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DEPARTMENT OF ENERGY

10 CFR Part 430

EERE-2021-BT-STD-0005

RIN 1904-AF09

Energy Conservation Program: Backstop Requirement for General Service Lamps

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

ACTION: Notification of proposed rule; request for comment.

SUMMARY: The U.S. Department of Energy (“DOE”) proposes to codify in the Code of Federal Regulations the 45 lumens per watt (“lm/W”) backstop requirement for general service lamps (“GSLs”) that Congress prescribed in the Energy Policy and Conservation Act, as amended. DOE proposes this backstop requirement applies because DOE failed to complete a rulemaking regarding general service lamps in accordance with certain statutory criteria. This proposal represents a departure from DOE’s previous determination published in 2019 that the backstop requirement was not triggered. DOE welcomes comments on this proposal.

DATES: Written comments and information are requested and will be accepted on or before **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

ADDRESSES: Interested persons are encouraged to submit comments using the Federal eRulemaking Portal at *www.regulations.gov*. Follow the instructions for submitting comments. Alternatively, interested persons may submit comments, identified by docket number EERE–2021–BT–STD–0005, by any of the following methods:

1. *Federal eRulemaking Portal: www.regulations.gov*. Follow the instructions for submitting comments.
2. *E-mail:* to *GSL2021STD0005@ee.doe.gov*. Include docket number EERE–2021–BT–STD–0005 in the subject line of the message.

No telefacsimiles (“faxes”) will be accepted. For detailed instructions on submitting comments and additional information on this process, see section V of this document.

Although DOE has routinely accepted public comment submissions through a variety of mechanisms, including postal mail and hand delivery/courier, the Department has found it necessary to make temporary modifications to the comment submission process in light of the ongoing COVID-19 pandemic. DOE is accepting only electronic submissions at this time. If a commenter finds that this change poses an undue hardship, please contact Appliance Standards Program staff at (202) 586-1445 to discuss the need for alternative arrangements. Once the COVID-19 pandemic health emergency is resolved, DOE anticipates resuming all of its regular options for public comment submission, including postal mail and hand delivery/courier.

Docket: The docket for this activity, which includes *Federal Register* notices, comments, and other supporting documents/materials, is available for review at *www.regulations.gov*. All documents in the docket are listed in the *www.regulations.gov* index. However, some documents listed in the index, such as those containing information that is exempt from public disclosure,

may not be publicly available.

The docket web page can be found at www.regulations.gov/#!docketDetail;D=EERE-2021-BT-STD-0005. The docket web page contains instructions on how to access all documents, including public comments, in the docket.

FOR FURTHER INFORMATION CONTACT:

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For further information on how to submit a comment, or review other public comments and the docket, contact the Appliance and Equipment Standards Program staff at (202) 287-1445 or by e-mail: ApplianceStandardsQuestions@ee.doe.gov.

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I. Introduction

A. Authority

The Energy Policy and Conservation Act, as amended (“EPCA”)¹, authorizes DOE to regulate the energy efficiency of a number of consumer products and certain industrial equipment. (42 U.S.C. 6291-6317) Title III, Part B² of the EPCA, established the Energy

¹ All references to EPCA in this document refer to the statute as amended through the Energy Act of 2020, Public Law 116-260 (Dec. 27, 2020).

² For editorial reasons, upon codification in the U.S. Code, Part B was redesignated Part A.

Conservation Program for Consumer Products Other Than Automobiles. (42 U.S.C. 6291-6309)

These products include GSLs, the subject of this notice of proposed rulemaking (“NOPR”).

EPCA directs DOE to conduct two rulemaking cycles to evaluate energy conservation standards for GSLs.³ (42 U.S.C. 6295(i)(6)(A)-(B)) For the first rulemaking cycle, EPCA directs DOE to initiate a rulemaking process prior to January 1, 2014, to determine whether: (1) to amend energy conservation standards for GSLs and (2) the exemptions for certain incandescent lamps should be maintained or discontinued. (42 U.S.C. 6295(i)(6)(A)(i)) The rulemaking is not limited to incandescent lamp technologies and must include a consideration of a minimum standard of 45 lumens per watt for GSLs. (42 U.S.C. 6295(i)(6)(A)(ii)) EPCA provides that if the Secretary determines that the standards in effect for GSILs should be amended, a final rule must be published by January 1, 2017, with a compliance date at least 3 years after the date on which the final rule is published. (42 U.S.C. 6295(i)(6)(A)(iii)) The Secretary must also consider phased-in effective dates after considering certain manufacturer and retailer impacts. (42 U.S.C. 6295(i)(6)(A)(iv)) If DOE fails to complete a rulemaking in accordance with 42 U.S.C. 6295(i)(6)(A)(i)-(iv), or if a final rule from the first rulemaking cycle does not produce savings greater than or equal to the savings from a minimum efficacy standard of 45 lm/W, the statute provides a “backstop” under which DOE must prohibit sales of GSLs that do not meet a minimum 45 lm/W standard. (42 U.S.C. 6295(i)(6)(A)(v))

³ GSLs are defined in EPCA to include GSILs, compact fluorescent lamps (“CFLs”), general service light-emitting diode (“LED”) lamps and organic light emitting diode (“OLED”) lamps, and any other lamps that the Secretary of Energy (Secretary) determines are used to satisfy lighting applications traditionally served by general service incandescent lamps. (42 U.S.C. 6291(30)(BB)(i)) The term “general service lamp” does not include any of the 22 lighting applications or bulb shapes explicitly not included in the definition of “general service incandescent lamp,” or any general service fluorescent lamp or incandescent reflector lamp. (42 U.S.C. 6291(30)(BB)(ii))

EPCA further directs DOE to initiate a second rulemaking cycle by January 1, 2020, to determine whether standards in effect for GSILs (which are a subset of GSLs) should be amended with more stringent maximum wattage requirements than EPCA specifies, and whether the exemptions for certain incandescent lamps should be maintained or discontinued. (42 U.S.C. 6295(i)(6)(B)(i)) As in the first rulemaking cycle, the scope of the second rulemaking is not limited to incandescent lamp technologies. (42 U.S.C. 6295(i)(6)(B)(ii))

B. March 2016 Notice of Proposed Rulemaking and October 2016 Notice of Proposed Definition and Data Availability

Pursuant to its statutory authority, DOE published a notice of proposed rulemaking (“NOPR”) on March 17, 2016, that addressed the first question that Congress directed it to consider—whether to amend energy conservation standards for GSLs (“March 2016 NOPR”). 81 FR 14528, 14629–30 (Mar. 17, 2016). In the March 2016 NOPR, DOE stated that it would be unable to undertake any analysis regarding GSILs and other incandescent lamps because of a then-applicable congressional restriction (“the Appropriations Rider”). *See* 81 FR 14528, 14540–14541. The Appropriations Rider prohibited expenditure of funds appropriated by that law to implement or enforce: (1) 10 CFR 430.32(x), which includes maximum wattage and minimum rated lifetime requirements for GSILs; and (2) standards set forth in section 325(i)(1)(B) of EPCA (42 U.S.C. 6295(i)(1)(B)), which sets minimum lamp efficiency ratings for incandescent reflector lamps (“IRLs”). Under the Appropriations Rider, DOE was restricted from undertaking the analysis required to address the first question presented by Congress, but was not so limited in addressing the second question—that is, DOE was not prevented from determining whether the exemptions for certain incandescent lamps should be maintained or

discontinued. To address that second question, DOE published a Notice of Proposed Definition and Data Availability (“NOPDDA”), which proposed to amend the definitions of GSIL, GSL, and related terms (“October 2016 NOPDDA”). 81 FR 71794, 71815 (Oct. 18, 2016). Notably, the Appropriations Rider, which was originally adopted in 2011 and readopted and extended continuously in multiple subsequent legislative actions, expired on May 5, 2017, when the Consolidated Appropriations Act, 2017 was enacted.⁴

C. January 2017 Final Rules

On January 19, 2017, DOE published two final rules concerning the definitions of GSL, GSIL, and related terms (“January 2017 Definition Final Rules”). 82 FR 7276; 82 FR 7322. The January 2017 Definition Final Rules amended the definitions of GSIL and GSL by bringing certain categories of lamps that had been excluded by statute from the definition of GSIL within the definitions of GSIL and GSL. DOE used two final rules in 2017 to amend the definitions of GSIL and GSLs by addressing the majority of the definition changes in one final rule and addressing the exemption for IRLs in the second final rule. These two rules were issued simultaneously, with the first rule eschewing a determination regarding the existing exemption for IRLs in the definition of GSL and the second rulemaking discontinuing that exemption from the GSL definition. 82 FR 7276, 7312; 82 FR 7322, 7323. As in the October 2016 NOPDDA, DOE stated that the January 2017 Definition Final Rules related only to the second question that Congress directed DOE to consider, regarding whether to maintain or discontinue “exemptions” for certain incandescent lamps. 82 FR 7276, 7277; 82 FR 7322, 7324 (*See also* 42 U.S.C. 6295(i)(6)(A)(i)(II)). That is, neither of the two final rules issued on January 19, 2017,

⁴ See Consolidated Appropriations Act of 2017 (Public Law. 115–31, div. D, tit. III); see also Consolidated Appropriations Act, 2018 (Public Law 115–141).

established energy conservation standards applicable to GSLs. DOE explained that the Appropriations Rider prevented it from establishing, or even analyzing, standards for GSILs. 82 FR 7276, 7278. Instead, DOE explained that it would either impose standards for GSLs in the future pursuant to its authority to develop GSL standards, or apply the backstop standard prohibiting the sale of lamps not meeting a 45 lm/W efficacy standard. 82 FR 7276, 7277-7278. The two final rules were to become effective as of January 1, 2020.

D. September 2019 Withdrawal Rule and December 2019 Final Determination

On March 17, 2017, the National Electrical Manufacturer’s Association (“NEMA”) filed a petition for review of the January 2017 Definition Final Rules in the U.S. Court of Appeals for the Fourth Circuit. *National Electrical Manufacturers Association v. United States Department of Energy*, No. 17-1341. NEMA claimed that DOE “amend[ed] the statutory definition of ‘general service lamp’ to include lamps that Congress expressly stated were ‘not include[d]’ in the definition” and adopted an “unreasonable and unlawful interpretation of the statutory definition.” Pet. 2. Prior to merits briefing, the parties reached a settlement agreement under which DOE agreed, in part, to issue a notice of data availability requesting data for GSILs and other incandescent lamps to assist DOE in determining whether standards for GSILs should be amended (the first question of the rulemaking required by 42 U.S.C. 6295(i)(6)(A)(i)).

With the removal of the Appropriations Rider in the Consolidated Appropriations Act, 2017, DOE was no longer restricted from undertaking the analysis and decision-making required to address the first question presented by Congress, *i.e.*, whether to amend energy conservation standards for general service lamps, including GSILs. Thus, on August 15, 2017, DOE

published a notice of data availability and request for information (“NODA”) seeking data for GSILs and other incandescent lamps (“August 2017 NODA”). 82 FR 38613.

The purpose of the August 2017 NODA was to assist DOE in determining whether standards for GSILs should be amended. (42 U.S.C. 6295(i)(6)(A)(i)(I)) Comments submitted in response to the August 2017 NODA also led DOE to re-consider the decisions it had already made with respect to the second question presented to DOE—whether the exemptions for certain incandescent lamps should be maintained or discontinued. 84 FR 3120, 3122 (*See also* 42 U.S.C. 6295(i)(6)(A)(i)(II)) As a result of the comments received in response to the August 2017 NODA, DOE also re-assessed the legal interpretations underlying certain decisions made in the January 2017 Definition Final Rules. *Id.*

On February 11, 2019, DOE published a NOPR proposing to withdraw the revised definitions of GSL, GSIL, and the new and revised definitions of related terms that were to go into effect on January 1, 2020 (“February 2019 Definition NOPR”). 84 FR 3120. In a final rule published September 5, 2019, DOE finalized the withdrawal of the definitions in the January 2017 Definition Final Rules and maintained the existing regulatory definitions of GSL and GSIL, which are the same as the statutory definitions of those terms (“September 2019 Withdrawal Rule”). 84 FR 46661. The September 2019 Withdrawal Rule revisited the same primary question addressed in the January 2017 Definition Final Rules, namely, the statutory requirement for DOE to determine whether “the exemptions for certain incandescent lamps should be maintained or discontinued.” 42 U.S.C. 6295(i)(6)(A)(i)(II) (*See also* 84 FR 46667). In the rule, DOE also addressed its interpretation of the statutory backstop at 42 U.S.C. 6295(i)(6)(A)(v) and

concluded the backstop had not been triggered. 84 FR 46663–46664. DOE reasoned that 42 U.S.C. 6295(i)(6)(A)(iii) “does not establish an absolute obligation on the Secretary to publish a rule by a date certain.” 84 FR 46663. “Rather, the obligation to issue a final rule prescribing standards by a date certain applies if, and only if, the Secretary makes a determination that standards in effect for GSILS need to be amended.” *Id.* DOE further stated that, since it had not yet made the predicate determination on whether to amend standards for GSILS, the obligation to issue a final rule by a date certain did not yet exist and, as a result, the condition precedent to the potential imposition of the backstop requirement did not yet exist and no backstop requirement had yet been imposed. *Id.* at 46664.

Similar to the January 2017 Definition Final Rules, the September 2019 Withdrawal Rule clarified that DOE was not determining whether standards for GSLs, including GSILs, should be amended. DOE stated it would make that determination in a separate rulemaking. *Id.* at 46662. DOE initiated that separate rulemaking by publishing a notice of proposed determination (“NOPD”) on September 5, 2019, regarding whether standards for GSILs should be amended (“September 2019 NOPD”). 84 FR 46830. In conducting its analysis for that notice, DOE used the data and comments received in response to the August 2017 NODA and relevant data and comments received in response to the February 2019 Definition NOPR, and DOE tentatively determined that the current standards for GSILS do not need to be amended because more stringent standards are not economically justified. *Id.* at 46831. DOE finalized that tentative determination on December 27, 2019. 84 FR 71626 (“December 2019 Final Determination”). DOE also concluded in the December 2019 Final Determination that, because it had made the predicate determination not to amend standards for GSILS, there was no obligation to issue a

final rule by January 1, 2017, and, as a result, the backstop requirement had not been imposed. *Id.* at 71636.

Two petitions for review were filed in the U.S. Court of Appeals for the Second Circuit challenging the September 2019 Withdrawal Rule. The first petition was filed by 15 States,⁵ New York City, and the District of Columbia. *See New York v. U.S. Department of Energy*, No. 19-3652. The second petition was filed by six organizations⁶ that included environmental, consumer, and public housing tenant groups. *See Natural Resources Defense Council v. U.S. Department of Energy*, No. 19-3658. The petitions were subsequently consolidated. Merits briefing has been concluded, but the case has not been argued or submitted to the Circuit panel for decision. The case has been in abeyance since March 2021, pending further rulemaking by DOE.

Additionally, in two separate petitions also filed in the Second Circuit, groups of petitioners that were essentially identical to those that filed the lawsuit challenging the September 2019 Withdrawal Rule challenged the December 2019 Final Determination. *See Natural Resources Defense Council v. U.S. Department of Energy*, No. 20-743; *New York v. U.S. Department of Energy*, No. 20-743. On April 2, 2020, those cases were put into abeyance pending the outcome of the September 2019 Withdrawal Rule petitions.

⁵ The petitioning States are the States of New York, California, Colorado, Connecticut, Illinois, Maryland, Maine, Michigan, Minnesota, New Jersey, Nevada, Oregon, Vermont, and Washington and the Commonwealth of Massachusetts.

⁶ The petitioning organizations are the Natural Resource Defense Council, Sierra Club, Consumer Federation of America, Massachusetts Union of Public Housing Tenants, Environment America, and U.S. Public Interest Research Group.

E. Subsequent Review

On January 20, 2021, President Biden issued Executive Order (“E.O.”) 13990, “Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis.” 86 FR 7037 (Jan. 25, 2021). Section 1 of that Order lists a number of policies related to the protection of public health and the environment, including reducing greenhouse gas emissions and bolstering the Nation's resilience to climate change. *Id.* at 7041. Section 2 of the Order instructs all agencies to review “existing regulations, orders, guidance documents, policies, and any other similar agency actions promulgated, issued, or adopted between January 20, 2017, and January 20, 2021, that are or may be inconsistent with, or present obstacles to, [these policies].” *Id.* Agencies are then directed, as appropriate and consistent with applicable law, to consider suspending, revising, or rescinding these agency actions and to immediately commence work to confront the climate crisis. *Id.*

In accordance with EO 13990, on May 25, 2021, DOE published a request for information (“RFI”) initiating a re-evaluation of its prior determination that the Secretary was not required to implement the statutory backstop requirement for GSLs (“May 2021 RFI”). 86 FR 28001. DOE solicited information regarding the availability of lamps that would satisfy a minimum efficacy standard of 45 lm/W, as well other information that may be relevant to a possible implementation of the statutory backstop. *Id.*

DOE received comments in response to the May 2021 RFI from the interested parties listed in Table I.1.

Table I.1 Written Comments Received in Response to the May 2021 RFI

Commenter(s)	Abbreviation	Commenter Type
California Energy Commission	CEC	State Official/Agency
California Investor Owned Utilities	CA IOUs	Utilities
National Electrical Manufacturers Association	NEMA	Trade Association
Appliance Standards Awareness Project, Natural Resources Defense Council, Alliance to Save Energy, American Council for an Energy-Efficient Economy, National Consumer Law Center, Northeast Energy Efficiency Partnerships, Northeast Energy Efficiency Alliance	Joint Commenters	Efficiency Organizations
American Lighting Association	ALA	Trade Association
China WTO/TBT National Notification & Enquiry Center	China	Country Official
Sierra Club and Earthjustice	SC & EJ	Efficiency Organization
Connecticut Department of Energy and Environmental Protection	Connecticut DEEP	State Official/Agency
Montana Environmental Information Center	MEIC	Efficiency Organization
National Association of State Energy Officials	NASEO	Efficiency Organization
Utah Clean Energy	UCE	Efficiency Organization
State of Washington Department of Commerce	WDOC	State Official/Agency
Climate Smart Missoula	CSM	Efficiency Organization
Southwest Energy Efficiency Project	SWEEP	Efficiency Organization
New Buildings Institute	NBI	Efficiency Organization
Urban Green Council	UGC	Efficiency Organization
Signify North America Corporation	Signify	Manufacturer
State of Rhode Island Office of Energy Resources	OER	State Official/Agency
Consumer Federation of America, The National Consumer Law Center, and 24 consumer groups listed	CFA and NCLC	Efficiency Organization
Oregon Department of Energy	ODOE	State Official/Agency
Environment America	EA	Efficiency Organization
VEIC	VEIC	Energy Efficiency Utility
NW Power and Conservation Council	NW Power and Conservation Council	Energy Efficiency Utility
Colorado Energy Office	CEO	State Official/Agency
Individual Commentor	Johnson	Individual
Individual Commentor	Anonymous	Individual
Individual Commentor	Mary	Individual
Interfaith Power & Light	IP&L	Efficiency Organization

The comments specific to the 45 lm/W backstop requirement and implementation of the backstop requirement are summarized and addressed in the following section. A parenthetical reference at the end of a comment quotation or paraphrase provides the location of the item in the public record.⁷

II. Proposed Rule

In this notice, DOE proposes a determination that the 45 lm/W backstop requirement for GSLs at 42 U.S.C. 6295(i)(6)(A)(v) has been triggered because of DOE’s failure to complete the first phase of rulemaking in accordance with 42 U.S.C. 6295(i)(6)(A)(i)-(iv). The effect of this failure to complete certain rulemakings would be that DOE must prohibit sales of GSLs that do not meet a minimum 45 lm/W standard. (42 U.S.C. 6295(i)(6)(A)(v))

A. Statutory Backstop Requirement

As described in section I.A of this document, EPCA specifies several criteria that DOE must adhere to in its first rulemaking cycle for GSLs. (*See* 42 U.S.C. 6295(i)(6)(A)(i) – (iv)) If DOE fails to complete a rulemaking in accordance with clauses (i) through (iv) of 42 U.S.C. 6295(i)(6)(A) or if the final rule does not produce savings that are greater than or equal to the savings from a minimum efficacy standard of 45 lm/W, clause (v) requires DOE to prohibit sales of lamps with an efficacy below 45 lm/W “effective beginning January 1, 2020.”

⁷ The parenthetical reference provides a reference for information located in the docket of DOE’s re-evaluation of the statutory backstop for GSLs. (Docket No. EERE-2021-BT-STD-0005, which is maintained at www.regulations.gov). The references are arranged as follows: (commenter name, comment docket ID number at page of that document).

1. Prior to the September 2019 Withdrawal Rule

In the March 2016 NOPR proposing energy conservation standards for GSLs, DOE explicitly addressed the backstop provision at 42 U.S.C. 6295(i)(6)(A)(v). 81 FR 14528 (March 17, 2016). Specifically, DOE stated that due to the Appropriations Rider, DOE was unable to perform the analysis required in clause (i) of 42 U.S.C. 6295(i)(6)(A) and as a result, the backstop in 6295(i)(6)(A)(v) is automatically triggered. 81 FR 14528, 14540. DOE reiterated that it was not considering GSILs, including exclusions or exemptions, in the rulemaking due to the Appropriations Rider. 81 FR 14528, 14582. DOE further explained that under 42 U.S.C. 6295(i)(6)(A)(v), if it failed to (1) complete a rulemaking in accordance with clauses (i) through (iv), which included determining whether the exemptions for certain incandescent lamps should be maintained or discontinued, or (2) publish a final rule that would meet or exceed the energy savings associated with the statutory 45 lm/W requirement, then the backstop would be triggered beginning January 1, 2020. *Id.* Thus, in the March 2016 NOPR, DOE assumed that the backstop would be triggered beginning January 1, 2020. *Id.* Further, DOE stated that lamps that meet the proposed GSL definition would be subject to the 45 lm/W efficacy level and estimated an associated energy savings of approximately 3 quadrillion Btu ("quads") for lamps sold in 2020–2049 and a carbon reduction of approximately 200 million metric tons by 2030. 81 FR 14528, 14534.

In the January 2017 Definition Final Rules, DOE did not interpret paragraph (6)(A) as requiring DOE to establish amended standards for GSLs. 82 FR 7276, 7283. DOE stated that clause (v) expressly contemplates the possibility that DOE would not finalize a rule that develops alternative standards for GSLs. *Id.* In these rules, DOE did not make any determination

regarding standards for GSLs. 82 FR 7278, 7316. DOE acknowledged that the backstop would go into effect if DOE failed to complete the rulemaking as prescribed by EPCA by January 1, 2017, or the final rule did not produce savings that are greater than or equal to the savings from a minimum efficacy standard of 45 lm/W. *Id.* While not explicitly stating its assumption that the backstop requirement would be triggered, DOE set a January 1, 2020 effective date for the definitions rule, which coincided with the effective date of the backstop requirement. DOE also noted its commitment to working with manufacturers to ensure a successful transition if the backstop standard went into effect. To that end, on January 18, 2017, DOE issued a “Statement Regarding Enforcement of 45 LPW General Service Lamp Standard” (“January 2017 Enforcement Statement”) stating that EPCA requires that, effective beginning January 1, 2020, DOE shall prohibit the sale of any GSL that does not meet a minimum efficacy standard of 45 lm/W.⁸ In the enforcement statement, DOE advised that it could issue a policy that provides additional time allowing for the necessary flexibility for manufacturers to comply with the 45 lm/W standard. *Id.*

2. September 2019 Withdrawal Rule and the December 2019 Final Determination

In the September 2019 Withdrawal Rule, DOE concluded that the backstop requirement had not been triggered. 84 FR 46661, 46664. DOE stated that it initiated the first GSL standards rulemaking process by publishing a notice of availability of a framework document in December 2013, satisfying the requirements in 42 U.S.C. 6295(i)(6)(A)(i) to initiate a rulemaking by January 1, 2014. 84 46661, 46663. DOE further stated its belief that Congress intended for the

⁸ Available at www.energy.gov/sites/default/files/2017/01/f34/Statement%20on%20Enforcement%20of%20GSL%20Standard%20-%201.18.2017.pdf.

Secretary to make a predicate determination about GSILs, and that the obligation to issue a final rule prescribing standards by a date certain applies if, and only if, the Secretary makes a determination that standards in effect for GSILs need to be amended. 84 FR 46661, 46663–46664. Since DOE had not yet made the predicate determination on whether to amend standards for GSILs, DOE found the obligation to issue a final rule by a date certain did not yet exist and, as a result, the condition precedent to the potential imposition of the backstop requirement did not yet exist and no backstop requirement had yet been imposed. *Id.*

In the December 2019 Final Determination, DOE reiterated its interpretation that the statutory deadline for the Secretary to complete a rulemaking for GSILs in 42 U.S.C. 6295(i)(6)(A)(iii) does not establish an absolute obligation on the Secretary to publish a rule by a date certain. 84 FR 71626, 71635. Instead, DOE stated that this deadline applies only if the Secretary makes a determination that standards for GSILs should be amended. *Id.* at 71636. Otherwise, DOE again stated, it could result in a situation where a prohibition is automatically imposed for a category of lamps for which no new standards, much less prohibition, are necessary. *Id.* In the December 2019 Final Determination, since DOE made what it characterized as the predicate determination that standards for GSILs do not need to be amended, DOE found that the obligation to issue a final rule by a date certain did not exist and, as a result, the condition precedent to the potential imposition of the backstop requirement did not exist and no backstop requirement had been imposed. *Id.*

3. Comments to the May 2021 RFI Regarding Operation of the Backstop

In the May 2021 RFI, DOE stated that if it were to determine that it did not fulfill the criteria in paragraphs (i)-(iv) of 42 U.S.C. 6295, the sales prohibition under the backstop requirement would affect any lamp type that is defined as a GSL. 86 FR 28001, 28003. Accordingly, DOE requested information about the lamp types discussed in the following sections, including whether a phased implementation would be appropriate for certain lamp types. *Id.* In addition to comments and data regarding the efficacy and availability of certain lamps, the Joint Commenters, CA IOUs, and CEC commented on the operation of the backstop, asserting that it has been triggered. (Joint Commenters, No. 19 at p. 13; CA IOUs, No. 22 at p. 2; CEC, No. 23 at pp. 2-4)

The Joint Commenters asserted that the backstop has been triggered because DOE failed to issue a new standard by January 1, 2017. (Joint Commenters, No. 19 at p. 13) The Joint Commenters cited the January 2017 Enforcement Statement in support of their assertion and stated that no subsequent action taken by DOE could change the fact that the 45 lm/W standard has been triggered. (*Id.*) The CA IOUs asserted that the backstop has been triggered as a result of DOE not issuing rulemakings by deadlines specified in EPCA. (CA IOUs, No. 22 at p. 2) CEC asserted that DOE failed to meet the requirements of 42 U.S.C. 6295(i)(6)(A)(i)-(iv). (CEC, No. 23 at p. 2) CEC stated because DOE was unable to consider incandescent lighting technologies when it initiated a rulemaking evaluating GSL standards on December 9, 2013, due to the Appropriations Rider, DOE did not evaluate whether the exemptions for certain incandescent technologies should be maintained or discontinued, as required by section 6295(i)(6)(A)(i)(II). (CEC, No. 23 at p. 3) CEC stated that the U.S. District Court for the

Eastern District of California had found that DOE likely failed to meet the requirements of 6295(i)(6)(A)(i)-(iv).⁹ *Id.* CEC further commented that because DOE failed to complete a rulemaking in accordance with subclauses (i) through (iv), DOE does not have discretion regarding implementation of the backstop. (CEC, No. 23 at p. 4) CEC noted that EPCA states that if the Secretary fails to complete a rulemaking in accordance with the statutory criteria, the Secretary “shall” prohibit GSLs that do not meet the minimum 45 lm/W standards and that the Supreme Court has found the term “shall” is “unmistakably” mandatory language.¹⁰ *Id.*

4. Proposed Determination Regarding the Backstop Requirement

Congress identified two circumstances that would trigger application of the backstop requirement: (1) if DOE “fails to complete a rulemaking in accordance with clauses (i) through (iv)” of section 6295(i)(6)(A); or (2) “if the final rule” promulgated under this rulemaking “does not produce savings that are greater than or equal to the savings from a minimum efficacy standard of 45 lumens per watt.” 42 U.S.C. 6295(i)(6)(A)(v). DOE preliminarily determines that the backstop requirement has been triggered because both of the foregoing circumstances have occurred.

a. DOE failed to complete the first cycle of rulemaking in accordance with clauses (i) through (iv) of 42 U.S.C. 6295(i)(6)(A) for at least two reasons. The first reason is that DOE

⁹ The matter cited by CEC was an order denying NEMA’s motion for judgment on the pleadings in the U.S. District Court for the Eastern District of California. At issue was whether California regulations were exempted from preemption under 42 U.S.C. 6295(i)(6)(A)(vi). *National Electrical Manufacturers Association v. California Energy Commission*, No. 2:17-CV-01625-KJM-AC (E.D. Cal. 2017). In denying NEMA’s motion, the Court stated that “the court cannot conclude as a matter of law that [the January 2017 Definition Final Rules were] ‘in accordance with’ clause (i), much less clauses (i)–(iv) [of section 6295(i)(6)(A)].” *Id.* at p. 13.

¹⁰ CEC cited *Washington v. Harper*, 494 U.S. 210, 221 (1990), as well as a subsequent opinion by the U.S. Court of Appeals for the Ninth Circuit interpreting the use of “shall” in EPCA (*see Natural Resource Defense Council v. Perry*, 940 F.3d 1072, 1078 (9th Cir. 2019)). (CEC, No. 23 at p. 4)

failed to complete this first GSL rulemaking timely. The structure of section 6295(i)(6)(A) reflects an expectation by Congress that by January 1, 2017, the outcome of DOE's GSL rulemaking would have been known, and, if either amended standards or the backstop were to be applicable, those would be in place no later than January 1, 2020.

The position DOE advanced in the September 2019 Withdrawal Rule and the December 2019 Determination—namely, that the backstop provision is premised on the Secretary first making a determination that standards for GSILs should be amended and that the statute does not impose a deadline for the GSIL determination—fails to give meaning to all of the surrounding statutory text, as DOE is obligated to do. *See* 84 FR 46661, 46663-46664; 84 FR 71626, 71635; *see also* 42 U.S.C. 6295(i)(6)(A)(iii). In looking at the surrounding context of section 6295(i)(6)(A) and 6295(i)(6)(B), it is clear that Congress intended DOE's first GSL rulemaking to be completed by January 1, 2017—primarily due to Congress providing interested parties a gap of time between the conclusion of this rulemaking and the deadline for compliance, thus giving interested parties time to adjust to any changes.

In section 6295(i)(6)(A), Congress explicitly contemplated two possible outcomes: (1) a final rule amending standards for GSLs, or (2) imposition of the backstop of 45 lm/W of 45 lm/W. Under the first scenario, DOE would have been obligated to publish a final rule by January 1, 2017, with an effective date no earlier than three years after publication—thereby giving manufacturers a three-year lead time to prepare for the changed standards. *See* 42 U.S.C. 6295(i)(6)(A)(iii). Under the second scenario, the backstop would come into effect, but not until

January 1, 2020—giving manufacturers the same three-year lead time to adjust to the forthcoming efficacy standard of 45 lm/W. *See id.* at 6295(i)(6)(A)(v).

Even if the statute contemplated a third possible scenario—a determination by DOE that standards for GSLs need not be amended under which the backstop was not triggered—it is clear from section 6295(i)(6)(A) that Congress expected this determination would be made no later than January 1, 2017.

This allowance for lead time is reflected in the preemption exception provision in section 6295(i)(6)(A)(vi), which gives California and Nevada the authority to adopt, with an effective date beginning January 1, 2018 or after, either:

- (1) A final rule adopted by the Secretary in accordance with 42 U.S.C. 6295(i)(6)(A)(i)-(iv);
- (2) If a final rule has not been adopted in accordance with 42 U.S.C. 6295(i)(6)(A)(i)-(iv), the backstop requirement under 42 U.S.C. 6295(i)(6)(A)(v); or
- (3) In the case of California, if a final rule has not been adopted in accordance with 42 U.S.C. 6295(i)(6)(A)(i)-(iv), any California regulations related to “these covered products” adopted pursuant to state statute in effect as of the date of enactment of EISA 2007.

This provision allows California and Nevada to implement either a final DOE rule amending standards for GSLs or the 45 lm/w backstop standard on January 1, 2018, two years earlier than the rest of the country. This provision thus assumes that California and Nevada would have to

have known whether DOE had completed a final rule amending standards for GSILs by January 1, 2017, so that manufacturers subject to standards in those states would have a practicable one-year lead time to comply.

Lastly, Congress' mandate in 42 U.S.C. 6295(i)(6)(B) that DOE initiate the second cycle of rulemaking by January 1, 2020, coincides with a schedule in which standards are adopted (or the backstop is implicated) by January 1, 2017 with a minimum three-year lead time.

In addition to failing to complete the first cycle of rulemaking timely, the second reason why DOE's rulemaking was not "in accordance with clauses (i) through (iv)" of section 6295(i)(6)(A) is because DOE's rulemaking did not "consider[] a minimum standard of 45 lumens per watt for general service lamps." 42 U.S.C. 6295(i)(6)(A)(ii)(II). DOE considered GSILs only in the scope of the December 2019 final determination analysis, with lamps having a maximum efficacy less than 45 lumens per watt. 84 FR 71626. While DOE did not analyze lamps other than GSILs in the scope of the December 2019 final determination analysis, DOE did look at the impact on GSIL shipments as a result of consumers choosing to purchase other lamps, such as CFLs and LED lamps, if standards for GSILs were amended as discussed in section VI.A of the December 2019 final determination. Therefore, DOE could not have considered a 45 lumens per watt standard level as part of that rulemaking determination because of the GSIL limited scope.

b. Although DOE's failure to "complete a rulemaking in accordance with clauses (i) through (iv)" is itself sufficient to trigger application of the backstop, DOE also did not

determine whether its final rule (or rules) in this first cycle of rulemaking produced savings that are “greater than or equal to the savings from a minimum efficacy standard of 45 lm/W[.]” 42 U.S.C. 6295(i)(6)(A)(v). That is an independent basis for application of the backstop under section 6295(i)(6)(v). Congress provided that the backstop would be imposed “if the final rule does not produce energy savings that are greater than or equal to the savings from a minimum efficacy standard of 45 lm/W.” *Id.* In neither the September 2019 Withdrawal Rule nor the December 2019 Determination did DOE compare whether any energy savings resulting from either rule would produce energy savings that are greater than or equal to a minimum efficacy standard of 45 lm/W.¹¹

For the foregoing reasons, DOE preliminarily determines the backstop requirement in 42 U.S.C. 6295(i)(6)(A)(v) was triggered and should have been effective as of January 1, 2020.

B. Scope of Backstop Requirement

Once triggered, the backstop requirement as specified in 42 U.S.C. 6295(i)(6)(A)(v) directs DOE to prohibit the sale of GSLs that do not meet a minimum requirement of 45 lm/W. DOE’s current regulatory definition for GSL is consistent with the statutory definition for GSL, which includes GSILs, CFLs, general service LED lamps and OLED lamps, and any other lamps

¹¹ Although DOE did perform various energy savings analyses in the December 2019 Final Determination, it was not the comparison to a 45 lumens per watt efficacy standard required by 42 U.S.C. 6295(i)(6)(A)(v). *See, e.g.*, 84 FR. at 71632 (“The no-new-standards case represents a projection of energy consumption that reflects how the market for a product would likely evolve in the absence of amended energy conservation standards. In this case, the standards case represents energy savings not from the technology outlined in a [trial standard level], but from product substitution as consumers are priced out of the market for GSILs.”).

that the Secretary determines are used to satisfy lighting applications traditionally served by GSILs as defined in EPCA. 10 CFR 430.2. (*See also*, 42 U.S.C. 6291(30)(BB)(i)) DOE's current regulatory definition of GSL does not include any of the 22 lighting applications or bulb shapes explicitly not included in the definition of GSIL,¹² or any general service fluorescent lamp or IRL. 10 CFR 430.2. (*See also*, 42 U.S.C. 6291(30)(BB)(ii))

By comparison, the definitions of GSL and GSIL as amended by the January 2017 Definition Final Rules were broader than their statutory definitions. On August 19, 2021, DOE published a NOPR to amend the definitions of GSL and GSIL as previously set forth in the January 2017 Definition Final Rules (“August 2021 Definition NOPR”). 86 FR 46611. Specifically, DOE proposed to adopt the definitions of GSL and GSIL as previously adopted in the January 2017 Definition Final Rules by amending the definition of GSL to be a lamp that has an ANSI base; is able to operate at a voltage of 12 volts or 24 volts, at or between 100 to 130 volts, at or between 220 to 240 volts, or at 277 volts for integrated lamps, or is able to operate at any voltage for non-integrated lamps; has an initial lumen output of greater than or equal to 310 lumens (or 232 lumens for modified spectrum general service incandescent lamps) and less than or equal to 3,300 lumens; is not a light fixture; is not an LED downlight retrofit kit; and is used in general lighting applications. 86 FR 46624 – 46625. Hence, DOE proposed that GSLs

¹² As defined in EPCA “general service incandescent lamp” does not include the following incandescent lamps: (I) An appliance lamp; (II) A black light lamp; (III) A bug lamp; (IV) A colored lamp; (V) An infrared lamp; (VI) A left-hand thread lamp; (VII) A marine lamp; (VIII) A marine signal service lamp; (IX) A mine service lamp; (X) A plant light lamp; (XI) A reflector lamp; (XII) A rough service lamp; (XIII) A shatter-resistant lamp (including a shatter-proof lamp and a shatter-protected lamp); (XIV) A sign service lamp; (XV) A silver bowl lamp; (XVI) A showcase lamp; (XVII) A 3-way incandescent lamp; (XVIII) A traffic signal lamp; (XIX) A vibration service lamp; (XX) A G shape lamp (as defined in ANSI C78.20-2003 and C79.1-2002 1 with a diameter of 5 inches or more; (XXI) A T shape lamp (as defined in ANSI C78.20-2003 and C79.1-2002) and that uses not more than 40 watts or has a length of more than 10 inches; (XXII) A B, BA, CA, F, G16-1/2, G-25, G30, S, or M-14 lamp (as defined in ANSI C79.1-2002 and ANSI C78.20-2003) of 40 watts or less. (42 U.S.C. 6291(30)(D)(ii))

include, but not be limited to, GSILs, CFLs, general service LED lamps, and general service OLED lamps. *Id.* Further, DOE proposed to re-adopt the conclusion DOE made in the January 2017 Definition Final Rules that GSLs do not include:

- (1) Appliance lamps;
- (2) Black light lamps;
- (3) Bug lamps;
- (4) Colored lamps;
- (5) G shape lamps with a diameter of 5 inches or more as defined in ANSI C79.1–2002;
- (6) General service fluorescent lamps;
- (7) High intensity discharge lamps;
- (8) Infrared lamps;
- (9) J, JC, JCD, JCS, JCV, JCX, JD, JS, and JT shape lamps that do not have Edison screw bases;
- (10) Lamps that have a wedge base or prefocus base;
- (11) Left-hand thread lamps;
- (12) Marine lamps;
- (13) Marine signal service lamps;
- (14) Mine service lamps;
- (15) MR shape lamps that have a first number symbol equal to 16 (diameter equal to 2 inches) as defined in ANSI C79.1–2002, operate at 12 volts, and have a lumen output greater than or equal to 800;
- (16) Other fluorescent lamps;
- (17) Plant light lamps;

- (18) R20 short lamps;
- (19) Reflector lamps that have a first number symbol less than 16 (diameter less than 2 inches) as defined in ANSI C79.1– 2002 and that do not have E26/E24, E26d, E26/50x39, E26/53x39, E29/28, E29/53x39, E39, E39d, EP39, or EX39 bases;
- (20) S shape or G shape lamps that have a first number symbol less than or equal to 12.5 (diameter less than or equal to 1.5625 inches) as defined in ANSI C79.1–2002;
- (21) Sign service lamps;
- (22) Silver bowl lamps;
- (23) Showcase lamps;
- (24) Specialty MR lamps;
- (25) T shape lamps that have a first number symbol less than or equal to 8 (diameter less than or equal to 1 inch) as defined in ANSI C79.1–2002, nominal overall length less than 12 inches, and that are not compact fluorescent lamps;
- (26) Traffic signal lamps.

See 86 FR 46625.

In the August 2021 Definition NOPR, in re-adopting definitions DOE previously adopted in the January 2017 Final Definition Rules, DOE proposed to amend the definition of GSIL to be a standard incandescent or halogen type lamp that is intended for general service applications; has a medium screw base; has a lumen range of not less than 310 lumens and not more than 2,600 lumens or, in the case of a modified spectrum lamp, not less than 232 lumens and not more than 1,950 lumens; and is capable of being operated at a voltage range at least partially within

110 and 130 volts. 86 FR 46624. However, this definition does not apply to the following incandescent lamps—

- (1) An appliance lamp;
- (2) A black light lamp;
- (3) A bug lamp;
- (4) A colored lamp;
- (5) A G shape lamp with a diameter of 5 inches or more as defined in ANSI C79.1–2002;
- (6) An infrared lamp;
- (7) A left-hand thread lamp;
- (8) A marine lamp;
- (9) A marine signal service lamp;
- (10) A mine service lamp;
- (11) A plant light lamp;
- (12) An R20 short lamp;
- (13) A sign service lamp;
- (14) A silver bowl lamp;
- (15) A showcase lamp; and
- (16) A traffic signal lamp.

Id.

In this document, DOE proposes an interpretation of EPCA by which DOE determines that the backstop provision in 42 U.S.C. 6295(i)(6)(A)(v) has been triggered and thus the sale of

GSLs that do not meet the 45 lm/W requirement prescribed by statute is prohibited. DOE recognizes that, if the backstop were implemented, the sales prohibition on GSLs that do not meet a minimum efficacy standard of 45 lm/W would present different implementation challenges than most DOE standards, which are based on the date of manufacture. Specifying a date beyond which certain GSLs could no longer be sold could lead to stranded inventory. DOE recognizes that manufacturers, distributors, and retailers would need time to take steps to account for the supply chain to avoid stranded inventory. As explained above, Congress structured 42 U.S.C. 6295(i)(6)(A)(i)-(v) so as to provide manufacturers with a lead time (with a possible shorter lead time for California and Nevada) to adjust to different efficacy standards—either standards adopted by DOE through rulemaking or the imposition of the statutory backstop. In addition, Congress expressly required DOE to consider phased-in effective dates by considering “the impact . . . on manufacturers, retiring and repurposing existing equipment, stranded investments, labor contracts, workers, [] raw materials,” and “the time needed to work with retailers and lighting designers to revise sales and marketing strategies.” 42 U.S.C. 6295(i)(6)(A)(iv). Therefore, Congress did not intend for there to be an instantaneous imposition of a new 45 lm/W efficacy standard for GSLs. Such a possible outcome exists now only because of DOE’s delay in correctly addressing the applicability of the backstop. DOE must balance Congress’s intent to facilitate a smooth transition to different efficacy standards through the provision of lead time with the clear intent of Congress that these different efficacy standards were to be in place as of January 1, 2020. 42 U.S.C. 6295(i)(6)(A)(jjj), (v).

To best balance Congress’s intent, DOE is proposing a 60-day effective date if the backstop is implemented under DOE’s proposed determination as set forth in this notice.

However, DOE understands the practicalities associated with the implementation of Congress' backstop that prohibits the sale of GSLs that do not meet a 45 lm/W efficacy standard, and DOE's understanding is informed, in part, by the comments received to the May 2021 RFI. In order to provide for a smooth transition, DOE intends to account for the practicalities of this transition to Congress's backstop efficacy standard through use of its enforcement discretion as further described below. DOE invites comments on these and further considerations relevant to informing DOE's enforcement discretion.

C. Implementation and Enforcement

Were DOE to determine that it did not complete the first cycle of rulemaking in accordance with paragraphs (i)–(iv) of Section 6295, the sales prohibition under the backstop requirement would affect any lamp type that is defined as a GSL. In the May 2021 RFI, DOE requested comment on a number of issues related to potential implementation of the backstop requirement. 86 FR 28001, 28004. Specifically, DOE requested information on the availability of and market for lamps defined as GSLs and lamps excluded from the definition of GSL; and if a lamp type within the definition of GSL or a lamp type excluded from the definition of GSL does not currently have units with an efficacy of at least 45 lm/W, information on whether it is possible to create lamps in that category that perform at such a level and how long it would take for those products to be sold at retail locations. *Id.* DOE also requested comment and information regarding inventory cycles, steps manufacturers/retailers would need to take to avoid stranded inventory for lamps that do not have an efficacy of at least 45 lm/W, and how stranded inventory would be addressed, as well as the associated costs. *Id.*

The Joint Commenters stated that there are a full range of LED products that fall within both the statutory definition and the January 2017 Definition Final Rules. The Joint Commenters stated that these products have a wide range of light outputs (including multiple light levels such as 3-way bulbs), color temperatures (*e.g.*, warm, cool white, daylight), shapes (*e.g.*, all sizes of candle, flame-tip, globe, reflector), and base types (*e.g.*, different-sized screw bases, pin-bases), all from a wide variety of manufacturers; and that there are also dimming and non-dimming versions and dim-to-warm features which mimic incandescent dimming. (Joint Commenters, No. 19 at pp. 8-9) The Joint Commenters stated that the majority of lighting products sold by home improvement stores are LED products; discount stores and hardware stores also carry a wide variety of LED lamps, with online retailers providing an even wider range; and that stores with less lighting shelf space (*e.g.*, drug, grocery stores) have narrower offerings for both LED and incandescent products. (Joint Commenters, No. 19 at pp. 8-9) The Joint Commenters also stated that the world-wide supply chain of LED GSLs is successfully meeting the growing demand, including 60 percent of lamps sold in the U.S. today and that 27 countries in Europe, California, and Nevada implemented the 45 lm/W standard and were able to meet consumer demand with LED lamps without a problem, demonstrating that demand can also be met in the U.S. (Joint Commenters, No. 19 at p. 12) CEC stated that new LED lamp models with improved quality, energy efficiency, and wide ranges of lumens are constantly being introduced in the market and that retail prices of the lamps have also been declining. (CEC, No. 23 at p. 6)

The CA IOUs stated that they conducted a survey of 14 lighting online retailers and collected information on 75,000 LED lamps, which included a continuous range of power levels, light output both below 310 lumens and above 3,300 lumens, and many different base types.

The CA IOUs stated they also identified small, high output lamps which they asserted are the most difficult to convert to LED technology due to miniaturization of electronics and heat management issues. The CA IOUs stated that this indicated that LED technology has matured, and lighting manufacturers can provide LED versions of all GSLs covered under DOE's January 2017 Definition Final Rules. (CA IOUs, No. 22 at p. 4) CEC stated that except for some truly specialty lamps, CEC has not seen major supply issues for lamps compliant with the 45 lm/W standard in California. (CEC, No. 23 at p. 6)

NBI commented that states have been requiring GSLs with an efficacy exceeding 45 lm/W in new residential and multifamily buildings for more than a decade. NBI stated that a high percentage of the country's construction activity is already covered by these lamp efficacy requirements, and that the residential chapter of the 2021 International Energy Conservation Code (IECC) requires all lamps in permanent fixtures to have an efficacy of no less than 65 lm/W and past IECC codes required at least a 45 lm/W requirement. (NBI, No. 15 at pp. 1-2) VEIC stated that California, Nevada, Vermont, Washington, Colorado, Massachusetts, and the District of Columbia have passed lighting standards in the absence of a Federal standard and have not had issues with product availability. VEIC also stated that the absence of a Federal standard supporting the 45 lm/W requirement—requiring states to enact their own legislation and enforcement—is creating confusion in the lighting market. (VEIC No. 29 at p. 2)

NEMA stated that, regarding what it characterized as compliant lamps that are not defined as GSLs, incandescent/halogen lamps have been declining since 2007 except for rough service and vibration service lamps. Regarding GSLs as defined under the existing GSL

definition, NEMA stated that, apart from a brief, forecasted spike, incandescent/halogen lamps sales have been declining since 2007 and CFLs have been declining since 2015 with only LED lamps increasing in sales. (NEMA, No. 13 at p. 2) NEMA stated that the decorative CFLs and reflector CFL sales have been declining since 2015 and these lamps are nearly gone from the market and only LED lamps in this category are increasing in sales. (NEMA, No. 13 at pp. 2-3) NEMA further stated that any incandescent/halogen lamps still being used in the commercial sector do not have acceptable LED substitutes. (NEMA, No. 13 at p. 5)

Citing the NEMA Lamp Indices, CEC stated that for the second quarter of 2020, incandescent/halogen lamps accounted for 23.8 percent of A shape lamp shipments. (CEC, No. 23 at p. 7) NEMA stated that, per NEMA Lamp Indices of A shape lamps, almost 75 percent are LED lamps, and NEMA estimated the proportion to grow and last due to the longer LED lamp lifetimes. (NEMA, No. 13 at p. 3) Citing a 2020 Northwest study, VEIC stated that more than half of the general purpose lamp and reflector lamp market was LED lamps. (VEIC, No. 29 at p. 1) Citing the CREED Lighttracker (based on sales data) for 2019, the Joint Commenters stated that LED lamps constitute 60 percent of lighting sales. (Joint Commenters, No. 19 at p. 3; MEIC, No. 7 at p. 1; CFA, NCLC, No. 24 at p. 1) Per this data, the Joint Commenters stated that incandescent/halogen lamps constitute 38 percent of sales (CSM stated 40 percent). (Joint Commenters, No. 19 at p. 3; CSM, No. 12 at p. 1) The Joint Commenters estimated about a billion light sockets in the U.S. still employ incandescent/halogen lamps. The Joint Commenters further stated that, per the CREED Lighttracker, of A shape lamps, candelabra base lamps, globe shape lamps, and reflector shape lamps, respectively, 58, 56, 50 and 84 percent were LED lamps in 2019. Citing the 2015 Lighting Market Characterization report, the Joint Commenters stated

that about 3.4 billion light sockets in the U.S. have A shapes and another 2 billion have a lamp type included in the proposed expanded definition. (Joint Commenters, No. 19 at p. 3)

The CA IOUs stated they relied on the CREED Lighttracker data for four popular lamp types (*i.e.*, A shape, candelabra base, globe shape, and reflector) to extrapolate 2020 U.S. lighting sales (excluding California). Based on this assessment, the CA IOUs estimated 334 million U.S. incandescent/halogen lamp sales in 2020 (a decrease of 46 percent in two years). The CA IOUs also estimated that in 2020 one-third of A shape lamps were incandescent/halogen; and of incandescent/halogen sales, 78 percent were A shape lamps and 19 percent were candelabra base lamps and globe shape lamps. The CA IOUs determined that few reflector lamps were incandescent/halogen and that less than 1 percent of new lamp sales were CFLs in 2020. The CA IOUs stated that this analysis showed that inefficient lamps still claim a significant market share for A shape, candelabra base, and globe shape GSLs and, given that LED lamps save about 80 percent or more electricity, there are significant energy saving to be gained from a DOE GSL standard. (CA IOUs, No. 22 at p. 4)

The Joint Commenters cited a 2020 study by the New York State Energy Research and Development Authority that used retailer inventory as a proxy for market share. The Joint Commenters stated that this study estimated that in New York the overall market share of LEDs was 73 percent, with LED lamps comprising 77, 72, 61, and 78 percent respectively of A shape lamps, candelabra base lamps, globe shape lamps, and reflector lamps. The Joint Commenters stated that the report found an increase in LEDs from the previous year and also that one in four lamps were still incandescent lamps. (Joint Commenters, No. 19 at pp. 4-5)

The Joint Commenters stated that big and small manufacturers and retailers continue to promote incandescent lamps because their short lifespan triggers sales sooner than for an LED lamp. (Joint Commenters, No. 19 at p. 5) The CA IOUs stated that the GSL transformation follows an S-shaped curve which means the rate of change will slow and then stop without the DOE standard. The CA IOUs stated that market forces alone will probably allow for inefficient GSLs to continue to have some share of the lighting market. (CA IOUs, No. 22 at p. 5) Connecticut DEEP stated that although LEDs have approximately 60 percent of the market share, savings will continue to be lost without national standards. (Connecticut DEEP, No. 6 at p. 2)

NEMA stated that GSLs that meet a 45 lm/W standard are essentially all LED lamps or CFLs. NEMA stated that incandescent/halogen lamps with medium screw base, lumens between 310 to 2600 lumens, and that operate between 110-130 volts (V) cannot meet 45 lm/W. NEMA stated that due to the successful development and sales of LED technology, there is no research and development being done on improving the efficacy of incandescent/halogen lamps. (NEMA, No. 13 at p. 2)

NEMA stated that lamps excluded from the GSL definition (*i.e.*, reflector lamps, rough service lamps, shatter-resistant lamps, 3-way lamps, vibration service lamps, larger T lamps greater than 1" in diameter, and most decorative lamp shapes with medium screw bases) that meet 45 lm/W are also essentially all LED lamps. (NEMA, No. 13 at p. 2) NEMA stated while there has been significant conversion to LED for many excluded lamps including reflector,

decorative, and 3-way lamps, the excluded lamp category is small (less than half the size of GSLs). (NEMA, No. 13 at p. 3)

NEMA stated that black light lamps and other ultraviolet (“UV”) lamps, bug lamps, and colored lamps are not tested for efficacy and are not GSLs. NEMA stated that infrared lamps, plant light lamps, and showcase lamps (T8 and smaller) are niche products not appropriate for general lighting applications. NEMA stated that G40 lamps and silver bowl lamps are used in few applications and are exempted because their size or light distributions make them difficult to be used anywhere else. With regards to marine lamps, marine signal service lamps, mine service lamps, R20 short lamps, sign service lamps, and traffic signal service lamps NEMA stated that LED versions of these lamps may not meet required military, transportation, or other specifications. (NEMA, No. 13 at p. 4)

NEMA and Signify stated the biggest limitation of LED technology is its use in high temperature environments (*i.e.*, within fixtures and devices) due to thermal management issues. NEMA commented that while some appliance lamps can have LED replacements, those operated in high temperatures—such as ovens—cannot. (NEMA, No. 13 at p. 3; Signify, No. 18 at p. 3) NEMA stated that appliances with LED light sources are already built in and designed to be protected from the heat. (NEMA, No. 13 at p. 3) NEMA stated that specialty lamps have no acceptable LED replacement because: (1) the LED version is not economically justified due to low sales volumes; (2) the LED version cannot be made in the small form factor; or (3) the LED version is unable to match the lumen output. (NEMA, No. 13 at p. 3) NEMA stated that an LED replacement for a typical pin base halogen (small form factor) that has 600 to 1200 lumens is

unable to provide that lumen level in the same small form factor. (NEMA, No. 13 at p. 4)

NEMA stated that LED lamps with a small diameter or with shapes such as MR16 and MR11 will continue to have thermal and light output limitations while small quartz halogen lamps can produce significant amount of light within a small form factor and operate at high temperatures. (NEMA, No. 13 at p. 5)

Signify stated that LED replacements for some T4/GY6.35 halogen capsule lamps can only be made with 600 lumens, and LED replacements for T3/R7s linear halogen lamps can match the required lumen outputs but only in larger form factors, which may lead to problems fitting in fixtures or poor optical performance. (Signify, No. 18 at p. 3) Signify stated that the following lamp types cannot meet 45 lm/W and/or are difficult to make with LED technology: heat (infrared) lamps, blacklight lamps (and any UV lamps), appliance lamps, bug lamps, colored lamps, specialty MR lamps for entertainment, 12 V landscape lighting applications, plant light lamps, marine lamps, marine signal service lamps, mine service lamps, R20 short lamps, sign service lamps, traffic signal replacement lamps, T4 120V halogen capsule lamps with light output higher than 600 lumens, and T3/R7s 120V linear halogen lamps. (Signify, No. 18 at p. 2)

With regard to potential implementation of the backstop, NEMA commented that consideration of timing should not be limited to retail shelf-to-consumer-sale range events as purchasing and business decisions, supply chain, and manufacturing impacts also need to be considered. (NEMA, No. 13 at p. 5) NEMA stated the total time between the retailer's initial factory order and when a consumer can purchase product can be up to 6 months or longer and is dependent, in part, on order sizes and retailer distribution schedules. (NEMA, No. 13 at pp. 5-6)

NEMA commented that upstream timing includes an average of three months from the start of the process of procuring raw materials until the release of component shipment to the factory, although the time will vary depending on the source of the materials. (NEMA, No. 13 at p. 6) NEMA stated that lower to medium volume products and larger full container orders can have one to two week lead time and 60-70 day lead times, respectively. NEMA further stated that goods will remain in a retailer's distribution center for two to four weeks until they are shipped to individual store locations. (NEMA, No. 13 at pp. 5-6) Signify stated that LED lamp design typically takes six months, followed by an additional six months to fill the supply chain pipeline. For any new LED lamp that needs to be developed, Signify stated that there may be a shortage of products available to consumers if DOE fails to provide adequate time for manufacturers to prepare for the transition. (Signify, No. 18 at p. 4)

NEMA stated that other factors, such as retailer-specific contracts and "safety stock," may also affect how retailers stock lamps. (NEMA, No. 13 at p. 6) NEMA further commented that review of product assortments by regional and national retail chains varies by retailer and that due to the complicated logistics and labor involved in resetting a physical product assortment across regional and national chains, this process can take 18 to 24 months to finalize and implement, to include normal sell through of product on the shelf. (NEMA, No. 13 at p. 6) NEMA suggested that DOE interview medium and small lighting retailers, many of whom are small businesses, and consider the negative financial impact mid-sized and smaller retailers may face and ensure the final rule provides sufficient time to avoid stranded assets in retail stores of all sizes. (NEMA, No. 13 at p. 6)

ALA stated lighting retail stores and distributors are facing challenges stemming from the COVID-19 pandemic including fluctuating prices as a result of uncertain freight costs as well as supply chain disruptions, as well as from tariffs, emerging government regulations, and growing competition from multiple channels of distribution. (ALA, No. 20, pp. 1-2) ALA further commented that showrooms do not typically have large stockpiles of any one type of lamp on hand, instead having a voluminous variety of lamps in inventory. (ALA, No. 20, pp. 1-2) ALA stated manufacturers have a certain lead time when it comes to the sourcing and production of products and that DOE must make every effort to put in place safeguards that will protect against any disruptions to the supply chain while production of compliant products increases. (ALA, No. 20, p. 2) ALA also commented that sales of newer, more efficient products are up and sales of affected products are down, and that as this trend continues, a manufacturers' sales ban would give showrooms the flexibility to sell off existing inventory. *Id.*

NEMA stated that in its experience, most retailers have on average three months of inventory between their store and distribution centers to prevent having empty shelf space. NEMA stated that lower to medium demand products and specialty seasonal demand products (*e.g.*, colored lights) may sit on a store shelf between 30 and 90 days, while retailers prefer to maintain at least two weeks of inventory for high demand products. (NEMA, No. 13 at pp. 6-7) NEMA also commented that identifying and sourcing new products for retail can take 6–12 months, including identifying and qualifying the source, setting up the new vendor, product testing time, price negotiation, purchase orders, transit from the source, and initiating new data setup in store registers. (NEMA, No. 13 at p. 7) NEMA further commented that lamp sales are

seasonal and affected by scheduled events, which requires manufacturers to prepare several months earlier to have adequate inventory to meet demand. *Id.*

NEMA stated that each manufacturer or retailer would individually decide what to do with stranded inventory, adding that national laws make it difficult to find alternative markets to sell newly restricted products and that the costs associated with disposal will be the cost of each individual lamp, associated labor, and land fill costs. (NEMA, No. 13 at pp. 7, 8) NEMA further stated that any lamp sold in another market will most likely be a high sales volume lamp type and would be sold at break-even or at a loss to exporters. (NEMA, No. 13 at pp. 7-8) Signify stated, as a manufacturer, that any stranded inventory would most likely need to be scrapped. (Signify, No. 18, p. 5) ALA stated that lamp products can often remain in inventory for a considerable amount of time and that nationally the impact of a retail sales ban would create a glut of stranded inventory, piling up at individual showrooms and eventually landfills. (ALA, No. 20, p. 2) ALA further commented that there are no viable options available to retailers under a retail sales ban to unload non-compliant GSLs, which means that lighting retailers will have millions of dollars of stranded product. (ALA, No. 20, p. 2) ALA further stated that retailers will be forced to increase costs on all other products in order to recoup the losses suffered as a result of the retail sales ban. (ALA, No. 20, p. 2)

NEMA commented that it is imperative that DOE provide enough time for manufacturers and retailers to plan an orderly exit from regulated product lines and that failure to provide adequate transition time would cause each manufacturer and each retailer to incur significant unexpected costs to dispose of stranded inventory, and waste material, manufacturing, and

transportation resources while providing very little additional energy savings or CO₂ emissions reductions. (NEMA, No. 13 at p. 7) NEMA asserted that the life of incandescent and halogen lamps is very short, and that the lost energy-savings risk of providing adequate time to manufacturers and retailers is very small, while the potential economic damage risk to both large companies and small family-owned retailers alike is large. (NEMA, No. 13 at pp. 7-8)

NEMA recommended that to minimize disruption and provide certainty throughout the supply chain, DOE rely on a two-step approach for manufacturers and retailers to implement the 45 lm/W minimum requirement. (NEMA, No. 13 at p. 7) Specifically, NEMA suggested an approach under which the requirement would apply to GSLs as manufactured beginning one-year after a final rule and to the retail sale of GSLs beginning one year following as-manufactured compliance date. (NEMA, No. 13 at p. 7) NEMA stated that the 2-step approach would be significantly less disruptive to manufacturers and retailers and would be far easier to manage than a blanket 45 lm/W sales ban. (NEMA, No. 13 at p. 7) ALA agreed with NEMA's comments in general and its two-step implementation approach, stating that a phase-in period of at least two years from the publication of a final rule would go a long way to address concerns. (ALA, No. 20, pp. 2-3) Signify stated it can support a minimum efficacy requirement of 45 lm/W for GSLs provided that it has a minimum of 12 months to implement it from the date of publication of any final rule and that it is implemented initially via a manufacturing date/importation ban, followed if necessary with a subsequent retail sales ban. (Signify, No. 18, pp. 2, 4) Signify further commented that a sales ban is difficult to implement and requires end-to-end management of stock and components and can result in high financial liabilities for manufacturers and retailers due to stranded inventory that cannot be sold and must be scrapped

and sent to landfills. (Signify, No. 18, p. 4) NEMA and Signify asserted that EISA allows a phase-in approach of additional regulations and that the suggested two-phase approach is sufficient to provide certainty in the marketplace, allow for advanced planning to avoid stranded inventory and empty shelf space, and result in reduced disruption throughout the supply chain. (NEMA, No. 13 at p. 7; Signify, No. 18 at pp. 4-5) China stated that a transition period of at least three years should be given for GSIL provisions and any new categories of products for the minimum efficacy of 45 lm/W. (China, No. 14, p. 3) UGC stated that prohibiting sales of inefficient bulbs now will disproportionately impact small businesses and could lead to a supply shortage of affordable bulbs in low-income communities. (UGC, No. 17 at p. 1)

The CA IOUs, CEC, and Joint Commenters stated that a wide range of compliant GSLs, as defined under the January 2017 Definition Final Rules, are readily available. (CA IOUs, No. 22 at p. 4; CEC, No. 23 at p. 7; Joint Commenters, No. 19 at pp. 8-9) The Joint Commenters stated that the world-wide supply chain for LED GSLs is more than capable of meeting additional LED demand. (Joint Commenters, No. 19 at p. 12) The Joint Commenters asserted that the lighting industry and retailers have known since enactment of the relevant lamp provisions in 2007 that a standard of at least 45 lumens per watt was due to take effect on January 1, 2020. (Joint Commenters, No. 19 at p. 12) The Joint Commenters further stated that equivalent standards have already been implemented in two states (California and Nevada) and across Europe, without disruption, demonstrating that the international supply chain can meet increased U.S. demand for LEDs. (Joint Commenters, No. 19 at p. 2) The CA IOUs stated that CEC staff have reported no major problems regarding the availability of GSLs in California 18

months following implementation by California of a 45 lm/W requirement. (CA IOUs, No. 22, p. 4)

The Joint Commenters stated that the backstop has already been triggered and the standard is non-discretionary and must be implemented as soon as practical. (Joint Commenters, No. 19, p. 7) To accommodate retailers with remaining non-compliant inventory while also avoiding further undue delay, the Joint Commenters recommended that DOE immediately announce that the backstop has been triggered and that sellers must comply with respect to the highest sales volume lamps within 60 days and that DOE allow 120 days for retailers to sell out slow-selling lamp types. (Joint Commenters, No. 19 at p. 2) The Joint Commenters stated that the sales prohibition deters manufacturers and retailers from importing and stockpiling excess inefficient products, an issue of greater concern in the light bulb context given their much lower unit price than the other products DOE regulates. (Joint Commenters, No. 19, p. 13) The Joint Commenters stated that a date of sale prohibition simplifies any effort to monitor compliance, as all that is needed is to check in a store or website to see if non-compliant lamps are still being offered for sale after the compliance date. (Joint Commenters, No. 19, p. 13) The CA IOUs urged DOE to maintain the “Date of Sale” prohibition with as short a period as possible before enforcement to allow retailers to clear inventories of non-compliant GSLs, and that DOE use its enforcement discretion based on information provided in response to the May 2021 RFI and other information to avoid needing to initiate enforcement actions against large numbers of retailers. (CA IOUs, No. 22 at p. 3) CEC stated that because the backstop has been triggered and DOE has a mandatory duty to begin enforcing it, DOE must begin enforcing it immediately. (CEC, No. 23, p. 4) CSM, UGC, and CEO encouraged DOE to implement new standards as

soon as practical to allow the minimum amount of time needed for retailers to sell existing inventory. (CSM, No. 12 at p. 1; UGC, No. 16 at p. 1) CEO further stated that prompt implementation of standards will ensure that all customers benefit from up-to-date energy saving technology. (CEO, No. 30 at p. 1)

As discussed, if DOE fails to complete a rulemaking in accordance with clauses (i) through (iv) of Section 6295(i)(6)(A) or if the final rule does not produce savings that are greater than or equal to the savings from a minimum efficacy standard of 45 lm/W, clause (v) provides that DOE “shall prohibit” sales of any GSL below the 45 lm/W backstop standard “effective beginning January 1, 2020.” As DOE explained in the January 2017 Definition Final Rules, if it is determined that the backstop is triggered, DOE would not have discretion regarding the effective date of the backstop standard. 84 FR 7276, 7283. The language of the statute is clear that Congress intended that the backstop, if triggered, would be effective as of January 1, 2020. DOE notes that clause (v) does not limit the sales prohibition to retail sales.

DOE recognizes the unique circumstances created by the delay in correctly addressing the applicability of the backstop. Were DOE to issue a final determination that the backstop has been triggered, as DOE proposes, DOE proposes to use its enforcement discretion to provide the necessary flexibility to avoid undue market disruption. For example, as part of this discretionary enforcement approach, and as suggested by many of the commenters, DOE would consider a staggered implementation that weighs factors such as the point of manufacture¹³, the point of

¹³ The point of manufacturer refers to the point where the product is manufactured, produced, assembled, or imported.

sale¹⁴, and the anticipated inventory of different lamp categories. This flexible enforcement approach takes into account the disruptive supply chain effects of stranded inventory and the significant consumer and environmental benefits of full compliance, DOE believes that such an approach would—given the current circumstances—best balance Congress’s intent to facilitate a smooth transition with Congress’s intent that the different efficacy standards were to be in place as of January 1, 2020. DOE welcomes input on these and additional considerations for enforcement.

D. Consumer and Environmental Impacts

In response to the May 2021 RFI, DOE received several comments regarding the potential impacts of the 45 lm/W backstop. CFA and NCLC commented that consumers are already benefiting from changing to LED technology, but greater savings are achievable with the backstop requirement. CFA and NCLC stated there are broader impacts beyond consumer electricity bills, such as reduced costs for goods and services that result from commercial and industrial sectors having reduced lighting cost. (CFA and NCLC, No. 24 at pp. 1-2) CEC stated that further delay in implementing standards will cost consumers millions and cause unnecessary emission of pollutants. (CEC, No. 23 at p. 7) NASEO commented that states rely on cost-effective federal appliance and equipment energy efficiency standards for products to help them achieve energy affordability, energy system reliability and resilience, and environmental protection. (NASEO, No. 10 at p. 1) UGC stated that practically designed and implemented

¹⁴ The point of sale refers to the point where the consumer purchases the product.

efficiency standards can benefit consumers and retailers while reducing emissions. (UGC, No. 18 at p. 1)

Commenters presented a range of potential consumer savings resulting from implementation of the backstop: UCE, CEO, MEIC, and SC & EJ stated that each month of delay in implementing standards that should have been implemented in 2020 costs consumers roughly \$80 million (UCE, No. 9 at p. 1; CEO, No. 30 at p. 1; MEIC, No. 7 at p. 1; SC & EJ, No. 26 at p. 1); Joint Commenters, WDOC, and Connecticut DEEP, citing a November 2020 ASAP study, stated that each additional month of delay in implementing the standards will cost consumers \$300 million over the lifetimes of the incandescent bulbs sold in that month (Joint Commenters, No. 19 at p. 6; WDOC, No. 17 at pp. 1-2; Connecticut DEEP, No. 6 at p. 1); and OER stated that each month of delay costs consumers \$3 billion in lost utility bill savings. (OER, No. 25 at p. 1) CFA and NCLC stated that since the beginning of the new administration, consumers will have spent \$2.8 billion on inefficient lighting and generated 4.8 million tons of carbon. (CFA, NCLC, No. 24 at p. 1).

OER, CFA, NCLC, VEIC, UCE, NASEO, MEIC, the Joint Commenters, and Connecticut DEEP stated that changing one bulb from incandescent to an LED saves a consumer \$40 to \$90 over ten years. OER, CFA, NCLC, VEIC, UGC, MEIC, Joint Commenters, and Connecticut DEEP further stated that the savings from this change can result in approximately \$3,000 in net savings over ten years for a typical household. (OER, No. 25 at p. 1; CFA, NCLC, No. 24 at p. 1; VEIC, No. 29 at p. 2; UGC, No. 16 at p. 1; UCE, No. 9 at p. 1; NASEO, No. 10 at p. 1; MEIC, No. 7 at p. 1; Joint Commenters, No. 19 at pp. 7-8; Connecticut DEEP, No. 6 at

pp. 1-2) CEC stated that any increased incremental cost from implemented standards would be fully offset by energy savings. (CEC, No. 23 at pp. 7-8)

NASEO stated that forgone consumer savings particularly harm low- and moderate-income households, and updated GSL standard implementation will ensure that all consumers benefit from cost- and energy-saving lighting. (NASEO, No. 10 at p. 1) The Joint Commenters, UGC, Connecticut DEEP, CFA, NCLC, and SWEEP stated that the cost of delayed implementation of standards disproportionately affects low-income consumers. Citing a Lawrence Berkeley National Laboratories report on EISA 2007, the CA IOUs stated that an estimated 27 quadrillion British thermal units (Btus) and a consumer net present value of \$120 billion (at a seven percent discount rate) would be saved nationally over the next 30 years as a result of the 45 lm/W standard, if applied to the January 2017 Definition Final Rules. (CA IOUs, No. 22 at p. 3) CEC estimated that enforcement of the backstop as of January 1, 2020 would have resulted in 9.5 billion kWh of energy to be saved by 2025, and that an effective date of July 1, 2021, would still result in substantial savings. (CEC, No. 23 at pp. 3,4, 6-7)

NW Power and Conservation Council estimated that if all residential and commercial replacement GSLs in the Northwest (excluding eastern Montana) complied with the backstop, the Pacific Northwest would save approximately 160 average megawatts or 1400 gigawatt hours. (NW Power and Conservation Council, No. 27 at p. 2) CA IOUs estimated national savings from a 45 lm/W standard for the January 2017 Definition Final Rules. Using this model and an effective date of July 1, 2022, CA IOUs estimate 0.83 quads of energy with a net present value of about \$28 billion and 81 million tons of CO₂ over 30 years. CA IOUs further stated that a

one-year delay will decrease the cumulative savings by 12 percent. (CA IOUs, No. 22 at p. 5) Citing a November 2020 ASAP study, NASEO stated that updated GSL standards could avoid an annual 2.7 to 6.2 million metric tons of CO₂ in 2030, with concomitant utility bill savings of \$2.6 billion in 2035. (NASEO, No. 10 at p. 1)

NEMA stated that the CO₂ emissions reduction from 2007 to 2020 for GSL A-line and non-regulated lamps (*e.g.*, lamps currently excluded from the GSL definitions) is 89 percent and 82 percent, respectively. NEMA stated that the reduction is due to conversion to LED technology, and given the current rate of this conversion, the maximum CO₂ emissions reductions by 2025 without regulation for GSL A-line and non-regulated lamps will be 92 percent and 88 percent, respectively. NEMA stated that the industry estimates that if the entire category of A-line lamps switches to LED or CFL there would be an approximate 96 percent reduction in CO₂ emissions since 2007. NEMA stated that most of the energy savings and CO₂ emission reduction has already been achieved by consumers voluntarily replacing lamps with LED lamps. (NEMA, No. 13 at p. 3)

Citing a November 2020 ASAP study, the Joint Commenters and OER stated that each additional month of delay in implementing the standards will result in 800,000 tons of CO₂ emissions over the lifetimes of the incandescent bulbs sold in that month. UGC, CFA, NCLC, VEIC, EA and Connecticut DEEP, and SWEEP reiterated the same estimate of CO₂ emissions in their comments. (Joint Commenters, No. 19 at p. 6; OER, No. 25 at p. 1; UGC, No. 16 at p. 1; CFA, NCLC, No. 24 at p. 1; VEIC, No. 29 at p. 2; EA, No. 28 at p. 1; Connecticut DEEP, No. 6 at p. 1, SWEEP, No. 11 at p. 1) CEO, MEIC, and SC & EJ estimated that continuing to delay the

standard will result in 250,000 tons of CO₂ emissions per month. (CEO, No. 30 at p. 1; MEIC, No. 7 at p. 1; SC & EJ, No. 26 at p. 1) OER stated that each month of delay implementing standards will result in 300,000 tons of CO₂ emissions. (OER, No. 25 at p. 1) The Joint Commenters stated that an additional year of delay will result in 9.5 million metric tons of CO₂ but if standards are implemented soon they can reduce CO₂ emissions by 50 million metric tons by 2030. (Joint Commenters, No. 19 at pp. 6-7)

DOE recognizes the potential for consumer and environmental benefits from a prohibition on the sale of GSLs with an efficacy of less than 45 lm/W. DOE reiterates that 42 U.S.C. 6295(i)(6)(A)(v), if triggered, requires DOE to prohibit sales of GSLs that do not meet the minimum efficacy of 45 lm/W. This backstop requirement is statutorily prescribed by Congress and no further analysis is required for its implementation.

III. Conclusion

DOE preliminarily determines that the statutory 45 lm/W backstop requirement has been triggered and therefore is proposing to place the backstop requirement for GSLs in the Code of Federal Regulations.

Were DOE to finalize the proposed rule and affirmatively determine that the backstop has been triggered, DOE would codify the statutory requirement in the Code of Federal Regulations.

IV. Procedural Issues and Regulatory Review

A. Review Under Executive Order 12866

This proposed rule is a an economically significant regulatory action under Executive Order 12866, “Regulatory Planning and Review.” 58 FR 51735 (October 4, 1993). Accordingly, this action was subject to review by the Office of Information and Regulatory Affairs in the Office of Management and Budget (OMB). Pursuant to section 6(a)(3)(C) of the Order, DOE has provided to OIRA an assessment, including the underlying analysis, of benefits and costs anticipated from the regulatory action, together with, to the extent feasible, a quantification of those costs. This assessment can be found in the technical report that accompanies this rulemaking¹⁵ The assessment estimates that all lamp demand for new construction and replacements is assumed to be fulfilled by lamps with an efficacy of at least 45 lm/W, yielding a substantial reduction in energy consumption and an associated savings in energy costs relative to the base case. It is estimated that national full fuel cycle energy savings of 5.7 quads from the implementation of a 45 lm/W backstop over the 30-year analysis period. These energy savings translate to annualized net benefits of \$3.7 billion, which includes the social value of emissions reductions (net benefits discounted at 3 percent). DOE plans to update our methodology to reflect the Environmental Protection Agency’s recent updates to benefit-per-ton values in a future impact analysis if DOE issues a final rule and generally for forthcoming rulemakings, but we do not have time to fully vet the new methods for this impact analysis.

Table IV.1: Summary of Annualized Costs and Benefits, 2022-2051

	Primary Estimate	Low-Net-Benefits Estimate	High-Net-Benefits Estimate
	Annualized (million 2020\$/year)		

¹⁵ <https://eta-publications.lbl.gov/publications/impact-eisa-2007-backstop-requirement>

Total Benefits			
7% discount rate	3,718	3,551	3,884
3% discount rate	3,828	3,632	4,023
Total Costs			
7% discount rate	178	180	173
3% discount rate	149	151	145
Net Benefits			
7% discount rate	3,540	3,371	3,711
3% discount rate	3,679	3,481	3,879

Note: Total Benefits for both the 3-percent and 7-percent cases are presented using the average GHG social costs with 3-percent discount rate. GHG reduction benefits are calculated using four different estimates of the social cost of carbon (SC-CO₂), methane (SC-CH₄), and nitrous oxide (SC-N₂O) (model average at 2.5 percent, 3 percent, and 5 percent discount rates; 95th percentile at 3 percent discount rate) as shown in Table ES-2 of the accompanying technical report. For the presentational purposes of this table, we show the total and net benefits associated with the average SC-GHG at a 3 percent discount rate, but the Department in a previous rulemaking did not use a single central SC-GHG point estimate. Considering the four SC-GHG estimates, the equivalent annual net benefit would be between \$3.1 billion to \$4.9 billion for the primary estimate, \$3 billion to 4.6 billion for the Low-Net-Benefits Estimate and \$3.3 to \$5.1 billion for the High-Net-Benefits Estimate. All net benefits are calculated using GHG benefits discounted at 3 percent.

While this assessment represents DOE's best effort to analyze the effects of this rule, there are areas where more information would be helpful to DOE as it considers potentially refining the analysis. They are: (1) whether DOE should consider a rebound effect (such as 10%) associated with the purchase of more efficient products; (2) whether there are consumer welfare losses associated with those consumers who prefer incandescent or halogen bulbs to LED bulbs even after taking into account steep price decline in LED bulbs and the energy savings that would accrue to them; and (3) how to disaggregate the effects of the backstop provision and the definitional provision separately within the framework presented in the proposed rules.

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 E.O. 13272, “Proper Consideration of Small Entities in Agency Rulemaking,” 67 FR 53461 (Aug. 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 (energy.gov/gc/office-general-counsel).

DOE reviewed this proposed rule under the provisions of the Regulatory Flexibility Act and the policies and procedures published on February 19, 2003. DOE is proposing to revise the Code of Federal Regulations to incorporate and implement the backstop requirement for general service lamps that Congress prescribed in EPCA. Because DOE is not imposing additional costs beyond those required by statute, DOE certifies that the proposed rule, if adopted, would have no significant economic impact on a substantial number of small entities. Accordingly, DOE has not prepared an IRFA for this proposed rule. DOE will transmit this certification and supporting statement of factual basis to the Chief Counsel for Advocacy of the Small Business Administration for review under 5 U.S.C. 605(b).

C. Review Under the Paperwork Reduction Act

If made final, this proposed rule would impose no new information or record keeping requirements. Accordingly, Office of Management and Budget 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 the proposed rule fits within the category of actions included in Categorical Exclusion (CX) B5.1 and otherwise meets the requirements for application of a CX. (See 10 CFR part 1021, App. B, B5.1(b); 1021.410(b) and App. B, B(1)–(5).) The rule fits within this category of actions because it is a rulemaking that establishes a standard for consumer products or industrial equipment, and for which none of the exceptions identified in CX B5.1(b) apply. Therefore, DOE has made a CX determination for this rulemaking, and DOE does not need to prepare an Environmental Assessment or Environmental Impact Statement for this rule. DOE’s CX determination for this rule is available at energy.gov/nepa/categorical-exclusion-cx-determinations-cx.

E. Review Under Executive Order 13132

E.O. 13132, “Federalism,” 64 FR 43255 (Aug. 10, 1999), imposes certain requirements on Federal agencies formulating and implementing policies or regulations that preempt State law or that have Federalism implications. The Executive Order requires agencies to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and to carefully assess the necessity for such actions. The Executive Order also requires agencies to have an accountable process to ensure meaningful and timely

input by State and local officials in the development of regulatory policies that have Federalism implications. On March 14, 2000, DOE published a statement of policy describing the intergovernmental consultation process it will follow in the development of such regulations. 65 FR 13735. DOE has examined this proposed rule and has tentatively determined that it would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. EPCA governs and prescribes Federal preemption of State regulations as to energy conservation for the products that are the subject of this proposed rule. States can petition DOE for exemption from such preemption to the extent, and based on criteria, set forth in EPCA. 42 U.S.C. 6297. Therefore, no further action is required by Executive Order 13132.

F. Review Under Executive Order 12988

With respect to the review of existing regulations and the promulgation of new regulations, section 3(a) of E.O. 12988, “Civil Justice Reform,” imposes on Federal agencies the general duty to adhere to the following requirements: (1) eliminate drafting errors and ambiguity, (2) write regulations to minimize litigation, (3) provide a clear legal standard for affected conduct rather than a general standard, and (4) promote simplification and burden reduction. 61 FR 4729 (Feb. 7, 1996). Regarding the review required by section 3(a), section 3(b) of E.O. 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 rule meets the relevant standards of E.O. 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 (other than to the extent that such regulations incorporate requirements specifically set forth in law). Public Law 104-4, section 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 them. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA. 62 FR 12820. DOE’s policy statement is also available at energy.gov/sites/prod/files/gcprod/documents/umra_97.pdf.

If made final, this proposed rule would codify the sales prohibition of GSLs with an efficacy of less than 45 lm/W prescribed in 42 U.S.C. 6295(i)(6)(A)(v). As the proposed rule would incorporate requirements specifically set forth in law, an assessment under UMRA is not required and has not been conducted.

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

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

I. Review Under Executive Order 12630

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

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

Section 515 of the Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516 note) provides for Federal agencies to review most disseminations of information to the public under information quality guidelines established by each agency pursuant to general guidelines issued by OMB. OMB’s guidelines were published at 67 FR 8452 (Feb. 22, 2002), and DOE’s guidelines were published at 67 FR 62446 (Oct. 7, 2002). Pursuant to OMB

Memorandum M-19-15, Improving Implementation of the Information Quality Act (April 24, 2019), DOE published updated guidelines which are available at www.energy.gov/sites/prod/files/2019/12/f70/DOE%20Final%20Updated%20IQA%20Guidelines%20Dec%202019.pdf. DOE has reviewed this action 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

E.O. 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 this proposed rule is not a significant energy action because it 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.

L. Congressional Notification

As required by 5 U.S.C. 801, DOE will report to Congress on the promulgation of this rule prior to its effective date. The report will state that it has been determined that the rule is a “major rule” as defined by 5 U.S.C. 804(2).

V. Public Participation

DOE will accept comments, data, and information regarding this proposed rule before or after the public meeting, but no later than the date provided in the **DATES** section at the beginning of this proposed rule. Interested parties may submit comments, data, and other information using any of the methods described in the **ADDRESSES** section at the beginning of this document.

Submitting comments via *www.regulations.gov*. The *www.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 *www.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 *www.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.

DOE processes submissions made through *www.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 *www.regulations.gov* provides after you have successfully uploaded your comment.

Submitting comments via email. Comments and documents submitted via email also will be posted to *www.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. No telefacsimiles (“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. Pursuant 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 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.

DOE will make its own determination about the confidential status of the information and treat it according to its determination.

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).

VI. Approval of the Office of the Secretary

The Secretary of Energy has approved publication of this notice of proposed rule.

Signing Authority

This document of the Department of Energy was signed on December 3, 2021, by Kelly Speakes-Backman, Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the *Federal Register*.

Signed in Washington, DC, on December 3, 2021

 Kelly Speakes-Backman

Digitally signed by Kelly Speakes-Backman
Date: 2021.12.03 18:25:44 -05'00'

Kelly J. Speakes-Backman
Principal Deputy 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. Section 430.32 is amended by:

- a. Revising the introductory text to paragraph (u)(1);
- b. Revising the introductory text to paragraph (x)(1); and
- c. Adding paragraph (dd).

The revisions and additions read as follows:

§ 430.32 Energy and water conservation standards and their compliance dates.

(u) Compact fluorescent lamps.

(1) Medium Base Compact Fluorescent Lamps. Subject to the sales prohibition in paragraph (dd) of this section, a bare or covered (no reflector) medium base compact fluorescent lamp manufactured on or after January 1, 2006, must meet the following requirements:

* * * * *

(x) General service incandescent lamps, intermediate base incandescent lamps and candelabra base incandescent lamps.

(1) Subject to the sales prohibition in paragraph (dd) of this section, the energy conservation standards in this paragraph apply to general service incandescent lamps:

* * * * *

(dd) *General service lamp*. Beginning [date of final rule] the sale of any general service lamp that does not meet a minimum efficacy standard of 45 lumens per watt is prohibited.