact Ms. Brenda Edwards at (202) 586-2945 or by email: brenda.edwards@ee.doe.gov.

FOR FURTHER INFORMATION CONTACT:

Ms. Lucy deButts, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, EE-2J, 1000 Independence Avenue, SW., Washington, DC, 20585-0121. Telephone: (202) 287–1604. Email: lucy.debutts@ee.doe.gov.

Ms. Celia Sher, U.S. Department of Energy, Office of the General Counsel, GC-71, 1000 Independence Avenue, SW., Washington, DC, 20585-0121. Telephone: (202) 287–6122. Email: celia.sher@hq.doe.gov.

SUPPLEMENTARY INFORMATION:

Table of Contents

I. Summary of the Rulemaking

The Energy Policy and Conservation Act of 1975 (EPCA; 42 U.S.C. 6291 et seq.), as amended, prescribes energy conservation standards for various consumer products and certain commercial and industrial equipment, including incandescent reflector lamps (IRLs). The National Electrical Manufacturers Association (NEMA) has petitioned the U.S. Department of Energy (DOE) to undertake a rulemaking to exclude from coverage under energy conservation standards a certain type of IRL that is marketed for use in pool and spa applications. Specifically, the lamp at issue is a 100-watt (W) R20[1] short (having a maximum overall length [MOL] of 3 and 5/8 [or 3.625] inches) lamp that falls within the voltage range of covered IRLs (hereafter "R20 short lamp"). 75 FR 80731 (Dec. 23, 2010). In this notice of proposed rulemaking (NOPR), DOE considers whether R20 short lamps should be excluded from coverage under the

[1] "R" denotes a reflector lamp type, and "20" denotes diameter in 1/8 inch increments, which translates to 2.5 inches.

applicable energy conservation standards for IRLs. Such a review is authorized under 42 U.S.C. 6291(30)(E), which allows the Secretary, by rule, to exclude from the terms "fluorescent lamp" and "incandescent lamp" any lamp for which standards would not result in significant energy savings because such lamp is designed for special applications or has special characteristics not available in reasonably substitutable lamp types.

Accordingly, DOE has assessed the impact of the application of R20 short lamps on the potential energy savings from energy conservation standards for these lamps. The characteristics of R20 short lamps, as well as their distribution channels and marketing, indicate that they are designed for pool and spa applications. DOE determined that because the R20 short lamps serve a very small market, they will result in insignificant energy savings from the applicable conservation standards.

Additionally, DOE analyzed the characteristics of R20 short lamps to determine if they were available in reasonably substitutable lamp types. Because the most likely substitute lamp required a modification to the fixture lens in order to maintain the same light distribution, DOE has tentatively concluded that no currently commercially available lamp can serve as a reasonable substitute for the R20 short lamp.

Therefore, under 42 U.S.C. 6291(30)(E), DOE proposes to exclude R20 short lamps from coverage of energy conservation standards by modifying the definition of "Incandescent reflector lamp" and proposing a new definition for "R20 short lamp" in 10 CFR 430.2. Based on consideration of the public comments DOE receives in response to

this notice and related information collected and analyzed during the course of this rulemaking effort, DOE may revise the proposal in this document.

II. Introduction

A. Authority

Title III, Part B of EPCA (42 U.S.C. 6291-6309, as codified) established the Energy Conservation Program for Consumer Products Other Than Automobiles,[2] a program covering most major household appliances. Subsequent amendments expanded Title III of EPCA to include additional consumer products and commercial and industrial equipment, including IRLs—the product that is the focus of this document.

In particular, amendments to EPCA in the Energy Policy Act of 1992 (EPAct 1992), Pub. L. 102-486, established energy conservation standards for certain classes of IRLs and authorized DOE to conduct two rulemaking cycles to determine whether those standards should be amended. (42 U.S.C. 6291(1), 6295(i)(1) and (3)-(4)) DOE completed the first cycle of amendments by publishing a final rule in July 2009 (hereafter "2009 Lamps Rule"). 74 FR 34080 (July 14, 2009).[3]

The EPAct 1992 amendments to EPCA also added as covered products certain IRLs with wattages of 40W or higher and established energy conservation standards for these IRLs. Section 322(a)(1) of the Energy Independence and Security Act of 2007

[2] For editorial reasons, upon codification in the U.S. Code, Part B was redesignated Part A.
[3] Information regarding the 2009 Lamps Rule can be found at DOE's Building and Technologies webpage for Incandescent Reflector Lamps: http://www1.eere.energy.gov/buildings/appliance_standards/product.aspx/productid/58

(EISA 2007), Pub. L. 110–140, subsequently expanded EPCA's definition of "incandescent reflector lamp" to include lamps with a diameter between 2.25 and 2.75 inches.[4] (42 U.S.C. 6291(30)(C)(ii)) This addition made R20 lamps (having a diameter of 20/8, or 2.5, inches) covered products subject to EPCA's standards for IRLs.

Although these lamps are covered products, 42 U.S.C. 6291(30)(E) gives DOE the authority to exclude these lamps upon a determination that standards "would not result in significant energy savings because such lamp is designed for special applications or has special characteristics not available in reasonably substitutable lamp types."

B. Background

The Administrative Procedure Act (APA; 5 U.S.C. 551 et seq.), provides, among other things, that "[e]ach agency shall give an interested person the right to petition for the issuance, amendment, or repeal of a rule." (5 U.S.C. 553(e)) Pursuant to this provision of the APA, NEMA petitioned DOE for a rulemaking to exclude a type of IRL from coverage of energy conservation standards. Specifically, NEMA sought exclusion for R20 short lamps marketed for use in pools and spas. These lamps are sold in jurisdictions that allow pools and spas to be supplied with 120V electricity. 75 FR 80731 (Dec. 23, 2010)

As stated in the previous section II.A, amendments to EPCA in EISA 2007 expanded EPCA's definition of IRLs to include smaller diameter lamps, such as the R20

[4] Prior to the enactment of EISA 2007, this definition applied to lamps with a diameter which exceeds 2.75 inches. EISA 2007 modified this definition to make it applicable to IRLs with a diameter which exceeds 2.25 inches.

lamps that are the subject of this rulemaking. (42 U.S.C. 6291(30)(C)(ii)) The related statutory standards went into effect on June 15, 2008—180 days after the date of enactment of EISA 2007. (42 U.S.C. 6295(i)(1)(D)(ii)) Although R20 short lamps were required to comply with these standards, noncompliant R20 short lamps remained on the market until September 2010 because the manufacturers of these lamps mistakenly believed the lamps were excluded from coverage. 75 FR at 80732 (Dec. 23, 2010). The manufacturers had relied upon the Federal Trade Commission's (FTC's) labeling rule, 16 CFR Part 305, which, until July 19, 2011, published the previous lamp definitions from the EPAct 1992 amendments of EPCA.[5] Before July 19, 2011, the FTC labeling regulations treated IRLs as general service incandescent lamps (GSILs), and erroneously continued to define GSILs as not including lamps specifically designed for "[s]wimming pool or other underwater service." 16 CFR 305.3(m)(3) (2010) This exclusion was eliminated from EPCA by section 321 of EISA 2007. Upon realization that the FTC definitions were incorrect and the R20 short lamps were subject to energy conservation standards, the manufacturers removed the product from the market. Subsequently, in November 2010, NEMA submitted its petition to exclude R20 short lamps from coverage under EPCA standards. DOE published the petition in the Federal Register on December 23, 2010, and requested public comment. 75 FR 80731.

In the petition, NEMA asked both for a rulemaking to exclude R20 short lamps from coverage of energy conservation standards, and for a stay of enforcement pending

[5] The FTC published a final rule in the Federal Register on July 19, 2010, which updated its regulations regarding its definition of general service incandescent lamp to reflect the definitional changes provided in EISA 2007. 75 FR 41696, 41713-14. These changes were effective July 19, 2011, at which time the amendments were reflected in the Code of Federal Regulations.

that rulemaking. As grounds for the petition, NEMA stated that R20 short lamps qualify for exclusion under 42 U.S.C. 6291(30)(E), which allows the Secretary to exclude a fluorescent or incandescent lamp "as a result of a determination that standards for such lamp would not result in significant energy savings because such lamp is designed for special applications or has special characteristics not available in reasonably substitutable lamp types." In its petition, NEMA contended that a rulemaking would find that energy conservation standards for R20 short lamps would not result in significant energy savings and that the lamp was designed for special applications or has special characteristics not available in substitute lamp types. Specifically, as the lamp has a particular MOL and is specially designed to meet underwater illumination requirements of pool and spa manufacturers (including designated beam spread and lumen output), there are no substitute products on the market for this application. 75 FR at 80732 (Dec. 23, 2010).

Additionally, NEMA asserted that having energy conservation standards for this lamp type would lead to its unavailability in the United States. To the best of NEMA's and manufacturers' knowledge, the decision of the two manufacturers of R20 short lamps to withdraw the product from the market has already resulted in its current unavailability. 75 FR at 80732-33 (Dec. 23, 2010).

DOE received several comments on the petition from manufacturers, utilities, and environmental and energy efficiency organizations.[6] After reviewing NEMA's petition and all comments, DOE concluded it has the legal authority to grant exclusions for IRLs

[6] NEMA's petition and associated comments can be found at regulations.gov under Docket No. EERE-2010-BT-PET-0047.

under 42 U.S.C. 6291(30)(E) and initiated a rulemaking to make a determination on exclusion. DOE granted NEMA's petition for a rulemaking in a request for information (RFI) published in the Federal Register on September 8, 2011, announcing its decision and requesting more information on this product. 76 FR 55609. The RFI stated that DOE granted the petition for a rulemaking pursuant to the requirements specified in section 6291(30)(E), and would also grant a stay of enforcement pending the outcome of the rulemaking. In the RFI, DOE also specifically asked for comment on (1) the potential for unregulated R20 short lamps to be used as substitutes for other lamps subject to energy conservation standards; (2) whether the distinctive features, pricing, and application-specific labeling and marketing of R20 short lamps provide a sufficient deterrent to their use in other applications; (3) the availability of substitute lamps that would meet both energy conservation standards and relevant pool and spa application requirements; and (4) the technological feasibility of R20 short lamps complying with the prescribed energy conservation standards and also meeting relevant pool and spa application requirements. 76 FR at 55614.

DOE received comments in response to the RFI from utilities and environmental and energy efficiency organizations.[7] The following section addresses these comments.

[7] The RFI and associated comments can also be found at regulations.gov under Docket No. EERE–2010–BT–PET– 0047.

III. Determination of R20 Short Lamp Exclusion

A. Authority

In response to the RFI, DOE received comments from interested parties regarding DOE's authority to exclude R20 short lamps under 42 U.S.C. 6291(30)(E). Earthjustice and National Resources Defense Council (hereafter "Earthjustice and NRDC") reiterated their previous comment made in response to NEMA's petition that section 6291(30)(E) can only apply to lamps for which significant energy savings would not be captured under future standards; the language of the provision (i.e., "would not result") does not permit DOE to apply it retroactively to lamps with existing standards. (Earthjustice and NRDC, No. 8 at p. 1)[8]

As stated in the RFI, DOE does not believe the plain language of section 6291(30)(E) compels an interpretation that the section only applies to standards before their compliance date. DOE finds this reading would prevent application of section 6291(30)(E). Under 42 U.S.C. 6295(o)(3), DOE is already barred from adopting standards for any product for which the standards would not result in significant conservation of energy. Therefore, if interpreted to apply to products for which standards are not yet in effect, section 6291(30)(E) would be rendered redundant and superfluous, as both it and section 6295(o)(3) would evaluate potential energy savings from future standards. Instead, DOE concluded in the RFI that section 6291(30)(E) contains no time bar for undertaking a rulemaking action to address a lamp for which standards would not

[8] A notation in the form "Earthjustice and NRDC, No. 8 at p. 1" identifies a written comment that DOE has received and has included in the docket of this rulemaking. This particular notation refers to a comment: (1) submitted by the Earthjustice and NRDC; (2) in document number 8 of the docket; and (3) on page 1 of that document.

result in significant energy savings because it is designed for special applications or has special characteristics not available in substitutable lamp types. Given the broad and growing coverage of DOE's energy conservation standards for lamps, DOE believes that Congress intended section 6291(30)(E) to provide a mechanism to address both those lamps inadvertently covered by existing standards, as well as new lamps subsequently developed to which standards would otherwise apply. 76 FR at 55611 (Sept. 8, 2011).

Earthjustice and NRDC disagreed that section 6291(30)(E) would be redundant if not applicable to standards that already require compliance. Earthjustice and NRDC commented that section 6291(30)(E) retains a separate relevance from section 6295(o)(3) because it enables DOE to exclude lamps from statutory standards that do not yet apply whereas section 6295(o)(3) only applies to DOE's adoption of standards via rulemakings. (Earthjustice and NRDC, No. 8 at pp. 1-2)

The language in section 6291(30)(E) does not explicitly condition exclusions from coverage of standards based on the authority under which the standards were developed. Interpreting section 6291(30)(E) as applying to only statutory standards in order to distinguish it from section 6295(o)(3) would limit the scope of section 6291(30)(E). The language in section 6291(30)(E) does not indicate that it was Congress's intent to limit the Secretary's authority of exemption. Therefore, DOE preliminarily concludes it has the authority under section 6291(30)(E) to consider excluding R20 short lamps from energy conservation standards. DOE assessed whether the lamps qualify for exclusion under each criteria set forth in that section.

B. R20 Short Lamp Special Application Design and Impact on Energy Savings

1. Special Application of R20 Short Lamps

a. R20 Short Lamp Design for Special Applications

NEMA's original petition stated that the R20 short lamp was specifically designed to meet the underwater illumination requirements of pool and spa part manufacturers. NEMA stated that the R20 short lamp's MOL, heat shield, filament, lumen output, and beam spread indicate the lamp was specifically designed for its application. 75 FR at 80733 (Dec. 23, 2010) Through interviews with lamp manufacturers and pool and spa part manufacturers, DOE was able to confirm that the R20 short lamp's MOL of 3 and 5/8 inches is required for compatibility with pool and spa fixtures; the heat shield is necessary for operation in a high temperature environment; and the lumen output range between 637 and 1022 lumens, and beam spread between 70 and 123 degrees are designed to satisfy consumer preferences as well as building codes and standards. DOE determined that the filament in R20 short lamps is specifically placed to achieve the required beam spread. Therefore, DOE has tentatively concluded that filament placement does not stand on its own as a requirement for pools and spas, but is rather encompassed within the requirement for a specific beam spread. Because the described R20 short lamp characteristics are designed to meet requirements specific to pools and spas, DOE believes that R20 short lamps are designed for a special application. For more discussion on DOE's analysis of R20 short lamp features, see section III.C.1.

b. Marketing and Distribution Channels of R20 Short Lamps

In addition to design features, DOE also analyzed distribution channels and marketing literature for R20 short lamps. NEMA commented that along with R20 short lamps' design characteristics, their application-specific marketing and specialty distribution methods deter any use in other applications. (NEMA, No. 7 at p. 1) DOE found R20 short lamps are marketed and clearly packaged in a way that indicates the lamps are specifically for pool and spa use. Through lamp manufacturer interviews and research conducted by DOE using publicly available information, DOE found that R20 short lamp manufacturers do not sell lamps directly to consumers. The commercial market is supplied through catalog warehouses, maintenance supply, maintenance, repair, operations (MRO) distributors, and pool and spa distributors. The residential market is primarily supplied through pool and spa distributors, which include large retail pool outlets and online retailers. Additionally, a small portion of products are sold to online retailers for pool and spa replacement parts, electrical distributors for direct installation in new pool construction, and hospitality and specialty lighting suppliers (e.g., medical equipment retail) for use with pools and spas.

Given the preceding information, DOE tentatively concludes that the non-traditional distribution channels and application-specific packaging indicates R20 short lamps are designed for pool and spa applications. Combined with the application-specific characteristics described in the previous section, DOE preliminary concludes that R20 short lamps are designed for a special application and therefore fulfill the special application condition in section 6291(30)(E).

2. Impact on Energy Savings

As mentioned in the previous sections, under 42 U.S.C. 6291(30)(E), DOE may determine to exclude a fluorescent or incandescent lamp provided standards for the lamp would not result in significant energy savings because the lamp is designed for special applications. As stated in section III.B.1, DOE preliminarily concluded that certain features of R20 short lamps and manufacturers' use of specialty distribution channels and application-specific marketing indicate that R20 short lamps are designed for a special application. Given that R20 short lamps met this criterion, DOE then considered the impact on energy savings from regulation of R20 short lamps.

NEMA commented that R20 short lamps have a minimal potential for energy savings because of low sales and operating hours due to their use in specialty task lighting rather than in general applications. (NEMA, No. 7 at p. 2) As part of its analysis, DOE evaluated the market share of R20 short lamps put forth by NEMA. In its petition, NEMA stated there are only two known manufacturers of the 100W R20 short lamp in the United States. Both manufacturers submitted their confidential R20 short lamps 2009 shipment data to NEMA. In interviews, these lamp manufacturers commented that the shipment data from 2009 is representative of the R20 short lamp market before they stopped making the lamp available to consumers in 2010. For comparison, NEMA used an adjusted estimate of covered IRL shipments from the 2009 Lamps Rule. In the 2009 Lamps Rule, DOE estimated the shipments of covered IRLs to be 181 million units in the year 2005. Based on a decline in shipments of all IRLs in 2009, NEMA assumed covered

IRLs would also decline, but estimated the shipments to still remain above 100 million. Based on a minimum of 100 million and a maximum of 181 million shipments of covered IRLs, NEMA calculated that the shipments of R20 short lamps represented significantly less than 0.1 percent of 2009 shipments of covered IRLs. 75 FR at 80733 (Dec. 23, 2010).

DOE independently obtained shipment information from lamp manufacturers that confirmed NEMA's estimate of R20 short lamps being significantly less than 0.1 percent of 2009 shipments of covered IRLs. Therefore, DOE determined this to be an accurate assessment of the R20 short lamp market share and concluded that less than 0.1 percent of covered IRLs indicated a small market share for R20 short lamps. (More information on R20 short lamp energy use can be found in appendix B.[9])

DOE also analyzed the potential for market migration of R20 short lamps. Pacific Gas and Electric Company, Southern California Gas Company, San Diego Gas and Electric, and Southern California Edison (hereafter "CA Utilities") commented that consumers are likely to substitute R20 short lamps in other IRL applications because the price is not significantly higher than other residential IRLs. CA Utilities added that if production of R20 short lamps increased, the price could decrease further due to economies of scale. (CA Utilities, No. 9 at pp. 1-2) NEMA disagreed, stating that R20 short lamps have a high price point of $15.88 and therefore would be unlikely to be used as a substitute for general service lamps. (NEMA, No. 7 at p. 2)

[9] Appendices can be found on DOE's Building and Technologies webpage for Incandescent Reflector Lamps under Standards section via the Technical Support Document link: http://www1.eere.energy.gov/buildings/appliance_standards/product.aspx/productid/58

DOE received information from lamp manufacturers stating that the end-user price varies, but typically ranges from $12 to $25. DOE research confirmed this large variation, finding prices ranging from as low as $2 to as high as $25. DOE acknowledges that the price of R20 short lamps can be competitive with other IRLs. Even with low prices, however, substitution of R20 short lamps in general applications is unlikely as consumers are unable to purchase R20 short lamps at typical retail outlets such as large home improvement stores. In interviews, lamp manufacturers stated that the R20 short lamp market is primarily for replacement lamps and, therefore, historically had shown very little growth or decay. Further, despite lamp manufacturers never previously considering the lamps as regulated, the market share has remained extremely low and there has been no indication of market migration. Therefore, DOE has preliminarily concluded that the R20 short lamp market has limited potential for growth and it is unlikely the lamps will migrate to general lighting applications.

CA Utilities also cited the R20 short lamp MOL as a reason for potential market migration, stating that there are commercially available lamps that have the same shortened 3 and 5/8 inches MOL as the R20 short lamp and are used in other lighting applications. CA Utilities concluded that the presence of these other short lamps indicated significant energy savings would be at risk because length would not prevent the use of R20 short lamps in other applications. (CA Utilities, No. 9 at p. 1) Earthjustice and NRDC agreed with CA Utilities and added that the potential use of R20 short lamps in applications other than pools and spas demonstrated that R20 short lamps could

become a low cost alternative to compliant IRLs. (Earthjustice and NRDC, No. 8 at p. 2) As noted in section III.B.1.b, the majority of R20 short lamps are purchased from pool and spa distributors and specialty retail stores, and are not available where general service IRLs are typically sold. R20 short lamps are also marketed and clearly packaged in a way that indicates the lamps are specifically for pool and spa use. Because of the limited distribution channels and specific marketing of R20 short lamps, DOE has tentatively concluded their use in general lighting applications is unlikely.

Because the specialty application of the R20 short lamps results in a small market share and limited potential for growth for these lamps, DOE determined that the regulation of R20 short lamps would not result in significant energy savings. For these same reasons, DOE has also tentatively concluded that the exclusion of R20 short lamps would not significantly impact the energy savings resulting from energy conservation standards. DOE requests comment on its assessment of the potential energy savings from standards for R20 short lamps.

C. Availability of R20 Short Lamp Special Characteristics in Substitutes

DOE may also exclude a lamp type because its special characteristics are not available in reasonably substitutable lamp types. 42 U.S.C. 6291(30)(E) To determine whether an exclusion was also acceptable based on this second condition, DOE ascertained whether special characteristics of R20 short lamps are available in reasonable substitutes. The following sections detail DOE's analysis, which consisted of identifying

the special characteristics of R20 short lamps and determining whether these characteristics existed in other lamp types that would qualify as reasonable substitutes.

1. Special Characteristics of R20 Short Lamps

As discussed in section B.1.a, DOE received comments that the R20 short lamps' shortened MOL, heat shield, specially engineered filament, and lamp performance (including a wide beam spread and high lumen output) indicate that the lamp was designed specifically for pool and spa applications. Therefore, DOE evaluated these lamp characteristics to determine if they should be considered as necessary in potential substitute lamps. DOE considered a lamp characteristic special if, without it, the R20 short lamp would not be able to provide the special application for which it was designed (i.e. use in pools and spas). Therefore, even if the lamp characteristic was not unique to the R20 short lamp, it was deemed special if it was required for the lamp to function in pools and spas. DOE identified a set of features that in combination allow the lamp to be used in a specialty application.

Beyond the characteristics mentioned above, DOE did not find any other R20 short lamp feature that should be considered a necessary special characteristic. DOE requests comments on any additional characteristics, other than those identified, that should be considered special characteristics.

a. Shortened MOL

The R20 short lamp has a MOL of 3 and 5/8 inches. NEMA stated that this shortened MOL is a distinct characteristic that allows the lamp to fit the fixture dimensions in pool and spa applications. 75 FR at 80732 (Dec. 23, 2010). CA Utilities disagreed and stated that the descriptor "short" is not a unique size distinction because many small diameter reflector lamps have MOLs less than or equal to 3 and 5/8 inches despite not being marketed as "short." (CA Utilities, No. 3 at p. 2)

DOE notes that there are currently several lamps in the marketplace that are labeled as short lamps, but are not designed for specific applications. These commercially available lamps have the same shortened MOL of 3 and 5/8 inches as the R20 short lamp and can be used in various general service lighting applications. This indicates that the desired MOL is a common feature available in other lamp types. However, DOE considers the shortened MOL a special characteristic of the R20 short lamp because it is necessary for use of the lamp in a fixture used in pool or spa applications. As stated by NEMA and confirmed with spa lamp manufacturers, the shortened MOL allows the lamp to fit inside pool and spa fixtures. Therefore, while a shortened MOL is not unique to R20 short lamps, without this feature, the lamp could not be used for the special application it was designed. In combination with the lamp's other special characteristics, the shortened MOL allows the lamp to be used in a specialty application.

b. Heat Shield

DOE received comments that the heat shield in the R20 short lamp was a special characteristic that is required to prevent high heat from damaging the cement that joins the glass envelope and base. 75 FR at 80732 (Dec. 23, 2010). Heat shields are metal rings constructed of either aluminum or steel and located in the narrow portion of the reflector below the filament. In lamp manufacturer interviews, DOE learned that heat shields are used to reflect radiant energy away from the lamp base. DOE further confirmed with lamp manufacturers that because of the high operating temperatures of pools and spas, a heat shield is a necessary feature in R20 short lamps that allow them to be used in these environments. After surveying the market, DOE notes that heat shields may be included in lamps used in environments other than pools and spas. In particular, DOE received manufacturer feedback that heat shields are often routinely added to reflector lamps to prevent seal failure. However, because heat shields are a necessary component in order for the R20 short lamp to be used in pools and spas, DOE considers it to be a special characteristic of the R20 short lamp. In combination with the lamp's other special characteristics, the presence of a heat shield allows the lamp to provide a specialty application.

c. Specially Engineered Filament

NEMA stated that the R20 short lamp's filament was specially engineered to provide a required beam spread. 75 FR at 80732 (Dec. 23, 2010). DOE attempted to identify how the filament was specially engineered and if the design change was necessary for the lamp's use in pools and spas.

Through teardowns and interviews with lamp manufacturers, DOE verified that R20 short lamps use a C-9 filament. This filament type is a single-coil filament that is commonly used in indoor IRLs. DOE received feedback from lamp manufacturers that although the filament type is not unique, the filament has been specifically placed within the lamp in order to achieve the same beam spread as a standard R20 lamp. Therefore, it is the placement of the filament, rather than the filament itself, that is distinct. Because the filament is placed to produce a specific beam spread, DOE does not consider filament placement to be a special characteristic, but a method of achieving a specific beam spread. The beam spread characteristic is discussed further in the following section.

d. Lamp Performance: Lumen Output, Beam Spread, and Illumination

In its petition NEMA stated that R20 short lamps are required to meet a specific beam spread and lumen output identified by pool and spa part manufacturers. 75 FR at 80733 (Dec. 23, 2010). In interviews with lamp manufacturers DOE learned that R20 short lamps have a lumen output between 900 and 1,000 lumens and a beam angle between 70 and 80 degrees. Additionally, DOE received comments that public pools and spas are often required to achieve minimum illumination levels. (NEMA, No. 2 at p. 1) DOE conducted independent testing on each of the two known lamp manufacturer's R20 short lamp models to confirm the lumen output and beam angle specifications, and also further researched illumination requirements.

The measured lumen output of the two R20 short lamp models indicated a lumen output range of 637 lumens to 1,022 lumens. The average lumen output of the first model was 967 lumens and within lamp manufacturer specified range. The second model's average lumen output was 720 lumens, which was considerably lower. DOE did not find any information indicating that these lower lumen output R20 short lamp models produced an inadequate lumen output or had any issues in their use in pool and spa applications. DOE considered both the measured and the rated lumen output to determine a broad lumen output range. DOE therefore concluded that a potential substitute lamp would need to achieve a measured lumen output between 637 and 1,022 lumens.

The measured beam angle of the R20 short lamp models indicated a range of 111 to 123 degrees and was relatively consistent between the two models. The average beam angle of the first model was 117 degrees and the average beam angle of the second was 116 degrees. The measured beam angle range did not correspond to the 70- to 80-degree beam angle range identified by lamp manufacturers. However, because lamp manufacturer feedback indicated R20 short lamps can have a 70-degree beam angle, DOE decided to establish a range encompassing both measured and manufacturer-provided beam angles. DOE therefore concluded that a potential substitute lamp would need to achieve a measured beam angle between 70 and 123 degrees.

Additionally, as previously stated, DOE further researched illumination requirements based on wattage. Pool and spa part manufacturers confirmed during interviews that R20 short lamps are designed to provide 0.5W of input power per square

foot of water surface area, or equivalent level of illumination, to account for commercial building code requirements pertaining to products for pool and spa lighting. In researching building codes, DOE found that while commercial building codes exist on both state and local levels, and vary by jurisdiction, there is no evidence of pools and spas in the residential sector being subject to building code requirements for lighting.

CA Utilities commented that minimum power density requirements prescribed in some local safety ordinances are often waived when replacement light sources are proven to provide adequate illumination comparable to incandescent lighting. For example, CA Utilities stated that California State regulations only specify that underwater lighting be adequate to see a person at the bottom of the pool and assure water quality. Therefore, CA Utilities concluded that low-wattage replacement lamps can be used as substitutes provided they have been demonstrated to provide acceptable levels of light. (CA Utilities, No. 9 at pp. 2-3)

DOE agrees with CA Utilities that building code requirements vary by jurisdiction and some waive requirements when replacement light sources are proven to provide adequate lighting. However, it appears that not all jurisdictions have explicitly included this caveat in their building codes and some seem to maintain minimum requirements based on input power alone. DOE requests further comment on whether reduced wattage lamps can be used in all jurisdictions, provided that adequate illumination is proven.

In order to account for the variation in commercial building code requirements, DOE used the design specification of 0.5W per square foot of water surface area, or the equivalent illumination for reduced wattage lamps, to determine if potential substitutes were in compliance. DOE requests comment on whether this specification for underwater illumination is accurate for commercial building code compliance.

2. Reasonable Substitutes with R20 Short Lamp Special Characteristics

Given the criteria discussed in the previous section, DOE evaluated lamps that could serve as potential substitutes by determining whether they contained all of the following special characteristics of R20 short lamps:

- Shortened MOL: An MOL of 3 and 5/8 inches or less;
- Heat shield: A shield reflecting radiant energy from lamp base;
- Beam Spread: A beam angle between 70 and 123 degrees;
- Lumen Output: A lumen output between 637 and 1,022 lumens; and
- Illumination: 0.5W per square foot of water surface area or the equivalent.

With regards to potential substitutes, in its petition NEMA stated that Pentair, a pool and spa part manufacturer, had noted only an R20 short lamp can be used with the existing fixtures because the lamp is listed on the fixture's Underwriters Laboratory (UL) listing. (NEMA, No. 2 at p. 3) All underwater pool and spa lighting must adhere to the applicable UL standards in the United States. UL Standard 676[10] covers electric luminaires that are installed underwater in pools and spas. The UL listing is granted on a

[10] "Underwater Luminaires and Submersible Junction Boxes" (Approved June 9, 2003, Revised July 6, 2011).

fixture level; however, the UL listing of underwater lighting fixtures mandates certain compatible lamp types. Because the fixtures are tested during the UL certification process with specific lamp types, the UL listing requires the use of those certified lamp types to remain valid. Therefore, if a lamp is used that has not been UL listed for use in a specific lighting fixture, manufacturers void the warranty because the performance of the fixture and lamp is unknown. Based on interviews with pool and spa part manufacturers, DOE does not believe that reasonable substitutes will encounter barriers when obtaining a UL listing. In fact, one pool and spa part manufacturer has already UL listed a smaller diameter IRL for use in the existing fixture. Therefore, DOE does not consider a current UL listing to be a necessary characteristic when identifying potential substitutes.

NEMA commented that underwater lamp fixtures are tightly sealed to prevent water intrusion and therefore experience elevated temperatures that typically exceed the recommended operating temperature of any electronically self-ballasted lamps. NEMA added that current compact fluorescent lamp (CFL) and light-emitting diode (LED) PAR lamp[11] designs are also unable to meet the MOL and beam spread requirements for pool and spa applications. NEMA therefore concluded that there are no available substitutes for pool and spa applications. (NEMA, No. 7 at p. 1) However, Earthjustice and NRDC stated that exclusion of R20 short lamps is unwarranted because substitute lighting technologies, such as LED lamps, exist. (Earthjustice and NRDC, No. 8 at p. 2)

DOE surveyed the market and identified several commercially available lamps that were marketed or evaluated by manufacturers as potential substitutes for an R20

[11] A lamp that has a parabolic aluminum reflector shape

short lamp. These lamps included more efficacious R20 short lamps, smaller diameter IRLs, and LED lamps. When analyzing each of the likely replacements, DOE focused on whether they possessed the special characteristics of the R20 short lamp. DOE's initial findings are outlined below.

a. Improved R20 Short Lamp

Currently available R20 short lamps do not meet existing energy conservation standards. When examining substitute lamps, DOE explored the possibility of a halogen-based R20 short lamp with an improved efficacy that would meet standards. Specifically, DOE examined the addition of halogen capsules to existing R20 short lamps. Tungsten-halogen lamps are a specific type of IRL that contain a small diameter, fused quartz envelope, referred to as a capsule, filled with a halogen molecule that surrounds the filament. The use of halogen capsules is known to improve the efficacy of IRLs.

In the RFI, DOE requested additional information on the feasibility of improving the efficacy of R20 short lamps while maintaining the necessary characteristics required for pool and spa applications. 76 FR at 55614 (Sept. 8, 2011). DOE received several comments in response to this request, mainly regarding halogen-based technology. NEMA commented that incorporating halogen capsules currently used in PAR lamps in R20 short lamps will not allow R20 short lamps to meet energy conservation standards established by the 2009 Lamps Rule that require compliance on July 14, 2012. NEMA stated that lamp manufacturers attempted to improve the efficacy of R20 short lamps through the use of an incandescent halogen capsule, but found it technically infeasible

either due to MOL constraints, internal dimensional compatibility of the halogen capsule, or meeting light output or beam spread requirements. (NEMA, No. 7 at p. 1)

CA Utilities and Earthjustice and NRDC disagreed with NEMA's comment and stated that the efficacy of existing lamps can be improved while still maintaining the necessary requirements for pool and spa applications. CA Utilities commented that single-ended and double-ended halogen burners are frequently used in small diameter reflector lamps to improve efficacy. CA Utilities suggested that because PAR20 lamps, which typically do not have MOLs exceeding 3 and 5/8 inches, can accommodate single-ended halogen burners, R20 short lamps could also use single-ended halogen burners to improve efficiency. They added that these long life halogen PAR20 lamps are now also available in a wide variety of beam spreads. CA Utilities also commented that Philips offers two small diameter, high efficacy lamps with double-ended halogen burners, long lifetime, and wide beam spread. CA Utilities concluded that these product offerings indicate that single- and double-ended halogen burners are the appropriate size for R20 short lamps. (Earthjustice and NRDC, No. 8 at p. 2; CA Utilities, No. 9 at p. 2)

In order to determine if an improved R20 short lamp could be a substitute, DOE modeled the performance of an R20 short lamp with a halogen capsule. DOE then determined if the halogen-based R20 short lamp would meet energy conservation standards and the special characteristic requirements.

First, DOE determined the dimensional compatibility of incorporating halogen technology in R20 short lamps. DOE performed teardowns of a 60W PAR16 lamp containing a single-ended halogen burner, a 60W PAR30 lamp containing a double-ended halogen burner, and a 100W R20 short lamp to determine the dimensional compatibility of the halogen capsules within an R20 short lamp. Based on the dimensions of the burners and the R20 short lamp, DOE has tentatively concluded that it is possible to fit both the single-ended and double-ended halogen burners in an R20 short lamp. DOE notes that single-ended halogen burners are already present in commercially available R20 lamps that have a listed MOL of 3.54 inches and are intended for use in general lighting applications. Given this availability and the results of the teardown analysis, DOE agrees with CA Utilities and Earthjustice and NRDC that single-ended and double-ended halogen burners are the appropriate size for R20 short lamps. For more information on the teardowns, see appendix A.

DOE next performed testing to determine the potential improvement in efficacy for R20 short lamps through the use of single-ended and double-ended halogen burners. DOE performed independent testing and analysis to determine what the theoretical increase in efficacy would be, given the successful incorporation of each burner type.

To determine the efficacy of a theoretical R20 short lamp with a single-ended halogen burner, DOE tested a 120V, 45W halogen R20 lamp with a MOL of 3.92 inches that contained a single-ended burner. Using equations relating lumens and wattage from the Illuminating Engineering Society of North America (IESNA) Lighting Handbook (see

appendix A), DOE scaled the lumen output of the 45W lamp such that it was within the desired range. Based on the calculations, DOE expects that when designing a more efficient version of an R20 short lamp, lamp manufacturers will be able to reduce the wattage to at least 75W. DOE determined through this scaling calculation that the efficacy of an R20 short lamp improves with the use of a single-ended halogen burner. The efficacy of the 100W R20 short lamp was measured to be 8.5 lumens per watt (lm/W), while the theoretical efficacy of the 75W halogen R20 with a single-ended burner was calculated to be 10.3 lm/W. However, the efficacy does not increase enough to allow the lamp to meet the current energy conservation standard of 12.5 lm/W set forth by EISA 2007, or the standard of 16.0 lm/W prescribed in the 2009 Lamps Rule that requires compliance on July 14, 2012. Therefore, DOE has tentatively concluded that while a single-ended burner is dimensionally compatible with an R20 short lamp, this improved halogen R20 short lamp is not a suitable replacement as it would not meet current standards. For more information on the improved efficacy calculation, see appendix A.

To determine the efficacy of a theoretical R20 short lamp with a double-ended burner, DOE tested a 120V, 60W PAR30 short lamp that contained a double-ended burner dimensionally compatible with an R20 short lamp. DOE then applied a reflector efficiency factor (see appendix A) to scale the lumen output of the PAR lamp to that of an R lamp. Again using IESNA equations relating lumen output and wattage, DOE scaled the 60W lamp to a 75W lamp. The efficacy of the 100W R20 lamp was measured to be 8.5 lm/W, while the efficacy of the 75W halogen R20 lamp was calculated to be 13.8

lm/W. DOE determined that the use of a double-ended halogen burner would likely enable the 75W R20 halogen short lamp to meet the EISA 2007 standard of 12.5 lm/W; however, the efficacy would not increase enough to meet the 2009 Lamps Rule standard of 16.0 lm/W. Therefore, DOE has tentatively concluded that while a double-ended burner is dimensionally compatible with an R20 short lamp, this improved halogen R20 short lamp is not a viable substitute because the lamp would not meet July 2012 standards. For more information on the improved efficacy calculation, see appendix A.

DOE confirmed during interviews that lamp manufacturers had attempted to improve the efficacy of R20 short lamps through the use of halogen capsules. The information shared by lamp manufacturers supports DOE's findings that while some halogen capsules are dimensionally compatible with the R20 short lamp envelope, the use of halogen capsules does not improve the efficacy enough to meet the July 2012 standards.

Although the two model lamps do not comply with upcoming standards, DOE evaluated whether they could include the R20 short lamp special characteristics as listed in the beginning of section III.C.2. As incorporating the halogen capsule does not affect the lamp length, the shortened MOL is retained. The heat shield could also be included in the improved R20 short lamp. The addition of a halogen capsule would, however, affect the lumen output and beam spread. Based on its theoretical modeling, DOE determined that the halogen-based R20 short lamp with single-ended burner would likely have a lumen output within the established range of 637 to 1,022 lumens, and the R20 short

lamp with double-ended burner would have a slightly higher, but comparable lumen output. Additionally, because the position of the filament impacts the beam angle, DOE anticipates that the beam angle could be affected by the use of a halogen capsule; however, prototypes would need to be constructed and tested in order to confirm. Because DOE determined that the halogen-based R20 short lamp was not a viable option due to insufficient efficacy improvement, DOE did not conduct prototype testing to verify the effect on beam angle.

Further, DOE preliminarily concluded that the halogen-based R20 short lamp would meet the 0.5 watts per square foot of water surface area or equivalent illumination requirements because the theoretical lamp would deliver a higher lumen output with a reduced input wattage compared to the R20 short lamp. However, additional testing would be required to confirm this conclusion. DOE notes an improved R20 short lamp would need to be separately listed on the UL certification for a fixture because the lamp would have different specifications than current R20 short lamps.

DOE has tentatively concluded that because the improved efficacy of a halogen-based R20 short lamp would not meet or exceed the July 2012 standards, it is not a reasonable substitute.

b. 60W PAR16 Substitute

Through market research and manufacturer interviews, DOE determined that 60W PAR16 lamps are currently being distributed and sold for use in pool and spa applications

as a replacement for R20 short lamps. Existing energy conservation standards cover PAR lamps that have diameters exceeding 2.25 inches. Therefore, PAR16 lamps, which have a diameter of 2 inches, are not covered under standards. Through research DOE identified two 60W PAR16 models marketed for use in pool and spa applications. DOE tested these two models to determine if this lamp type contained the R20 short lamp special characteristics identified and could serve as a reasonable substitute. In manufacturer interviews, DOE was able to identify an additional 60W PAR16 model that can be used in pool and spa applications. This model was not tested as DOE determined it had adequate information to make a conclusion regarding the substitutability of this lamp type.

The 60W PAR16 lamp is a small diameter halogen lamp with a parabolic aluminized reflector. DOE found some variation in MOL of the 60W PAR16 lamps, ranging from a minimum MOL of 2.86 inches to a maximum of 3.31 inches. However, all models had a MOL less than the R20 short lamp MOL of 3.625 inches. In addition, the 60W PAR16 lamps tested contained heat shields.

After DOE confirmed that the physical specifications of the 60W PAR16 were equivalent to those of the R20 short lamp, DOE considered the performance specifications. DOE received feedback from lamp manufacturers that the lumen output of 60W PAR16 lamps was between 600 and 700 lumens and the beam angle was 30 degrees. DOE conducted independent testing and determined that the average lumen

output of the models tested was 733 lumens.[12] DOE concluded that the lumen output of the 60W PAR16 lamp was comparable to that of the R20 short lamp because the measured lumen output was within the lumen output range of the R20 short lamps (637 to 1,022 lumens).

DOE also measured beam angles and determined that the average beam angle was 34 degrees.[13] DOE concluded that the beam angle of the 60W PAR16 lamp did not meet the beam angle range of the R20 short lamps (70 to 123 degrees).

Additionally, DOE interviewed lamp manufacturers to determine if they considered the 60W PAR16 as a suitable replacement for the R20 short lamp. Lamp manufacturers commented that while the 60W PAR16 is being used in pools and spas, the lamp was not designed for such applications. The lamp was not utilized in pools and spas until September 2010, when an alternate lamp was needed until the R20 short lamp exclusion rulemaking was completed. DOE received varying comments on the satisfaction of 60W PAR16 lamps in pool and spa applications. While the rated lifetime of these lamps is in the same range as the rated lifetime of R20 short lamps (2,000 to 2,500 hours), some lamp manufacturers have received consumer feedback that the lifetime of the 60W PAR16 lamp is shortened when used in pool and spa applications. However, DOE also received feedback from pool and spa part manufacturers that the performance of the 60W PAR16 has proven to be more robust than the R20 short lamp, and that they have seen no issues with shortened lifetime. DOE welcomes further

[12] The maximum lumen output of the lamps tested was 780 lumens and the minimum was 685 lumens.
[13] The maximum beam angle was 40 degrees and the minimum beam angle was 28 degrees.

clarification on this issue, including test data regarding the impact on lifetime of the 60W PAR16 lamps when used in pool and spa applications.

During interviews, some lamp manufacturers commented that the lumen output and beam angle of the 60W PAR16 were not sufficient for use in pool and spa applications. However, DOE also received comments that the performance of the 60W PAR16 was comparable to the R20 short lamp when installed in a fixture with optimized components. Pool and spa part manufacturers develop underwater lighting based on the performance of a lamp and fixture together and optimize the fixture's components in order to achieve suitable illumination. A manufacturer of pool and spa parts commented that by adding an optimized lens to the R20 short lamp fixture, the measured light output and beam angle of the 60W PAR16 lamp within the fixture was comparable to the R20 short lamp within the fixture with a standard lens. The lens added to the R20 short lamp fixture was an existing component, developed for use with underwater LED lighting in order to provide a more diffuse beam spread. The pool and spa part manufacturer provided test results of the 60W PAR16 within the R20 short lamp fixture both with and without the optimized LED lens. When the LED lens was used, the beam angle was substantially increased and fell within the required beam angle range. However, because the subject of this rulemaking is specific to the lamp, DOE must evaluate the performance of the lamp alone when determining the availability of reasonable substitutes.

The 60W PAR16 is currently being marketed and sold for use in pool and spa applications and therefore likely to be compliant with building code requirements for appropriate illumination of pool/spas. DOE also notes that the 60W PAR16 lamp is UL listed for use in R20 short lamp fixtures.

The 60W PAR16 lamp is physically compatible with an underwater light fixture due to its short MOL and also contains a heat shield. However, in order for the 60W PAR16 to serve as a replacement for the R20 short lamp, modifications must be made to achieve the acceptable beam spread. Specifically, the 60W PAR16 must be partnered with a fixture with an optimized LED lens to achieve the appropriate beam angle. Because the 60W PAR16 lamp alone does not contain all of the special characteristics of a R20 short lamp, DOE has tentatively concluded that this is not a reasonable substitute.

c. LED Replacement Lamp

CA Utilities commented that several commercially available LED lamps could serve as replacements for R20 short lamps. CA Utilities added that while the products are currently more expensive, they offer longer lifetimes with lower maintenance costs. In addition, LED prices are expected to decrease as the technology matures. (CA Utilities, No. 9 at p. 2) DOE did confirm that LED replacement lamps are currently being sold for use in pool and spa fixtures. DOE researched three LED models that were determined to be compatible with the R20 short lamp fixture in order to determine if the lamps offered the special characteristics of the R20 short lamp and could therefore be considered a substitutable lamp type.

One of the LED models that can be used as a replacement for R20 short lamps has a rated wattage of 8 W, a diameter of 2.5 inches, and has a listed MOL of 3.5 inches, which is less than that of a R20 short lamp MOL of 3.625 inches. The lamp has a lumen output of 500 lumens and a 40 degree beam angle. Additionally, the lamp has a rated lifetime of 40,000 hours. While the use of a heat shield is not applicable to LED lamps, the lamp manufacturer indicated that the lamp was adapted for use in underwater pool and spa applications and certain components were changed in order to withstand the high heat environment.

This LED lamp has the required MOL for pool and spa applications, however, the lamp does not achieve the required lumen output and beam angle. The LED lamp's rated lumen output of 500 lumens is notably less than the established acceptable range of 637 and 1,022 lumens. Additionally, the LED lamp's beam angle of 40 degrees is also considerably less than specified beam angle range of 70 to 123 degrees. DOE has tentatively concluded based on the lamp manufacturer-provided specifications, that this LED model is a not a reasonable substitute because the lamp does not have the required special characteristics of the R20 short lamp.

The remaining two LED models for use in the R20 short lamp fixture did not have published performance specifications. DOE contacted the lamp manufacturers, but was able to obtain only limited information on the models. DOE was able to determine that one model has a rated wattage of 20 W, an MOL of 3.3 inches, and a diameter of 3.0

inches. DOE was unable to find information on the lamp shape, lumen output, beam angle, and rated lifetime of the model. For the other model, DOE was able to determine that it has a rated wattage of 12 W, an MOL of 2.41 inches, and a diameter of 3.07 inches. Similarly, DOE was unable to find information on the lamp shape, lumen output, beam angle, and rated lifetime of the model. Because of the limited information on these two LED models, DOE cannot conclude that the lamps have the required special characteristics of R20 short lamps. DOE welcomes further information on potential LED replacement models.

DOE assumed that because the LED lamps are currently being marketed and sold for use in pool and spa applications, these lamps provide the equivalent illumination of 0.5 watts per square foot of water surface area. DOE notes that the LED lamps are not UL listed for use in R20 short lamp fixtures.

DOE also identified an LED lamp that is being sold for use in pool and spa applications, but cannot be installed in an R20 short lamp fixture and, therefore, requires a compatible LED fixture. The LED lamp and fixture are intended to be a direct replacement for the R20 short lamp and fixture. Because the replacement option requires a completely new fixture and this rulemaking is evaluating the lamp alone, DOE has determined that this LED lamp is not a reasonable substitute.

Based on the foregoing, DOE has tentatively concluded that commercially available LED lamps are not reasonable substitutes because they do not have the required

special characteristics of R20 short lamps. DOE also tentatively concluded that the LED lamp and fixture replacement identified is not a reasonable substitute because it requires more than the lamp to be replaced.

DOE requests comment on the analysis of potential R20 short lamp substitutes and its initial conclusion that there are no reasonable substitutes for this lamp type.

D. Conclusion

In interviews with manufacturers, DOE established that R20 short lamps were designed for pool and spa applications based on industry need and consumer preference. The design requirements included a wide beam spread, high lumen output and adequate illumination; a heat shield to withstand the high operating temperatures of spas; and a shortened MOL, allowing the lamp to fit in underwater pool or spa fixtures. Further, DOE determined that the majority of R20 short lamps are purchased from pool and spa distributors and specialty retail stores, and are not available where IRLs are typically sold for general lighting applications. R20 short lamps are also marketed and clearly packaged in a way that indicates the lamps are specifically for pools and spas. Therefore, DOE has preliminarily concluded that R20 short lamps are designed for pool and spa applications. Due to the special application of R20 short lamps, DOE assessed the impact on energy savings from the exclusion of these lamps from energy conservation standards. As R20 short lamps have a small market share and limited potential for growth, DOE tentatively determined that the regulation of R20 short lamps would not result in significant energy savings.

DOE also evaluated lamps that could serve as potential substitutes by analyzing their ability to replicate the specialized characteristics of the R20 short lamp, specifically a shortened MOL, heat shield, high lumen output, wide beam spread, and adequate illumination. DOE considered a halogen-based R20 short lamp with improved efficacy, a commercially available 60W PAR16 lamp, and LED lamps as potential substitutes. DOE has tentatively disqualified these lamps as reasonable substitutes for the following reasons: (1) the halogen-based R20 short lamp would not comply with standards; (2) the 60W PAR16 can only achieve the required beam spread when partnered with a fixture with an optimized LED lens; and (3) the LED replacement does not have the necessary lumen output.[14] Therefore, DOE has tentatively concluded that there are no reasonably substitutable lamp types currently available that offer the special characteristics of R20 short lamps.

Based on the previous assessments, DOE proposes to exclude R20 short lamps from energy conservation standards. DOE's analysis has initially found that energy conservation standards for R20 short lamps would not result in significant energy savings because the lamps are designed for special applications, and also that the lamps have special characteristics that are not available in reasonably substitutable lamp types. Therefore, under section 6291(30)(E), DOE proposes to exclude R20 short lamps from energy conservation standards by modifying the definition of "Incandescent reflector lamp" and proposing a new definition for "R20 Short Lamp" in 10 CFR 430.2. DOE

[14] Performance information was not available for all LED replacements.

requests comment on its proposed determination that R20 short lamps should be excluded from energy conservation standards.

E. Options for Conditional Exclusions

Stakeholders provided additional suggestions on how to exclude R20 short lamps from energy conservation standards. Earthjustice and NRDC commented that if DOE excludes R20 short lamps from coverage under EPCA energy conservation standards, measures must be taken to ensure that the blanket exclusion does not become a loophole. Earthjustice and NRDC provided four recommendations for conditional exclusions. In one recommendation, Earthjustice and NRDC suggested that DOE could provide exclusion only for R20 short lamps installed in states where 120V electricity supplies pools and spas. This would prevent R20 short lamps from migrating to states where the only use would be as a substitute for an IRL that meets standards. Earthjustice and NRDC suggested in another recommendation that DOE limit the exclusion to a specified number of R20 short lamps. They stated DOE has the authority to do this because section 6291(30)(E) authorizes DOE to grant exclusion from standards at the individual lamp level. Another recommendation was to exclude the first 100,000 R20 short lamps produced after the final rule effective date on the basis that subsequent production would abate findings that standards would not result in significant energy savings. In addition, Earthjustice and NRDC suggested DOE could establish an annual sales limit, restricting the market share and thereby ensuring that standards for R20 short lamps would not result in significant energy savings. They stated that this could be accomplished by requiring manufacturers to report sales quarterly and terminating the exclusion when reported sales

exceed an established percentage of historic annual sales. (Earthjustice and NRDC, No. 8 at pp. 2-4)

Finally, Earthjustice and NRDC also suggested that any exclusion expire after five years, regardless of lamp sales. This would allow R20 short lamp manufacturers enough time to perform necessary redesign for incorporating more energy-efficient lighting technologies at the lowest possible cost, while not greatly reducing energy savings achieved through standards. Ibid.

As mentioned previously, DOE does not anticipate market growth or market migration of R20 short lamps due to their application-specific marketing and unique distribution channels. DOE's proposed definition for R20 short lamps requires them to be designed, labeled, and marketed for pool and spa applications. However, DOE would consider reevaluating the exclusion of R20 short lamps from energy conservation standards, if it was found that lamp sales were increasing due to market migration after an exclusion of R20 short lamps was granted. DOE invites the submission of shipment information that supports increased lamp sales following an exclusion of R20 short lamps.

Earthjustice and NRDC also suggested that DOE require a technical specification for R20 short lamps, such as a specific correlated color temperature value, that would not significantly affect quality or efficiency but would ensure the lamp would not be used in other applications. (Earthjustice and NRDC, No. 8 at p. 4) EPCA authorizes DOE to

consider and adopt only performance-based energy conservation standards for this product. (42 U.S.C. 6291(6)) DOE cannot, therefore, specify R20 short lamps to have certain technical characteristics. Further, as stated previously, DOE does not anticipate that R20 short lamps would be used in other applications and therefore, does not see a need for such a requirement.

IV. Procedural Issues and Regulatory Review

A. Review Under Executive Orders 12866 and 13563

Today's regulatory action has been determined to not be a "significant regulatory action" under section 3(f) of Executive Order 12866, "Regulatory Planning and Review," 58 FR 51735 (Oct. 4, 1993). Accordingly, the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget (OMB) is not required to review this action.

DOE has also reviewed this proposed regulation pursuant to Executive Order 13563, issued on January 18, 2011 (76 FR 3281 (Jan. 21, 2011)). Executive Order 13563 is supplemental to and explicitly reaffirms the principles, structures, and definitions governing regulatory review established in Executive Order 12866. To the extent permitted by law, agencies are required by Executive Order 13563 to: (1) propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs (recognizing that some benefits and costs are difficult to quantify); (2) tailor regulations to impose the least burden on society, consistent with obtaining regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of

cumulative regulations; (3) select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity); (4) to the extent feasible, specify performance objectives, rather than specifying the behavior or manner of compliance that regulated entities must adopt; and (5) identify and assess available alternatives to direct regulation, including providing economic incentives to encourage the desired behavior, such as user fees or marketable permits, or providing information upon which choices can be made by the public.

DOE emphasizes as well that Executive Order 13563 requires agencies to use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible. In its guidance, OIRA has emphasized that such techniques may include identifying changing future compliance costs that might result from technological innovation or anticipated behavioral changes. For the reasons stated in the preamble, DOE believes that today's NOPR is consistent with these principles, including the requirement that, to the extent permitted by law, benefits justify costs and that net benefits are maximized.

B. Review Under the Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 et seq.) requires preparation of an initial regulatory flexibility analysis (IRFA) for any rule that by law must be proposed for public comment, unless the agency certifies that the rule, if promulgated, 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 website (http://energy.gov/gc/office-general-counsel).

DOE reviewed today's proposed rulemaking under the provisions of the Regulatory Flexibility Act and the policies and procedures published on February 19, 2003. This proposed rulemaking would set no standards; it would only determine whether exclusion from standards is warranted for R20 short lamps. DOE certifies that this proposed rulemaking will not have a significant impact on a substantial number of small entities. The factual basis for this certification is as follows.

For manufacturers of 100W R20 IRLs with an MOL of 3 and 5⁄8 inches, the Small Business Administration (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. 65 FR 30836, 30849 (May 15, 2000), as amended at 65 FR 53533, 53545 (Sept. 5, 2000) and codified at 13 CFR 121. The size standards are listed by North American Industry Classification System (NAICS) code and industry description and are available at

http://www.sba.gov/sites/default/files/files/Size_Standards_Table.pdf. The manufacturing of R20 short lamps is classified under NAICS 335110, "Electric Lamp Bulb and Part Manufacturing." The SBA sets a threshold of 1,000 employees or less for an entity to be considered as a small business for this category. DOE identified two small business manufacturers of R20 short lamps.

Amendments to EPCA in the Energy Policy Act of 1992 (EPAct 1992), P.L. 102-486, established the current energy conservation standards for certain classes of IRLs. On July 14, 2009, DOE published a final rule in the Federal Register that amended these standards, with a compliance date of July 14, 2012. 74 FR 34080. In that rulemaking, DOE concluded that the standards would not have a substantial impact on small entities and, therefore, did not prepare a regulatory flexibility analysis. 74 FR at 34174-75 (July 14, 2009). On the basis of the foregoing and because this rulemaking to establish an exclusion would decrease regulatory burden, DOE certifies that this rulemaking will have no significant economic impact on a substantial number of small entities. Accordingly, DOE has not prepared an IRFA for this NOPR. DOE will transmit this certification and supporting statement of factual basis to the Chief Counsel for Advocacy of the SBA for review under 5 U.S.C. 605(b).

C. Review Under the Paperwork Reduction Act

This rulemaking, which proposes an exclusion from energy conservation standards for R20 short lamps, would impose no new information or record keeping

requirements. Accordingly, the OMB clearance is not required under the Paperwork Reduction Act. (44 U.S.C. 3501 et seq.)

D. Review Under the National Environmental Policy Act of 1969

Pursuant to the National Environmental Policy Act (NEPA) of 1969, DOE has determined that this proposed rulemaking fits within the category of actions that are categorically excluded from review under the National Environmental Policy Act of 1969 (Pub. L. 91-190, codified at 42 U.S.C. 4321 et seq.), and DOE's implementing regulations at 10 CFR part 1021. Specifically, the proposed rulemaking amends an existing rule without changing its environmental effect, and, therefore, is covered by Categorical Exclusion (CX) A5 found in 10 CFR part 1021, subpart D, appendix A. Therefore, as DOE has made a CX determination for the proposed rulemaking, DOE does not need to prepare an Environmental Assessment or Environmental Impact Statement. DOE's CX determination is available at http://cxnepa.energy.gov/.

E. Review Under Executive Order 13132

Executive Order 13132, "Federalism," 64 FR 43255 (Aug. 10, 1999) imposes certain requirements on federal agencies formulating and implementing policies or regulations that preempt state laws 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. EPCA governs and prescribes federal preemption of state regulations as to energy conservation for the covered product that is the subject of today's proposed rulemaking. 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) 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; and (3) provide a clear legal standard for affected conduct rather than a general standard and promote simplification and burden reduction. 61 FR 4729 (Feb. 7, 1996). 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 proposed rulemaking 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. Pub. L. 104-4, sec. 201 (codified at 2 U.S.C. 1531). For a proposed regulatory action likely to result in a rule that may cause 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 small governments. 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/gc/office-general-counsel.

DOE examined today's proposed rulemaking 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. Instead, if adopted in a final rulemaking, the rule would exclude R20 IRLs with an MOL of 3 and 5⁄8 inches from standards, thereby eliminating any existing compliance costs. Accordingly, no further assessment or analysis is required under the Unfunded Mandates Reform Act of 1995.

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 proposed rulemaking 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

DOE has determined, under Executive Order 12630, "Governmental Actions and Interference with Constitutionally Protected Property Rights" 53 FR 8859 (Mar. 18, 1988), that this regulation 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 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 today's proposed rulemaking 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 proposed 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 proposed 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.

DOE has tentatively concluded that today's proposed regulatory action, which excludes R20 short lamps from coverage under energy conservation standards, is not a significant energy action because the proposed exclusion from standards is not a significant regulatory action under Executive Order 12866, is not likely to have a significant adverse effect on the supply, distribution, or use of energy, nor has it been designated as such by the Administrator at OIRA. Accordingly, DOE has not prepared a Statement of Energy Effects on the proposed rulemaking.

L. Review Under the Information Quality Bulletin for Peer Review

On December 16, 2004, OMB, in consultation with the Office of Science and Technology Policy (OSTP), issued its Final Information Quality Bulletin for Peer Review (the Bulletin). 70 FR 2664 (Jan. 14, 2005). The Bulletin establishes that certain scientific information shall be peer reviewed by qualified specialists before it is disseminated by the Federal Government, including influential scientific information related to agency regulatory actions. The purpose of the Bulletin is to enhance the quality and credibility of the Government's scientific information. Under the Bulletin, the energy conservation standards rulemaking analyses are "influential scientific information," which the Bulletin defines as scientific information the agency reasonably can determine will have, or does have, a clear and substantial impact on important public policies or private sector decisions. 70 FR at 2667 (Jan. 14, 2005).

In response to OMB's Bulletin, DOE conducted formal in-progress peer reviews of the energy conservation standards development process and analyses and has prepared a Peer Review Report pertaining to the energy conservation standards rulemaking analyses. Generation of this report involved a rigorous, formal, and documented evaluation using objective criteria and qualified and independent reviewers to make a judgment as to the technical/scientific/business merit, the actual or anticipated results, and the productivity and management effectiveness of programs and/or projects. The "Energy Conservation Standards Rulemaking Peer Review Report" dated February 2007 has been disseminated and is available at the following website: www1.eere.energy.gov/buildings/appliance_standards/peer_review.html.

V. Public Participation

A. Submission of Comments

DOE will accept comments, data, and information regarding this NOPR no later than the date provided in the DATES section at the beginning of this notice. Interested parties may submit comments, data, and other information using any of the methods described in the ADDRESSES section at the beginning of this notice.

Submitting comments via regulations.gov. The regulations.gov webpage will require you to provide your name and contact information. Your contact information will be viewable to DOE Building Technologies staff only. Your contact information will not be publicly viewable except for your first and last names, organization name (if any), and submitter representative name (if any). If your comment is not processed properly

because of technical difficulties, DOE will use this information to contact you. If DOE cannot read your comment due to technical difficulties and cannot contact you for clarification, DOE may not be able to consider your comment.

However, your contact information will be publicly viewable if you include it in the comment itself or in any documents attached to your comment. Any information that you do not want to be publicly viewable should not be included in your comment, nor in any document attached to your comment. Otherwise, persons viewing comments will see only first and last names, organization names, correspondence containing comments, and any documents submitted with the comments.

Do not submit to regulations.gov information for which disclosure is restricted by statute, such as trade secrets and commercial or financial information (hereinafter referred to as Confidential Business Information (CBI)). Comments submitted through regulations.gov cannot be claimed as CBI. Comments received through the website will waive any CBI claims for the information submitted. For information on submitting CBI, see the Confidential Business Information section below.

DOE processes submissions made through regulations.gov before posting. Normally, comments will be posted within a few days of being submitted. However, if large volumes of comments are being processed simultaneously, your comment may not be viewable for up to several weeks. Please keep the comment tracking number that regulations.gov provides after you have successfully uploaded your comment.

Submitting comments via email, hand delivery/courier, or mail. Comments and documents submitted via email, hand delivery, or mail also will be posted to regulations.gov. If you do not want your personal contact information to be publicly viewable, do not include it in your comment or any accompanying documents. Instead, provide your contact information in a cover letter. Include your first and last names, email address, telephone number, and optional mailing address. The cover letter will not be publicly viewable as long as it does not include any comments

Include contact information each time you submit comments, data, documents, and other information to DOE. If you submit via mail or hand delivery/courier, please provide all items on a CD, if feasible. It is not necessary to submit printed copies. No facsimiles (faxes) will be accepted.

Comments, data, and other information submitted to DOE electronically should be provided in PDF (preferred), Microsoft Word or Excel, WordPerfect, or text (ASCII) file format. Provide documents that are not secured, that are written in English, and that are free of any defects or viruses. Documents should not contain special characters or any form of encryption and, if possible, they should carry the electronic signature of the author.

Campaign form letters. Please submit campaign form letters by the originating organization in batches of between 50 to 500 form letters per PDF or as one form letter

with a list of supporters' names compiled into one or more PDFs. This reduces comment processing and posting time.

Confidential Business Information. According to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via email, postal mail, or hand delivery/courier two well-marked copies: one copy of the document marked confidential including all the information believed to be confidential, and one copy of the document marked non-confidential with the information believed to be confidential deleted. Submit these documents via email or on a CD, if feasible. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

Factors of interest to DOE when evaluating requests to treat submitted information as confidential include: (1) A description of the items; (2) whether and why such items are customarily treated as confidential within the industry; (3) whether the information is generally known by or available from other sources; (4) whether the information has previously been made available to others without obligation concerning its confidentiality; (5) an explanation of the competitive injury to the submitting person which would result from public disclosure; (6) when such information might lose its confidential character due to the passage of time; and (7) why disclosure of the information would be contrary to the public interest.

It is DOE's policy that all comments may be included in the public docket, without change and as received, including any personal information provided in the comments (except information deemed to be exempt from public disclosure).

B. Issues on Which DOE Seeks Comment

Although DOE welcomes comments on any aspect of this proposal, DOE is particularly interested in receiving comments and views of interested parties concerning the following issues:

1. DOE's assessment of the identified special characteristics of R20 short lamps and any other features that should be considered special characteristics;

2. The proposal that R20 short lamps qualify for an exclusion from energy conservation standards because of insignificant energy savings attributable to their design for specialty applications;

3. Whether reduced wattage lamps can be used as reasonable substitutes in pool and spa applications in all jurisdictions provided that they meet the 0.5W of input power per square foot of water surface area, or equivalent level of illumination;

4. The identified specifications for underwater illumination (0.5W of input power per square foot of water surface area, or equivalent level of illumination) for

building code compliance and whether this requirement is appropriate when qualifying a lamp as a reasonable substitute; and

5. DOE's analysis of potential R20 short lamp substitutes and the conclusion that there are no reasonably substitutable lamps for this lamp type.

VI. Approval of the Office of the Secretary

The Secretary of Energy has approved publication of today's proposed rulemaking.

List of Subjects in 10 CFR Part 430

Administrative practice and procedure, Confidential Business Information, Energy conservation, Household appliances, Imports, Intergovernmental relations, Small businesses.

Issued in Washington, DC, on December 21, 2012.

_____

David T. Danielson
Assistant Secretary
Energy Efficiency and Renewable Energy

For the reasons set forth in the preamble, DOE proposes to amend part 430 of chapter II, subchapter D, of title 10 of the Code of Federal Regulations, 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, revise the definition for “Incandescent reflector lamp” and add the definition for “R20 short lamp,” in alphabetical order, to read as follows:

§430.2 Definitions.

* * * * *

Incandescent reflector lamp (commonly referred to as a reflector lamp) means any lamp in which light is produced by a filament heated to incandescence by an electric current, which: contains an inner reflective coating on the outer bulb to direct the light; is not colored; is not designed for rough or vibration service applications; is not an R20 short lamp; has an R, PAR, ER, BR, BPAR, or similar bulb shapes with an E26 medium screw base; has a rated voltage or voltage range that lies at least partially in the range of 115 and 130 volts; has a diameter that exceeds 2.25 inches; and has a rated wattage that is 40 watts or higher.

* * * * *

R20 short lamp means a lamp that is an R20 incandescent reflector lamp that has a rated wattage of 100 watts; has a maximum overall length of 3 and 5/8, or 3.625, inches; and is designed, labeled, and marketed specifically for pool and spa applications.

* * * * *

[FR Doc. 2012-31396 Filed 12/28/2012 at 8:45 am; Publication Date: 12/31/2012]