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DEPARTMENT OF ENERGY

10 CFR Part 430

[Docket No. EERE-2011-BT-STD-0006]

RIN: 1904-AC43

Energy Conservation Program: Availability of the Preliminary Technical Support Document for General Service Fluorescent Lamps and Incandescent Reflector Lamps

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

ACTION: Notice of public meeting and availability of preliminary technical support document.

SUMMARY: The U.S. Department of Energy (DOE) will hold a public meeting to discuss and receive comments on: the product classes that DOE plans to analyze for purposes of amending energy conservation standards for general service fluorescent lamps (GSFLs) and incandescent reflector lamps (IRLs); the analytical framework, models, and tools that DOE is using to evaluate standards for GSFLs and IRLs; the results of preliminary analyses DOE performed for these products; and potential energy conservation standard levels derived from these analyses that DOE could consider for GSFLs and IRLs. DOE encourages written comments on these subjects. To inform

interested parties and facilitate this process, DOE has prepared an agenda, a preliminary technical support document (TSD), and briefing materials, which are available on regulations.gov, docket number EERE-2011-BT-STD-0006 at www.regulations.gov/#!docketDetail;D=EERE-2011-BT-STD-0006.

DATES: DOE will hold a public meeting on April 9, 2013 from 9 a.m. to 4 p.m., in Washington, DC. The meeting will also be broadcast as a webinar. See section IV Public Participation for webinar registration information, participant instructions, and information about the capabilities available to webinar participants.

DOE will accept comments, data, and information regarding this notice before and after the public meeting, but no later than **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. See section IV Public Participation for details.

ADDRESSES: The public meeting will be held at the U.S. Department of Energy, Forrestal Building, Room 8E-089 1000 Independence Avenue, SW., Washington, DC 20585. To attend, please notify Ms. Brenda Edwards at (202) 586-2945. Please note that foreign nationals visiting DOE Headquarters are subject to advance security screening procedures. Any foreign national wishing to participate in the meeting should advise DOE as soon as possible by contacting Ms. Edwards to initiate the necessary procedures. Please also note that those wishing to bring laptops into the Forrestal Building will be required to obtain a property pass. Visitors should avoid bringing laptops, or allow an

extra 45 minutes. Persons can attend the public meeting via webinar. For more information, refer to the Public Participation section near the end of this notice.

Any comments submitted must identify the notice of public meeting for Energy Conservation Standards for General Service Fluorescent Lamps and Incandescent Reflector Lamps, and provide docket number EE-2011–BT–STD–0006 and/or regulatory information number (RIN) 1904-AC43. Comments may be submitted using any of the following methods:

1. Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the instructions for submitting comments.
2. Email: GSFL-IRL_2011-STD-0006@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 the collection-of-information requirements contained in this proposed rule may be submitted to Office of Energy Efficiency and Renewable Energy through the methods listed above and by email to [Christine J. Kymn@omb.eop.gov](mailto:Christine.J.Kymn@omb.eop.gov).

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

Docket: The docket is available for review at www.regulations.gov, including Federal Register notices, framework documents, public meeting attendee lists and transcripts, 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 docket for this notice can be found on the [regulations.gov](http://www.regulations.gov) site, docket number EERE-2011-BT-STD-0006 at www.regulations.gov/#!docketDetail;D=EERE-2011-BT-STD-0006. The [regulations.gov](http://www.regulations.gov) web page contains instructions on how to access all documents, including public comments, in the docket. See section IV for further information on how to submit comments through www.regulations.gov.

For further information on how to submit a comment, review other public comments and the docket, or participate in the public meeting, 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. Elizabeth Kohl, U.S. Department of Energy, Office of the General Counsel, GC-71, 1000 Independence Avenue, SW., Washington, DC, 20585-0121. Telephone: (202) 586-7796. Email: elizabeth.kohl@hq.doe.gov.

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I. Statutory Authority

Title III of the Energy Policy and Conservation Act (EPCA; 42 U.S.C. 6291 et seq.) sets forth a variety of provisions designed to improve energy efficiency. Part B of Title III (42 U.S.C. 6291-6309) established the “Energy Conservation Program for Consumer Products Other Than Automobiles,” which includes the fluorescent and incandescent reflector lamps (IRLs) that are the focus of this preliminary analysis.^{1 2} In particular, EPCA establishes energy conservation standards for certain classes of general service fluorescent lamps (GSFLs) and IRLs, and requires that the U.S. Department of Energy (DOE) (1) conduct two rulemaking cycles to determine whether these standards should be amended; and (2) determine whether the standards in effect for GSFLs should be amended to apply to additional GSFLs. (42 U.S.C. 6291(1), 6295(i)(1) and (3)-(5)) On July 14, 2009, DOE published a final rule in the Federal Register, which completed the first rulemaking cycle to amend energy conservation standards for GSFLs and IRLs (hereafter the “2009 Lamps Rule”). 74 FR 34080. This rulemaking constitutes DOE’s second cycle of review to determine whether the standards in effect for GSFLs and IRLs should be amended. In this rulemaking, DOE will also consider whether the standards should be applicable to additional GSFLs.

DOE must design any energy conservation standards for GSFLs and IRLs to (1) achieve the maximum improvement in energy efficiency that is technologically feasible and economically justified, and (2) result in significant conservation of energy. (42

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

² All references to EPCA in this document refer to the statute as amended through the American Energy Manufacturing Technical Corrections Act (AEMTCA), Pub. L. 112-210 (Dec. 18, 2012).

U.S.C. 6295(o)(2)(A) and (o)(3)) To determine whether a proposed standard is economically justified, DOE must determine whether the benefits of the standard exceed its burdens by, to the greatest extent practicable, considering the following seven factors:

1. the economic impact of the standard on manufacturers and consumers of products subject to the standard;
2. the savings in operating costs throughout the estimated average life of the covered products in the type (or class) compared to any increase in the price, initial charges, or maintenance expenses for the covered products which are likely to result from the imposition of the standard;
3. the total projected amount of energy savings likely to result directly from the imposition of the standard;
4. any lessening of the utility or the performance of the covered products likely to result from the imposition of the standard;
5. the impact of any lessening of competition, as determined in writing by the Attorney General, that is likely to result from the imposition of the standard;
6. the need for national energy conservation; and
7. other factors the Secretary [of Energy] considers relevant.

(42 U.S.C. 6295(o)(2)(B)(i))

DOE also adheres to additional statutory requirements of general applicability for prescribing new or amended standards set forth in other relevant sections of EPCA.

II. Rulemakings for General Service Fluorescent Lamps and Incandescent Reflector Lamps

A. Background

As mentioned in the previous section, EPCA, as amended, established energy conservation standards for certain classes of GSFLs and IRLs, and required DOE to conduct two rulemaking cycles to determine whether these standards should be amended. (42 U.S.C. 6291(1), 6295(i)(1) and (3)-(4)) EPCA also authorized DOE to adopt standards for additional GSFLs if such standards were warranted. (42 U.S.C. 6295(i)(5))

DOE completed the first cycle of amendments by publishing a final rule in the Federal Register in July 2009. 74 FR 34080 (July 14, 2009). In the 2009 Lamps Rule, DOE amended existing GSFL and IRL energy conservation standards and adopted standards for additional GSFLs. DOE also amended the regulatory definitions of “colored fluorescent lamp” and “rated wattage” and adopted test procedures applicable to the newly covered GSFLs.³

To initiate the second rulemaking cycle to consider amended energy conservation standards for GSFLs and IRLs, on September 14, 2011, DOE published a notice announcing the availability of the framework document, “Energy Conservation Standards Rulemaking Framework Document for General Service Fluorescent Lamps and Incandescent Reflector Lamps,” and a public meeting to discuss the proposed analytical

³ Information regarding the 2009 Lamps Rule can be found on DOE’s Building and Technologies webpages for IRLs (http://www1.eere.energy.gov/buildings/appliance_standards/product.aspx/productid/58) and GSFLs (http://www1.eere.energy.gov/buildings/appliance_standards/product.aspx/productid/70).

framework for the rulemaking. 76 FR 56678. In the framework document, which DOE also posted on its website, DOE described the procedural and analytical approaches DOE anticipated using to evaluate the establishment of energy conservation standards for GSFLs and IRLs.

DOE held the public meeting for the framework document on October 4, 2011,⁴ to describe the various rulemaking analyses DOE would conduct, such as the engineering analysis, the life-cycle cost (LCC) and payback period (PBP) analyses, and the national impact analysis (NIA); the methods for conducting them; and the relationship among the various analyses. Manufacturers, trade associations, and environmental advocates attended the meeting. The participants discussed multiple issues, including unknown impacts of the 2009 Lamps Rule, technology shifts, and rare earth phosphors.

DOE has also taken steps to consider standards for certain reflector (R), elliptical reflector (ER), and bulged reflector (BR) IRLs. Additional background can be found at 75 FR 23191 (May 3, 2010). DOE has suspended these rulemaking activities, however, as a result of section 315 of Public Law 112-74 (Dec. 23, 2011), which prohibits DOE from using appropriated funds to implement or enforce standards for these IRLs. DOE does not examine any IRLs covered by the prohibition (which has currently been extended through March 27, 2013), including bulged parabolic reflector IRLs, in this preliminary analysis.

⁴ The framework document and public meeting information are available at regulations.gov, docket number EERE-2011-BT-STD-0006 at www.regulations.gov/#!docketDetail;D=EERE-2011-BT-STD-0006.

B. Current Rulemaking Process

In this preliminary analysis, DOE considers whether and at what level(s) to promulgate energy conservation standards for GSFLs and IRLs. Comments received since publication of the framework document have helped DOE identify and resolve issues involved in the preliminary analyses. Chapter 2 of the preliminary technical support document (TSD) summarizes and addresses the comments DOE received.

The process for developing energy conservation standards involves input from the public. DOE considers the participation of interested parties to be a very important part of the rulemaking process. Accordingly, DOE encourages the participation of all interested parties during the comment period provided at each stage of the rulemaking.

In conducting energy conservation standards rulemakings, DOE involves interested parties through various means. This standards rulemaking process for GSFLs and IRLs involves four public notices, published in the Federal Register, and three public meetings (including the public notice and meeting associated with the framework document previously mentioned).

The preliminary analysis allows for public comment on the data, models, and tools that DOE expects to use in the rulemaking. These data, as discussed in section III.A, include product classes and candidate standard levels (CSLs), which span the range of efficacies from baseline lamps⁵ to the most efficacious technology. DOE requests

⁵ DOE selected baseline lamps for each representative product class. Generally, a baseline lamp is one that represents the most common, least efficacious lamp sold within a product class.

comment and will hold a public meeting and webinar related to the preliminary analyses on the day specified in the DATES section.

After the preliminary analysis public meeting, DOE will determine whether to publish a notice of proposed rulemaking (NOPR). Any NOPR would present discussion of the comments received on the preliminary analysis, along with DOE's analysis of the impacts of potential standards on consumers, manufacturers, and the nation; DOE's weighting of these impacts; and the proposed standard levels, for public comment.

III. Summary of the Analyses

DOE conducted in-depth technical analyses in the following areas for GSFLs and IRLs currently under consideration: (1) engineering, (2) energy-use characterization, (3) product price determination, (4) LCC and PBP, and (5) national impact. The preliminary TSD presents the methodology and results of each analysis. The analyses are described in more detail in the following sections.

DOE conducted several other analyses that either support the five major analyses or are preliminary analyses that will be expanded in the NOPR. These include the market and technology assessment; the screening analysis, which contributes to the engineering analysis; and the shipments analysis, which contributes to the NIA. DOE has also begun work on the manufacturer impact analysis and identified the methods to be used for the LCC subgroup analysis, the emissions analysis, the employment analysis, the regulatory impact analysis, and the utility impact analysis.

A. Engineering Analysis

For this GSFL and IRL rulemaking, DOE derives efficacy levels in the engineering analysis and lamp end-user prices in the product price determination (see section III.C). DOE estimates the end-user price of GSFLs and IRLs directly because it is difficult to disassemble and reverse-engineer the lamps. The outputs of the engineering analysis and product price determination are used to develop cost-efficiency relationships.

The engineering analysis focuses on selecting commercially available lamps that incorporate design options that improve efficacy. The engineering analysis identifies both the highest efficacy level that is technologically feasible within each product class and the representative baseline models, which serve as reference points against which DOE can measure changes resulting from potential energy conservation standards. After identifying more efficacious substitutes for each baseline model, DOE develops CSLs. Chapters 2 and 5 of the preliminary TSD discuss the engineering analysis, and chapters 2 and 7 and appendix 7A of the preliminary TSD discuss the product price determination.

B. Energy-Use Analysis

The purpose of the energy-use analysis is to estimate the energy usage for the baseline and higher efficacy lamps considered in this rulemaking. This analysis, which is meant to represent typical energy usage in the field, is an input to both the LCC and PBP analyses and the NIA. The energy-use analysis enables DOE to determine the LCC and

the PBP of more efficacious lamps in relation to the baseline lamp. Chapters 2 and 6 of the preliminary TSD provide detail on the energy-use characterization.

C. Product Price Determination

As mentioned in section III.A, DOE often develops cost-efficiency relationships in the engineering analysis. However, for this rulemaking, DOE estimated the end-user price of GSFLs and IRLs directly. DOE selected this methodology because it is difficult to reverse-engineer GSFLs and IRLs, which are not easily disassembled. Chapters 2 and 7 of the preliminary TSD provide detail on the estimation of end-user prices.

D. Life-Cycle Cost and Payback Period Analyses

The LCC and PBP analyses determine the economic impact of potential standards on individual customers. The LCC of a product is the cost it incurs over its lifetime, taking into account both purchase price and operating expenses. The PBP represents the time it takes to recover the additional installed cost of the more efficacious products through annual operating-cost savings. DOE analyzes the net effect on consumers by calculating the LCC and PBP using the engineering performance data (section III.A), the energy-use analysis data (section III.B), and the product price determination (section III.C). Chapters 2 and 8 of the preliminary TSD provide detail on the LCC and PBP analyses.

E. National Impact Analysis

The NIA estimates the national energy savings (NES) and the net present value (NPV) of total consumer costs and savings expected to result from amended standards at specific CSLs. DOE calculates NES and NPV for each CSL for GSFLs and IRLs as the difference between a base case projection (without new standards) and the standards-case projection (with standards). DOE calculates national energy use for each year beginning with the expected compliance date of the standards, estimating national electricity use for the base case and each potential standard level analyzed. To calculate energy use, product stock in a given year is multiplied by annual energy use. DOE calculates the national NPV of the consumer savings resulting from energy conservation standards in conjunction with the NES. It calculates annual energy expenditures from annual energy use by incorporating projected energy prices and installed stock in each year. DOE calculates annual product expenditures by multiplying the price per lamp by the projected shipments. The difference between a base case and a standards-case scenario gives the national energy bill savings and increased product expenditure in dollars. Chapters 2 and 10 of the preliminary TSD provide more detail on the NIA.

IV. Public Participation

DOE consulted with interested parties on all of the analyses and invites further input on these topics. The preliminary analytical results are subject to revision following review and input from the public. A revised TSD will be made available upon issuance of a NOPR. Any final rule will contain the final analysis results and be accompanied by a final rule TSD.

At the preliminary analysis public meeting, the Department will make a presentation, invite discussion on the rulemaking process as it applies to the covered products, and solicit comments, data, and information from participants and other interested parties. Participants can also attend the public meeting via webinar. Registration information, participant instructions, and information about the capabilities available to webinar participants will be available through the following webpage: http://www1.eere.energy.gov/buildings/appliance_standards/public_meetings_and_comment_deadline.html. Participants are responsible for ensuring their computer systems are compatible with the webinar software. The Department encourages those who wish to participate in the public meeting to obtain the preliminary TSD and to be prepared to discuss its contents. However, public meeting participants need not limit their comments to the topics identified in the TSD. DOE is also interested in receiving information on other relevant issues that participants believe would affect energy conservation standards for these products or that DOE should address in the NOPR.

DOE welcomes all interested parties, regardless of whether they participate in the public meeting, to submit comments and information in writing by the day listed in the DATES section.

The public meeting and associated webinar will be conducted in an informal, conference style. A court reporter will be present to record the minutes of the meeting.

There shall be no discussion of proprietary information, costs, prices, market shares, or other commercial matters regulated by U.S. antitrust laws.

After considering all comments and additional information it receives from interested parties or through further analyses, DOE will consider whether to propose standard levels in a NOPR. Any NOPR would be published in the Federal Register and include proposed energy conservation standards for the products covered by the rulemaking. Members of the public will again have an opportunity to submit written and oral comments on any proposed standards.

Issued in Washington, DC, on February 20, 2013.

Kathleen B. Hogan
Deputy Assistant Secretary for Energy Efficiency
Energy Efficiency and Renewable Energy

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