

## DEPARTMENT OF ENERGY

## 10 CFR Part 430

[EERE–2014–BT–STD–0005]

RIN 1904–AF57

**Energy Conservation Program: Energy Conservation Standards for Consumer Conventional Cooking Products**

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

**ACTION:** Notice of proposed rulemaking.

**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 consumer conventional cooking products. In this notice of proposed rulemaking (“NOPR”), the U.S. Department of Energy (“DOE”) proposes new and amended energy conservation standards for consumer conventional cooking products identical to those set forth in a direct final rule published elsewhere in this issue of the **Federal Register**. If DOE receives adverse comment and determines that such comment may provide a reasonable basis for withdrawal of the direct final rule, DOE will publish a notice of withdrawal and will proceed with this proposed rule.

**DATES:** DOE will accept comments, data, and information regarding this NOPR no later than June 3, 2024. Comments regarding the likely competitive impact of the proposed standard should be sent to the Department of Justice contact listed in the **ADDRESSES** section on or before March 15, 2024.

**ADDRESSES:** See section IV of this document, “Public Participation,” for details. If DOE withdraws the direct final rule published elsewhere in this issue of the **Federal Register**, DOE will hold a public meeting to allow for additional comment on this proposed rule. DOE will publish notice of any meeting in the **Federal Register**.

Interested persons are encouraged to submit comments using the Federal eRulemaking Portal at [www.regulations.gov](http://www.regulations.gov) under docket number EERE–2014–BT–STD–0005. Follow the instructions for submitting comments. Alternatively, interested persons may submit comments, identified by docket number EERE–2014–BT–STD–0005, by any of the following methods:

(1) *Email:* [ApplianceStandardsQuestions@ee.doe.gov](mailto:ApplianceStandardsQuestions@ee.doe.gov). Include the docket number

EERE–2014–BT–STD–0005 in the subject line of the message.

(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, 950 L’Enfant Plaza SW, 6th Floor, Washington, DC 20024. 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 IV of this document.

*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](http://www.regulations.gov). All documents in the docket are listed in the [www.regulations.gov](http://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 web page can be found at [www.regulations.gov/docket/EERE-2014-BT-STD-0005](http://www.regulations.gov/docket/EERE-2014-BT-STD-0005). The docket web page contains instructions on how to access all documents, including public comments, in the docket. See section IV of this document for information on how to submit comments through [www.regulations.gov](http://www.regulations.gov).

EPCA requires the Attorney General to provide DOE a written determination of whether the proposed standard is likely to lessen competition. The U.S. Department of Justice Antitrust Division invites input from market participants and other interested persons with views on the likely competitive impact of the proposed standard. Interested persons may contact the Antitrust Division at [www.energy.standards@usdoj.gov](mailto:www.energy.standards@usdoj.gov) on or before the date specified in the **DATES** section. Please indicate in the “Subject” line of your email the title and Docket Number of this proposed rulemaking.

**FOR FURTHER INFORMATION CONTACT:** Dr. Carl Shapiro, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Office, EE–5B, 1000 Independence Avenue SW, Washington,

DC 20585–0121. Telephone: (202) 287–5649. Email: [ApplianceStandardsQuestions@ee.doe.gov](mailto:ApplianceStandardsQuestions@ee.doe.gov).

Ms. Melanie Lampton, U.S. Department of Energy, Office of the General Counsel, GC–33, 1000 Independence Avenue SW, Washington, DC 20585–0121. Telephone: (240) 751–5157. Email: [Melanie.Lampton@hq.doe.gov](mailto:Melanie.Lampton@hq.doe.gov).

For further information on how to submit a comment, review other public comments and the docket, or participate in the public meeting, contact the Appliance and Equipment Standards Program staff at (202) 287–1445 or by email: [ApplianceStandardsQuestions@ee.doe.gov](mailto:ApplianceStandardsQuestions@ee.doe.gov).

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**I. Synopsis of the Proposed Rule**

The Energy Policy and Conservation Act, Public Law 94–163, as amended (“EPCA”),<sup>1</sup> 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 B of EPCA<sup>2</sup>

<sup>1</sup> 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), which reflect the last statutory amendments that impact Parts A and A–1 of EPCA.

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

established the Energy Conservation Program for Consumer Products Other Than Automobiles. (42 U.S.C. 6291–6309) These products include consumer conventional cooking products, the subject of this proposed rule. (42 U.S.C. 6292(a)(10))

Pursuant to EPCA, any new or amended energy conservation standard must, among other things, be designed to achieve the maximum improvement in energy efficiency that DOE determines is technologically feasible and economically justified. (42 U.S.C. 6295(o)(2)(A)) Furthermore, the new or amended standard must result in significant conservation of energy. (42 U.S.C. 6295(o)(3)(B))

In light of the above and under the authority provided by 42 U.S.C. 6295(p)(4), DOE is proposing this rule establishing and amending the energy conservation standards for consumer conventional cooking products and is concurrently issuing a direct final rule elsewhere in this issue of the **Federal Register**. DOE will proceed with this NOPR only if it determines it must withdraw the direct final rule pursuant to the criteria provided in 42 U.S.C. 6295(p)(4). The new and amended standard levels in the proposed rule and

direct final rule were proposed in a letter submitted to DOE jointly by groups representing manufacturers, energy and environmental advocates, consumer groups, and a utility. This letter, titled “Energy Efficiency Agreement of 2023” (hereafter, the “Joint Agreement”<sup>3</sup>), recommends specific energy conservation standards for consumer conventional cooking products that, in the commenters’ view, would satisfy the EPCA requirements in 42 U.S.C. 6295(o). DOE subsequently received letters of support from States including New York, California, and Massachusetts<sup>4</sup> and utilities including San Diego Gas and Electric and Southern California Edison<sup>5</sup> advocating for the adoption of the recommended standards. As discussed in more detail in the accompanying direct final rule and in accordance with the provisions at 42 U.S.C. 6295(p)(4), DOE has determined that the recommendations contained in the Joint Agreement comply with the requirements of 42 U.S.C. 6295(o).

In accordance with these and other statutory provisions discussed in this document, DOE proposes new and amended energy conservation standards that are performance-based standards

for conventional cooking tops and prescriptive standards for conventional ovens. The standards for conventional cooking tops are expressed in terms of integrated annual energy consumption (“IAEC”), measured in thousand British thermal units per year (“kBtu/year”) for gas cooking tops and in kilowatt-hours per year (“kWh/year”) for electric cooking tops, as measured according to DOE’s current conventional cooking top test procedure codified at title 10 of the Code of Federal Regulations (“CFR”) part 430, subpart B, appendix I1 (“appendix I1”).

Table I.1 presents the proposed new and amended standards for conventional cooking tops. Table I.2 presents the proposed new and amended standards for conventional ovens. These proposed new and amended standards would exclude portable cooking products. The proposed standards are the same as those recommended by the Joint Agreement. These standards apply to all products listed in Table I.1 and Table I.2 manufactured in, or imported into, the United States starting on January 31, 2028, as recommended in the Joint Agreement.

TABLE I.1—PROPOSED ENERGY CONSERVATION PERFORMANCE STANDARDS FOR CONVENTIONAL COOKING TOPS  
[Compliance starting January 31, 2028]

| Product class  | Maximum integrated annual energy consumption (IAEC) |
|--|---|
| Electric Open (Coil) Element Cooking Tops .....                                  | No standard.  |
| Electric Smooth Element Standalone Cooking Tops .....                            | 207 kWh/year.                                       |
| Electric Smooth Element Cooking Top Component of Combined Cooking Products ..... | 207 kWh/year.                                       |
| Gas Standalone Cooking Tops .....  | 1,770 kBtu/year.                                    |
| Gas Cooking Top Component of Combined Cooking Products .....                     | 1,770 kBtu/year.                                    |

TABLE I.2—PROPOSED PRESCRIPTIVE ENERGY CONSERVATION STANDARDS FOR CONVENTIONAL OVENS  
[Compliance starting January 31, 2028]

| Product class        | New and amended standards  |
|----------------------|--|
| Electric Ovens ..... | Shall not be equipped with a control system that uses linear power supply.*<br>The control system for gas ovens shall:<br>(1) Not be equipped with a constant burning pilot light; and<br>(2) Not be equipped with a linear power supply.* |
| Gas Ovens .....      |  |

\* A linear power supply produces unregulated as well as regulated power. The unregulated portion of a linear power supply typically consists of a transformer that steps alternating current (“AC”) line voltage down, a voltage rectifier circuit for AC to direct current (“DC”) conversion, and a capacitor to produce unregulated, direct current output. Linear power supplies are described in section IV.C.1.b of the direct final rule published elsewhere in this issue of the **Federal Register**.

**II. Introduction**

The following section briefly discusses the statutory authority underlying this proposed rule, as well

as some of the relevant historical background related to the establishment of standards for consumer conventional cooking products.

*A. Authority*

EPCA authorizes DOE to regulate the energy efficiency of a number of consumer products and certain

<sup>3</sup>This document is available in the docket at: [www.regulations.gov/comment/EERE-2014-BT-STD-0005-12811](http://www.regulations.gov/comment/EERE-2014-BT-STD-0005-12811).

<sup>4</sup>This document is available in the docket at: [www.regulations.gov/comment/EERE-2014-BT-STD-0005-12812](http://www.regulations.gov/comment/EERE-2014-BT-STD-0005-12812).

<sup>5</sup>This document is available in the docket at: [www.regulations.gov/comment/EERE-2014-BT-STD-0005-12813](http://www.regulations.gov/comment/EERE-2014-BT-STD-0005-12813).

industrial equipment. Title III, Part B of EPCA established the Energy Conservation Program for Consumer Products Other Than Automobiles. These products include consumer conventional cooking products, the subject of this document. (42 U.S.C. 6292(a)(10)) EPCA prescribed energy conservation standards for these products (42 U.S.C. 6295(h)(1)), and directed DOE to conduct future rulemakings to determine whether to amend these standards. (42 U.S.C. 6295(h)(2)) EPCA further provides that, not later than 6 years after the issuance of any final rule establishing or amending a standard, DOE must publish either a notice 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)(1)).

The energy conservation program under EPCA 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 efficiency requirements for covered products established under EPCA generally supersede State laws and regulations concerning energy conservation testing, labeling, and standards. (42 U.S.C. 6297(a)–(c)) DOE may, however, grant waivers of Federal preemption in limited instances for particular State laws or regulations, in accordance with the procedures and other provisions set forth under EPCA. (See 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, or estimated annual operating cost of each covered product. (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 products comply with the applicable energy conservation standards adopted under EPCA and when making representations to the public regarding the energy use or efficiency of those products. (42 U.S.C. 6293(c) and 6295(s)) Similarly, DOE must use these test procedures to determine whether

the products comply with standards adopted pursuant to EPCA. (42 U.S.C. 6295(s)) The DOE test procedures for conventional cooking tops appear at appendix I1. There are currently no DOE test procedures for conventional ovens.

DOE must follow specific statutory criteria for prescribing new or amended standards for covered products, including consumer conventional cooking products. Any new or amended standard for a covered product must be designed to achieve the maximum improvement in energy efficiency that the Secretary determines is technologically feasible and economically justified. (42 U.S.C. 6295(o)(2)(A)) Furthermore, DOE may not adopt any standard that would not result in the significant conservation of energy. (42 U.S.C. 6295(o)(3)(B)).

Moreover, DOE may not prescribe a standard if DOE determines by rule that the standard is not technologically feasible or economically justified. (42 U.S.C. 6295(o)(3)(B)) In deciding whether a proposed standard is economically justified, DOE must determine whether the benefits of the standard exceed its burdens. (42 U.S.C. 6295(o)(2)(B)(i)) DOE must make this determination after receiving comments on the proposed standard, and by considering, to the greatest extent practicable, the following seven statutory factors:

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

(42 U.S.C. 6295(o)(2)(B)(i)(I)–(VII))

Further, EPCA, as codified, establishes a rebuttable presumption that a standard is economically justified if the Secretary finds that the additional cost to the consumer of purchasing a product complying with an energy conservation standard level will be less than three times the value of the energy

savings during the first year that the consumer will receive as a result of the standard, as calculated under the applicable test procedure. (42 U.S.C. 6295(o)(2)(B)(iii)).

EPCA, as codified, also contains what is known as an “anti-backsliding” provision, which prevents the Secretary from prescribing any amended standard that either increases the maximum allowable energy use or decreases the minimum required energy efficiency of a covered product. (42 U.S.C. 6295(o)(1)) Also, the Secretary may not prescribe an amended or new standard if interested persons have established by a preponderance of the evidence that the standard is likely to result in the unavailability in the United States in any covered product type (or class) of performance characteristics (including reliability), features, sizes, capacities, and volumes that are substantially the same as those generally available in the United States. (42 U.S.C. 6295(o)(4))

EPCA specifies requirements when promulgating an energy conservation standard for a covered product that has two or more subcategories. A rule prescribing an energy conservation standard for a type (or class) of product must specify a different standard level for a type or class of products that has the same function or intended use if DOE determines that products within such group: (A) consume a different kind of energy from that consumed by other covered products within such type (or class); or (B) have a capacity or other performance-related feature which other products within such type (or class) do not have and such feature justifies a higher or lower standard. (42 U.S.C. 6295(q)(1)) In determining whether a performance-related feature justifies a different standard for a group of products, DOE considers such factors as the utility to the consumer of such a feature and other factors DOE deems appropriate. (*Id.*) Any rule prescribing such a standard must include an explanation of the basis on which such higher or lower level was established. (42 U.S.C. 6295(q)(2)).

Additionally, pursuant to the amendments contained in the Energy Independence and Security Act of 2007 (“EISA 2007”), Public Law 110–140, final rules for new or amended energy conservation standards promulgated after July 1, 2010, are required to address standby mode and off mode energy use. (42 U.S.C. 6295(gg)(3)) Specifically, when DOE adopts a standard for a covered product after that date, it must, if justified by the criteria for adoption of standards under EPCA (42 U.S.C. 6295(o)), incorporate standby mode and off mode energy use into a

single standard, or, if that is not feasible, adopt a separate standard for such energy use for that product. (42 U.S.C. 6295(gg)(3)(A)–(B)) DOE’s current test procedures for conventional cooking tops address standby mode and off mode energy use, as do the standards proposed in this NOPR.

Finally, EISA 2007 amended EPCA, in relevant part, to grant DOE authority to directly issue a final rule (*i.e.*, a “direct final rule”) establishing an energy conservation standard upon receipt of a statement submitted jointly by interested persons that are fairly representative of relevant points of view (including representatives of manufacturers of covered products, States, and efficiency advocates), as determined by the Secretary, that contains recommendations with respect to an energy or water conservation standard. (42 U.S.C. 6295(p)(4)) Pursuant to 42 U.S.C. 6295(p)(4), the Secretary must also determine whether a jointly-submitted recommendation for an energy or water conservation standard satisfies 42 U.S.C. 6295(o) or 42 U.S.C. 6313(a)(6)(B), as applicable.

A NOPR that proposes an identical energy efficiency standard must be published simultaneously with the direct final rule, and DOE must provide a public comment period of at least 110 days on this proposal. (42 U.S.C. 6295(p)(4)(A)–(B)) Based on the comments received during this period, the direct final rule will either become effective, or DOE will withdraw it not later than 120 days after its issuance if (1) one or more adverse comments is received, and (2) DOE determines that those comments, when viewed in light of the rulemaking record related to the direct final rule, may provide a reasonable basis for withdrawal of the direct final rule under 42 U.S.C. 6295(o). (42 U.S.C. 6295(p)(4)(C)) Receipt of an alternative joint recommendation may also trigger a DOE withdrawal of the direct final rule in the same manner. (*Id.*) After withdrawing a direct final rule, DOE must proceed with the NOPR published simultaneously with the direct final rule and publish in the **Federal Register** the reasons why the direct final rule was withdrawn. (*Id.*)

DOE has previously explained its interpretation of its direct final rule authority. In a final rule amending the Department’s “Procedures, Interpretations and Policies for Consideration of New or Revised Energy Conservation Standards for Consumer Products” at 10 CFR part 430, subpart C, appendix A, DOE noted that it may issue standards recommended by interested persons that are fairly

representative of relative points of view as a direct final rule when the recommended standards are in accordance with 42 U.S.C. 6295(o) or 42 U.S.C. 6313(a)(6)(B), as applicable. 86 FR 70892, 70912 (Dec. 13, 2021). But the direct final rule provision in EPCA, under which this proposed rule is issued, does not impose additional requirements applicable to other standards rulemakings, which is consistent with the unique circumstances of rules issued through consensus agreements under DOE’s direct final rule authority. *Id.* DOE’s discretion remains bounded by its statutory mandate to adopt a standard that results in the maximum improvement in energy efficiency that is technologically feasible and economically justified—a requirement found in 42 U.S.C. 6295(o). *Id.* As such, *DOE’s review and analysis of the Joint Agreement is limited to whether the recommended standards satisfy the criteria in 42 U.S.C. 6295(o).*

## B. Background

### 1. Current Standards

In a final rule published on April 8, 2009 (“April 2009 Final Rule”), DOE prescribed the current energy conservation standards for consumer conventional cooking products that prohibit constant burning pilot lights for all gas cooking products (*i.e.*, gas cooking products with or without an electrical supply cord) manufactured on and after April 9, 2012. 74 FR 16040. These standards are set forth in DOE’s regulations at 10 CFR 430.32(j)(1)–(2).

### 2. Current Test Procedure

On August 22, 2022, DOE published a test procedure final rule (“August 2022 TP Final Rule”) establishing a test procedure for conventional cooking tops, at 10 CFR part 430, subpart B, appendix I1, “Uniform Test Method for the Measuring the Energy Consumption of Conventional Cooking Products.” 87 FR 51492. The test procedure adopted the latest version of the relevant industry standard published by the International Electrotechnical Commission (“IEC”), Standard 60350–2 (Edition 2.0 2017–08), “Household electric cooking appliances—Part 2: Hobs—Methods for measuring performance” (“IEC 60350–2:2021”), for electric cooking tops with modifications including adapting the test method to gas cooking tops, normalizing the energy use of each test cycle to a consistent final water temperature, and including a measurement of standby mode and off mode energy use. *Id.* The standard levels proposed in this NOPR

are based on the IAEC metric as measured according to appendix I1.

### 3. History of Standards Rulemaking for Consumer Conventional Cooking Products

The National Appliance Energy Conservation Act of 1987 (“NAECA”), Public Law 100–12, amended EPCA to establish prescriptive standards for gas cooking products, requiring gas ranges and ovens with an electrical supply cord that are manufactured on or after January 1, 1990, not to be equipped with a constant burning pilot light. (42 U.S.C. 6295(h)(1)) NAECA also directed DOE to conduct two cycles of rulemakings to determine if more stringent or additional standards were justified for kitchen ranges and ovens. (42 U.S.C. 6295(h)(2)).

DOE undertook the first cycle of these rulemakings and published a final rule on September 8, 1998 (“September 1998 Final Rule”), which found that no standards were justified for conventional electric cooking products at that time. 63 FR 48038. In addition, partially due to the difficulty of conclusively demonstrating at that time that elimination of standing pilot lights for gas cooking products without an electrical supply cord was economically justified, DOE did not include amended standards for gas cooking products in the September 1998 Final Rule. 63 FR 48038, 48039–48040. For the second cycle of rulemakings, DOE published the April 2009 Final Rule amending the energy conservation standards for consumer conventional cooking products to prohibit constant burning pilot lights for all gas cooking products (*i.e.*, gas cooking products with or without an electrical supply cord) manufactured on or after April 9, 2012. DOE decided to not adopt energy conservation standards pertaining to the cooking efficiency of conventional electric cooking products because it determined that such standards would not be technologically feasible and economically justified at that time. 74 FR 16040, 16085.<sup>6</sup>

### 4. The Joint Agreement

On September 25, 2023, DOE received a joint statement (*i.e.*, the Joint Agreement) recommending standards for consumer conventional cooking

<sup>6</sup> As part of the April 2009 Final Rule, DOE decided not to adopt energy conservation standards pertaining to the cooking efficiency of microwave ovens. DOE has since published a final rule on June 20, 2023, adopting amended energy conservation standards for microwave oven standby mode and off mode. 88 FR 39912. DOE is not considering energy conservation standards for microwave ovens as part of the direct final rule published elsewhere in this issue of the **Federal Register**.

products that was submitted by groups representing manufacturers, energy and environmental advocates, consumer groups, and a utility.<sup>7</sup> In addition to the recommended standards for consumer conventional cooking products, the Joint Agreement also included separate recommendations for several other covered products.<sup>8</sup> And, while acknowledging that DOE may implement these recommendations in separate rulemakings, the Joint Agreement also stated that the recommendations were recommended as a complete package and each recommendation is contingent upon the other parts being implemented. DOE understands this to mean that the Joint

Agreement is contingent upon DOE initiating rulemaking processes to adopt all of the recommended standards in the agreement. That is distinguished from an agreement where issuance of an amended energy conservation standard for a covered product is contingent on issuance of amended energy conservation standards for the other covered products. If the Joint Agreement were so construed, it would conflict with the anti-backsliding provision in 42 U.S.C. 6295(o)(1), because it would imply the possibility that, if DOE were unable to issue an amended standard for a certain product, it would have to withdraw a previously issued standard for one of the other products. The anti-

backsliding provision, however, prevents DOE from withdrawing or amending an energy conservation standard to be less stringent. As a result, DOE will be proceeding with individual rulemakings that will evaluate each of the recommended standards separately under the applicable statutory criteria. The Joint Agreement recommends new and amended standard levels for consumer conventional cooking products as presented in Table II.1. (Joint Agreement, No. 12811 at p. 10) Details of the Joint Agreement recommendations for other products are provided in the Joint Agreement posted in the docket.<sup>9</sup>

TABLE II.1—RECOMMENDED NEW AND AMENDED ENERGY CONSERVATION STANDARDS FOR CONSUMER CONVENTIONAL COOKING PRODUCTS

| Product class                                     | Standard level                  | Compliance date   |
|---|---------------------------------|-------------------|
| Electric Coil .....                               | No standard .....               | January 31, 2028. |
| Propose new class: Electric smooth Cooktop* ..... | 207 kWh/year.                   |                   |
| Propose new Class: Electric smooth range* .....   | 207 kWh/year.                   |                   |
| Propose new class: Gas cooktop* .....             | 1,770 kBtu/year.                |                   |
| Propose new class: Gas range* .....               | 1,770 kBtu/year.                |                   |
| Ovens (Electric and Gas)* .....                   | Electric: Baseline + SMPS ..... |                   |
|   | Gas: Baseline + SMPS.           |                   |

\* Excludes portable cooking products.

The Joint Agreement also stated that the signatories would propose separately to DOE the inclusion of an alternative simmer calculation in the DOE test procedure for use in certification. (*Id.*) The Joint Agreement specified that, for enforcement purposes, DOE would rely on the full simmer test, rather than the alternative simmer calculation (which would be similar to the triangulation method used for refrigerator/freezers at 10 CFR 429.134(b)(2)). (*Id.*) DOE received a comment on the cooking top test procedure from the Joint Agreement signatories<sup>10</sup> on January 5, 2024, and will address the issues raised in the

comment in a separate test procedure rulemaking.

DOE has evaluated the Joint Agreement and believes that it meets the EPCA requirements for issuance of a direct final rule. As a result, DOE published a direct final rule establishing energy conservation standards for consumer conventional cooking products elsewhere in this issue of the **Federal Register**. If DOE receives adverse comments that may provide a reasonable basis for withdrawal and withdraws the direct final rule, DOE will consider those comments and any other comments received in determining how to proceed with this proposed rule.

For further background information on these proposed standards and the supporting analyses, please see the direct final rule published elsewhere in this issue of the **Federal Register**. That document and the accompanying technical support document (“TSD”) contain an in-depth discussion of the analyses conducted in evaluating the Joint Agreement, the methodologies DOE used in conducting those analyses, and the analytical results.

When the Joint Agreement was submitted, DOE was conducting a rulemaking to consider amending the standards for consumer conventional cooking products. As part of that process, DOE published a supplemental

<sup>7</sup> The signatories to the Joint Agreement include the Association of Home Appliance Manufacturers (“AHAM”), American Council for an Energy-Efficient Economy, Alliance for Water Efficiency, Appliance Standards Awareness Project, Consumer Federation of America, Consumer Reports, Earthjustice, National Consumer Law Center, Natural Resources Defense Council, Northwest Energy Efficiency Alliance, and Pacific Gas and Electric Company. Members of AHAM’s Major Appliance Division that make the affected products include: Alliance Laundry Systems, LLC; Asko Appliances AB; Beko US Inc.; Brown Stove Works, Inc.; BSH Home Appliances Corporation; Danby Products, Ltd.; Electrolux Home Products, Inc.; Elicamex S.A. de C.V.; Faber; Fotile America; GE Appliances, a Haier Company; L’Atelier Paris Haute Design LLC; LG Electronics; Liebherr USA, Co.; Midea America Corp.; Miele, Inc.; Panasonic Appliances Refrigeration Systems (PAPRSA)

Corporation of America; Perlick Corporation; Samsung Electronics America, Inc.; Sharp Electronics Corporation; Smeg S.p.A; Sub-Zero Group, Inc.; The Middleby Corporation; U-Line Corporation; Viking Range, LLC; and Whirlpool Corporation.

<sup>8</sup> The Joint Agreement contained recommendations for 6 covered products: refrigerators, refrigerator-freezers, and freezers; clothes washers; clothes dryers; dishwashers; cooking products; and miscellaneous refrigeration products.

<sup>9</sup> The Joint Agreement is available in the docket at [www.regulations.gov/comment/EERE-2014-BT-STD-0005-12811](http://www.regulations.gov/comment/EERE-2014-BT-STD-0005-12811).

<sup>10</sup> In the test procedure comment letter, only the following Joint Agreement signatories were included: AHAM, Appliance Standards Awareness Project, American Council for an Energy-Efficient Economy, Consumer Federation of America,

Consumer Reports, Earthjustice, National Consumer Law Center, Natural Resources Defense Council, the Northwest Energy Efficiency Alliance, and the Pacific Gas and Electric Company. Furthermore, AHAM noted that it represents the following companies who manufacture consumer conventional cooking products are members of the AHAM Major Appliance Division: Arcelik A.S.; Beko US, Inc.; Brown Stove Works, Inc.; BSH Home Appliances Corporation; Danby Products, Ltd.; De’Longhi America, Inc.; Electrolux Home Products, Inc.; Elicamex S.A. de C.V.; Faber S.p.A.; FOTILE America, LLC; GE Appliances, a Haier Company; Gradient, Inc.; Hisense USA Corporation; LG Electronics USA, Inc.; Liebherr USA, Co.; Midea America Corp.; Miele, Inc.; Panasonic Corporation of America; Samsung Electronics America Inc.; Sharp Electronics Corporation; Smeg S.p.A; Sub-Zero Group, Inc.; Viking Range, LLC; and Whirlpool Corporation.

notice of proposed rulemaking (“SNOPR”) and announced a public meeting on February 1, 2023, (“February 2023 SNOPR”) seeking comment on its proposed new and amended standards for consumer conventional cooking products to inform its decision consistent with its obligations under EPCA and the Administrative Procedure Act (“APA”). 88 FR 6818. The February 2023 SNOPR proposed new and amended standards for consumer conventional cooking products, consisting of maximum IAEC levels for electric and gas cooking tops and design requirements for conventional ovens. *Id.* Subsequently, on February 28, 2023, DOE published a notification of data availability (“NODA”) providing additional information to clarify the February 2023 SNOPR analysis for gas cooking tops. 88 FR 6818. Finally, on August 2, 2023, DOE published a second NODA updating its analysis for gas cooking tops based on the stakeholder data it received in response to the February 2023 SNOPR. 88 FR 50810. The February 2023 SNOPR TSD is available at: [www.regulations.gov/document/EERE-2014-BT-STD-0005-0090](http://www.regulations.gov/document/EERE-2014-BT-STD-0005-0090).

### III. Proposed Standards

When considering new or amended energy conservation standards, the standards that DOE adopts for any type (or class) of covered product must be designed to achieve the maximum improvement in energy efficiency that the Secretary determines is technologically feasible and economically justified. (42 U.S.C. 6295(o)(2)(A)) In determining whether a standard is economically justified, the Secretary must determine whether the benefits of the standard exceed its burdens by, to the greatest extent practicable, considering the seven statutory factors discussed previously. (42 U.S.C. 6295(o)(2)(B)(i)) The new or amended standard must also result in significant conservation of energy. (42 U.S.C. 6295(o)(3)(B))

DOE considered the impacts of new and amended standards for consumer conventional cooking products at each trial standard level (“TSL”), beginning with the maximum technologically feasible (“max-tech”) level, to determine whether that level was economically justified. Where the max-tech level was not justified, DOE then considered the next most efficient level and undertook the same evaluation until it reached the highest efficiency level that is both technologically feasible and economically justified and saves a significant amount of energy. DOE refers

to this process as the “walk-down” analysis.

To aid the reader as DOE discusses the benefits and/or burdens of each TSL, tables in this section present a summary of the results of DOE’s quantitative analysis for each TSL. In addition to the quantitative results presented in the tables, DOE also considers other burdens and benefits that affect economic justification. These include the impacts on identifiable subgroups of consumers who may be disproportionately affected by a national standard and impacts on employment.

DOE also notes that the economics literature provides a wide-ranging discussion of how consumers trade off upfront costs and energy savings in the absence of government intervention. Much of this literature attempts to explain why consumers appear to undervalue energy efficiency improvements. There is evidence that consumers undervalue future energy savings as a result of (1) a lack of information; (2) a lack of sufficient salience of the long-term or aggregate benefits; (3) a lack of sufficient savings to warrant delaying or altering purchases; (4) excessive focus on the short term, in the form of inconsistent weighting of future energy cost savings relative to available returns on other investments; (5) computational or other difficulties associated with the evaluation of relevant tradeoffs; and (6) a divergence in incentives (for example, between renters and owners, or builders and purchasers). Having less than perfect foresight and a high degree of uncertainty about the future, consumers may trade off these types of investments at a higher than expected rate between current consumption and uncertain future energy cost savings.

In DOE’s current regulatory analysis, potential changes in the benefits and costs of a regulation due to changes in consumer purchase decisions are included in two ways. First, if consumers forgo the purchase of a product in the standards case, this decreases sales for product manufacturers, and the impact on manufacturers attributed to lost revenue is included in the manufacturer impact analysis (“MIA”). Second, DOE accounts for energy savings attributable only to products actually used by consumers in the standards case; if a standard decreases the number of products purchased by consumers, this decreases the potential energy savings from an energy conservation standard. DOE provides estimates of shipments and changes in the volume of product purchases in chapter 9 of the direct final

rule TSD<sup>11</sup> available in the docket for this rulemaking. However, DOE’s current analysis does not explicitly control for heterogeneity in consumer preferences, preferences across subcategories of products or specific features, or consumer price sensitivity variation according to household income.<sup>12</sup>

While DOE is not prepared at present to provide a fuller quantifiable framework for estimating the benefits and costs of changes in consumer purchase decisions due to an energy conservation standard, DOE is committed to developing a framework that can support empirical quantitative tools for improved assessment of the consumer welfare impacts of appliance standards. DOE has posted a paper that discusses the issue of consumer welfare impacts of appliance energy conservation standards, and potential enhancements to the methodology by which these impacts are defined and estimated in the regulatory process.<sup>13</sup> DOE welcomes comments on how to more fully assess the potential impact of energy conservation standards on consumer choice and how to quantify this impact in its regulatory analysis in future rulemakings.

#### A. Benefits and Burdens of TSLs Considered for Consumer Conventional Cooking Product Standards

Table III.1 and Table III.2 summarize the quantitative impacts estimated for each TSL for consumer conventional cooking products. The national impacts are measured over the lifetime of consumer conventional cooking products purchased in the 30-year period that begins in the anticipated year of compliance with the new and amended standards (2027–2056 for all TSLs except TSL 1, *i.e.*, the “Recommended TSL” for consumer conventional cooking products, and 2028–2057 for TSL 1). The energy savings, emissions reductions, and value of emissions reductions refer to full-fuel-cycle (“FFC”) results. DOE is presenting monetized benefits of greenhouse gas (“GHG”) emissions reductions in accordance with the applicable Executive Orders and would

<sup>11</sup> The TSD is available in the docket for this rulemaking at [www.regulations.gov/docket/EERE-2014-BT-STD-0005/document](http://www.regulations.gov/docket/EERE-2014-BT-STD-0005/document).

<sup>12</sup> P.C. Reiss and M.W. White. Household Electricity Demand, Revisited. *Review of Economic Studies*. 2005. 72(3): pp. 853–883. doi: 10.1111/0034-6527.00354.

<sup>13</sup> Sanstad, A. H. *Notes on the Economics of Household Energy Consumption and Technology Choice*. 2010. Lawrence Berkeley National Laboratory. [www1.eere.energy.gov/buildings/appliance\\_standards/pdfs/consumer\\_ee\\_theory.pdf](http://www1.eere.energy.gov/buildings/appliance_standards/pdfs/consumer_ee_theory.pdf) (last accessed November 2, 2023).

reach the same conclusion presented in this NOPR in the absence of the social cost of greenhouse gases, including the Interim Estimates presented by the Interagency Working Group. The efficiency levels contained in each TSL are described in section V.A of the direct final rule published elsewhere in this issue of the **Federal Register**.

TABLE III.1—SUMMARY OF ANALYTICAL RESULTS FOR CONSUMER CONVENTIONAL COOKING PRODUCTS TSLs: NATIONAL IMPACTS

| Category  | TSL 1 | TSL 2  | TSL 3   |
|---|-------|--------|---------|
| Cumulative FFC National Energy Savings:                                 |       |        |         |
| Quads .....   | 0.22  | 0.66   | 1.52    |
| Cumulative FFC Emissions Reduction:                                     |       |        |         |
| CO <sub>2</sub> (million metric tons) .....                             | 3.99  | 21.16  | 36.69   |
| CH <sub>4</sub> (thousand tons) .....                                   | 34.70 | 235.42 | 366.22  |
| N <sub>2</sub> O (thousand tons) .....                                  | 0.04  | 0.10   | 0.25    |
| SO <sub>2</sub> (thousand tons) .....                                   | 1.15  | 2.26   | 6.96    |
| NO <sub>x</sub> (thousand tons) .....                                   | 7.61  | 51.14  | 80.03   |
| Hg (tons) .....   | 0.01  | 0.01   | 0.05    |
| Present Value of Benefits and Costs (3% discount rate, billion 2022\$): |       |        |         |
| Consumer Operating Cost Savings .....                                   | 1.63  | 4.30   | 3.97    |
| Climate Benefits* .....   | 0.22  | 1.28   | 2.16    |
| Health Benefits** .....   | 0.42  | 2.15   | 3.85    |
| Total Benefits † .....  | 2.27  | 7.73   | 9.99    |
| Consumer Incremental Product Costs ‡ .....                              | 0.07  | 3.96   | 47.86   |
| Consumer Net Benefits .....   | 1.56  | 0.34   | (43.89) |
| Total Net Benefits .....  | 2.20  | 3.77   | (37.87) |
| Present Value of Benefits and Costs (7% discount rate, billion 2022\$): |       |        |         |
| Consumer Operating Cost Savings .....                                   | 0.69  | 1.90   | 0.86    |
| Climate Benefits* .....   | 0.22  | 1.28   | 2.16    |
| Health Benefits** .....   | 0.16  | 0.87   | 1.56    |
| Total Benefits † .....  | 1.07  | 4.04   | 4.58    |
| Consumer Incremental Product Costs ‡ .....                              | 0.04  | 2.30   | 27.21   |
| Consumer Net Benefits .....   | 0.65  | (0.40) | (26.34) |
| Total Net Benefits .....  | 1.03  | 1.74   | (22.62) |

**Note:** This table presents the costs and benefits associated with consumer conventional cooking products shipped during the period 2027–2056 for all TSLs except for TSL 1 (the Recommended TSL) and 2028–2057 for TSL 1. These results include benefits to consumers which accrue after 2056 from the products shipped during the period 2027–2056 for all TSLs except TSL 1 and 2057 from the products shipped during the period 2028–2057 for TSL 1.

\* Climate benefits are calculated using four different estimates of the SC–CO<sub>2</sub>, SC–CH<sub>4</sub> and SC–N<sub>2</sub>O. Together, these represent the global SC–GHG. For presentational purposes of this table, the climate benefits associated with the average SC–GHG at a 3-percent discount rate are shown, but DOE does not have a single central SC–GHG point estimate. To monetize the benefits of reducing GHG emissions this analysis uses the interim estimates presented in the *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates Under Executive Order 13990* published in February 2021 by the IWG.

\*\* Health benefits are calculated using benefit-per-ton values for NO<sub>x</sub> and SO<sub>2</sub>. DOE is currently only monetizing (for NO<sub>x</sub> and SO<sub>2</sub>) PM<sub>2.5</sub> precursor health benefits and (for NO<sub>x</sub>) ozone precursor health benefits, but will continue to assess the ability to monetize other effects such as health benefits from reductions in direct PM<sub>2.5</sub> emissions. The health benefits are presented at real discount rates of 3 and 7 percent. See section IV.L of the direct final rule published elsewhere in this issue of the **Federal Register** for more details.

† Total and net benefits include consumer, climate, and health benefits. For presentation purposes, total and net benefits for both the 3-percent and 7-percent cases are presented using the average SC–GHG with 3-percent discount rate, but DOE does not have a single central SC–GHG point estimate. DOE emphasizes the importance and value of considering the benefits calculated using all four sets of SC–GHG estimates.

‡ Costs include incremental equipment costs as well as installation costs.

TABLE III.2—SUMMARY OF ANALYTICAL RESULTS FOR CONSUMER CONVENTIONAL COOKING PRODUCTS TSLs: MANUFACTURER AND CONSUMER IMPACTS\*

| Category   | TSL 1       | TSL 2         | TSL 3           |
|--|-------------|---------------|-----------------|
| Manufacturer Impacts:  |             |               |                 |
| Industry NPV (million 2022\$) (No-new-standards case INPV = 1,601) .....               | 1,457–1,458 | 1,042–1,078   | (302)–(25)      |
| Industry NPV (% change) .....  | (9.0)–(9.0) | (34.9)–(32.6) | (118.9)–(101.6) |
| Consumer Average LCC Savings (2022\$):   |             |               |                 |
| Electric Smooth Element Standalone Cooking Tops .....                                  | 62.80       | 8.54          | (638.87)        |
| Electric Smooth Element Cooking Top as a Component of a Combined Cooking Product ..... | 62.80       | 8.54          | (638.87)        |
| Gas Standalone Cooking Tops .....  | 3.09        | (1.03)        | (1.03)          |
| Gas Cooking Top as a Component of a Combined Cooking Product .....                     | 3.09        | (1.03)        | (1.03)          |
| Electric Ovens .....   | 16.23       | (39.55)       | (24.87)         |
| Gas Ovens .....  | 15.17       | (24.16)       | (24.16)         |
| Shipment-Weighted Average** .....  | 23.34       | (17.72)       | (153.51)        |
| Consumer Simple Payback Period (years):  |             |               |                 |
| Electric Smooth Element Standalone Cooking Tops .....                                  | 0.6         | 4.0           | 170.4           |
| Electric Smooth Element Cooking Top as a Component of a Combined Cooking Product ..... | 0.6         | 4.0           | 170.4           |

TABLE III.2—SUMMARY OF ANALYTICAL RESULTS FOR CONSUMER CONVENTIONAL COOKING PRODUCTS TSLs: MANUFACTURER AND CONSUMER IMPACTS \*—Continued

| Category   | TSL 1 | TSL 2 | TSL 3 |
|--|-------|-------|-------|
| Gas Standalone Cooking Tops .....  | 6.6   | 10.5  | 10.5  |
| Gas Cooking Top as a Component of a Combined Cooking Product .....                     | 6.6   | 10.5  | 10.5  |
| Electric Ovens .....   | 2.1   | 25.4  | 20.8  |
| Gas Ovens .....  | 1.9   | 18.0  | 18.0  |
| Shipment-Weighted Average ** .....   | 2.7   | 16.1  | 50.7  |
| Percent of Consumers that Experience a Net Cost:                                       |       |       |       |
| Electric Smooth Element Standalone Cooking Tops .....                                  | 0     | 52    | 100   |
| Electric Smooth Element Cooking Top as a Component of a Combined Cooking Product ..... | 0     | 52    | 100   |
| Gas Standalone Cooking Tops .....  | 1     | 38    | 38    |
| Gas Cooking Top as a Component of a Combined Cooking Product .....                     | 1     | 38    | 38    |
| Electric Ovens .....   | 0     | 27    | 81    |
| Gas Ovens .....  | 0     | 21    | 21    |
| Shipment-Weighted Average ** .....   | 0     | 34    | 64    |

Parentheses indicate negative (–) values.

\* All TSLs except TSL 1 (the Recommended TSL) have a compliance year of 2027; TSL 1 has a compliance year of 2028.

\*\* Weighted by shares of each product class in total projected shipments in 2022.

DOE first considered TSL 3, which represents the max-tech efficiency levels. TSL 3 would save an estimated 1.52 quads of energy, an amount DOE considers significant. Under TSL 3, the net present value (“NPV”) of consumer benefit would decrease compared to the no-new-standards case by \$26.34 billion using a discount rate of 7 percent, and \$43.89 billion using a discount rate of 3 percent.

The cumulative emissions reductions at TSL 3 are 36.69 million metric tons (“Mt”) <sup>14</sup> of carbon dioxide (“CO<sub>2</sub>”), 6.96 thousand tons of sulfur dioxide (“SO<sub>2</sub>”), 80.03 thousand tons of nitrogen oxides (“NO<sub>x</sub>”), 0.05 tons of mercury (“Hg”), <sup>15</sup> 366.22 thousand tons of methane (“CH<sub>4</sub>”), and 0.25 thousand tons of nitrous oxide (“N<sub>2</sub>O”). The estimated monetary value of the climate benefits from reduced GHG emissions (associated with the average social cost of GHG (“SC–GHG”) at a 3-percent discount rate) at TSL 3 is \$2.2 billion. The estimated monetary value of the health benefits from reduced SO<sub>2</sub> and NO<sub>x</sub> emissions at TSL 3 is \$1.6 billion using a 7-percent discount rate and \$3.9 billion using a 3-percent discount rate.

Using a 7-percent discount rate for consumer benefits and costs, health benefits from reduced SO<sub>2</sub> and NO<sub>x</sub> emissions, and the 3-percent discount rate case for climate benefits from

reduced GHG emissions, the estimated total NPV at TSL 3 is \$22.6 billion less than the no-new-standards case. Using a 3-percent discount rate for all benefits and costs, the estimated total NPV at TSL 3 is \$37.9 billion less than the no-new-standards case. The estimated total NPV is provided for additional information, however DOE primarily relies upon the NPV of consumer benefits when determining whether a proposed standard level is economically justified.

At TSL 3, the average life-cycle costs (“LCC”) impact is a loss of \$638.87 for electric smooth element cooking top product classes, a loss \$1.03 for gas cooking top product classes, a shipments-weighted average loss of \$24.87 for electric ovens, and a shipment-weighted average loss of \$24.16 for gas ovens. The simple payback period is 170.5 years for electric smooth element cooking top product classes, 10.5 years for gas cooking top product classes, 20.8 years for electric ovens, and 18.0 years for gas ovens. The fraction of consumers experiencing a net LCC cost is 100 percent for electric smooth element cooking top product classes, 38 percent for gas cooking top product classes, 81 percent for electric ovens, and 21 percent for gas ovens.

At TSL 3, the projected change in industry net present value (“INPV”) ranges from a decrease of \$1,903 million to a decrease of \$1,626 million, which corresponds to decreases of 118.9 percent and 101.6 percent, respectively. DOE estimates that industry must invest \$2,069.2 million to comply with standards set at TSL 3. DOE estimates that less than 1 percent of electric smooth element cooking top (standalone and component of a combined cooking product) shipments, 41 percent of gas

cooking top (standalone and component of a combined cooking product) shipments, zero percent of electric standard oven (freestanding and built-in) shipments, zero percent of electric self-clean oven (freestanding) shipments, 2 percent of electric self-clean oven (built-in) shipments, 62 percent of gas standard oven (freestanding) shipments, 38 percent of gas standard oven (built-in) shipments, 93 percent of gas self-clean oven (freestanding) shipments, and 77 percent of gas self-clean oven (built-in) shipments would already meet the efficiency levels required at TSL 3 in 2027.

The Secretary tentatively concludes that at TSL 3 for consumer conventional cooking products, the benefits of energy savings, emission reductions, and the estimated monetary value of the emissions reductions would be outweighed by the negative NPV of consumer benefits, the economic burden on many consumers (e.g., negative LCC savings across all product classes), and the significant impacts on manufacturers, including the large conversion costs and the significant reduction in INPV. A significant fraction of consumers across all product classes would experience a net LCC cost and negative LCC savings. The consumer NPV is negative at both 3 and 7 percent. The potential reduction in INPV could be as high as 118.9 percent. Consequently, the Secretary has tentatively concluded that TSL 3 is not economically justified.

DOE next considered TSL 2, which represents EL 2 for all product classes. TSL 2 would save an estimated 0.66 quads of energy, an amount DOE considers significant. Under TSL 2, the NPV of consumer benefit would decrease compared to the no-new-

<sup>14</sup> A metric ton is equivalent to 1.1 short tons. Results for emissions other than CO<sub>2</sub> are presented in short tons.

<sup>15</sup> DOE calculated emissions reductions relative to the no-new-standards-case, which reflects key assumptions in the *Annual Energy Outlook 2023* (“*AEO2023*”). *AEO2023* reflects, to the extent possible, laws and regulations adopted through mid-November 2022, including the Inflation Reduction Act. See section IV.K of the direct final rule published elsewhere in this issue of the *Federal Register* for further discussion of *AEO2023* assumptions that effect air pollutant emissions.



standards case by \$0.40 billion using a discount rate of 7 percent, and increase compared to the no-new-standards case by \$0.34 billion using a discount rate of 3 percent.

The cumulative emissions reductions at TSL 2 are 21.16 Mt of CO<sub>2</sub>, 2.26 thousand tons of SO<sub>2</sub>, 51.14 thousand tons of NO<sub>x</sub>, 0.01 tons of Hg, 235.42 thousand tons of CH<sub>4</sub>, and 0.10 thousand tons of N<sub>2</sub>O. The estimated monetary value of the climate benefits from reduced GHG emissions (associated with the average SC–GHG at a 3-percent discount rate) at TSL 2 is \$1.3 billion. The estimated monetary value of the health benefits from reduced SO<sub>2</sub> and NO<sub>x</sub> emissions at TSL 2 is \$0.9 billion using a 7-percent discount rate and \$2.1 billion using a 3-percent discount rate.

Using a 7-percent discount rate for consumer benefits and costs, health benefits from reduced SO<sub>2</sub> and NO<sub>x</sub> emissions, and the 3-percent discount rate case for climate benefits from reduced GHG emissions, the estimated total NPV at TSL 2 is \$1.7 billion. Using a 3-percent discount rate for all benefits and costs, the estimated total NPV at TSL 2 is \$3.8 billion. The estimated total NPV is provided for additional information, however DOE primarily relies upon the NPV of consumer benefits when determining whether a proposed standard level is economically justified.

At TSL 2, the average LCC impact is a savings of \$8.54 for electric smooth element cooking top product classes, a loss of \$1.03 for gas cooking top product classes, a shipments-weighted average loss of \$39.55 for electric ovens, and a shipment-weighted average loss of \$24.16 for gas ovens. The simple payback period is 4.0 years for electric smooth element cooking top product classes, 10.5 years for gas cooking top product classes, 25.4 years for electric ovens, and 18.0 years for gas ovens. The fraction of consumers experiencing a net LCC cost is 52 percent for electric smooth element cooking top product classes, 38 percent for gas cooking top product classes, 27 percent for electric ovens, and 21 percent for gas ovens.

At TSL 2, the projected change in INPV ranges from a decrease of \$559 million to a decrease of \$522 million, which corresponds to decreases of 34.9 percent and 32.6 percent, respectively. DOE estimates that industry must invest \$576.5 million to comply with standards set at TSL 2. DOE estimates that approximately 15 percent of electric smooth element cooking top (standalone and component of a combined cooking product) shipments, 41 percent of gas cooking top (standalone and component

of a combined cooking product) shipments, 38 percent of electric standard oven (freestanding) shipments, 30 percent of electric standard oven (built-in) shipments, 77 percent of electric self-clean oven (freestanding) shipments, 88 percent of electric self-clean ovens (built-in) shipments, 62 percent of gas standard oven (freestanding) shipments, 38 percent of gas standard oven (built-in), 93 percent of gas self-clean oven (freestanding) shipments, and 77 percent of gas self-clean oven (built-in) shipments would already meet or exceed the efficiency levels required at TSL 2 in 2027.

The Secretary tentatively concludes that at TSL 2 for consumer conventional cooking products, the benefits of energy savings, emission reductions, and the estimated monetary value of the emissions reductions would be outweighed by the negative NPV of consumer benefits, the economic burden on many consumers, and the significant impacts on manufacturers, including the large conversion costs and the significant reduction in INPV. At TSL 2, consumers, on average, would experience a negative LCC savings for gas cooking tops, electric ovens, and gas ovens. For electric cooking tops, 52 percent of consumers would experience a net cost. At TSL 2, the simple payback period for electric and gas ovens would exceed the average product lifetime. Additionally, the consumer NPV is negative at 7 percent. The potential reduction in INPV could be as high as 34.9 percent. Consequently, the Secretary has tentatively concluded that TSL 2 is not economically justified.

DOE next considered TSL 1, which corresponds to the TSL recommended in the Joint Agreement (the “Recommended TSL”) and which represents EL 1 for all product classes. The Recommended TSL would save an estimated 0.22 quads of energy, an amount DOE considers significant. Under the Recommended TSL, the NPV of consumer benefit would be \$0.65 billion using a discount rate of 7 percent, and \$1.56 billion using a discount rate of 3 percent.

The cumulative emissions reductions at the Recommended TSL are 3.99 Mt of CO<sub>2</sub>, 1.15 thousand tons of SO<sub>2</sub>, 7.61 thousand tons of NO<sub>x</sub>, 0.01 tons of Hg, 34.70 thousand tons of CH<sub>4</sub>, and 0.04 thousand tons of N<sub>2</sub>O. The estimated monetary value of the climate benefits from reduced GHG emissions (associated with the average SC–GHG at a 3-percent discount rate) at the Recommended TSL is \$0.22 billion. The estimated monetary value of the health benefits from reduced SO<sub>2</sub> and NO<sub>x</sub> emissions at the Recommended TSL is

\$0.16 billion using a 7-percent discount rate and \$0.42 billion using a 3-percent discount rate.

Using a 7-percent discount rate for consumer benefits and costs, health benefits from reduced SO<sub>2</sub> and NO<sub>x</sub> emissions, and the 3-percent discount rate case for climate benefits from reduced GHG emissions, the estimated total NPV at the Recommended TSL is \$1.03 billion. Using a 3-percent discount rate for all benefits and costs, the estimated total NPV at the Recommended TSL is \$2.20 billion. The estimated total NPV is provided for additional information, however DOE primarily relies upon the NPV of consumer benefits when determining whether a proposed standard level is economically justified.

At the Recommended TSL, the average LCC impact is a savings of \$62.80 for electric smooth element cooking top product classes, a savings of \$3.09 for gas cooking top product classes, a shipments-weighted average savings of \$16.23 for electric ovens, and a shipment-weighted average savings of \$15.17 for gas ovens. The simple payback period is 0.6 years for electric smooth element cooking top product classes, 6.6 years for gas cooking top product classes, 2.1 years for electric ovens, and 1.9 years for gas ovens. The fraction of consumers experiencing a net LCC cost is 0 percent for electric smooth element cooking top product classes, 1 percent for gas cooking top product classes, 0 percent for electric ovens, and 0 percent for gas ovens.

At the Recommended TSL, the projected change in INPV ranges from a decrease of \$144 million to a decrease of \$143 million, which corresponds to decreases of 9.0 percent and 9.0 percent, respectively. DOE estimates that industry must invest \$66.7 million to comply with standards set at the Recommended TSL. DOE estimates that approximately 77 percent of electric smooth element cooking top (standalone and component of a combined cooking product) shipments, 97 percent of gas cooking top (standalone and component of a combined cooking product) shipments, 95 percent of electric standard oven (freestanding and built-in) shipments, 95 percent of electric self-clean oven (freestanding and built-in) shipments, 96 percent of gas standard oven (freestanding and built-in) shipments, and 96 percent of gas self-clean oven (freestanding and built-in) shipments would already meet or exceed the efficiency levels required at the Recommended TSL in 2028.

After considering the analysis and weighing the benefits and burdens, the Secretary has tentatively concluded that

at a standard set at the Recommended TSL for consumer conventional cooking products would be economically justified. At this TSL, the average LCC savings for all consumer conventional cooking product consumers is positive. A shipment-weighted 0 percent of conventional cooking product consumers experience a net cost, with the largest impact being 1 percent net cost for gas cooking top product classes. The FFC national energy savings are significant and the NPV of consumer benefits is positive using both a 3-percent and 7-percent discount rate. Notably, the benefits to consumers vastly outweigh the cost to manufacturers. At the Recommended TSL, the NPV of consumer benefits, even measured at the more conservative discount rate of 7 percent is over 4 times higher than the maximum estimated manufacturers' loss in INPV. The standard levels at the Recommended TSL are economically justified even without weighing the estimated monetary value of emissions reductions. When those emissions reductions are included—representing \$0.22 billion in climate benefits (associated with the average SC-GHG at a 3-percent discount rate), and \$0.42 billion (using a 3-percent discount rate) or \$0.16 billion (using a 7-percent discount rate) in health benefits—the rationale becomes stronger still.

As stated, DOE conducts the walk-down analysis to determine the TSL that represents the maximum improvement in energy efficiency that is technologically feasible and economically justified as required under EPCA. The walk-down is not a comparative analysis, as a comparative analysis would result in the

maximization of net benefits instead of energy savings that are technologically feasible and economically justified, which would be contrary to the statute. 86 FR 70892, 70908. Although DOE has not conducted a comparative analysis to select the new and amended energy conservation standards, DOE notes that the Recommended TSL has higher average LCC savings, a shorter average payback period, a lower fraction of consumers experiencing a net LCC cost, and higher consumer net present values compared to TSL 2 and 3.

Although DOE considered new and amended standard levels for consumer conventional cooking products by grouping the efficiency levels for each product class into TSLs, DOE evaluates all analyzed efficiency levels in its analysis. For electric smooth element cooking top product classes, the Recommended TSL corresponds to efficiency level (“EL”) 1, which incorporates low-standby-loss electronic controls. Setting a standard at EL 2 or EL 3 would result in a majority of consumers experiencing a net LCC cost and longer payback periods relative to EL 1. For gas cooking top product classes, the Recommended TSL corresponds to EL 1, which represents the efficiency level defined in the Joint Agreement and which would not preclude any combination of other features mentioned by manufacturers (e.g., multiple high input rate burners (“HIR burners”),<sup>16</sup> continuous cast-iron grates, different nominal unit widths, sealed burners, at least one low input rate burner (“LIR burner”),<sup>17</sup> multiple dual-stacked and/or multi-ring HIR burners, and at least one extra-high input rate burner), as demonstrated by products from multiple manufacturers

in the expanded test sample. Setting a standard at EL 2 would result in an average net LCC cost and a higher payback period relative to EL 1. For electric and gas ovens, the Recommended TSL corresponds to EL 1, which incorporates switch mode power supplies (“SMPs”). A standard at EL 2 or EL 3 for electric ovens would result in a significantly higher percentage of consumers experiencing a net LCC cost and longer payback periods relative to EL 1. Similarly, for gas ovens, a standard at EL 2 would result in a larger percentage of consumers experiencing a net LCC cost and longer payback periods relative to EL 1. The proposed levels at the Recommended TSL result in positive LCC savings for all product classes and a lower percentage of consumers experiencing a net cost to the point where DOE has tentatively concluded that they are economically justified, as discussed for the Recommended TSL in the preceding paragraphs.

Accordingly, the Secretary tentatively concludes that the Recommended TSL would offer the maximum improvement in efficiency that is technologically feasible and economically justified and would result in the significant conservation of energy.

Therefore, based on the previous considerations, DOE proposes to adopt the energy conservation standards for consumer conventional cooking products at the Recommended TSL.

The proposed new and amended energy conservation standards for consumer conventional cooking products, excluding portable cooking products, are shown in Table III.3 and Table III.4.

TABLE III.3—PROPOSED NEW AND AMENDED ENERGY CONSERVATION STANDARDS FOR CONVENTIONAL COOKING TOPS

| Product class   | Maximum integrated annual energy consumption (IAEC) |
|---|---|
| Electric Open (Coil) Element Cooking Tops .....                                   | No standard.  |
| Electric Smooth Element Standalone Cooking Tops .....                             | 207 kWh/year.                                       |
| Electric Smooth Element Cooking Top Component of a Combined Cooking Product ..... | 207 kWh/year.                                       |
| Gas Standalone Cooking Tops .....   | 1,770 kBtu/year.                                    |
| Gas Cooking Top Component of a Combined Cooking Product .....                     | 1,770 kBtu/year.                                    |

TABLE III.4—PROPOSED NEW AND AMENDED PRESCRIPTIVE ENERGY CONSERVATION STANDARDS FOR CONVENTIONAL OVENS

| Product class        | New and amended standards   |
|----------------------|---|
| Electric Ovens ..... | Shall not be equipped with a control system that uses linear power supply.* |

<sup>16</sup> In this analysis, DOE defines an HIR burner as a burner rated at or above 14,000 Btu per hour (“Btu/h”).

<sup>17</sup> In this analysis, DOE defines an LIR burner as a burner with an input rate below 6,500 Btu/h.

TABLE III.4—PROPOSED NEW AND AMENDED PRESCRIPTIVE ENERGY CONSERVATION STANDARDS FOR CONVENTIONAL OVENS—Continued

| Product class   | New and amended standards  |
|-----------------|--|
| Gas Ovens ..... | The control system for gas ovens shall:<br>(1) Not be equipped with a constant burning pilot light; and<br>(2) Not be equipped with a linear power supply. |

The Secretary also tentatively concludes that an amended standard is not technologically feasible and economically justified for electric open (coil) element cooking tops. Therefore, DOE is not proposing any energy conservation standards for electric open (coil) element cooking tops.

*B. Annualized Benefits and Costs of the Proposed Standards*

The benefits and costs of the proposed standards can also be expressed in terms of annualized values. The annualized net benefit is (1) the annualized national economic value (expressed in 2022\$) of the benefits from operating products that meet the proposed standards (consisting primarily of operating cost

savings from using less energy), minus increases in product purchase costs, and (2) the annualized monetary value of the climate and health benefits.

Table III.5 shows the annualized values for consumer conventional cooking products under the Recommended TSL, expressed in 2022\$. The results under the primary estimate are as follows.

Using a 7-percent discount rate for consumer benefits and costs and NO<sub>x</sub> and SO<sub>2</sub> reductions, and the 3-percent discount rate case for GHG social costs, the estimated cost of the proposed standards for consumer conventional cooking products is \$3.9 million per year in increased equipment installed costs, while the estimated annual

benefits are \$68.1 million from reduced equipment operating costs, \$12.4 million in GHG reductions, and \$16.1 million from reduced NO<sub>x</sub> and SO<sub>2</sub> emissions. In this case, the net benefit amounts to \$92.6 million per year.

Using a 3-percent discount rate for all benefits and costs, the estimated cost of the proposed standards for consumer conventional cooking products is \$4.0 million per year in increased equipment costs, while the estimated annual benefits are \$90.8 million in reduced operating costs, \$12.4 million from GHG reductions, and \$23.5 million from reduced NO<sub>x</sub> and SO<sub>2</sub> emissions. In this case, the net benefit amounts to \$122.7 million per year.

TABLE III.5—ANNUALIZED BENEFITS AND COSTS OF PROPOSED STANDARDS (RECOMMENDED TSL) FOR CONSUMER CONVENTIONAL COOKING PRODUCTS

|  | Million 2022\$/year |                           |                            |
|--|---------------------|---------------------------|----------------------------|
|  | Primary estimate    | Low-net-benefits estimate | High-net-benefits estimate |
| <b>3% discount rate</b>                      |                     |                           |                            |
| Consumer Operating Cost Savings .....        | 90.8                | 84.0                      | 95.6                       |
| Climate Benefits * .....                     | 12.4                | 11.9                      | 12.5                       |
| Health Benefits ** .....                     | 23.5                | 22.6                      | 23.8                       |
| Total Benefits † .....                       | 126.7               | 118.4                     | 131.9                      |
| Consumer Incremental Product Costs ‡ .....   | 4.0                 | 4.1                       | 3.8                        |
| Net Benefits .....                           | 122.7               | 114.3                     | 128.1                      |
| Change in Producer Cash Flow (INPV ††) ..... | (13.8)              | (13.8)                    | (13.8)                     |
| <b>7% discount rate</b>                      |                     |                           |                            |
| Consumer Operating Cost Savings .....        | 68.1                | 63.3                      | 71.5                       |
| Climate Benefits * (3% discount rate) .....  | 12.4                | 11.9                      | 12.5                       |
| Health Benefits ** .....                     | 16.1                | 15.5                      | 16.3                       |
| Total Benefits † .....                       | 96.6                | 90.7                      | 100.3                      |
| Consumer Incremental Product Costs ‡ .....   | 3.9                 | 4.0                       | 3.8                        |
| Net Benefits .....                           | 92.6                | 86.7                      | 96.5                       |
| Change in Producer Cash Flow (INPV ††) ..... | (13.8)              | (13.8)                    | (13.8)                     |

**Note:** This table presents the costs and benefits associated with consumer conventional cooking products shipped in 2028–2057. These results include consumer, climate, and health benefits that accrue after 2057 from the products shipped in 2028–2057. The Primary, Low Net Benefits, and High Net Benefits Estimates utilize projections of energy prices from the AEO2023 Reference case, Low Economic Growth case, and High Economic Growth case, respectively. In addition, incremental equipment costs reflect a medium decline rate in the Primary Estimate, a low decline rate in the Low Net Benefits Estimate, and a high decline rate in the High Net Benefits Estimate. The methods used to derive projected price trends are explained in sections IV.F.1 and IV.H.2 of the direct final rule published elsewhere in this issue of the **Federal Register**. Note that the Benefits and Costs may not sum to the Net Benefits due to rounding.

\* Climate benefits are calculated using four different estimates of the global SC–GHG (see section IV.L of the direct final rule published elsewhere in this issue of the **Federal Register**). For presentational purposes of this table, the climate benefits associated with the average SC–GHG at a 3-percent discount rate are shown, but DOE does not have a single central SC–GHG point estimate, and it emphasizes the importance and value of considering the benefits calculated using all four sets of SC–GHG estimates. To monetize the benefits of reducing GHG emissions, this analysis uses the interim estimates presented in the *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates Under Executive Order 13990* published in February 2021 by the IWG.

\*\* Health benefits are calculated using benefit-per-ton values for NO<sub>x</sub> and SO<sub>2</sub>. DOE is currently only monetizing (for SO<sub>2</sub> and NO<sub>x</sub>) PM<sub>2.5</sub> precursor health benefits and (for NO<sub>x</sub>) ozone precursor health benefits, but will continue to assess the ability to monetize other effects such as health benefits from reductions in direct PM<sub>2.5</sub> emissions. See section IV.L of the direct final rule published elsewhere in this issue of the **Federal Register** for more details.

† Total benefits for both the 3-percent and 7-percent cases are presented using the average SC–GHG with 3-percent discount rate, but DOE does not have a single central SC–GHG point estimate.

‡ Costs include incremental equipment costs as well as installation costs.

‡‡ Operating Cost Savings are calculated based on the life-cycle costs analysis and national impact analysis as discussed in detail below. See sections IV.F and IV.H of the direct final rule published elsewhere in this issue of the **Federal Register**. DOE's national impacts analysis includes all impacts (both costs and benefits) along the distribution chain beginning with the increased costs to the manufacturer to manufacture the product and ending with the increase in price experienced by the consumer. DOE also separately conducts a detailed analysis on the impacts on manufacturers (the MIA). See section IV.J of the direct final rule published elsewhere in this issue of the **Federal Register**. In the detailed MIA, DOE models manufacturers' pricing decisions based on assumptions regarding investments, conversion costs, cash flow, and margins. The MIA produces a range of impacts, which is the rule's expected impact on the INPV. The change in INPV is the present value of all changes in industry cash flow, including changes in production costs, capital expenditures, and manufacturer profit margins. The annualized change in INPV is calculated using the industry weighted average cost of capital value of 9.1 percent that is estimated in the manufacturer impact analysis (see chapter 12 of the direct final rule TSD for a complete description of the industry weighted average cost of capital). For consumer conventional cooking products, the annualized change in INPV is –\$13.8 million. DOE accounts for that range of likely impacts in analyzing whether a trial standard level is economically justified. See section V.C of the direct final rule published elsewhere in this issue of the **Federal Register**. DOE is presenting the range of impacts to the INPV under two markup scenarios: the Preservation of Gross Margin scenario, which is the manufacturer markup scenario used in the calculation of Consumer Operating Cost Savings in this table, and the Preservation of Operating Profit scenario, where DOE assumed manufacturers would not be able to increase per-unit operating profit in proportion to increases in manufacturer production costs. DOE includes the range of estimated annualized change in INPV in the above table, drawing on the MIA explained further in section IV.J of the direct final rule published elsewhere in this issue of the **Federal Register** to provide additional context for assessing the estimated impacts of the proposed rule to society, including potential changes in production and consumption, which is consistent with OMB's Circular A–4 and E.O. 12866. If DOE were to include the INPV into the annualized net benefit calculation for the proposed rule, the annualized net benefits would be \$108.9 million at 3-percent discount rate and would be \$78.8 million at 7-percent discount rate. Parentheses ( ) indicate negative values.

## IV. Public Participation

### A. Submission of Comments

DOE will accept comments, data, and information regarding this proposed rule on 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. Comments relating to the direct final rule published elsewhere in this issue of the **Federal Register** should be submitted as instructed therein.

*Submitting comments via www.regulations.gov.* The *www.regulations.gov* web page 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 delivery/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 comment or any accompanying documents. Instead, provide your contact information in a cover letter. Include your first and last names, email address, telephone number, and

optional mailing address. The cover letter will not be publicly viewable as long as it does not include any comments.

Include contact information each time you submit comments, data, documents, and other information to DOE. If you submit via postal mail or hand delivery/courier, please provide all items on a CD, if feasible, in which case it is not necessary to submit printed copies. 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).

#### B. Public Meeting

As stated previously, if DOE withdraws the direct final rule published elsewhere in this issue of the **Federal Register** pursuant to 42 U.S.C. 6295(p)(4)(C), DOE will hold a public meeting to allow for additional comment on this proposed rule. DOE will publish notice of any meeting in the **Federal Register**.

#### V. Procedural Issues and Regulatory Review

The regulatory reviews conducted for this proposed rule are identical to those conducted for the direct final rule published elsewhere in this issue of the **Federal Register**. Please see the direct final rule for further details.

#### A. 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") and a final regulatory flexibility analysis ("FRFA") 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 ([www.energy.gov/gc/office-general-counsel](http://www.energy.gov/gc/office-general-counsel)). DOE has prepared the following IRFA for the products that are the subject of this proposed rulemaking.

For manufacturers of consumer conventional cooking products, the SBA has set a size threshold, which defines those entities classified as "small businesses" for the purposes of the statute. DOE used the SBA's small business size standards to determine whether any small entities would be

subject to the requirements of the rule. (See 13 CFR part 121.) The size standards are listed by North American Industry Classification System ("NAICS") code and industry description and are available at [www.sba.gov/document/support-table-size-standards](http://www.sba.gov/document/support-table-size-standards). Manufacturing of consumer conventional cooking products is classified under NAICS 335220, "Major Household Appliance Manufacturing." The SBA sets a threshold of 1,500 employees or fewer for an entity to be considered as a small business for this category.

#### 1. Description of Reasons Why Action Is Being Considered

EPCA prescribed energy conservation standards for consumer conventional cooking products (42 U.S.C. 6295(h)(1)), and directs DOE to conduct future rulemakings to determine whether to amend these standards. (42 U.S.C. 6295(h)(2)) EPCA further provides that, not later than 6 years after the issuance of any final rule establishing or amending a standard, DOE must publish either a notice 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)(1)) DOE is proposing amended energy conservation standards for consumer conventional cooking products in accordance with DOE's obligations under EPCA.

Pursuant to EPCA, any new or amended energy conservation standard must be designed to achieve the maximum improvement in energy efficiency that DOE determines is technologically feasible and economically justified. (42 U.S.C. 6295(o)(2)(A)) Furthermore, the new or amended standard must result in significant conservation of energy. (42 U.S.C. 6295(o)(3)(B))

In light of the above and the requirements under 42 U.S.C. 6295(p)(4)(A)–(B), DOE is issuing this NOPR proposing energy conservation standards for consumer conventional cooking products. These standard levels were submitted jointly to DOE on September 25, 2023, by groups representing manufacturers, energy and environmental advocates, consumer groups, and a utility.<sup>18</sup> The Joint

<sup>18</sup> The signatories to the Joint Agreement include AHAM, American Council for an Energy-Efficient Economy, Alliance for Water Efficiency, Appliance Standards Awareness Project, Consumer Federation of America, Consumer Reports, Earthjustice, National Consumer Law Center, Natural Resources Defense Council, Northwest Energy Efficiency Alliance, and Pacific Gas and Electric Company.

Agreement recommends specific energy conservation standards for consumer conventional cooking products that, in the commenters' view, would satisfy the EPCA requirements in 42 U.S.C. 6295(o).

#### 2. Objectives of, and Legal Basis for, Rule

NAECA, Public Law 100–12, amended EPCA to establish prescriptive standards for gas cooking products, requiring gas ranges and ovens with an electrical supply cord that are manufactured on or after January 1, 1990, not to be equipped with a constant burning pilot light. (42 U.S.C. 6295(h)(1)) NAECA also directed DOE to conduct two cycles of rulemakings to determine if more stringent or additional standards were justified for kitchen ranges and ovens. (42 U.S.C. 6295(h)(2)) EPCA additionally requires that, not later than 6 years after the issuance of a final rule establishing or amending a standard, DOE must publish either notice 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)(1))

#### 3. Description on Estimated Number of Small Entities Regulated

DOE conducted a focused inquiry into small business manufacturers of the products covered by this rulemaking. DOE used the SBA's small business size standards to determine whether any small entities would be subject to the requirements of the rule. The size standards are listed by NAICS code as well as by industry description and are available at [www.sba.gov/document/support-table-size-standards](http://www.sba.gov/document/support-table-size-standards). Manufacturing of consumer conventional cooking products is classified under NAICS 335220, "major household appliance manufacturing." The SBA sets a threshold of 1,500 employees or fewer for an entity to be considered as a small business for this category. DOE used available public information to identify potential small

Members of AHAM's Major Appliance Division that manufacture the affected products include: Alliance Laundry Systems, LLC; Asko Appliances AB; Beko US Inc.; Brown Stove Works, Inc.; BSH Home Appliances Corporation; Danby Products, Ltd.; Electrolux Home Products, Inc.; Elicamex S.A. de C.V.; Faber; Fotile America; GE Appliances, a Haier Company; L'Atelier Paris Haute Design LLC; LG Electronics; Liebherr USA, Co.; Midea America Corp.; Miele, Inc.; PAPRSA Corporation of America; Perlick Corporation; Samsung Electronics America, Inc.; Sharp Electronics Corporation; Smeg S.p.A.; Sub-Zero Group, Inc.; The Middleby Corporation; U-Line Corporation; Viking Range, LLC; and Whirlpool Corporation.

manufacturers. DOE accessed the Compliance Certification Database <sup>19</sup> (“CCD”), the Modernized Appliance Efficiency Database System <sup>20</sup> (“MAEDbS”), and the National Resources Canada database <sup>21</sup> (“NRCan”) to create a list of companies that import or otherwise manufacture the products covered by this NOPR. Once DOE created a list of potential manufacturers, DOE used market research tools to determine whether any companies met SBA’s definition of a small entity—based on the total number of employees for each company including parent, subsidiary, and sister entities—and gather annual revenue estimates.

Based on DOE’s analysis, DOE identified 35 companies that manufacture consumer conventional cooking products covered by this rulemaking. DOE screened out companies that have more than 1,500 total employees, are not original equipment manufacturers (*i.e.*, do not manufacture the products they sell), or are entirely foreign owned and operated, and therefore do not meet SBA’s requirements to be considered a small entity. Of the 35 companies DOE identified as manufacturers of consumer conventional cooking products sold in the United States, 15 were identified as small businesses.

4. Description and Estimate of Compliance Requirements Including Differences in Cost, if Any, for Different Groups of Small Entities

DOE is proposing TSL 1 in this NOPR. For all conventional oven product classes, TSL 1 requires that the conventional ovens not be equipped with a linear power supply. Based on DOE’s shipments analysis, more than 95 percent of conventional ovens use an SMPS and therefore are not equipped with a linear power supply. Based on DOE’s shipment analysis, DOE assumed most, if not all, small businesses already use SMPSs for the conventional ovens they manufacture. If any small businesses do still use linear power supplies in their conventional ovens, there would be minimal conversion costs to these small businesses, as SMPSs can be purchased as a separate component and would most likely not require a significant redesign to incorporate these SMPSs. The remainder of this cost analysis focuses on the costs associated with complying with the proposed conventional cooking top energy conservation standards.

As stated in the previous section, DOE identified 15 small manufacturers of consumer conventional cooking products. All 15 of these small businesses manufacture conventional cooking tops. These 15 small businesses can be grouped into two manufacturing groups: those that manufacture

premium cooking tops and those that manufacture non-premium cooking tops.

Gas cooking top non-premium products typically have thinner non-continuous grates with one or no HIR burner (although some of these small businesses may offer a limited number of models with thicker continuous grates). Electric cooking top non-premium products mostly have electric open (coil) element cooking tops (although a few small businesses may have up to 25 percent of their electric ranges or electric cooking tops using electric smooth element cooking tops). These non-premium small businesses usually compete on price in the market.

Gas cooking top premium products typically have thicker continuous grates with multiple HIR burners. Electric cooking top premium products use smooth elements, typically with induction technology. Small businesses manufacturing premium products do not offer electric open (coil) element cooking tops. Lastly, small businesses manufacturing premium products typically compete on the high quality and professional look and design of their products. These ranges or cooking tops are typically significantly more expensive than non-premium products.

Based on data from each small business’s websites, DOE estimated the number of basic models each small business offers.

TABLE V.1—NUMBER OF UNIQUE BASIC MODELS FOR EACH SMALL BUSINESS

| Manufacturer      | Small business type | Number of cooking top basic models (by product class) |                         |
|-------------------|---------------------|---|-------------------------|
|                   |                     | Gas   | Electric—smooth element |
| Small Business 1  | Non-Premium         | 4   | 4                       |
| Small Business 2  | Non-Premium         |   | 30                      |
| Small Business 3  | Non-Premium         | 27  | 13                      |
| Small Business 4  | Non-Premium         | 24  |                         |
| Small Business 5  | Non-Premium         | 14  |                         |
| Small Business 6  | Non-Premium         | 3   | 2                       |
| Small Business 7  | Premium             | 11  |                         |
| Small Business 8  | Premium             | 24  | 5                       |
| Small Business 9  | Premium             | 20  | 7                       |
| Small Business 10 | Premium             | 16  |                         |
| Small Business 11 | Premium             | 14  | 1                       |
| Small Business 12 | Premium             | 12  |                         |
| Small Business 13 | Premium             | 42  |                         |
| Small Business 14 | Premium             | 13  |                         |
| Small Business 15 | Premium             | 14  |                         |

DOE estimated the small business conversion costs and testing costs using the same methodology used to estimate the industry conversion costs, described

in section IV.J.2.c of the direct final rule published elsewhere in this issue of the **Federal Register**. There are two types of conversion costs that small businesses

could incur due to the proposed standards: product conversion costs (including any testing costs) and capital conversion costs. In the August 2022 TP

<sup>19</sup> U.S. Department of Energy Compliance Certification Management System, available at: [www.regulations.doe.gov/ccms](http://www.regulations.doe.gov/ccms).

<sup>20</sup> California Energy Commission’s Modernized Appliance Efficiency Database System, available at: [cacertappliances.energy.ca.gov/Login.aspx](http://cacertappliances.energy.ca.gov/Login.aspx).

<sup>21</sup> Natural Resources Canada searchable product list, available at: [oee.nrcan.gc.ca/pml-lmp/](http://oee.nrcan.gc.ca/pml-lmp/).

Final Rule, DOE estimated a lower per-unit testing cost for testing done in-house and a more-costly third-party laboratory per-unit testing cost. For this IRFA, DOE assumed all small businesses would incur the more costly third-party laboratory per-unit testing cost, as most small businesses do not have in-house testing capabilities or capacity to test all their products in accordance with the DOE test procedure.

Product conversion costs are investments in research and development (“R&D”), testing, marketing, and other non-capitalized costs necessary to make product designs comply with new and amended energy conservation standards. Capital conversion costs are investments in

property, plant, and equipment necessary to adapt or change existing production facilities such that new compliant product designs can be fabricated and assembled. Manufacturers would have to incur testing costs for all gas cooking tops and all electric smooth element cooking tops since DOE is proposing new performance-based energy conservation standards for cooking tops. Therefore, even products that meet the proposed energy conservation standards would incur testing costs to test these gas cooking tops and electric smooth element cooking tops to demonstrate compliance with the proposed energy conservation standards. However, manufacturers would only incur R&D

product conversion costs and capital conversion costs if they have products that do not meet the proposed energy conservation standards.

Based on the estimated model counts for each conventional cooking top product class shown in Table V.1 and the conversion cost and testing cost methodology used to calculate industry conversion costs, DOE estimated the conversion costs and testing costs for each small business, displayed in Table V.2. DOE then used D&B Hoovers to estimate the annual revenue for each small business. DOE presents the estimated conversion costs and testing costs as a percent of the estimated 4 years of annual revenue for each small business.

TABLE V.2—ESTIMATED CONVERSION COSTS AND ANNUAL REVENUE FOR EACH SMALL BUSINESS

| Manufacturer      | Small business type | Total conversion and testing costs | Annual revenue | Conversion cost as a % of 4-years of annual revenue |
|-------------------|---------------------|------------------------------------|----------------|---|
| Small Business 1  | Non-Premium         | \$326,600                          | \$950,000      | 9   |
| Small Business 2  | Non-Premium         | 573,002                            | 8,780,000      | 2   |
| Small Business 3  | Non-Premium         | 611,001                            | 58,630,000     | <1  |
| Small Business 4  | Non-Premium         | 196,800                            | 31,370,000     | <1  |
| Small Business 5  | Non-Premium         | 114,800                            | 23,980,000     | <1  |
| Small Business 6  | Non-Premium         | 302,000                            | 107,350,000    | <1  |
| Small Business 7  | Premium             | 733,204                            | 2,730,000      | 7   |
| Small Business 8  | Premium             | 1,224,306                          | 5,000,000      | 6   |
| Small Business 9  | Premium             | 1,136,404                          | 8,800,000      | 3   |
| Small Business 10 | Premium             | 774,204                            | 7,990,000      | 2   |
| Small Business 11 | Premium             | 1,027,004                          | 8,648,000      | 3   |
| Small Business 12 | Premium             | 741,404                            | 10,970,000     | 2   |
| Small Business 13 | Premium             | 1,201,909                          | 32,600,000     | 1   |
| Small Business 14 | Premium             | 749,604                            | 19,800,000     | 1   |
| Small Business 15 | Premium             | 757,804                            | 23,730,000     | 1   |

5. Duplication, Overlap, and Conflict With Other Rules and Regulations

DOE is not aware of any rules or regulations that duplicate, overlap, or conflict with the proposed rule.

6. Significant Alternatives to the Rule

The discussion in the previous section analyzes impacts on small businesses that would result from the proposed standards, represented by TSL 1. In reviewing alternatives to the proposed standards, DOE examined not setting energy conservation standards for consumer conventional cooking products. While not setting energy conservation standards for consumer conventional cooking products would reduce the impacts on small business manufacturers, it would come at the expense of 0.22 quads of energy savings and between \$1.56 billion to \$0.65 billion in consumer net benefits.

Establishing standards at TSL 1 would balance the benefits of the energy

savings and consumer net benefits at TSL 1 with the potential burdens placed on consumer conventional cooking product manufacturers, including small business manufacturers. Accordingly, DOE is proposing to adopt TSL 1 and is not proposing any of the other policy alternatives examined as part of the regulatory impact analysis and included in chapter 17 of the direct final rule TSD.

Additional compliance flexibilities may be available through other means. EPCA provides that a manufacturer whose annual gross revenue from all of its operations does not exceed \$8 million may apply for an exemption from all or part of an energy conservation standard for a period not longer than 24 months after the effective date of a final rule establishing the standard. (42 U.S.C. 6295(t)) Additionally, manufacturers subject to DOE’s energy efficiency standards may apply to DOE’s Office of Hearings and Appeals for exception relief under

certain circumstances. Manufacturers should refer to 10 CFR part 430, subpart E, and 10 CFR part 1003 for additional details.

VI. Approval of the Office of the Secretary

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

List of Subjects in 10 CFR Part 430

Administrative practice and procedure, Confidential business information, Energy conservation, Household appliances, Imports, Intergovernmental relations, Reporting and recordkeeping requirements, and Small businesses.

Signing Authority

This document of the Department of Energy was signed on January 26, 2024, by Jeffrey Marootian, 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 January 29, 2024.

**Treena V. Garrett,**  
Federal Register Liaison Officer, U.S.  
Department of 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. Amend § 430.2 by adding in alphabetical order, the definition of “Portable indoor conventional cooking top” to read as follows:

**§ 430.2 Definitions.**

\* \* \* \* \*

*Portable indoor conventional cooking top* means a conventional cooking top designed—

- (1) For indoor use; and
- (2) To be moved from place to place.

\* \* \* \* \*

■ 3. Amend § 430.32 by revising paragraphs (j)(1) and (2) and the heading to paragraph (j)(3) introductory text to read as follows:

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

\* \* \* \* \*

(j) \* \* \*

(1) *Conventional cooking tops.* (i) Gas cooking tops, other than gas portable indoor conventional cooking tops, manufactured on or after April 9, 2012, and before January 31, 2028, shall not be equipped with a constant burning pilot light.

(ii) Gas portable indoor conventional cooking tops, manufactured on or after April 9, 2012, shall not be equipped with a constant burning pilot light.

(iii) Conventional cooking tops, other than portable indoor conventional cooking tops, manufactured on or after January 31, 2028, shall have an integrated annual energy consumption (IAEC), excluding any downdraft venting system energy consumption, no greater than:

| Product class  | Maximum integrated annual energy consumption (IAEC) |
|--|---|
| (A) Electric Smooth Element Standalone Cooking Tops .....                            | 207 kWh/year.                                       |
| (B) Electric Smooth Element Cooking Top Component of Combined Cooking Products ..... | 207 kWh/year.                                       |
| (C) Gas Standalone Cooking Tops .....  | 1,770 kBtu/year.                                    |
| (D) Gas Cooking Top Component of Combined Cooking Products .....                     | 1,770 kBtu/year.                                    |

(2) *Conventional ovens.* The control system of a conventional oven shall:

- (i) Not be equipped with a constant burning pilot light, for gas ovens manufactured on or after April 9, 2012; and

(ii) Not be equipped with a linear power supply, for electric and gas ovens manufactured on or after January 31, 2028.

(3) *Microwave ovens.* \* \* \*

\* \* \* \* \*

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