



DEPARTMENT OF ENERGY

10 CFR Part 430

[EERE-2023-BT-STD-0005]

RIN 1904-AF51

Energy Conservation Program: Energy Conservation Standards for Fluorescent Lamp Ballasts

AGENCY: Office of Critical Minerals and Energy Innovation, Department of Energy.

ACTION: Notification of proposed determination, request for comment, and announcement of webinar.

SUMMARY: The Energy Policy and Conservation Act, as amended (“EPCA”), prescribes energy conservation standards for various consumer products and certain commercial and industrial equipment, including fluorescent lamp ballasts (“FLBs”). EPCA also requires the U.S. Department of Energy (“DOE”) to periodically review its existing standards to determine whether more-stringent standards would be technologically feasible and economically justified, and would result in significant energy savings. In this notification of proposed determination (“NOPD”), DOE has initially determined that amended energy conservation standards for fluorescent lamp ballasts would not be cost-effective, and therefore, DOE has tentatively determined that energy conservation standards for FLBs should not be amended. DOE requests comment on this proposed determination and the associated analyses and results.

DATES: *Comments:* Written comments, data, and information are requested on all aspects of this NOPD and will be accepted on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

Meeting: DOE will hold a public meeting webinar on Wednesday, April 22 from 1 to 3 p.m. ET. See section VI, “Public Participation,” for webinar registration information,

participant instructions, and information about the capabilities available to webinar participants.

ADDRESSES: Interested persons are encouraged to submit comments using the Federal eRulemaking Portal at *www.regulations.gov* under docket number EERE-2023-BT-STD-0005. Follow the instructions for submitting comments. Alternatively, interested persons may submit comments, identified by docket number EERE-2023-BT-STD-0005 and/or regulatory identification number (“RIN”) 1904-AF51, by any of the following methods:
(1) *Email: FLB2023STD0005@ee.doe.gov*. Include the docket number EERE-2023-BT-STD-0005 and/or RIN 1904-AF51 in the subject line of the message. Submit electronic comments in WordPerfect, Microsoft Word, PDF, or ASCII file format, and avoid the use of special characters or any form of encryption.

(2) *Postal Mail:* Appliance and Equipment Standards Program, U.S. Department of Energy, Building Technologies Office, Mailstop EE-5B, 1000 Independence Avenue, SW., Washington, DC, 20585-0121. Telephone: (202) 287-1445. If possible, please submit all items on a compact disc (“CD”), in which case it is not necessary to include printed copies.

(3) *Hand Delivery/Courier:* Appliance and Equipment Standards Program, U.S. Department of Energy, Building Technologies Office, 1000 Independence Avenue, SW., Washington, DC, 20585-0121. Telephone: (202) 287-1445. If possible, please submit all items on a CD, in which case it is not necessary to include printed copies.

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

Docket: The docket for this activity, which includes *Federal Register* notices, public meeting attendee lists and transcripts, comments, and other supporting documents/materials, is available for review at *www.regulations.gov*. All documents in

the docket are listed in the *www.regulations.gov* index. However, not all documents listed in the index may be publicly available, such as information that is exempt from public disclosure.

The docket webpage can be found at *www.regulations.gov/docket/EERE-2023-BT-STD-0005*. The docket webpage contains instructions on how to access all documents, including public comments, in the docket. See section VI, “Public Participation,” of this document for further information on how to submit comments through *www.regulations.gov*.

FOR FURTHER INFORMATION CONTACT: Mr. Jeremy Dommu, U.S. Department of Energy, Office of Critical Minerals and Energy Innovation, Building Technologies Office, EE-5B, 1000 Independence Avenue, SW., Washington, DC, 20585-0121. Telephone: (240) 994-8232. Email: *ApplianceStandardsQuestions@ee.doe.gov*.

Ms. Ani Esenyan or Mr. Eric Stas, U.S. Department of Energy, Office of the General Counsel, GC-33, 1000 Independence Avenue, SW., Washington, DC, 20585-0121. Telephone: (202) 586-4798. Email: *Ani.Esenyan@hq.doe.gov* or *Eric.Stas@hq.doe.gov*.

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 email: *ApplianceStandardsQuestions@ee.doe.gov*.

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I. Synopsis of the Proposed Determination

The Energy Policy and Conservation Act, Pub. L. 94-163, 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, as codified) Title III, Part B² of EPCA established the Energy Conservation Program for Consumer Products Other Than Automobiles. (42 U.S.C. 6291–6309, as codified) These products include fluorescent lamp ballasts, the subject of this document. (42 U.S.C. 6292(a)(13))

Pursuant to EPCA, DOE is required to review its existing energy conservation standards for covered consumer products no later than three years after a determination that standards for the product do not need to be amended. (42 U.S.C. 6295(m)(3)(B)) Pursuant to that statutory provision, DOE must publish either a notification of determination that standards for the product do not need to be amended, or a notice of proposed rulemaking (“NOPR”) including new proposed energy conservation standards (proceeding to a final rule, as appropriate). (*Id.*) DOE has conducted this review of the energy conservation standards for fluorescent lamp ballasts under EPCA’s three-year-lookback authority described herein.

In accordance with these and other statutory provisions discussed in this document, DOE analyzed the benefits and burdens of potential amended energy conservation standards for fluorescent lamp ballasts currently subject to standards specified in the Code of Federal Regulations (“CFR”) at 10 CFR 430.32(m).

DOE first analyzed the technological feasibility of more energy efficient fluorescent lamp ballasts. For those fluorescent lamp ballasts for which DOE determined

¹ All references to EPCA in this document refer to the statute as amended through the Energy Act of 2020, Pub. L. 116-260 (Dec. 27, 2020), which reflects the last statutory amendments that impact Parts A and A-1 of EPCA.

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

higher standards to be technologically feasible, DOE evaluated whether higher standards would be cost-effective. Based upon this review, DOE has tentatively determined that the market and technology characteristics of fluorescent lamp ballasts are largely similar to those analyzed in the previous rulemaking, which concluded with the publication of a final rule in the *Federal Register* determining not to amend standards. 85 FR 81558 (Dec. 16, 2020) (“December 2020 Final Determination”). In the December 2020 Final Determination, DOE concluded that amended standards for fluorescent lamp ballasts would not be cost-effective and would not result in significant energy savings. Therefore, DOE has tentatively determined that the conclusions reached in the December 2020 Final Determination regarding the benefits and burdens of more-stringent standards for fluorescent lamp ballasts are still relevant and applicable to the fluorescent lamp ballast (“FLB”) market today.

Hence, DOE has tentatively determined that the current standards for fluorescent lamp ballasts do not need to be amended and is issuing this NOPD accordingly.

II. Introduction

The following section briefly discusses the statutory authority underlying this proposed determination, as well as historical background related to the establishment of standards for fluorescent lamp ballasts.

A. Authority

EPCA authorizes DOE to regulate the energy efficiency of a number of consumer products and certain industrial equipment. (42 U.S.C. 6291–6317, as codified) Title III, Part B³ of EPCA established the Energy Conservation Program for Consumer Products

³ As noted previously, for editorial reasons, upon codification in the U.S. Code, Part B was redesignated Part A.

Other Than Automobiles. (42 U.S.C. 6291–6309, as codified) These products include fluorescent lamp ballasts, the subject of this document. (42 U.S.C. 6292(a)(13))

Under EPCA, DOE's energy conservation program consists essentially of four parts: (1) testing, (2) labeling, (3) the establishment of Federal energy conservation standards, and (4) certification and enforcement procedures. Relevant provisions of EPCA specifically include definitions (42 U.S.C. 6291), test procedures (42 U.S.C. 6293), labeling provisions (42 U.S.C. 6294), energy conservation standards (42 U.S.C. 6295), and the authority to require information and reports from manufacturers (42 U.S.C. 6296).

Federal energy conservation requirements for covered products established under EPCA generally supersede State laws and regulations concerning energy use or efficiency of covered products. (42 U.S.C. 6297(b)-(c)) DOE may, however, grant waivers of Federal preemption in limited circumstances for particular State laws or regulations, in accordance with the procedures and other provisions set forth under EPCA. (42 U.S.C. 6297(d))

Subject to certain criteria and conditions, DOE is required to develop test procedures to measure the energy efficiency, energy use, water use (as applicable) or estimated annual operating cost of each covered product during a representative average use cycle or period of use, and the statute further requires that the test procedure not be unduly burdensome to conduct. (42 U.S.C. 6293, 42 U.S.C. 6295(o)(3)(A), and 42 U.S.C. 6295(r)) Manufacturers of covered products must use the prescribed DOE test procedure as the basis for certifying to DOE that their product complies with the applicable energy conservation standards and as the basis for any representations regarding the energy use or energy efficiency of the product. (42 U.S.C. 6293(c) and

42 U.S.C. 6295(s)) Similarly, DOE must use these test procedures to evaluate whether a basic model of the product complies with the applicable energy conservation standard(s) adopted pursuant to EPCA. (42 U.S.C. 6295(s)) The DOE test procedures for fluorescent lamp ballasts appear at 10 CFR 430.23(q) and 10 CFR part 430, subpart B, appendix Q.

Not later than three years after the issuance of a final determination not to amend standards, DOE must publish either a notification of determination that standards for the product do not need to be amended, or a NOPR including new proposed energy conservation standards (proceeding to a final rule, as appropriate). (42 U.S.C. 6295(m)(3)(B)) DOE must make the analysis on which a NOPD or NOPR is based publicly available and provide an opportunity for written comment. (42 U.S.C. 6295(m)(2)) Not later than two years after a NOPR is issued, DOE must publish a final rule amending the energy conservation standard for the product. (42 U.S.C. 6295(m)(3)(A))

A determination that amended standards are not needed must be based on consideration of whether amended standards will result in significant conservation of energy, are technologically feasible, and are cost-effective as described at 42 U.S.C. 6295(o)(2)(B)(i)(II). (42 U.S.C. 6295(m)(1)(A) and 42 U.S.C. 6295(n)(2)) Under 42 U.S.C. 6295(o)(2)(B)(i)(II), an evaluation of cost-effectiveness requires DOE to consider savings in operating costs throughout the estimated average life of the covered products in the type (or class) compared to any increase in the price, initial charges, or maintenance expenses for the covered products that are likely to result from the standard. (42 U.S.C. 6295(n)(2) and 42 U.S.C. 6295(o)(2)(B)(i)(II))

DOE is publishing this NOPD pursuant to the three-year-lookback review requirement in EPCA under 42 U.S.C. 6295(m)(3)(B), as described herein.

B. Background

1. Current Standards

DOE most recently completed a review of its fluorescent lamp ballast standards in a final rule published in the *Federal Register* on November 14, 2011 (“2011 FL Ballast Rule”), through which DOE prescribed the current energy conservation standards for fluorescent lamp ballasts manufactured on and after November 14, 2014. 76 FR 70548.⁴ These standards apply to fluorescent lamp ballasts designed and marketed to operate at nominal input voltages at or between 120 and 277 volts; with an input current frequency of 60 Hertz; and for use in connection with fluorescent lamps as defined in 10 CFR 430.2. These standards require a minimum power factor of 0.9 or greater for ballasts that are not residential ballasts or 0.5 or greater for residential ballasts. Fluorescent lamp ballasts (other than dimming ballasts) are subject to a minimum ballast luminous efficiency (“BLE”) as set forth in DOE’s regulations at 10 CFR 430.32(m)(1) and repeated in Table II.1 of this document. *See* 10 CFR 430.32(m)(1).

Dimming ballasts that operate one F34T12, two F34T12, two F96T12/ES, or two F96T12HO/ES lamps and that are designed and marketed to operate at or between 120 and 277 volts; with an input current frequency of 60 Hertz; and for use in connection with fluorescent lamps as defined in 10 CFR 430.2 are also subject to the standards set in the 2011 fluorescent lamp ballast rule. These standards also require a minimum power factor of 0.9 or greater for ballasts that are not residential ballasts or 0.5 or greater for

⁴ Note: Standards for fluorescent lamp ballasts codified at 10 CFR 430.32(m), which were adopted in the 2011 FL Ballast Rule, were reorganized in a final rule published in the *Federal Register* on June 5, 2015. 80 FR 31971, 31972-31974.

residential ballasts. Dimming ballasts are subject to a minimum BLE requirement as set forth at 10 CFR 430.32(m)(2) and repeated in Table II.2 of this document. *See* 10 CFR 430.32(m)(2).

However, the power factor and BLE standards described in 10 CFR 430.32(m)(1) and 10 CFR 430.32(m)(2) do not apply to the following exempted ballasts: (1) A dimming ballast designed and marketed to operate exclusively lamp types other than one F34T12, two F34T12, two F96T12/ES, or two F96T12HO/ES lamps; (2) a low frequency ballast that is designed and marketed to operate T8 diameter lamps; is designed and marketed for use in electromagnetic-interference-sensitive-environments only; and is shipped by the manufacturer in packages containing 10 or fewer ballasts; or (3) a programmed start ballast that operates 4-foot medium bipin T8 lamps and delivers on average less than 140 milliamperes to each lamp. *See* 10 CFR 430.32(m)(3).

Table II.1 Federal Energy Conservation Standards for Fluorescent Lamp Ballasts (Other Than Dimming Ballasts)

BLE = A/(1 + B × average total lamp arc power ^ -C) Where A, B, and C are as follows:			
Description	A	B	C
Instant start and rapid start ballasts (not classified as residential ballasts) that are designed and marketed to operate:			
- 4-ft medium bipin lamps;	0.993	0.27	0.25
- 2-ft U-shaped lamps; or			
- 8-ft slimline lamps.			
Programmed start ballasts (not classified as residential ballasts) that are designed and marketed to operate:			
- 4-ft medium bipin lamps;	0.993	0.51	0.37
- 2-ft U-shaped lamps;			
- 4-ft miniature bipin standard output lamps; or			
- 4-ft miniature bipin high output lamps.			
Instant start and rapid start ballasts (not classified as sign ballasts) that are designed and marketed to operate 8-ft high output lamps	0.993	0.38	0.25
Programmed start ballasts (not classified as sign ballasts) that are designed and marketed to operate 8-ft high output lamps	0.973	0.70	0.37
Sign ballasts that are designed and marketed to operate 8-ft high output lamps	0.993	0.47	0.25
Instant start and rapid start residential ballasts that are designed and marketed to operate:			
- 4-ft medium bipin lamps;	0.993	0.41	0.25
- 2-ft U-shaped lamps; or			
- 8-ft slimline lamps.			
Programmed start residential ballasts that are designed and marketed to operate:			
- 4-ft medium bipin lamps or	0.973	0.71	0.37
- 2-ft U-shaped lamps.			

Table II.2 Federal Energy Conservation Standards for Certain Dimming Fluorescent Lamp Ballasts

Designed and Marketed for Operation of a Maximum of	Nominal Input Voltage	Total Nominal Lamp Watts	Ballast Luminous Efficiency	
			Low-Frequency Ballasts	High-Frequency Ballasts
One F34T12 lamp	120/277	34	0.777	0.778
Two F34T12 lamps	120/277	68	0.804	0.805
Two F96T12/ES lamps	120/277	120	0.876	0.884
Two F96T12HO/ES lamps	120/277	190	0.711	0.713

2. History of Standards Rulemakings for Fluorescent Lamp Ballasts

In accordance with EPCA requirements detailed in section II.A of this document, DOE completed the first of the statutorily required rulemaking cycles by publishing a final rule in the *Federal Register* on September 19, 2000, that adopted amended performance standards for fluorescent lamp ballasts manufactured on or after April 1, 2005. 65 FR 56740. Covered fluorescent lamp ballasts manufactured or imported after

the compliance date of April 1, 2005, were required to meet those amended standards. Subsequently, on October 18, 2005, DOE published a final rule technical amendment in the *Federal Register* codifying the new FLB standards established in section 135(c)(2) of the Energy Policy Act of 2005 (Pub. L. 109-58; “EPACT 2005”) into DOE’s regulations at 10 CFR 430.32(m). 70 FR 60407. Additionally, DOE completed a second rulemaking cycle to amend the standards for fluorescent lamp ballasts by publishing a final rule in the *Federal Register* on November 14, 2011. 76 FR 70548. DOE completed a third rulemaking cycle for fluorescent lamp ballasts by publishing a final determination to not amend standards in the *Federal Register* on December 16, 2020 (*i.e.*, the December 2020 Final Determination). 85 FR 81558.

As noted previously, the current energy conservation standards for fluorescent lamp ballasts are located in 10 CFR 430.32(m). The currently applicable DOE test procedures for fluorescent lamp ballasts appear at 10 CFR part 430, subpart B, appendix Q.

In support of the present review of the FLB energy conservation standards, DOE published a request for information (“RFI”) in the *Federal Register* on March 27, 2023, which identified various issues on which DOE sought comment to inform its consideration of whether the standards need to be amended. 88 FR 18086 (“March 2023 RFI”).

DOE received comments in response to the March 2023 RFI from the interested parties listed in Table II.3.

Table II.3 March 2023 RFI Written Comments

Commenter(s)	Reference in this NOPD	Comment No. in the Docket	Commenter Type
New York State Energy Research and Development Authority	NYSERDA	2	State Official/Agency
National Electrical Manufacturers Association	NEMA	3	Trade Association

A parenthetical reference at the end of a comment quotation or paraphrase provides the location of the item in the public record.⁵

III. Rationale of Analysis and Discussion of Related Comments

In response to the March 2023 RFI, NYSERDA stated that it supports DOE’s consideration of efficiency improvements for fluorescent lamp ballasts. The commenter stated that because of the availability of more light-emitting diode (“LED”) replacement options, it is necessary to reassess the FLB market. (NYSERDA, No. 2 at p. 1) NEMA stated that one of its larger member lighting companies has announced it will stop selling fluorescent and high-intensity discharge (“HID”) products and shift to a full LED portfolio by the end of 2023 and that others have made similar announcements. NEMA also commented that State and local energy codes indirectly mandate LED technology by requiring energy efficiency that cannot be met by other technologies. Additionally, NEMA commented that several States have enacted, or are in the process of enacting, bans on the sale of linear fluorescent lamps. NEMA stated that in 2020, DOE sensibly published a final determination to not amend standards for fluorescent lamp ballasts because of manufacturer divestment from fluorescent and HID technologies concurrent with investment in solid-state lighting (“SSL”), which is a downward market trend that remains valid in 2023. NEMA recommended that DOE should determine not to amend

⁵ The parenthetical reference provides a reference for information located in the docket. (Docket No. EERE-2023-BT-STD-0005, which is maintained at www.regulations.gov). The references are arranged as follows: (commenter name, comment docket ID number, page of that document).

FLB standards, as such an update would not produce measurable energy savings or be technologically feasible or economically justified. (NEMA, No. 3 at pp. 1–2)

For this review of FLB standards, DOE has tentatively determined that, since the December 2020 Final Determination analysis, there has been no substantial change in: (1) product offerings of fluorescent lamp ballasts to warrant a change in scope of analysis or product classes or (2) technologies or design options that could improve the energy efficiency of fluorescent lamp ballasts. Additionally, DOE has tentatively determined that, since the December 2020 Final Determination, there has been: (1) a slight increase in operating hours, (2) a continued reduction in shipments, and (3) continued market and industry trends away from FLB technology. As such, DOE has tentatively determined that the analysis conducted for the December 2020 Final Determination and its conclusion remains valid that amending energy conservation standards for fluorescent lamp ballasts would not be cost-effective. DOE requests comments on its tentative conclusion that because no substantive changes have occurred in the technology of fluorescent lamp ballasts and significant reduction in shipments, the conclusion of the December 2020 Final Determination not to amend FLB standards remains valid.

The following sections discuss the status of the current FLB market as well as issues raised in comments received in response to the March 2023 RFI.

A. Scope of Coverage

In this analysis, a “fluorescent lamp ballast” is defined as a device that is used to start and operate fluorescent lamps by providing a starting voltage and current and limiting the current during normal operation. 10 CFR 430.2. Any product meeting the

definition of “fluorescent lamp ballast” is included in DOE’s scope of coverage, although not all products within the scope of coverage may be subject to standards.

NYSERDA stated that including circline lamps within the scope of FLB standards could be an opportunity to improve product performance. (NYSERDA, No. 2 at pp. 1–2). In response, as previously discussed, a fluorescent lamp ballast is a device used to start and operate fluorescent lamps. However, EPCA’s definition of “fluorescent lamp” at 42 U.S.C. 6291(30)(A) restricts the scope of that term, largely based upon lamp shape, base, and wattage. Consequently, the current energy conservation standards for fluorescent lamp ballasts are for ballasts used in connection with fluorescent lamps as defined in 10 CFR 430.2, a provision which reflects those statutory parameters in terms of scope. In the December 2020 Final Determination, DOE similarly relied on the definition of “fluorescent lamp” in 10 CFR 430.2, which provides the specific lamp lengths, bases, and wattages included by the term. 85 FR 81558, 81564 (Dec. 16, 2020). These do not include circline lamps, so ballasts servicing circline lamps would also be out of scope. Because DOE has found no substantial change in product offerings of covered fluorescent lamp ballasts since the December 2020 Final Determination, it is not proposing a change in the scope of analysis.

Furthermore, in response to the March 2023 RFI, NEMA recommended that DOE replace the reference to International Electrotechnical Commission (“IEC”) 62301:2011, *Household electrical appliances – Measurement of standby power*, with a reference to American National Standards Institute (“ANSI”) C82.11-2023, *Lamp Ballasts – High Frequency Fluorescent Lamp Ballasts*, because it is the most up-to-date FLB standard that now includes the standby power test methods. (NEMA, No. 3 at p. 2) NEMA also stated that other industry standards referenced by DOE’s test procedures have been updated since the December 2020 Final Determination, and the commenter specifically

recommended that referenced standards be updated to the following versions: ANSI C78.81-2016 (R2022); ANSI C78.375A-2014 (R2020); ANSI/NEMA C78.901-2016 (R2022); ANSI C82.1-2004 (R2008, R2015, S2020); ANSI C82.2- 2002 (R2007, R2016, S2021); ANSI C82.3-2016 (R2022); ANSI C82.11-2023; ANSI C82.13-2020; ANSI C82.77-10-2021. (NEMA, No. 3 at p. 2) In response, as specified in section III.A of this document, DOE notes that this proceeding is limited to consideration of the need for amended energy conservation standards for fluorescent lamp ballasts. However, DOE will examine the issue of updating references to industry testing standards found in DOE's test procedure as part of a future rulemaking considering amendments to DOE's test procedures for fluorescent lamp ballasts.

B. Product Classes

When evaluating and establishing or amending energy conservation standards, DOE will establish separate standards for a group of covered products (*i.e.*, establish a separate product class) if DOE determines that covered products within such group consume a different kind of energy, or have a capacity or other performance-related feature which other products within such type (or class) do not have and such feature justifies a different standard. (42 U.S.C. 6295(q)(1)) In making a determination whether a performance-related feature justifies a different standard, DOE considers such factors as the utility of the feature to the consumer and other factors DOE determines are appropriate. (*Id.*)

For fluorescent lamp ballasts, the current energy conservation standards specified in 10 CFR 430.32(m) are based on the seven product classes listed in Table II.1. In the March 2023 RFI, DOE requested feedback on the current FLB product class structure. 88 FR 18086, 18089 (March 27, 2023). On this topic, NYSERDA stated that instant start ("IS") and rapid start ("RS") ballasts have significant efficiency differences even though they are classified together in one product class. (NYSERDA, No. 2 at p. 1) In response,

DOE notes that in the December 2020 Final Determination, IS and RS ballasts were classified under the same product class even though there are efficiency differences between the two starting methods, because IS and RS ballasts are commonly used as substitutes for each other, indicating that consumers find no added benefit or distinct utility associated with IS ballasts relative to RS ballasts as would support separate product classes under 42 U.S.C. 6295(q)(1). 85 FR 81558, 81565 (Dec. 16, 2020) (*See* chapter 3 of the 2020 Final Determination Technical Support Document (“TSD”) for further details.) Since DOE has found no substantial change in product offerings, DOE has tentatively determined that this conclusion from the December 2020 Final Determination remains valid.

C. Technology Options and Screening Analysis

In the March 2023 RFI, DOE presented technology options for fluorescent lamp ballasts considered in the December 2020 Final Determination. 88 FR 18086, 18089 (March 27, 2023). In the December 2020 Final Determination, DOE identified technology options that have the potential to improve the efficiency of fluorescent lamp ballasts, and then DOE identified design options by screening out technology options that do not meet five screening criteria outlined in DOE’s Process Rule. *See* 10 CFR part 430, subpart C, appendix A, sections 6(c)(3) and 7(b).⁶ 85 FR 81558, 81561 (Dec. 16, 2020).

⁶ DOE notes that subsequent amendments to the Process Rule resulted in a renumbering of certain provisions, such as those related to screening criteria. Consequently, these provisions can now be found at sections 6(a)(3)(iii) and 7(b) of the current Process Rule. (*See* 89 FR 24340, 24360 (April 8, 2024)) However, the substance of these screening criteria did not change. The five screening criteria are: (1) *Technological feasibility*. Technologies that are not incorporated in commercial products or in commercially viable, existing prototypes will not be considered further. (2) *Practicability to manufacture, install and service*. If it is determined that mass production of a technology in commercial products and reliable installation and servicing of the technology could not be achieved on the scale necessary to serve the relevant market at the time of the compliance date of the standard, then that technology will not be considered further. (3) *Impacts on product utility or availability*. If a technology is determined to have significant adverse impact on the utility of the product/equipment to subgroups of consumers or result in the unavailability of any covered product type with performance characteristics (including reliability), features, sizes, capacities, and volumes that are substantially the same as products generally available in the

In this latest cycle of review, DOE has not found any new information or data to indicate that those same technology options and resulting design options are no longer valid means for manufacturers to improve the efficiency of fluorescent lamp ballasts. In addition, DOE has not identified any new technologies not already analyzed in the previous rulemaking that may improve the efficiency of fluorescent lamp ballasts. DOE did not receive any comments regarding technology options for fluorescent lamp ballasts in response to the March 2023 RFI. Accordingly, in this NOPD, DOE continues to consider only those design options identified in the December 2020 Final Determination.

D. Efficiency Levels

As in any energy conservation standards rulemaking, DOE conducts an engineering analysis to establish the relationship between the efficiency and cost of a fluorescent lamp ballast. There are two elements to consider in the engineering analysis: (1) the selection of efficiency levels (“ELs”) to analyze (*i.e.*, the “efficiency analysis”) and (2) the determination of product cost at each efficiency level (*i.e.*, the “cost analysis”). In determining the performance of higher-efficiency fluorescent lamp ballasts, DOE considers technologies and design option combinations not eliminated by the screening analysis. For each product class, DOE estimates the baseline cost, as well as the incremental cost for the product at efficiency levels above the baseline. The output of the engineering analysis is a set of cost-efficiency “curves” that are used in downstream analyses (*i.e.*, the life-cycle cost (“LCC”) and payback period (“PBP”) analyses, as well as the national impact analysis (“NIA”)).

U.S. at the time, it will not be considered further. (4) *Impacts on health or safety.* If it is determined that a technology will have significant adverse impacts on health or safety, it will not be considered further. (5) *Unique-pathway proprietary technologies.* If a technology has proprietary protection and represents a unique pathway to achieving a given efficiency level, it will not be considered further, due to the potential for monopolistic concerns. (See 10 CFR part 430, subpart C, appendix A, sections 6(b)(3) and 7(b))

In the March 2023 RFI, DOE presented the maximum technologically feasible (“max-tech”) efficiency levels identified in the December 2020 Final Determination. 88 FR 18086, 18091-18092 (March 27, 2023). DOE did not receive any comments regarding these max-tech efficiency levels.

Because in the December 2020 Final Determination DOE did not amend standards for fluorescent lamp ballasts based on considerations of cost-effectiveness and significant energy savings (*see* 85 FR 81558, 81583 (Dec. 16, 2020)), an engineering analysis that shows higher efficiency levels than the max-tech levels analyzed in that rule may result in a different outcome. Therefore, in the present analysis, DOE focused on determining if there are higher max-tech levels than those identified in the December 2020 Final Determination.

In the December 2020 Final Determination, DOE identified efficiency levels including max-tech levels for each representative product class (*i.e.*, product classes directly analyzed) based on fluorescent lamp ballasts certified in DOE’s Compliance Certification Database (“CCD”⁷) at the time of the analysis. 85 FR 81558, 81567-81571 (Dec. 16, 2020). For the present analysis, DOE once again assessed the fluorescent lamp ballasts currently in the CCD. Based on a review of these products, DOE has tentatively determined that the max-tech levels identified in the December 2020 Final Determination remain valid.

Hence, DOE’s review of the CCD found no changes in product offerings or efficiencies for fluorescent lamp ballasts that would affect the results of the engineering analysis in the December 2020 Final Determination. Therefore, DOE has tentatively

⁷ U. S. Department of Energy's Compliance Certification Database (Available at: www.regulations.doe.gov/certification-data/products.html#q=Product_Group_s%3A*).

determined that the engineering analysis in the December 2020 Final Determination remains valid.

E. Energy Use

Fluorescent lamp ballast energy use is directly dependent upon the power draw of the lamps operated by the ballast. In the December 2020 Final Determination, DOE included a mixture of wattage T8, T12, and tubular LED (“TLED”) lamp options. TLEDs draw less power than fluorescent lamps⁸. DOE inquired about the mixture of lamps in the March 2023 RFI. 88 FR 18086, 18093-18094 (March 27, 2023).

There are three types of TLEDs: Type A; Type B; and Type C and all are retrofit options for fluorescent systems. Type B and Type C TLEDs require that the electrician disconnect the power to the ballast and re-wire the fixture. In contrast, Type A TLEDs are a direct replacement for fluorescent tubes and operate on the existing ballast(s) in a fixture. Therefore, Type A TLEDs were included in the lamp mixture to determine the power draw of the fluorescent lamp ballast.

In response to the March 2023 RFI, NYSERDA stated that, particularly given the popularity of LEDs, it expects the proportion of fluorescent lamps operating on fluorescent lamp ballasts to decline over time. (NYSERDA, No. 2 at p. 2) NEMA stated that many States and localities have adopted building energy codes that indirectly mandate LED technology by setting requirements that could not be met with other technologies and that several States have enacted, or are in the process of enacting, bans on the sale of linear fluorescent lamps. (NEMA, No. 3 at pp. 1–2) NEMA stated “ban of

⁸ A 2016 snapshot of TLEDs showed that TLEDs had efficacy values greater than fluorescent lamps. If the efficacy is greater, then a TLED can produce the same number of lumens for less input power. See U.S. Department of Energy CALiPER Snapshot Linear Lamps (TLEDs) (Available at: stage.energy.gov/sites/default/files/2016/07/f33/snapshot2016_tleds.pdf).

the sale of linear fluorescent lamp” in their comment; however, the actual legislation focuses on the sale of mercury-containing lamps. Fluorescent lamp (compact and linear) technology involves low pressure lamps that use mercury vapor and phosphor coating on the lamp to generate visible light. States are enacting bans on the sales of mercury-containing products. Although fluorescent technology has reduced the mercury content in the lamps, there is still some mercury within the products. As a result, sales of certain types of fluorescent technology are affected by these laws enacted by States and other entities in the U.S.

As noted in the December 2020 Final Determination, fluorescent lamp ballasts can operate a variety of lamp types. The mixture of specific lamps operated by the fluorescent lamp ballast directly relates to the input power of the fluorescent lamp ballast. DOE included a mixture of full-wattage fluorescent lamps, reduced-wattage fluorescent lamps, and TLED lamps in the energy use analysis. 85 FR 81558, 81572 (Dec. 16, 2020). As shown in chapter 7 of the TSD for the December 2020 Final Determination, DOE modeled 26 percent of the lamps operated on IS/RS commercial ballasts as TLEDs. TLED lamps draw less power than fluorescent lamps. If the lamp power is lower, the fluorescent lamp ballast power will be lower, and if the operating hours are the same, the energy use will be lower. DOE also notes that at the writing of this notice, nine States have prohibited the sale of mercury-containing lamps, which include fluorescent lamps, and would also affect the proportion of fluorescent lamps that operate on fluorescent ballasts in a future analysis period. These bans would take effect before the start of the proposed analysis period of the determination. Table III.1 lists the effective dates of the laws that limit the sales of general service fluorescent lamps in specific States.

Table III.1 States with Mercury-Containing Lamp Bans

State	Effective Date	Legislative Number
Vermont	January 1, 2024	VT 10 VSA 7152
California	January 1, 2025	CA AB 2208
Colorado	January 1, 2025	CO HB 1161
Maine	January 1, 2026	HP 1160
Oregon	January 1, 2025	HB 2531
Rhode Island	January 1, 2025	H5550
Hawaii	January 1, 2026	HB 192
Minnesota	January 1, 2026	HF 3911
Illinois	January 1, 2027	HB2363

NYSERDA also stated that in reviewing the weighting factors in the December 2020 Final Determination, the proportion and weighting factors for T12s appear to be unrealistically high given existing Federal and State standards limiting sales, which caused a steep decline in T12 sales and market share. (NYSERDA, No, 2 at p. 2)

DOE disagrees with NYSERDA that the T12 proportion in the December 2020 Final Determination was unrealistic. NEMA posts shipment data of TLEDs and general service fluorescent lamps. Per NEMA's data, T12 lamp shipments posted a 13.8 percent increase in the first quarter of 2022 compared to the first quarter of 2021, and T12 lamps represented 9.7 percent of fluorescent lamp shipments.⁹ However, DOE does acknowledge that Federal efficiency standards will affect T12 lamps. Within the December 2020 Final Determination, DOE included in TSD chapter 7, *Energy Use Analysis*, the weighting factor for the different lamps operated on the ballasts. For IS/RS commercial ballasts, DOE projects a 0 percent T12 weighting factor in 2023, and for IS/RS residential ballasts, DOE projects a 2 percent T12 weighting factor in 2023. Within that analysis, DOE also noted that for some efficiency levels, a T12 lamp is no longer an option, and the market share was distributed around the remaining lamps proportionally. For certain fluorescent lamp ballasts, T12 lamps represent 100 percent of the lamp mixture in chapter 7 of the December 2020 Final Determination TSD. These

⁹ See www.nema.org/analytics/indices/view/t-led-lamp-shipments-index-increases-in-first-quarter-2022-compared-to-previous-year (Last accessed April 10, 2025).

are specific ballasts that operate T12 lamps (*e.g.*, fixtures for billboard/sign lighting) and the lamps are 8 feet in length.

Energy use for fluorescent ballasts is determined by multiplying the power draw of the ballast by the operating hours. DOE stated previously in this document that the max-tech levels identified in the December 2020 Final Determination remain valid. Therefore, the only other possible change in the energy use analysis would be operating hours.

In the December 2020 Final Determination analysis, DOE based the operating hours on the 2015 Lighting Market Characterization (“LMC”)¹⁰ 85 FR 81558, 81572 (Dec. 16, 2020). Since the December 2020 Final Determination analysis, DOE published the 2020 LMC¹¹. The hours for different types of buildings vary slightly between the 2015 LMC and the 2020 LMC. Overall, the operating hours for fluorescent lamps in the 2020 LMC are slightly (<10 percent) greater than the 2015 LMC used by the 2020 Final Determination.

Because there are no changes in the engineering analysis from the 2020 Final Determination and the operating hours are roughly the same, DOE tentatively concludes that overall, the per unit energy use of fluorescent lamp ballasts would be roughly the same in this analysis as the 2020 Final Determination.

F. Shipments

In the December 2020 Final Determination, DOE projected a steady decline in the shipments of fluorescent lamp ballasts, consistent with market transition away from this type of lighting technology. 85 FR 81558, 81575–81576 (Dec. 16, 2020).

¹⁰ See www.energy.gov/eere/ssl/2015-us-lighting-market-characterization.

¹¹ See www.energy.gov/eere/ssl/articles/2020-us-lighting-market-characterization.

As discussed previously, in response to the March 2023 RFI, NEMA stated that one of its larger member lighting companies has announced it will stop selling fluorescent products and shift to a full LED portfolio by the end of 2023. (NEMA, No. 3 at pp. 1) NEMA's comment indirectly referenced the Acuity Brands, a large lighting manufacturer (\$3.7 billion in sales in 2018), announcement that it will discontinue the manufacture of all fluorescent luminaires that remain in its portfolio by December 31, 2023.¹² In addition, DOE found that Lutron, a large manufacturer of ballasts and lighting controls, also announced that it will stop selling fluorescent lamp ballasts by December 31, 2023.¹³

In response to the March 2023 RFI, NYSERDA commented that it agrees with DOE's 2020 assumption that fluorescent lamp ballasts would be replaced rather than repaired, as the variety of replacement options has increased over time. NYSERDA further stated that one-for-one replacements of failed fluorescent lamp ballasts with new fluorescent lamp ballasts are anticipated to be less common, as Type B and Type C TLEDs have increasingly become the more economical option. NYSERDA anticipated that this trend will continue over time as LED replacements continue to grow in popularity. (NYSERDA, No. 2 at p. 2)

In the December 2020 Final Determination analysis, DOE determined that fluorescent lamp ballasts shipments are declining because of LED technology options. 85 FR 81558, 81576 (Dec. 16, 2020). Specifically, DOE modeled four shipments scenarios.

- (1) Scenario #1—declining shipments that all terminate in 2024.
- (2) Scenario #2—declining shipments that all terminate in 2040.

¹² See insights.acuitybrands.com/earthlight-blog/fluorescent-and-hid-discontinuation (Last accessed Oct. 6, 2025).

¹³ See www.lutron.com/us/en/resources/upgrade-to-led-lighting (Last accessed Oct. 6, 2025).

(3) Scenario #3—declining shipments that approach zero near the end of the analysis period (2052). This scenario was close to a year-over-year linear reduction of shipments by 20 percent.

(4) Scenario #4—declining shipments that terminate near the end of the analysis period. This scenario was based on a slower decline rate in the initial part of the analysis period and is similar to a projected decline in fluorescent lamps.

Id.

In December 2020 Final Determination, DOE utilized scenario #3 (declining shipments that approach zero near 2050) as the reference case. *Id.* The declines in shipments modeled in the December 2020 Final Determination stem from consumers switching away from fluorescent technology to LED technology.

In the February 2023 General Service Fluorescent Lamp (“GSFL”) Final Determination (“February 2023 GSFL Final Determination”), DOE modeled shipments of general service fluorescent lamps. Fluorescent lamp ballasts are directly related to general services fluorescent lamps, as the ballasts start and operate the lamps. The ballasts serve no function other than starting and operating general service fluorescent lamps¹⁴ so, shipments of general service fluorescent lamps directly affect the shipments of fluorescent lamp ballasts. Fluorescent lamp ballasts typically operate more than one lamp. The February 2023 GSFL TSD used a weighted average of 2.88 lamps per instant-start ballast and 2.52 lamps per programmed-start ballast.

In the February 2023 GSFL Final Determination TSD, DOE’s shipment model was based on different inputs. The demand module of the shipment model projects

¹⁴ FLBs can also start and operate Type A TLEDs, which are a type of LED retrofit lamp designed to operate on existing fluorescent lamp ballasts that are used during retrofits in which Type A TLEDs replace general service fluorescent lamps using the existing FLB.

GSFL demand for replacements of failed or retired lamps that are met by new shipments. Shipments to new construction are also capable of being tracked and accounted for in the demand module. However, DOE stated in the February 2023 GSFL Final Determination that DOE assumed that for each shipment's projection year, demand for replacements would be the only source of demand for new lamp purchases. 88 FR 9118, 9130 (Feb. 13, 2023). DOE received a comment during the GSFL Final Determination rulemaking process from NEMA stating that the new construction is shifting to cost-competitive LED lighting. NEMA also shared data in response to DOE requesting data on shipments for new construction. NEMA shared their lamp index showing a reduction in general service fluorescent lamp shipments by 50 percent from 2015 to 2019. (Docket. EERE-2019-BT-STD-0030, Comment No. 6, pp. 2, 10 – 11). Based on NEMA's comments and data as well as other market trend data, DOE assumed no demand for general service fluorescent lamps for new construction.

In the February 2023 GSFL Final Determination, DOE assumed a fixed fraction of all tubular lamp stock in each year leave the market due to retrofits or renovations with integrated LED fixtures. This assumption has the effect of reducing the number of lamps that might retire, and, therefore, the size of the market in each year. 88 FR 9118, 9130 (Feb. 13, 2023). The reason the market reduces is that lamps leave service early before retirement (either via outright failure or normal replacement schedules) thus reducing the overall size of the GSFL market and depressing future shipments because fewer retired general service fluorescent lamps exist that could be replaced with similar general service fluorescent lamps.

Tubular lamp stock leaving the market for integrated LED fixtures reduces the potential market for fluorescent lamp ballasts. As previously stated, DOE assumes no shipments for new construction for general service fluorescent lamps, and, thus, fluorescent lamp ballasts do not service new construction. Therefore, FLB shipments

service existing equipment where a fluorescent lamp ballast failed or needed repair. If existing tubular light fixtures are being retrofit or renovated with integrated LED fixtures, then there are fewer fixtures that might need to be serviced with a replacement fluorescent lamp ballast. Therefore, as GSFL lamp shipments are reduced because of fixtures being replaced by integrated LED fixtures, FLB shipments are also reduced.

The February 2023 GSFL Final Determination Technical Support Document (“TSD”) included a more detailed shipment analysis than that presented in the February 2023 GSFL Final Determination. In chapter 7 of the GSFL Final Determination TSD, DOE modeled shipments of GSFLs with a reduction by nearly 100 percent from 2020 to circa 2030.¹⁵

In the 2024 April General Service Lamp (“GSL”) Final Rule, DOE also discussed linear light sources (TLEDs and fixtures) and modeled shipments of GSFLs. In response to comments, DOE stated that there is uncertainty in the rate at which integrated fixtures will replace linear lamp fixtures, as well as uncertainty in the persistence of demand for linear lamps in applications that were not explicitly analyzed. 89 FR 28856, 28913 (April 19, 2024). In the 2024 April GSL Final Rule, DOE modeled a scenario where a smaller percentage of stock is removed each year and results in a more gradual reduction in the size of the linear lamp model. *Id.* The April 2024 GSL Final Rule TSD included a more detailed shipment analysis than presented in the April 2024 GSL Final Rule. In chapter 8 of the GSL Final Rule TSD, DOE modeled shipments of GSFLs being reduced from 10 million shipments circa 2030 to thousands of shipments in 2040.¹⁶ As stated earlier, there is a direct relationship between GSFL shipments and FLB shipments. DOE assumed no future demand of general service fluorescent lamps to service new construction.

¹⁵ See <https://www.regulations.gov/docket/EERE-2019-BT-STD-0030/document>.

¹⁶ See <https://www.regulations.gov/docket/EERE-2022-BT-STD-0022/document>.

Therefore, a decrease in GSFL shipments would directly affect the market for fluorescent lamp ballasts used to service existing fixtures since there are fewer existing installations.

The recent bans enacted by several States on lamps containing mercury, such as fluorescent lamps, may also decrease FLB shipments and further drive the shift to TLED lamps. Both Type B and Type C TLEDs require electrically bypassing the fluorescent lamp ballast to the lamp socket. Therefore, an increase in Type B and C TLED lamps will likely further reduce the overall amount of fluorescent lamp ballast shipments.

In summary, because fluorescent lamp ballast shipments continue to decline as consumers switch to LED technology, DOE has tentatively determined that the shipment scenarios modeled in the December 2020 Final Determination remain valid. However, in the December 2020 Final Determination, DOE utilized scenario #3 (declining shipments that approach zero near 2050) as the reference case. Based on new data related to shipments of GSFLs, which will directly affect the shipment of FLBs, DOE proposes scenario #2 (declining shipments that terminate in 2040) as the reference case.

In shipment scenario #2, FLB shipments reduce by 60 percent from 2020 to 2025; by 85 percent from 2020 to 2030; and by 97 percent from 2020 to 2035. DOE requests comments on its tentative conclusion that shipment scenario #2 represents the expected shipment trends of FLB technology.

IV. Proposed Determination

As required by EPCA, this NOPD analyzes whether amended energy conservation standards for fluorescent lamp ballasts would result in significant conservation of energy, be technologically feasible, and be cost-effective. (42 U.S.C. 6295(m)(1)(A) and 42 U.S.C. 6295(n)(2)) The criteria considered under 42 U.S.C. 6295(m)(1)(A) and the additional analysis relating to economic justification are discussed in the sections that follow. DOE first discusses the technological feasibility of amended

standards and then addresses the cost-effectiveness and energy savings associated with potential amended standards.

A. Technological Feasibility

EPCA mandates that DOE consider whether amended energy conservation standards for fluorescent lamp ballasts would be technologically feasible. (42 U.S.C. 6295(m)(1)(A) and 42 U.S.C. 6295(n)(2)(B)) In the December 2020 Final Determination, DOE concluded that there are technology options that would improve the efficiency of fluorescent lamp ballasts. Further, DOE concluded that these technology options are being used in commercially available fluorescent lamp ballasts and, therefore, are technologically feasible. 88 FR 81558, 81583 (Dec. 16, 2020). Because there have been no substantive changes in the FLB market since the December 2020 Final Determination analysis, DOE has tentatively determined that its conclusions regarding technological feasibility from that analysis remain valid. Hence, DOE has tentatively determined that amended energy conservation standards for fluorescent lamp ballasts would be technologically feasible.

B. Cost Effectiveness

EPCA requires DOE to consider whether energy conservation standards for fluorescent lamp ballasts would be cost-effective through an evaluation of the savings in operating costs throughout the estimated average life of the covered fluorescent lamp ballasts compared to any increase in the price of, or in the initial charges for, or maintenance expenses of, the covered fluorescent lamp ballasts which are likely to result from an amended standard. (42 U.S.C. 6295(m)(1)(A), 42 U.S.C. 6295(n)(2)(C), and 42 U.S.C. 6295(o)(2)(B)(i)(II)) In the December 2020 Final Determination, DOE

conducted an LCC analysis to estimate the net costs/benefits to users from increased efficiency of the considered FLBs. 85 FR 81558, 81583 (Dec. 16, 2020).

In the December 2020 Final Determination, DOE found that the average consumer purchasing a representative fluorescent lamp ballast would experience either no savings or the savings of \$1 in LCC at each evaluated standards case as compared to the no-new-standards case. 85 FR 81558, 81580 (Dec. 16, 2020). The simple PBP for the average FLB customer at most efficiency levels was near the rated life of fluorescent lamp ballasts. *Id.* These results indicate that based on the previous energy use of fluorescent lamp ballasts, the costs were only recovered near the end of the fluorescent lamp ballast life. Because there have been no substantive changes in the FLB market that would affect the conclusions of the December 2020 Final Determination analysis, DOE has tentatively determined that these conclusions remain valid.

In the December 2020 Final Determination, DOE then aggregated the results of the LCC analysis to estimate the net present value (“NPV”) of the total costs and benefits experienced by consumers. The inputs used to determine NPV included (1) total annual installed cost, (2) total annual operating costs (energy costs and repair and maintenance costs) and (3) discount factor to calculate the present value of costs and savings. DOE found that the NPV at the considered efficiency levels were negative for all product classes at 3-percent and 7-percent discount rates, and based on this negative NPV, DOE determined that none of the efficiency levels analyzed were cost effective. 85 FR 81558, 81581 (Dec. 16, 2020). Because there have been no substantive changes in the FLB market since the December 2020 Final Determination that would impact the inputs to the NPV analysis, DOE has tentatively determined that NPV results would still be negative. As a result, DOE has tentatively determined that its conclusion that more-stringent

amended energy conservation standards for fluorescent lamp ballasts are not cost effective remains valid.

C. Significant Conservation of Energy

EPCA also mandates that DOE consider whether amended energy conservation standards for fluorescent lamp ballasts would result in significant conservation of energy. (42 U.S.C. 6295(m)(1)(A) and 42 U.S.C. 6295(n)(2)(A))

However, as discussed in the previous section, DOE has tentatively determined that amended standards for fluorescent lamp ballasts would not be cost-effective. Therefore, DOE has tentatively concluded that quantification of energy savings from potential amended standards is not necessary in the case of this rulemaking.

D. Summary

Based on the initial determination that amended standards would not be cost-effective, DOE has tentatively determined that energy conservation standards for fluorescent lamp ballasts do not need to be amended. DOE will consider all comments received on this proposed determination in deciding how to move forward with this proceeding.

V. Procedural Issues and Regulatory Review

A. Review Under Executive Orders 12866

This proposed regulatory action, if adopted, would not be a significant regulatory action under section 3(f) of Executive Order (“E.O.”) 12866, “Regulatory Planning and Review,” 58 FR 51735 (Oct. 4, 1993). Accordingly, this proposed regulatory action was

not subject to review under the Executive Order by the Office of Information and Regulatory Affairs (“OIRA”) in the Office of Management and Budget (“OMB”).

B. Review Under the Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act of 1996) 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 (August 16, 2002), DOE published procedures and policies on February 19, 2003, to ensure that the potential impacts of its rules on small entities are properly considered during the DOE rulemaking process. 68 FR 7990. DOE has made its procedures and policies available on the Office of the General Counsel’s website (www.energy.gov/gc/office-general-counsel).

DOE reviewed this proposed determination under the provisions of the Regulatory Flexibility Act and the policies and procedures published on February 19, 2003. Because DOE is proposing not to amend standards for fluorescent lamp ballasts, if adopted, the determination would not amend any energy conservation standards. On the basis of the foregoing, DOE certifies that the proposed determination, if adopted, would not have a “significant economic impact on a substantial number of small entities,” and, therefore, the preparation of an IRFA is not warranted. Accordingly, 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 of 1995

DOE is not amending its existing information collections through this proposed rule. Under existing provisions, manufacturers of covered products/equipment must certify to DOE that their products comply with any applicable energy conservation standards. In certifying compliance, manufacturers must test their products according to the DOE test procedures for such products/equipment, including any amendments adopted for those test procedures, on the date that compliance is required. DOE has established regulations for the certification and recordkeeping requirements for all covered consumer products and commercial equipment (*see generally* 10 CFR part 429). The collection-of-information requirement for certification and recordkeeping is subject to review and approval by OMB under the Paperwork Reduction Act (“PRA”). This requirement has been approved by OMB under OMB control number 1910-1400. Public reporting burden for the certification is estimated to average 35 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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

Specifically, this proposed determination, through which DOE has tentatively decided that amended energy conservation standards for fluorescent lamp ballasts are unnecessary under the applicable statutory criteria, would impose no new informational

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

D. Review Under the National Environmental Policy Act of 1969

Pursuant to the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 *et seq.*), DOE has analyzed this action in accordance with NEPA, as amended, DOE's NEPA implementing regulations (set forth in 10 CFR part 1021), and DOE's NEPA implementing procedures (published outside the Code of Federal Regulations on June 30, 2025 (Available at: www.energy.gov/nepa/articles/doe-nepa-implementing-procedures-june-2025)). On July 3, 2025, DOE published an interim final rule in the *Federal Register* which revised 10 CFR part 1021 to contain only administrative and routine actions excepted from NEPA review in appendix A, its existing categorical exclusions in appendix B, related requirements, and a provision for emergency circumstances. 90 FR 29676. DOE notes that appendix A in 10 CFR part 1021 (formerly categorical exclusions) are now administrative and routine actions that do not require NEPA review.

In this document, DOE considers the need for amended energy conservation standards for fluorescent lamp ballasts; after careful review, the DOE has tentatively determined that amended standards are not necessary under the applicable statutory criteria. DOE analyzed the proposed determination in accordance with NEPA and tentatively determined that this action is administrative and routine because it is an interpretation or ruling in regard to an existing regulation and is therefore excepted from NEPA. 10 CFR part 1021, subpart D, paragraph A4. DOE has tentatively determined that as an administrative and routine action, this rulemaking is not a major Federal action significantly affecting the quality of the human environment within the meaning of NEPA and no further environmental review is needed. DOE will complete its NEPA

review before issuing the final action. For more information, please see appendix A of 10 CFR part 1021 (“A4, Interpretations and Rulings for Existing Regulations”) and appendix A of DOE’s NEPA implementing procedures, A4, Interpretations and Rulings for Existing Regulations (June 30, 2025).

E. Review Under Executive Order 13132

E.O. 13132, “Federalism,” 64 FR 43255 (August 10, 1999), imposes certain requirements on Federal agencies formulating and implementing policies or regulations that preempt State law or that have federalism implications. The Executive order requires agencies to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and to carefully assess the necessity for such actions. The Executive order also requires agencies to have an accountable process to ensure meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications. On March 14, 2000, DOE published a statement of policy describing the intergovernmental consultation process it will follow in the development of such regulations. 65 FR 13735.

DOE has examined this proposed determination 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. In this proposed determination, DOE tentatively concludes that it is not necessary to amend the existing energy conservation standards for fluorescent lamp ballasts. EPCA governs and prescribes Federal preemption of State regulations as to energy conservation for the fluorescent lamp ballasts 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(d)) No further action is required by E.O. 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,” 61 FR 4729 (Feb. 7, 1996), 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. 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 determination 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. Pub. L. 104-4, sec. 201 (codified at 2 U.S.C. 1531). For a proposed regulatory action likely to result in a rule that may cause the expenditure by State, local, and Tribal governments, in the aggregate, or by the private sector of \$100 million or more in any one year (adjusted annually for inflation), section 202 of UMRA requires a Federal agency to publish a written statement that estimates the resulting costs, benefits, and other effects on the national economy. (2 U.S.C. 1532(a), (b)) The UMRA also requires a Federal agency to develop an effective process to permit timely input by elected officers of State, local, and Tribal governments on a proposed “significant intergovernmental mandate,” and requires an agency plan for giving notice and opportunity for timely input to potentially affected small governments before establishing any requirements that might significantly or uniquely affect 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 www.energy.gov/sites/prod/files/gcprod/documents/umra_97.pdf.

DOE examined this proposed determination according to UMRA and its statement of policy and has tentatively determined that the proposed determination does not contain a Federal intergovernmental mandate, nor is it expected to require expenditures of \$100 million or more in any one year by State, local, and Tribal governments, in the aggregate, or by the private sector. As a result, no further assessment or analysis is required under UMRA.

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

Section 654 of the Treasury and General Government Appropriations Act, 1999 (Pub. L. No. 105-277) requires Federal agencies to issue a Family Policymaking Assessment for any rule or policy that may affect family well-being. When developing a

Family Policymaking Assessment, agencies must assess whether: (1) the action strengthens or erodes the stability or safety of the family and, particularly, the marital commitment; (2) the action strengthens or erodes the authority and rights of parents in the education, nurture, and supervision of their children; (3) the action helps the family perform its functions, or substitutes governmental activity for the function; (4) the action increases or decreases disposable income or poverty of families and children; (5) the proposed benefits of the action justify the financial impact on the family; (6) the action may be carried out by State or local government or by the family; and whether (7) the action establishes an implicit or explicit policy concerning the relationship between the behavior and personal responsibility of youth, and the norms of society.

This proposed determination, which tentatively concludes that amended standards for fluorescent lamp ballasts are not necessary, would not have any financial impact on families nor 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 for this document, as none of the above factors are implicated.

I. Review Under Executive Order 12630

Pursuant to E.O. 12630, “Governmental Actions and Interference with Constitutionally Protected Property Rights,” 53 FR 8859 (March 18, 1988), DOE has determined that this proposed determination 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 proposed determination 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 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 is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (2) is designated by the Administrator of OIRA as a significant energy action. For any significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use should the regulation 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 determination, which proposes to not amend the existing energy conservation standards for fluorescent lamp ballasts, is not a significant energy action for the reasons that follow. It is not a significant regulatory action under Executive Order 12866. Moreover, it would not have a significant adverse effect on the supply, distribution, or use of energy, nor has it been designated as such by the Administrator at OIRA. Accordingly, DOE has not prepared a Statement of Energy Effects for this proposed determination.

L. Review Under the Information Quality Bulletin for Peer Review

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

In response to OMB’s Bulletin, DOE conducted formal peer reviews of the energy conservation standards development process and the analyses that are typically used and has prepared a Peer Review report pertaining to the energy conservation

standards rulemaking analyses.¹⁷ Generation of this report involved a rigorous, formal, and documented evaluation using objective criteria and qualified and independent reviewers to make a judgment as to the technical/scientific/business merit, the actual or anticipated results, and the productivity and management effectiveness of programs and/or projects. Because available data, models, and technological understanding have changed since 2007, DOE has engaged with the National Academy of Sciences to review DOE’s analytical methodologies to ascertain whether modifications are needed to improve the Department’s analyses. DOE is in the process of evaluating the resulting report.¹⁸

M. Review Under Additional Executive Orders and Presidential Memoranda

DOE has examined this proposed determination and has tentatively determined that it is consistent with the policies and directives outlined in E.O. 14154, “Unleashing American Energy,” 90 FR 8353 (Jan. 29, 2025); E.O. 14192, “Unleashing Prosperity Through Deregulation,” 90 FR 9065 (Feb. 6, 2025); and Presidential Memorandum, “Delivering Emergency Price Relief for American Families and Defeating the Cost-of-Living Crisis,” 90 FR 8245 (Jan. 28, 2025). This proposed determination has also been determined to be an “E.O. 14192 deregulatory action” because it provides regulatory certainty to manufacturers of fluorescent lamp ballasts that regulatory burdens will not be increasing, thereby allowing them to allocate resources to other productive activities.

VI. Public Participation

A. Participation in the Webinar

¹⁷ “Energy Conservation Standards Rulemaking Peer Review Report” (2007) (Available at: www.energy.gov/eere/buildings/downloads/energy-conservation-standards-rulemaking-peer-review-report-0) (Last accessed Oct. 6, 2023).

¹⁸ The report is available at www.nationalacademies.org/our-work/review-of-methods-for-setting-building-and-equipment-performance-standards (Last accessed Oct. 9, 2025).

The time and date of the webinar are listed in the **DATES** section at the beginning of this document. Webinar registration information, participant instructions, and information about the capabilities available to webinar participants will be published on DOE's website:

www1.eere.energy.gov/buildings/appliance_standards/standards.aspx?productid=3.

Participants are responsible for ensuring their systems are compatible with the webinar software.

B. Procedure for Submitting Prepared General Statements for Distribution

Any person who has an interest in the topics addressed in this document, or who is representative of a group or class of persons that has an interest in these issues, may request an opportunity to make an oral presentation at the webinar. Such persons may submit such request make a prepared general statement to

ApplianceStandardsQuestions@ee.doe.gov. Persons who wish to speak should include with their request a computer file in WordPerfect, Microsoft Word, PDF, or text (ASCII) file format that briefly describes the nature of their interest in this proposed determination and the topics they wish to discuss. Such persons should also provide a daytime telephone number where they can be reached to enable DOE staff to make follow-up contact, if needed.

DOE requests persons seeking to make an oral presentation to submit an advance copy of their statements at least two weeks before the webinar. At its discretion, DOE may permit persons who cannot supply an advance copy of their statement to participate, if those persons have made advance alternative arrangements with the Building Technologies Office. As necessary, requests to give an oral presentation should ask for such alternative arrangements.

C. Conduct of the Webinar

DOE will designate a DOE official to preside at the webinar and may also use a professional facilitator to aid discussion. The meeting will not be a judicial or evidentiary-type public hearing, but DOE will conduct it in accordance with section 336 of EPCA (42 U.S.C. 6306). A court reporter will be present to record the proceedings and prepare a transcript. DOE reserves the right to schedule the order of presentations and to establish the procedures governing the conduct of the webinar. There shall not be discussion of proprietary information, costs or prices, market share, or other commercial matters regulated by U.S. anti-trust laws. After the webinar, interested parties may submit further comments on the proceedings, as well as on any aspect of the proposed determination, until the end of the comment period.

The webinar will be conducted in an informal, conference style. DOE will present a general overview of the topics to be addressed in this rulemaking and summaries of comments received before the webinar, allow time for prepared general statements by participants, and encourage all interested parties to share their views on issues affecting this proposed determination. Each participant will be allowed to make a general statement (within time limits determined by DOE), before the discussion of specific topics. DOE will allow, as time permits, other participants to comment briefly on any general statements.

At the end of all prepared statements on a topic, DOE will permit participants to clarify their statements briefly. Participants should be prepared to answer questions by DOE and by other participants concerning these issues. DOE representatives may also ask questions of participants concerning other matters relevant to this proposed determination. The official conducting the webinar will accept additional comments or

questions from those attending, as time permits. The presiding official will announce any further procedural rules or modification of the above procedures that may be needed for the proper conduct of the webinar.

A transcript of the webinar will be included in the docket, which can be viewed as described in the *Docket* section at the beginning of this NOPD and will be accessible on the DOE website. In addition, any person may buy a copy of the transcript from the transcribing reporter.

D. Submission of Comments

DOE will accept comments, data, and information regarding this proposed determination before or after the webinar, but no later than the date provided in the **DATES** section at the beginning of this document. 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, hand delivery/courier, or postal mail. Comments and documents submitted via email, hand deliver/courier, or postal mail 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 comments 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. With this instruction followed, 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 to FLB2023STD0005@ee.doe.gov, postal mail, or hand delivery/courier two well-marked copies: one copy of the document marked “confidential” including all the information believed to be confidential, and one copy of the document marked “non-confidential” with the information believed to be confidential deleted. 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).

E. Issues on Which DOE Seeks Comment

Although DOE welcomes comments on any aspect of this proposal, DOE is particularly interested in receiving comments and views of interested parties concerning its tentative conclusion that because no substantive changes have occurred in the market and technology of fluorescent lamp ballasts, the conclusions of the December 2020 Final Determination remain valid that amending FLB standards is not cost-effective.

VII. Approval of the Office of the Secretary

The Secretary of Energy has approved publication of this notification of proposed determination, request for comment, and announcement of webinar.

Signing Authority

This document of the Department of Energy was signed on March 11, 2026, by Audrey Robertson, Assistant Secretary (EERE) for Critical Minerals and Energy Innovation, 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 March 27, 2026.

Treena V. Garrett,
Federal Register Liaison Officer,
U.S. Department of Energy.

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