[6450-01-P]

DEPARTMENT OF ENERGY

10 CFR Part 430

[Docket Number EERE–2014–BT–STD–0045]

RIN: 1904-AD48

Energy Conservation Program for Consumer Products: Definitions for Residential Water Heaters

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

ACTION: Notice of proposed rulemaking (NOPR).

SUMMARY: The Energy Policy and Conservation Act of 1975 (EPCA), as amended, prescribes energy conservation standards for various consumer products and certain commercial and industrial equipment, including residential water heaters. EPCA also requires the U.S. Department of Energy (DOE) to determine whether more stringent amended standards would be technologically feasible and economically justified, and would save a significant amount of energy. Accordingly, DOE established amended energy conservation standards for several classes of residential water heaters in an April 2010 final rule. In this notice, DOE proposes to amend its definitions pertaining to residential water heaters and to clarify the applicability of energy conservation standards for residential water heaters that are utilized as a secondary back-up heat source in solar-

thermal water heating systems. Specifically, DOE is proposing to create a definition for "solar-assisted fossil fuel storage water heater" and "solar-assisted electric storage water heater" and clarify that water heaters meeting these definitions are not subject to the amended energy conservation standards for residential water heaters established by the April 2010 final rule.

DATES: DOE will accept comments, data, and information regarding this notice of proposed rulemaking (NOPR) no later than [**INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER PUBLICATION**]. See section V, "Public Participation" for details.

ADDRESSES: Any comments submitted must identify the NOPR for Energy Conservation Standards for Residential Water Heaters, and provide docket number EERE-2014–BT–STD–0045 and/or regulatory information number (RIN) number 1904-AD48. Comments may be submitted using any of the following methods:

1. Federal eRulemaking Portal: www.regulations.gov. Follow the instructions for submitting comments.
2. E-mail: ResWaterHeater2014STD0045@ee.doe.gov. Include the docket number and/or RIN in the subject line of the message.
3. Mail: Ms. Brenda Edwards, U.S. Department of Energy, Building Technologies Program, Mailstop EE-2J, 1000 Independence Avenue, SW., Washington, DC,

20585-0121. If possible, please submit all items on a CD. It is not necessary to include printed copies.

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

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

Docket: The docket, which includes Federal Register notices, public meeting attendee lists and transcripts, comments, and other supporting documents/materials, is available for review at regulations.gov. All documents in the docket are listed in the regulations.gov index. However, some documents listed in the index, such as those containing information that is exempt from public disclosure, may not be publicly available.

A link to the docket web page can be found at: http://www.regulations.gov/#!docketDetail;D=EERE-2014-BT-STD-0045 . This web page will contain a link to the docket for this notice on the regulations.gov site. The regulations.gov web page will contain simple instructions on how to access all documents, including public comments, in the docket. See section V for further information on how to submit comments through www.regulations.gov.

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

FOR FURTHER INFORMATION CONTACT:

Ashley Armstrong, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, EE-2J, 1000 Independence Avenue, SW., Washington, DC, 20585-0121. Telephone: (202) 586-6590. E-mail: Ashley.Armstrong@ee.doe.gov.

Johanna Hariharan, U.S. Department of Energy, Office of the General Counsel, GC-33, 1000 Independence Avenue, SW., Washington, DC, 20585-0121. Telephone: (202) 287-6307. E-mail: Johanna.Hariharan@hq.doe.gov.

SUPPLEMENTARY INFORMATION:

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I. Introduction

The following section briefly discusses the statutory authority underlying DOE's standards for residential water heaters and this NOPR, as well as some of the relevant historical background related to the establishment of standards for residential water heaters.

A. Authority

Title III of the Energy Policy and Conservation Act, as amended[1] (42 U.S.C. 6291 et seq.; hereinafter "EPCA") sets forth various provisions designed to improve energy efficiency. Part A of title III of EPCA (42 U.S.C. 6291-6309) establishes the "Energy Conservation Program for Consumer Products Other Than Automobiles," which covers consumer products and certain commercial products (hereinafter referred to as "covered

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

products").[2] These covered products include residential water heaters, which are the subject of this notice. (42 U.S.C. 6292(a)(4))

Under EPCA, energy conservation programs generally consist of four parts: (1) testing, (2) labeling, (3) establishing Federal energy conservation standards, and (4) certification and enforcement procedures. The Federal Trade Commission (FTC) is primarily responsible for labeling consumer products, and DOE implements the remainder of the program.

EPCA 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 of 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))

B. Background

EPCA prescribed energy conservation standards for residential water heaters (42 U.S.C. 6295(e)(1)) and directed DOE to conduct rulemakings to determine whether to

[2] For editorial reasons, upon codification in the U.S. Code, Part B was re-designated Part A.

amend these standards. (42 U.S.C. 6295(e)(4)) DOE notes that under 42 U.S.C. 6295(m), the agency must periodically review its already established energy conservation standards for a covered product. Under this requirement, the next review that DOE would need to conduct must occur no later than six years from the issuance of a final rule establishing or amending a standard for a covered product.

On January 17, 2001, DOE published a final rule prescribing the Federal energy conservation standards for residential water heaters that are currently in effect for units manufactured on or after January 20, 2004. 66 FR 4474 ("January 2001 Final Rule"). The January 2001 Final Rule set minimum energy factors (EFs) that vary based on the storage volume of the water heater, the type of energy it uses (i.e., gas, oil, or electricity), and whether it is a storage, instantaneous, or tabletop model. 66 FR 4474; 10 CFR 430.32(d).Table I.1 presents the current Federal energy conservation standards for residential water heaters.

Table I.1 – Current Federal Energy Efficiency Standards for Residential Water Heaters

Product Class	Energy Factor as of January 20, 2004
Gas-fired Water Heater	EF=0.67-(0.0019 x Rated Storage Volume in gallons).
Oil-fired Water Heater	EF=0.59-(0.0019 x Rated Storage Volume in gallons).
Electric Water Heater	EF=0.97-(0.00132 x Rated Storage Volume in gallons).
Tabletop Water Heater	EF=0.93-(0.00132 x Rated Storage Volume in gallons).
Instantaneous Gas-fired Water Heater	EF=0.62-(0.0019 x Rated Storage Volume in gallons).
Instantaneous Electric Water Heater	EF=0.93-(0.00132 x Rated Storage Volume in gallons).

On April 16, 2010, DOE published a final rule in the Federal Register amending the energy conservation standards for residential water heaters for a second time (hereinafter "April 2010 final rule"). 75 FR 20111. The updated standards maintained the existing product class structure, dividing water heaters based on the type of energy used (i.e., gas, oil, or electricity) and whether it is a storage, instantaneous, or tabletop model, but also differentiated standard levels for electric and gas-fired storage water heaters based on whether the rated storage volume is greater than 55 gallons, or less than or equal to 55 gallons. Compliance with the energy conservation standards contained in the April 2010 final rule will be required starting on April 16, 2015. Id.

Table I.2 presents the amended Federal energy conservation standards for residential water heaters, which are also set forth in 10 CFR 430.32(d).

Table I.2 – Amended Federal Energy Conservation Standards for Residential Water Heaters Established by April 2010 Final Rule

Product Class	Energy Factor as of April 16, 2015
Gas-fired Water Heater	For tanks with a Rated Storage Volume at or below 55 gallons: EF=0.675-(0.0015 x Rated Storage Volume in gallons).
	For tanks with a Rated Storage Volume above 55 gallons: EF=0.8012-(0.00078 x Rated Storage Volume in gallons).
Oil-fired Water Heater	EF=0.68-(0.0019 x Rated Storage Volume in gallons).
Electric Water Heater	For tanks with a Rated Storage Volume at or below 55 gallons: EF=0.960-(0.0003 x Rated Storage Volume in gallons).
	For tanks with a Rated Storage Volume above 55 gallons: EF=2.057-(0.00113 x Rated Storage Volume in gallons).
Tabletop Water Heater	EF=0.93-(0.00132 x Rated Storage Volume

	in gallons).
Instantaneous Gas-Fired Water Heater	EF=0.82-(0.0019 x Rated Storage Volume in gallons).
Instantaneous Electric Water Heater	EF=0.93-(0.00132 x Rated Storage Volume in gallons).

On October 21, 2014, DOE published a Request for Information (RFI) in the Federal Register regarding test procedures and energy conservation standards for residential solar water heaters (hereinafter the "October 2014 RFI"). 79 FR 62891. Specifically, the October 2014 RFI requested comment on the following topics:

1. Solar water heating technologies that utilize a secondary heating source that are currently available to the consumer.
2. Design differences between water heaters that are designed to be part of a solar water heating system compared to those meant for typical residences without a solar water heating system.
3. Heating rates and the amount of hot water that can be supplied by water heaters meant to serve as a secondary heat source for a solar collector compared to the heating rates and hot water supply capacity water heaters.
4. The fractions of single tank and dual tank solar water heating systems, and whether the secondary water heaters used include design features that differ from conventional residential water heaters.
5. The manufacturers of water heaters used in solar thermal installations, the market share of each manufacturer, and whether any of them are small businesses.

6. The total annual shipments of the market for solar water heating systems that utilize secondary heat sources, the fractions of water heaters that are used to provide secondary water heating by rated volume, input capacity, and fuel type.
7. Any other attributes of solar water heating tanks which distinguish them from conventional storage or instantaneous water heaters. 79 FR 62891, 62893−94 (Oct. 21, 2014).

II. Summary of the Proposed Rule

After considering the comments on the RFI and the characteristics and applications of hot water storage tanks used in solar thermal systems and having a backup gas, oil, or electric heat source, DOE has tentatively concluded that the analysis conducted for the April 2010 final rule did not adequately consider such applications and the accompanying backup tanks. Therefore, in this NOPR, DOE is proposing to add clarifying text to 10 CFR 430.32(d) indicating that the energy conservation standards for residential water heaters do not apply to water heaters meeting the new definitions of "solar-assisted fossil fuel storage water heater" and "solar-assisted electric storage water heater," that are also proposed in this NOPR. (See section III.D of this NOPR for the proposed definitions.)

III. General Discussion

As stated in section I.B, compliance with an amended energy conservation standard for residential water heaters will be required beginning on April 16, 2015. 75 FR 20111. DOE has tentatively concluded that hot water storage tanks used in solar

thermal systems that have a backup gas, oil, or electric heat source were not adequately considered in the analysis for the April 2010 rule. Therefore, DOE is undertaking this rulemaking to clarify the scope of DOE's existing energy conservation standards for residential water heaters.

In response to the October 2014 RFI, DOE received 4 written comments from the following interested parties: American Council for an Energy-Efficient Economy (ACEEE)[3], Air-Conditioning, Heating and Refrigeration Institute (AHRI), Rheem Manufacturing Company (Rheem) and Solar Energy Industries Association (SEIA)[4]. These comments are discussed further in the sections below as they relate to the specific issues discussed in this NOPR.

Generally, the ACEEE joint comment recommended that DOE not consider a rulemaking to adopt a new minimum efficiency standard for residential solar-thermal water heaters because the extremely small sales volume of these products does not justify the effort to set a standard. The ACEEE joint comment argued that customers of these expensive systems would buy only from reputable manufacturers and installers and use either the ENERGY STAR brand or a high rating under the SRCC program to guide their purchasing decision. (ACEEE joint comment, No. 2 at p. 1-2) The ACEEE joint comment also recommended that DOE not consider a rulemaking to adopt a new

[3] ACEEE submitted a joint comment on behalf of ACEEE, Appliance Standards Awareness Project (ASAP), and Natural Resources Defense Council (NRDC), and this comment is referred to throughout this document as the "ACEEE joint comment."

[4] SEIA submitted a joint comment on behalf of SEIA, International Association of Plumbing and Mechanical Officials (IAPMO) and Solar Rating and Certification Corporation (SRCC), and this comment is referred to throughout this document as the "SEIA joint comment."

test method for residential solar-thermal water heating systems because a widely accepted non-federal test method and rating program for solar water heaters built around OG-300 solar system ratings already exists. (ACEEE joint comment, No. 2 at p. 1) The SEIA joint comment recommended an exemption be established for backup water heaters which prioritize solar heating over the secondary heat source and that the volume heated by the secondary heat source be less than or equal to 55 gallons. (SEIA joint comment, No. 5 at p. 6) Similarly, Rheem commented that the residential water heater standard for conventional water heaters should not be applied to solar water heaters because they are different systems and not direct substitutes. (Rheem, No. 4 at p. 2)

DOE generally agrees with these commenters' points and notes that the purpose of this NOPR is not to consider new energy conservation standards or test methods for solar water heating systems, but rather to clarify the scope of DOE's existing standards. Specifically, DOE is proposing amendments to clarify that DOE's standards for residential water heaters are not applicable to water heaters that are used as a backup heat source in solar thermal water heating systems.

A. Product Classes

When evaluating and establishing energy conservation standards, DOE divides covered products into product classes by the type of energy used or by capacity or other performance-related features that justify a different standard. In making a determination whether a performance-related feature justifies a different standard, DOE must consider

such factors as the utility to the consumer of the feature and other factors DOE determines are appropriate. (42 U.S.C. 6295(q))

Existing energy conservation standards divide residential water heaters into product classes based on primary energy source (i.e., gas, oil, or electricity), whether it is instantaneous or storage, and whether it is a "tabletop" model. Storage capacity and input rate are used to determine whether a water heater is characterized as storage or instantaneous. (42 U.S.C. 6291(27)) For example, an instantaneous water heater must contain no more than one gallon of water per 4,000 Btu per hour of input. (42 U.S.C 6291(27)(B)). EPCA establishes the input-rate limitations for residential water heaters (42 U.S.C. 6291(27)), and DOE has further established limitations at 10 CFR 430.2 based on rated storage volume and the temperature to which the water can be delivered. Table III.1 shows the input and volume limitations that define the current range of water heaters subject to standards. In addition to the criteria listed in Table III.1, if a water heater is designed to heat water to a temperature of less than 180 °F, it is classified as residential, while any water heater that heats water to temperatures at or above 180 °F is classified as commercial. In the amended energy conservation standard established by the April 2010 final rule and effective April 16, 2015, rated storage volume is used to determine the applicable standard. Gas and electric water heaters with rated storage volumes above 55 gallons are subject to more stringent standards than smaller water heaters of the same fuel type. 10 CFR 430.32(d).

Residential water heaters that use solar energy only are not covered by DOE regulations for residential water heaters since they do not utilize gas, oil, or electricity as required by the definition of a "water heater" under EPCA. (42 U.S.C. 6291(27)) However, residential water heaters that use solar energy but that are combined with storage tanks with secondary or backup energy sources that use electricity, gas, or oil are covered, provided that they meet all other requirements to be considered a "water heater". This rule considers only solar-thermal tanks designed for residential use; therefore, the water heater must be described by the fuel type and volumes specified in Table I.2 and reiterated in Table III.1 and meet the input capacity limitations set forth in EPCA and shown below in Table III.1. (42 U.S.C. 6291(16))

Table III.1 Residential Storage Water Heater Scope of Coverage

Product Class	**Rated Storage Volume**	**Input Capacity**
Gas-Fired Storage	≥ 20 gal and ≤ 100 gal	≤ 75 kBtu/h
Oil-Fired Storage	≤ 50 gal	≤ 105 kBtu/h
Electric Storage	≥ 20 gal and ≤ 120 gal	≤ 12 kW
Tabletop	≥ 20 gal and ≤ 100 gal	≤ 12 kW

B. Solar Water Heating Technologies

1. General Description

Solar water heating systems that are the subject of this NOPR generally consist of a solar collector to capture heat from the sun and a storage tank that stores the potable water that has been heated by the solar collector for use on demand. These systems typically require a secondary heat source for times when solar energy is not sufficient to provide adequate hot water. In the October 2014 RFI, DOE requested comment on current solar water heating technology practices in the United States and, specifically, on

solar water heating technologies that utilize a secondary heating source and are currently available to consumers. 79 FR 62891, 62893 (Oct. 21, 2014).

Both Rheem's comment and the SEIA joint comment stated that all solar water heating systems sold in the U.S. today are paired with a conventional backup heating source (SEIA joint comment, No. 5 at p. 2, Rheem, No. 4 at p. 2). Furthermore, the SEIA joint comment specified that a single-tank electric/solar water heating system consists of a single tank which serves as both a solar storage tank and a conventional water heater (when adequate solar energy is unavailable). In these tanks, a 4.5 kW electric element is commonly located in the upper part of the tank, leaving one-half to two-thirds of the tank unheated by the electric element due to temperature stratification, which causes the heated water to remain mostly in the upper part of the tank. (SEIA joint comment, No. 5 at p. 2)

2. Comments on the General Advantages of Solar Heating Systems

In the October 2014 RFI, DOE requested comment on any other attributes of solar water heating systems that utilize secondary heating tanks, which distinguish them from conventional storage or instantaneous water heaters. 79 FR 62891, 62893 (Oct. 21, 2014).

The SEIA joint comment stated that solar water heating systems offer advantages over conventional water heating equipment that are overlooked or not understood. For example, solar water heating systems provide lower peak load requirements (which can be beneficial to utility companies), are not sensitive to flow rates, and have lower

maintenance requirements than instantaneous heating systems. (SEIA joint comment, No. 5 at p. 8) The commenters also noted that solar water heating systems have several advantages over heat pump water heaters, including better performance in cold climate, no air circulation considerations, and no special skills required to install and maintain. (SEIA joint comment, No. 5 at p. 9)

3. Design and Heating Rate Differences

In the October 2014 RFI, DOE specifically sought comment on the design differences between water heaters that are designed to be part of a solar water heating system compared to those meant for typical residences without a solar water heating system. DOE also requested comment on the heating rates and the amount of hot water that can be supplied by water heaters meant to serve as a secondary heat source for a solar collector compared to the heating rates and hot water supply capacity of other water heaters, and whether there are any other attributes of solar water heating systems that utilize secondary heating tanks that distinguish them from conventional storage or instantaneous water heaters. 79 FR 62891, 62893 (Oct. 21, 2014).

AHRI's comment, Rheem's comment, and the SEIA joint comment stated that generally solar water heaters that use secondary heating tanks are fairly similar to conventional water heaters. (AHRI, No. 3 at p. 2, Rheem, No. 4 at p. 5)

In noting the design differences between conventional water heaters and those used in solar-thermal water heating systems, AHRI, Rheem and the joint SEIA comment

stated that there is a range of design differences in water heaters intended to be part of a solar thermal installation and those intended for a conventional installation. Water heaters intended for use in solar-thermal systems typically have two extra threaded ports as well as specifically designed controls. Other features may include special heat exchangers or additional backup heating elements. (AHRI, No. 3 at p. 1, Rheem, No. 4 at p. 3, SEIA joint comment, No. 5 at p. 4) On the other hand, the ACEEE joint commenters stated that they would be surprised to find many products specifically designed as auxiliary heat sources for solar thermal water heating systems, and that the only special features for a solar storage tank by itself would be a double-wall water-to-water heat exchanger for indirect systems employing non-potable antifreeze in the primary loop. (ACEEE joint comment, No. 2 at p. 2)

Several commenters stated that solar water heaters are sized differently than conventional water heaters. The SEIA joint comment stated that the solar component of a typical 80 gallon solar/electric system can heat between 40 and 80 gallons depending on the level of solar radiation and the rate of use, where up to 40 gallons is heated by the electric element. (SEIA joint comment, No. 5 at p. 6)

Rheem also stated that their 80 and 120 gallon storage water heaters can provide up to 40 gallons of backup element water heating capacity regardless of the tank volume. (Rheem, No. 4 at p. 3) AHRI's comment and the SEIA joint comment stated that the performance characteristics of solar water heaters can be less than a standard water heater. (AHRI, No. 3 at p. 2, SEIA joint comment, No. 5 at p. 6)

Another design difference that was noted by commenters centered around the location and number of the plumbing connections on the storage tank that are used in solar thermal systems. Rheem commented that the cold water inlet connections on solar water heating storage tanks are located at the bottom to prevent mixing with heated water as compared to the cold water inlet being typically located at the top of a traditional storage tank. (Rheem, No. 4 at p. 4) Rheem also commented that the features of its solar storage water heater increase the manufacturing complexity and cost of the heaters, and therefore it is not anticipated that the heaters would be substituted for a standard water heater in an installation without a solar collector. (Rheem, No. 4 at p. 5)

DOE considered all of the above comments when developing its tentative conclusions regarding solar-assisted electric storage water heaters and solar-assisted fossil fuel storage water heaters (see section III.D).

C. Solar Water Heating Markets

DOE has conducted preliminary research to investigate the solar water heating equipment market. Based on a report by the National Renewable Energy Laboratory (NREL), DOE distinguished between two distinct periods of solar water heater installations. From 1985 to 2005, when there were no tax incentives for solar water heaters, the number of installations ranged from approximately 5,000 to 10,000 annually. Federal and State tax incentives were instituted in 2006. Between 2006 and

2010, there were between approximately 18,000 and 33,500 solar thermal water heater systems installed annually in the U.S.

In the October 2014 RFI, DOE requested comments on various topics related to the market for solar water heating systems. Specifically, DOE requested information on the fractions of single tank and dual tank solar water heating systems. DOE also sought comments on the manufacturers of water heaters used in solar thermal installations, as well as the market share of each manufacturer, and whether any of them are small businesses. Lastly, DOE sought input regarding the total annual shipments of solar water heating systems that utilize secondary heat sources, the fractions of water heaters that are used to provide secondary water heating by rated volume, input capacity, and fuel type. 79 FR 62891, 62893 (Oct. 21, 2014).

The SEIA joint comment stated that dual tank systems are normally only used when the end use is heating water with natural gas, propane, or fuel oil, and that most dual tank systems are located in areas with strong financial incentives. (SEIA joint comment, No. 5 at p. 6) The following market distribution of systems is currently certified by the SRCC: 43 percent of systems are dual tank, 45 percent are single tank, and 12 percent are tankless. (SEIA joint comment, No. 5 at p. 6 n.13) For dual tank systems, the distribution by fuel type certified by the SRCC is as follows: 54 percent use natural gas as backup, 45 percent use electricity, and 1 percent use oil. (SEIA joint comment, No. 5 at p. 7) Regarding the number of units actually installed, the SEIA joint

comment estimated that the ratio of single tank to dual tank systems installed is 4 to 1. (SEIA joint comment, No. 5 at p. 7)

Rheem commented that it sells solar thermal systems with a single storage tank. Rheem noted that some installers have the opportunity to install multiple small tanks or combinations of tanks to store heat collected when sunlight is available, and that specific designs are based on the hot water requirement of the dwelling and the solar capacity available from the collectors. (Rheem, No. 4 at p. 3)

The SEIA joint comment provided the market share of water heater manufacturers for the entire market as follows: A.O. Smith represents about half of the total U.S. market for water heaters (50 percent), Rheem approximately one third (33 percent), and Bradford White holds about 13 percent market share; the remaining 4 percent is comprised of other brands. (SEIA joint comment, No. 5 at p. 7) Rheem stated that solar thermal water heating systems are a low sales volume product for Rheem, and that it is a major manufacturer of storage water heaters. (Rheem, No. 4 at p. 3)

Regarding annual shipments of solar water heating systems, the SEIA joint comment stated that in 2013, 2,200 solar water heating systems using 80 or 120 gallon tanks received a rebate for installation in Hawaii (excluding Kauai County). In addition, solar water heating systems installed on new single-family home construction with tanks in the 65 to 120 gallon range can be estimated at 1,500 per year. (SEIA joint comment, No. 5 at p. 7) Based on a report from International Energy Agency Solar Heating and

Cooling Programme, the SEIA joint comment estimates that 22,500 new solar domestic water heating systems are being installed in the U.S. annually. (SEIA joint comment, No. 5 at p. 8) Rheem commented that its annual sales of thermal storage water heaters is less than one day of production of conventional storage water heaters. (Rheem, No. 4 at p. 3)

D. Conclusions

DOE has considered the comments discussed in sections III.B and III.C and has tentatively determined that solar-assisted electric storage water heaters and solar-assisted fossil fuel storage water heaters are distinguishable from other categories of storage water heaters. Even though solar-assisted water heaters use electricity or fossil fuel to heat water without the use of solar thermal panels, DOE notes that the heating capacity of the tank with a comparable rated storage volume is reduced based on the design difference of the heating element or the fossil fuel burner. The plumbing configuration of the tank is also different in order for the storage tank to utilize the solar heated water in an optimized manner. DOE further notes that purchasers of these solar-assisted water heating systems may not be considering the economic criteria of the storage water heater tank alone, given that a significant portion of the installed cost of these systems is attributable to the solar thermal portion of the system and that a substantial portion of the water heating load may be provided by solar energy, as opposed to marketed fuels such as electricity, gas, or oil. These purchasers, therefore, may place an added value on owning a "green" system, which could provide different economic and performance benefits to these consumers when compared to an electric or fossil fuel storage water heater. For these reasons, DOE

has determined that the minimum efficiency standard levels promulgated in the April 16, 2010 final rule do not apply to these categories of water heaters.

In order to clarify the applicability of DOE's regulations to solar-assisted water heaters, DOE proposes to define the terms "solar-assisted electric storage water heater" and "solar-assisted fossil fuel storage water heater" at 10 CFR 430.2 and clarify that products meeting these definitions are not subject to DOE's current or amended standards for residential water heaters at 10 CFR 430.32(d). In addition to the data and comments received in response to the request for information, DOE also used the certified ratings from DOE's Compliance Certification Data base, as of February 2015, to gather information such as average first hour ratings for basic models being distributed in commerce for various storage volumes.[5] More specifically, DOE used the average first hour rating of the electric storage water heaters with a rated storage volume of 50 gallons, the average first hour rating of the gas-fired storage water heaters with a rated storage volume of 40 gallons, and the average first hour rating of the oil storage water heaters with a rated storage volume of 32 gallons to develop parts of the definitions below.

Based on the comments discussed in section II.B, DOE proposes to define a "solar-assisted electric storage water heater" as:

a product that utilizes electricity to heat potable water for use outside the heater upon demand and --

[5] See http://www.regulations.doe.gov/certification-data/CCMS-792228421l3.html for additional information and access to the data that DOE analyzed.

(A) stores water at a thermostatically controlled temperature with an input of 12 kilowatts or less;

(B) has at least two threaded ports in addition to those used for introduction and delivery of potable water for the supply and return of water or a heat transfer fluid heated externally by solar panels;

(C) does not have electric resistance heating elements located in the lower half of the storage tank;

(D) has the temperature sensing device that controls the auxiliary electric heat source located in the upper half of the storage tank; and

(E) has a certified first hour rating less than 63 gallons.

Similarly, DOE proposes to define a "solar-assisted fossil fuel storage water heater" at 10 CFR 430.2 as:

a product that utilizes oil or gas to heat potable water for use outside the heater upon demand and --

(A) stores water at a thermostatically controlled temperature, including gas storage water heaters with an input of 75,000 Btu per hour or less and oil storage water heaters with an input of 105,000 Btu per hour or less;

(B) has at least two threaded ports in addition to those used for introduction and delivery of potable water for the supply and return of water or a heat transfer fluid heated externally by solar panels;

(C) has the burner located in the upper half of the storage tank;

(D) has the temperature sensing device that controls the auxiliary gas or oil heat source located in the upper half of the storage tank; and

(E) has a certified first hour rating less than 69 gallons for gas storage water heaters and has a certified first hour rating less than 128 gallons for oil storage water heaters.

DOE is specifically seeking comment on one element of its proposed definition of solar-assisted fossil fuel storage water heaters that would limit solar-assisted water heaters to only those with the burner located in the upper half of the storage tank. DOE is aware of solar backup water heaters that have burners located in the upper portion of the tank but acknowledges that there are others that have burners located at the bottom of the water heater. The Department is concerned that water heaters with burners located at the bottom of the tank can be used as a household's main water heater without solar backup and should, therefore, be treated in the same manner as conventional water heaters with regards to standards. Thus, DOE seeks comment on the merits of this proposal.

DOE also requests comment on other ways to define solar-assisted water heaters, including both definitional criteria not listed in the proposed definitions above and any performance-based criteria that might involve tests to determine whether the definition is met.

Although water heaters meeting the definition of "solar-assisted electric storage water heater" or "solar-assisted fossil fuel storage water heater" remain covered products

as water heaters, DOE proposes to clarify at 10 CFR 430.32(d) that these water heaters are not subject to the energy conservation standards currently specified in 10 CFR 430.32(d). DOE also proposes to clarify that the test methods described in 10 CFR 430.23(e) are applicable to solar-assisted water heaters for purposes of representing their performance when described as a stand-alone item (i.e., the backup tank portion only). When these water heaters are presented as part of a complete solar system that includes solar panels and any auxiliary equipment to move heat from the panels to the storage water heater, DOE believes that metrics commonly used by industry such as the Solar Energy Factor and Solar Fraction are most appropriate for representing the performance of the entire system. DOE seeks comment on the applicability of the uniform test method for measuring the energy consumption of water heaters to solar-assisted electric and fossil fuel storage water heaters.

IV. Procedural Issues and Regulatory Review

A. Review Under Executive Orders 12866 and 13563

Section 1(b)(1) of Executive Order 12866, "Regulatory Planning and Review," 58 FR 51735 (Oct. 4, 1993), requires each agency to identify the problem that it intends to address, including, where applicable, the failures of private markets or public institutions that warrant new agency action, as well as to assess the significance of that problem. The problems that today's standards address are as follows:

(1) Insufficient information and the high costs of gathering and analyzing relevant information leads some consumers to miss opportunities to make cost-effective investments in energy efficiency.

(2) In some cases the benefits of more efficient equipment are not realized due to misaligned incentives between purchasers and users. An example of such a case is when the equipment purchase decision is made by a building contractor or building owner who does not pay the energy costs.

(3) There are external benefits resulting from improved energy efficiency of appliances that are not captured by the users of such equipment. These benefits include externalities related to public health, environmental protection, and national security that are not reflected in energy prices, such as reduced emissions of air pollutants and greenhouse gases that impact human health and global warming.

In addition, today's regulatory action is not an "economically significant regulatory action" under section 3(f)(1) of Executive Order 12866. Accordingly, DOE is not required under section 6(a)(3) of the Executive Order to prepare a regulatory impact analysis (RIA) on today's rule and the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget (OMB) is not required to review this rule.

DOE has also reviewed this regulation pursuant to Executive Order 13563. 76 FR 3281 (Jan. 21, 2011). Executive Order 13563 is supplemental to and explicitly reaffirms the principles, structures, and definitions governing regulatory review established in

Executive Order 12866. To the extent permitted by law, agencies are required by Executive Order 13563 to: (1) propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs (recognizing that some benefits and costs are difficult to quantify); (2) tailor regulations to impose the least burden on society, consistent with obtaining regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of cumulative regulations; (3) select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity); (4) to the extent feasible, specify performance objectives, rather than specifying the behavior or manner of compliance that regulated entities must adopt; and (5) identify and assess available alternatives to direct regulation, including providing economic incentives to encourage the desired behavior, such as user fees or marketable permits, or providing information upon which choices can be made by the public.

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

B. Review Under the Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 et seq.) requires preparation of an initial regulatory flexibility analysis (IRFA) for any rule that by law must be proposed for public comment, unless the agency certifies that the rule, if promulgated, will not have a significant economic impact on a substantial number of small entities. As required by Executive Order 13272, "Proper Consideration of Small Entities in Agency Rulemaking," 67 FR 53461 (August 16, 2002), DOE published procedures and policies on February 19, 2003, to ensure that the potential impacts of its rules on small entities are properly considered during the rulemaking process. 68 FR 7990. DOE has made its procedures and policies available on the Office of the General Counsel's website (http://energy.gov/gc/office-general-counsel).

For manufacturers of residential water heaters, the Small Business Administration (SBA) has set a size threshold, which defines those entities classified as "small businesses" for the purposes of the statute. DOE used the SBA's small business size standards to determine whether any small entities would be subject to the requirements of the rule. 65 FR 30836, 30848 (May 15, 2000), as amended at 65 FR 53533, 53544 (Sept. 5, 2000) and codified at 13 CFR part 121.The size standards are listed by North American Industry Classification System (NAICS) code and industry description and are available at http://www.sba.gov/sites/default/files/files/Size_Standards_Table.pdf . Residential water heater manufacturing is classified under NAICS 335228, "Other Major

Household Appliance Manufacturing." The SBA sets a threshold of 500 employees or less for an entity to be considered as a small business for this category.

To estimate the number of companies that could be small business manufacturers of solar-assisted water heaters covered by this rulemaking, DOE constructed a list of residential water heater manufacturers by conducting a market survey using publicly available information. DOE's research involved industry trade association membership directories (including AHRI), information from previous rulemakings, individual company websites, SBA's database, and market research tools (e.g., Hoover's reports). DOE used the Solar Rating and Certification Corporation's certification database as well as individual company websites to determine which residential water heater manufacturers identified offer solar-assisted products and would potentially be impacted by this proposed rule. DOE screened out companies that do not offer products covered by this rulemaking, do not meet the definition of a "small business," or are completely foreign owned and operated.

DOE initially identified eight manufacturers of solar-assisted water heaters sold in the United States. After reviewing publicly available information on these potential residential water heater manufacturers, DOE determined that five were either large manufacturers or manufacturers that were completely foreign owned and operated. Based on these efforts, DOE estimated that there are three small business manufacturers of water heaters that meet the definition of solar-assisted electric storage water heater or solar-assisted fossil fuel water heater, as proposed in this NOPR.

DOE is not proposing any amended standards for residential water heater manufacturers in this NOPR. Rather, the Department proposes to define solar-assisted electric storage water heaters and solar-assisted fossil fuel-fired storage water heaters, and to clarify that current residential water heater standards do not apply to such products. As a result, DOE certifies that this NOPR will not have a significant economic impact on a substantial number of small entities and therefore, has not prepared an IRFA. DOE will transmit this certification to the Chief Counsel for Advocacy of the Small Business Administration (SBA) for review under 5 U.S.C 605(b).

A statement of the objectives of, and reasons and legal basis for, the proposed rule are set forth elsewhere in the preamble and not repeated here.

C. Review Under the Paperwork Reduction Act

Manufacturers of residential water heaters must certify to DOE that their products comply with any applicable energy conservation standards. In certifying compliance, manufacturers must test their products according to the DOE test procedures for residential water heaters, including any amendments adopted for those test procedures. DOE has established regulations for the certification and recordkeeping requirements for all covered consumer products and commercial equipment, including residential water heaters. 76 FR 12422 (March 7, 2011). The collection-of-information requirement for the certification and recordkeeping is subject to review and approval by OMB under the Paperwork Reduction Act (PRA). This requirement has been approved by OMB under

OMB control number 1910-1400. Public reporting burden for the certification is estimated to average 30 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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

Today's proposal clarifies the applicability of the amended energy conservation standards to solar-assisted water heaters and thus, also clarifies the certification requirements. If the proposal is finalized as proposed, those water heaters meeting the definition of solar-assisted in DOE's regulations would not have to be certified with the Department because they would not be subject to standards.

D. Review Under the National Environmental Policy Act of 1969

Pursuant to the National Environmental Policy Act (NEPA) of 1969, DOE has determined that the proposed rule fits within the category of actions included in Categorical Exclusion (CX) B5.1 and otherwise meets the requirements for application of a CX. See 10 CFR Part 1021, App. B, B5.1(b); 1021.410(b) and Appendix B, B(1)-(5). The proposed rule fits within the category of actions because it is a rulemaking that clarifies the applicability of energy conservation standards for consumer products, and for

which none of the exceptions identified in CX B5.1(b) apply. Therefore, DOE has made a CX determination for this rulemaking, and DOE does not need to prepare an Environmental Assessment or Environmental Impact Statement for this proposed rule. DOE's CX determination for this proposed rule is available at http://cxnepa.energy.gov/.

E. Review Under Executive Order 13132

Executive Order 13132, "Federalism." 64 FR 43255 (Aug. 10, 1999) imposes certain requirements on Federal agencies formulating and implementing policies or regulations that preempt State law or that have Federalism implications. The Executive Order requires agencies to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and to carefully assess the necessity for such actions. The Executive Order also requires agencies to have an accountable process to ensure meaningful and timely input by State and local officials in the development of regulatory policies that have Federalism implications. On March 14, 2000, DOE published a statement of policy describing the intergovernmental consultation process it will follow in the development of such regulations. 65 FR 13735. EPCA governs and prescribes Federal preemption of State regulations as to energy conservation for the products that are the subject of today's proposed rule. States can petition DOE for exemption from such preemption to the extent, and based on criteria, set forth in EPCA. (42 U.S.C. 6297) No further action is required by Executive Order 13132.

F. Review Under Executive Order 12988

With respect to the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, "Civil Justice Reform," imposes on Federal agencies the general duty to adhere to the following requirements: (1) eliminate drafting errors and ambiguity; (2) write regulations to minimize litigation; and (3) provide a clear legal standard for affected conduct rather than a general standard and promote simplification and burden reduction. 61 FR 4729 (Feb. 7, 1996). Section 3(b) of Executive Order 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) clearly specifies the preemptive effect, if any; (2) clearly specifies any effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct while promoting simplification and burden reduction; (4) specifies the retroactive effect, if any; (5) adequately defines key terms; and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires Executive agencies to review regulations in light of applicable standards in section 3(a) and section 3(b) to determine whether they are met or it is unreasonable to meet one or more of them. DOE has completed the required review and determined that, to the extent permitted by law, this proposed rule meets the relevant standards of Executive Order 12988.

G. Review Under the Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA) requires each Federal agency to assess the effects of Federal regulatory actions on State, local, and

Tribal governments and the private sector. Pub. L. 104-4, sec. 201 (codified at 2 U.S.C. 1531). For a proposed regulatory action likely to result in a rule that may cause the expenditure by State, local, and Tribal governments, in the aggregate, or by the private sector of $100 million or more in any one year (adjusted annually for inflation), section 202 of UMRA requires a Federal agency to publish a written statement that estimates the resulting costs, benefits, and other effects on the national economy. (2 U.S.C. 1532(a), (b)) The UMRA also requires a Federal agency to develop an effective process to permit timely input by elected officers of State, local, and Tribal governments on a proposed "significant intergovernmental mandate," and requires an agency plan for giving notice and opportunity for timely input to potentially affected small governments before establishing any requirements that might significantly or uniquely affect small governments. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA. 62 FR 12820. DOE's policy statement is also available at http://energy.gov/gc/office-general-counsel.

Today's proposed rule does not contain a Federal intergovernmental mandate, and will not require expenditures of $100 million or more on the private sector. Accordingly, no further action is required under the UMRA.

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

Section 654 of the Treasury and General Government Appropriations Act, 1999 (Pub. L. 105-277) requires Federal agencies to issue a Family Policymaking Assessment for any rule that may affect family well-being. This rule would not have any impact on

the autonomy or integrity of the family as an institution. Accordingly, DOE has concluded that it is not necessary to prepare a Family Policymaking Assessment.

I. Review Under Executive Order 12630

DOE has determined, under Executive Order 12630, "Governmental Actions and Interference with Constitutionally Protected Property Rights" 53 FR 8859 (Mar. 18, 1988), that this regulation would not result in any takings that might require compensation under the Fifth Amendment to the U.S. Constitution.

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

Section 515 of the Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516, note) provides for Federal agencies to review most disseminations of information to the public under guidelines established by each agency pursuant to general guidelines issued by OMB. OMB's guidelines were published at 67 FR 8452 (Feb. 22, 2002), and DOE's guidelines were published at 67 FR 62446 (Oct. 7, 2002). DOE has reviewed today's NOPR under the OMB and DOE guidelines and has concluded that it is consistent with applicable policies in those guidelines.

K. Review Under Executive Order 13211

Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" 66 FR 28355 (May 22, 2001), requires Federal agencies to prepare and submit to OIRA at OMB, a Statement of Energy Effects for any proposed significant energy action. A "significant energy action" is defined as

any action by an agency that promulgates or is expected to lead to promulgation of a final rule, and that: (1) is a significant regulatory action under Executive Order 12866, or any successor order; and (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy, or (3) is designated by the Administrator of OIRA as a significant energy action. For any proposed significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use should the proposal be implemented, and of reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use.

DOE has tentatively concluded that today's regulatory action, which clarifies applicability of the energy conservation standards for residential water heaters, is not a significant energy action because the proposed clarifications are not likely to have a significant adverse effect on the supply, distribution, or use of energy, nor has it been designated as such by the Administrator at OIRA. Accordingly, DOE has not prepared a Statement of Energy Effects on the proposed rule.

L. Review Under the Information Quality Bulletin for Peer Review

On December 16, 2004, OMB, in consultation with the Office of Science and Technology Policy (OSTP), issued its Final Information Quality Bulletin for Peer Review (the Bulletin). 70 FR 2664 (Jan. 14, 2005). The Bulletin establishes that certain scientific information shall be peer reviewed by qualified specialists before it is disseminated by the Federal Government, including influential scientific information related to agency regulatory actions. The purpose of the bulletin is to enhance the quality

and credibility of the Government's scientific information. Under the Bulletin, the energy conservation standards rulemaking analyses are "influential scientific information," which the Bulletin defines as scientific information the agency reasonably can determine will have, or does have, a clear and substantial impact on important public policies or private sector decisions. 70 FR 2667.

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

V. Public Participation

DOE welcomes all interested parties to submit in writing by **[INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]** comments, data, and other information on matters addressed in this proposal and on other matters relevant to consideration of definitions for residential water heaters.

After the closing of the comment period, DOE will consider all timely-submitted comments and additional information obtained from interested parties, as well as information obtained through further analyses. Afterward, DOE will publish either supplemental notice of proposed rulemaking or a final rule amending these definitions and clarifying the applicability of standards. The final rule would include definitions for the products covered by the rulemaking.

A. Submission of Comments

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

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

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

Submitting comments via email, hand delivery/courier, or mail. Comments and documents submitted via email, hand delivery, or mail also will be posted to regulations.gov. If you do not want your personal contact information to be publicly

viewable, do not include it in your comment or any accompanying documents. Instead, provide your contact information in a cover letter. Include your first and last names, email address, telephone number, and optional mailing address. The cover letter will not be publicly viewable as long as it does not include any comments

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

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

Campaign form letters. Please submit campaign form letters by the originating organization in batches of between 50 to 500 form letters per PDF or as one form letter with a list of supporters' names compiled into one or more PDFs. This reduces comment processing and posting time.

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

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

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

B. Issues on Which DOE Seeks Comment

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

1. Are the criteria proposed to define solar-assisted water heaters sufficient to describe these types of water heaters?

2. Are there alternative ways to define solar-assisted water heaters including additional prescriptive design criteria or performance-based criteria that might involve tests to determine whether the definition is met?

3. Should a criterion be added to the definition of solar-assisted fossil fuel-fired water heaters that requires the burner to be located in the upper half of the tank?

4. Is the uniform test method for measuring the energy consumption of water heaters appropriate for representing the performance of solar-assisted electric and fossil fuel-fired storage water heaters?

VI. Approval of the Office of the Secretary

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

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.

Issued in Washington, DC, on March 25, 2015.

Roland Risser

Roland Risser
Acting Deputy Assistant Secretary for Energy Efficiency
Energy Efficiency and Renewable Energy

For the reasons set forth in the preamble, DOE proposes to amend part 430 of chapter II, subchapter D, of title 10 of the Code of Federal Regulations, to read as set forth below:

PART 430 - ENERGY CONSERVATION PROGRAM FOR CONSUMER PRODUCTS

1. The authority citation for Part 430 continues to read as follows:

Authority: 42 U.S.C. 6291-6309; 28 U.S.C. 2461 note.

2. Section 430.2 is amended by adding the definitions of "solar-assisted electric storage water heater" and "solar-assisted fossil fuel storage water heater" in alphabetical order to read as follows:

§430.2 Definitions.

* * * * *

Solar-assisted electric storage water heater means a product that utilizes electricity to heat potable water for use outside the heater upon demand and --

(1) stores water at a thermostatically controlled temperature with an input of 12 kilowatts or less;

(2) has at least two threaded ports in addition to those used for introduction and delivery of potable water for the supply and return of water or a heat transfer fluid heated externally by solar panels;

(3) does not have electric resistance heating elements located in the lower half of the storage tank;

(4) has the temperature sensing device that controls the auxiliary electric heat source located in the upper half of the storage tank;

(5) has a certified first hour rating less than 63 gallons.

Solar-assisted fossil fuel storage water heater means a product that utilizes oil or gas to heat potable water for use outside the heater upon demand and --

(1) stores water at a thermostatically controlled temperature, including gas storage water heaters with an input of 75,000 Btu per hour or less and oil storage water heaters with an input of 105,000 Btu per hour or less;

(2) has at least two threaded ports in addition to those used for introduction and delivery of potable water for the supply and return of water or a heat transfer fluid heated externally by solar panels;

(3) has the burner located in the upper half of the storage tank;

(4) has the temperature sensing device that controls the auxiliary heat source located in the upper half of the storage tank; and

(5) has a certified first hour rating less than 69 gallons for gas storage water heaters and has a certified first hour rating less than 128 gallons for oil storage water heaters.

* * * * *

3. Section 430.32 is amended by revising paragraph (d) to read as follows:

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

* * * * *

(d) *Water heaters*. The energy factor of water heaters shall not be less than the following for products manufactured on or after the indicated dates.

Product class	Storage Volume	Energy Factor as of January 20, 2004	Energy Factor as of April 16, 2015
Gas-fired Storage Water Heater	≥ 20 gallons and ≤ 100 gallons	0.67−(0.0019 × Rated Storage Volume in gallons)	For tanks with a Rated Storage Volume at or below 55 gallons: EF = 0.675−(0.0015 × Rated Storage Volume in gallons). For tanks with a Rated Storage Volume above 55 gallons: EF = 0.8012−(0.00078 × Rated Storage Volume in gallons).
Oil-fired Storage Water Heater	≤ 50 gallons	0.59−(0.0019 × Rated Storage Volume in gallons)	EF = 0.68−(0.0019 × Rated Storage Volume in gallons).
Electric Storage Water Heater	≥ 20 gallons and ≤ 120 gallons	0.97−(0.00132 × Rated Storage Volume in gallons)	For tanks with a Rated Storage Volume at or below 55 gallons: EF = 0.960−(0.0003 × Rated Storage Volume in gallons). For tanks with a Rated Storage Volume above 55 gallons: EF = 2.057−(0.00113 × Rated Storage Volume in gallons).
Tabletop Water Heater	≥ 20 gallons and ≤ 120 gallons	0.93−(0.00132 × Rated Storage Volume in gallons)	EF = 0.93−(0.00132 × Rated Storage Volume in gallons).
Instantaneous Gas-fired Water Heater	< 2 gallons	0.62−(0.0019 × Rated Storage Volume in gallons)	EF = 0.82−(0.0019 × Rated Storage Volume in gallons).
Instantaneous Electric Water Heater	< 2 gallons	0.93−(0.00132 × Rated Storage Volume in gallons)	EF = 0.93−(0.00132 × Rated Storage Volume in gallons).

NOTE: The Rated Storage Volume equals the water storage capacity of a water heater, in gallons, as certified by the manufacturer.

Exclusions: The energy conservation standards shown in this paragraph do not apply to the following types of water heaters: gas-fired, oil-fired, and electric water heaters at or above 2 gallons storage volume and below 20 gallons storage volume; gas-fired water heaters above 100 gallons storage volume; oil-fired water heaters above 50 gallons storage volume; electric water heaters above 120 gallons storage volume; gas-fired instantaneous water heaters at or below 50,000 Btu/h; solar-assisted electric storage water heaters; and solar-assisted fossil fuel storage water heaters.

* * * * *