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(1) By e-mail to [aero.ocr@nga.mil](mailto:aero.ocr@nga.mil); or  
(2) By mail to: National Geospatial-

Intelligence Agency, Mail Stop D-111, Attn: Public Release of Aeronautical Products, 4600 Sangamore Road, Bethesda, MD 20816-5003.

Dated: December 13, 2004.

**Jeannette Owings-Ballard,**

*OSD Federal Register Liaison Officer,  
Department of Defense.*

[FR Doc. 04-27645 Filed 12-16-04; 8:45 am]

BILLING CODE 5001-06-M

## DEPARTMENT OF ENERGY

### Office of Energy Efficiency and Renewable Energy

#### Energy Conservation Program for Consumer Products: Decision and Order Denying the American Water Heater Company Petition for Waiver of the DOE Test Procedure for Measuring the Energy Consumption of Water Heaters (Case No. WH-010)

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

**ACTION:** Decision and Order; Denial of Petition for Waiver.

**SUMMARY:** Today's notice denies the American Water Heater Company's (American) Petition for Waiver from the U.S. Department of Energy (DOE or the Department) Uniform Test Method for Measuring the Energy Consumption of Water Heaters. American claims the DOE test method does not allow for an accurate representation of the true energy consumption of its residential water heaters fitted with an automatic, adaptive, control, a microprocessor-based control system. The Department does not believe the current test procedure misrepresents the true energy consumption of the American water heater equipped with an automatic, adaptive, electronic control.

**ADDRESSES:** To read background documents or comments received, go to the U.S. Department of Energy, Forrestal Building, Room 1J-018 (Resource Room of the Building Technologies Program), 1000 Independence Avenue, SW., Washington, DC, (202) 586-9127, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays. Please call Ms. Brenda Edwards-Jones at the above telephone number for additional information regarding visiting the Resource Room. Please note:

The Department's Freedom of Information Reading Room (formerly Room 1E-190 at the Forrestal Building) is no longer housing rulemaking materials.

#### FOR FURTHER INFORMATION CONTACT:

Mohammed Khan, U.S. Department of Energy, Building Technologies Program, Mail Stop EE-2J, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585-0121, (202) 586-7892; e-mail:

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[Francine.Pinto@hq.doe.gov](mailto:Francine.Pinto@hq.doe.gov).

**SUPPLEMENTARY INFORMATION:** In accordance with 10 CFR part 430.27(l), notice is hereby given of the issuance of the Decision and Order as set out below. In the Decision and Order, American is denied a Waiver from the Department's Uniform Test Method for Measuring the Energy Consumption of Water Heaters for its water heaters that have automatic, adaptive, electronic controls.

Issued in Washington, DC, on December 14, 2004.

**David K. Garman,**

*Assistant Secretary, Energy Efficiency and Renewable Energy.*

#### Decision and Order

In the matter of: American Water Heater Company (American). (Case No. WH-010)

#### Background

Title III of the Energy Policy and Conservation Act (EPCA) sets forth a variety of provisions concerning energy efficiency. Part B of Title III (42 U.S.C. 6291-6309) provides for the "Energy Conservation Program for Consumer Products other than Automobiles" which requires, among other things, that DOE prescribe standardized test procedures to measure the energy consumption of certain consumer products, including water heaters. The relevant DOE test procedure for purposes of today's decision and order is "Uniform Test Method for Measuring the Energy Consumption of Water Heaters" (current test procedure). The current test procedure is set forth in 10 CFR part 430, subpart B, Appendix E. It prescribes a method for characterizing the energy requirements of all types of water heaters and yields model-specific energy efficiency information that can aid consumers in their purchasing decisions.

The Department's regulations contain provisions allowing a person to seek a waiver from the test procedure requirements for covered consumer products and electric motors. These provisions are set forth in 10 CFR 430.27 and 10 CFR 431.29. The waiver provisions allow the Assistant Secretary for Energy Efficiency and Renewable Energy (Assistant Secretary) to waive temporarily the test procedure for a particular basic model when a petitioner shows that the basic model contains one or more design characteristics that prevent testing according to the prescribed test procedures, or when the prescribed test procedures may evaluate the basic model in a manner so unrepresentative of its true energy consumption as to provide materially inaccurate comparative data. (10 CFR 430.27(l)) Waivers generally remain in effect until final test procedure amendments become effective, thereby resolving the problem that is the subject of the waiver.

On January 24, 2002, the Department published a notice in the **Federal Register**, 67 FR 3449, (hereafter referred to as the January 2002 notice) regarding a Petition for Waiver and Application for Interim Waiver received on April 26, 2001, from American. In its Petition for Waiver, American sought modifications to the DOE test procedure to accommodate its electric water heaters which are fitted with an automatic, adaptive, electronic control device said to automatically raise or lower the thermostat set point based on patterns of use. American has developed the automatic, adaptive, electronic control in an effort to reduce standby energy losses. American stated that by lowering the temperature of the water within the water heater tank, standby losses can be reduced. American requested four modifications to the current test procedure:

(1) The inclusion of a qualification test on the automatic, adaptive, electronic control to ensure that it automatically changes the set point;

(2) Change the specified nominal average tank temperature to the lowest stable temperature achieved by the automatic, adaptive, electronic control from the existing constant set point of 135° F;

(3) Change the volume of water of each draw to provide an equal amount of thermal energy as would be provided in each draw of the current procedure; and

(4) Change the equations to compute the energy factor by replacing the 135° F nominal temperature with  $T_{su}$ , the maximum average tank temperature

observed after the recovery following the sixth draw.

In the January 2002 notice, the Department denied an Interim Waiver to American from the current test procedure and solicited comments, data and information as to whether to grant the Petition for Waiver as well as comments on testing water heaters with electronic controls.

#### *Assertions and Determinations*

The Department believes American's proposed test procedure is not appropriate because of certain issues which would arise from modifying the current test procedure as American requests. DOE received comments from the American Gas Association (AGA), American, Applied Energy Technology (AET), Rheem Manufacturing Company (Rheem), and Southern California Gas Company (SCG) in response to the Petition for Waiver and the January, 2002, notice. This section provides a discussion of the comments and places the issues into context.

The current test procedure stipulates a first-hour rating test that provides for an estimate of the amount of "hot" water (water having a temperature above 110° F) a storage water heater can supply within one hour. In its comments, AET and Rheem expressed concern that American did not propose a modified first-hour rating. In response to a similar DOE statement in the January 2002 notice, American provided results from first-hour rating tests for three of its basic models. These models were tested in accordance with the current test procedure except with the starting water heater tank temperature set at the lowest stable temperature, approximately 115° F instead of 135° F set point requirement. American asserted that this change to the first-hour rating test is appropriate because American advises consumers to use a thermostat set point of 120° F. American further argued that its modified first-hour rating test accurately reflects the typical hourly consumption of actual consumer use since 115° F is the typical temperature of tanks used by consumers.

DOE believes the first-hour rating test, as proposed by American in its response to the January 2002 notice, is unacceptable because drawing hot water until a 25° F drop is observed at the tank outlet from an initial temperature of 115° F would result in water that could be too cold for residential use. For example, Chapter 49 of the 2003 American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Applications Handbook lists the following

representative hot water temperatures for various uses:

Hand washing: 105° F

Shaving: 115° F

Showers and tubs: 110° F

Residential dish washing and laundry: 140° F.

None of the temperatures listed above for residential applications are less than 105° F. Allowing American to draw water until the water temperature becomes 25° F cooler than the 115° F start temperature, as prescribed in its modified test proposal, would result in 90° F water from the water heater. Water at 90° F is below the recommended hot water temperatures such as those indicated in the ASHRAE Applications Handbook.

With respect to American's proposal for a modified start-temperature of 115° F, AET recommended setting a lower limit on the temperature of the outlet water as a criterion for stopping a draw during the first-hour rating test as opposed to using a fixed temperature drop. Again, considering the ASHRAE recommended temperatures, DOE believes that a lower limit should not be less than 105° F. Allowing American to perform a first-hour rating test at a lower limit of 105° F with a start temperature of 115° F (or even 120° F) could result in unequal delivery capacity ratings compared to water heaters that are unequipped with an automatic, adaptive, electronic control since start temperatures would be different and the lower limit could be different.

The Department also believes that the effectiveness of the automatic, adaptive, electronic control in establishing and maintaining a lowest stable temperature under typical use patterns is unpredictable. In the January 2002 notice, DOE stated that "American did not provide any test data that DOE could use to determine that a lower thermostat set point would result from typical household use \* \* \*." American responded by reiterating that the laboratory test data of three of its water heater models showed that the automatic, adaptive, electronic control would reach a lowest stable temperature. While American's data demonstrates that three of its water heaters equipped with automatic, adaptive, electronic controls can create a lowest stable temperature in a laboratory setting, American did not provide data that shows that the lowest stable temperature achievable in a laboratory represents, or correlates to, what may be typical of household use in the field. AET, Rheem, and SCG argued that American's request to test the water heater at the lowest stable

temperature is inappropriate because there is no guarantee that in actual practice, the water heater would operate at such a level. Rheem and AET both stated that the proposed test procedure uses a best-case scenario and not necessarily thermostat set-points representative of actual field use.

American did not respond to DOE's request for data that characterizes water usage in family dwellings. American also did not provide evidence that, in actual field use, its water heaters would store water at the lowest stable temperature said to be achievable by the automatic, adaptive, electronic control. The data American provided to DOE on February 14, 2002, in response to the notice of January 2002, however, shows the performance of one water heater from each of four classes under a regulated draw pattern that artificially moves the thermostat set point up or down. The regulated draws are not necessarily representative of typical household water demand patterns and thus not necessarily representative of typical set-point temperatures and hot water temperatures. In its comments, American provides additional laboratory-derived data for four of the six basic models for which it seeks a waiver. American states that this data shows that the lowest, stable attainable temperatures range from 112° F to 118° F, and the temperature difference results from the control algorithm and hardware. Again however, American did not provide data that shows how the lowest stable temperature achievable in a laboratory represents or correlates to what may be typical of household use in the field.

Rheem also points out that the automatic, adaptive, electronic control has (four) different modes which can be manually selected. In addition to the "Energy Saver Cycle" mode, which American terms the control mode responsible for adjusting the stored water temperature based on the actual hot water usage pattern, the automatic, adaptive, electronic control includes a manually selectable constant temperature mode, a manually selectable vacation mode, and a manually selectable low-temperature mode. Because these modes can be manually selected, the Department recognizes that consumers may select a mode other than the Energy Saver Cycle mode. The potential energy savings, which American claims are achievable in the Energy Saver Cycle mode, would not be attained if the user selects an operating mode other than the Energy Saver Cycle (e.g., a fixed set point of 135° F). The Department believes American has not demonstrated how the

consumer would set, and keep, the automatic, adaptive, electronic control in the Energy Saver Cycle mode.

The automatic, adaptive, electronic control's ability to automatically raise the set-point temperature when hot water demand is high poses a concern. It is conceivable that in actual field use, the new automatic, adaptive, electronic control could result in higher energy consumption since it is capable of upwardly adjusting the set point, making the water temperature inside the tank higher than that ordinarily observed or higher than the set-point temperature prescribed in the current test procedure. Operating at set-point temperatures higher than those prescribed in the current test procedure would result in energy consumption higher than that observed using the current test procedure.

Another reason the DOE believes American's proposed modifications are not suitable is that the modifications could allow for inequitable testing. AGA, AET, Rheem, and SCG believe American's proposed test procedure is biased towards the specific control device American has introduced. AGA, AET, and SCG commented that providing an exemption for such a control offers an unfair advantage to electric water heaters, as most gas water heaters do not incorporate an electricity source whereby an automatic controller such as American's can be powered and operated. Rheem and AET indicated that the proposed waiver would discount other types of controls. For example, conventional thermostats are also a type of control, but these simple and low-cost devices would not be covered under American's proposed rating procedure. American proposes a particular test that would qualify its control, but other controllers that work in a slightly different manner would not qualify under American's test, despite being capable of forcing the tank temperature to a lower level. SCG stated that, because of the large variability in hot water use, the purpose of the current test procedure is to provide a level playing field while not necessarily duplicating actual household energy consumption. Besides its assertion of posing an unfair advantage, AET also stated that, since American indicates no lowest stable temperature, the proposed modification would result in a test procedure potentially subject to abuse by allowing water heaters to be tested at temperatures that would not be considered useful. The proposed test procedure is potentially subject to further abuse since American has not specified thermostat cut-out and cut-in temperatures.

DOE believes the current test procedure provides for an equitable test metric for all applicable water heaters and an evaluation method that is representative of the true energy consumption of the water heater in question under the demand conditions specified. The current 24-hour-simulated-use test procedure simulates the consumption of hot water; the test begins with six draws at one-hour intervals. The total amount of water removed from the tank in these equally sized draws is 64.3 gallons at a flow rate of three gallons per minute. After the draw portion of the test, the water heater sits idly until a period of time totaling 24 hours has elapsed. The temperature of the water in the tank is set at 135° F, and the temperature of the inlet water is set at 58° F. The current test procedure says 135° F is the needed water temperature; American's proposed test would not allow the water heater to yield a water temperature of 135° F. American suggests a modified procedure, which is to deliver the identical amount of thermal energy by increasing the amount of water drawn from the tank at a lower temperature. This modification however, would not emulate a demand condition requiring 135° F water. Granting American's waiver request would result in an inequitable metric as some water heaters would need to satisfy demands at 135° F while others would only need to satisfy demands at much lower temperatures.

A control device such as American's can provide an automated means for changing the temperature of the water stored in a water heater. However, DOE does not believe that a waiver for a lower set-point-temperature is warranted on the basis of automation. American argues that its automatic, adaptive, electronic control will automatically cause the water heater to operate at a lower temperature than is required in the current test procedure and thus, should be tested at a lower temperature. While water heaters with conventional controllers can be manually set to operate at a lower temperature than is specified in the DOE test procedure and thus achieve the same effect as American's automatic, adaptive, electronic control, the current test procedure does not allow for a manual change. American's control feature does not change the fundamental operation of its water heater or create a unique operating regime that is unattainable by water heaters equipped with conventional controls. For these reasons also, DOE believes that allowing American to test its water heater

equipped with its automatic, adaptive, electronic control at a set-point temperature lower than that specified in the current test procedure would create an inequitable test standard.

DOE believes American has not provided sufficient evidence to establish that the current test procedure misrepresents the true energy consumption of its water heater equipped with its new automatic, adaptive, electronic control. American has also not substantiated its claim that a water heater with its automatic, adaptive, electronic control will save energy compared to a water heater with a conventional control when responding to the same demand conditions. American has responded to DOE's request for more data by providing results on three tanks in a laboratory setting in which a series of short draws demonstrated an automatic decrease in tank temperature, and longer draws show an automatic increase in temperature. While the test results show that the automatic, adaptive, electronic control can decrease the temperature of the water inside the tank to a minimally acceptable temperature, as defined by the automatic, adaptive, electronic control, the results fail to demonstrate energy savings at temperatures matching those prescribed in the current DOE test procedure. Moreover, American has not provided data that justify a deviation from the prescribed temperatures. A demonstration of performance under an artificial draw pattern that is designed to force the water heater to its optimum control settings, which do not correspond to set-point temperatures prescribed in the current DOE test procedure and which are too low to yield water that is sufficiently warm for recommended household uses, is insufficient to establish that testing in accordance with the current test procedure would result in materially inaccurate comparative energy consumption data. The energy consumption measured under the current test procedure would not be misrepresentative of American's water heaters' true energy consumption under the demand conditions assumed in the test procedure. Accordingly, the petitioner has not met the criterion in 10 CFR 430.27 (l) that a waiver be granted if the prescribed test procedure evaluates the basic model in a manner so unrepresentative of its true energy consumption as to provide materially inaccurate comparative data.

Furthermore, the Department believes American's automatic, adaptive, electronic control does not preclude testing in accordance with the current test procedure, and no other aspect of

the water heater's design precludes testing it in accordance with the provisions in the current test procedure. The Department has determined that the relevant basic models of water heaters that are the subject of the application for waiver can be tested under the current test procedure. AGA agrees with this conclusion; it stated that there is nothing that prevents American's water heater from being tested under the current test procedure, and that test results would accurately predict energy consumption under the behavioral assumptions inherent in the test procedure (namely, the amount of water required and the temperature at which that water is needed). Accordingly, the petitioner has not met the criterion in 10 CFR 430.27 (l) that the basic model contains one or more design characteristics that prevent testing according to the prescribed test procedures.

#### Conclusion

Following a careful consideration of all the material that was submitted by American, the comments received, and based on the criteria for granting a waiver as provided in 10 CFR 430.27 (l), it is ordered that no waiver will be granted.

Issued in Washington, DC, on December 14, 2004.

**David K. Garman,**

*Assistant Secretary, Energy Efficiency and Renewable Energy.*

[FR Doc. 04-27643 Filed 12-16-04; 8:45 am]

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## DEPARTMENT OF ENERGY

### Federal Energy Regulatory Commission

[Docket No. ER04-1003-002 and ER04-1007-002]

#### American Electric Power Service Corporation; Notice of Compliance Filing

December 9, 2004.

Take notice that on December 2, 2004, American Electric Power Service Corporation (AEPSC) on behalf of the AEP operating companies in its East Zone, (namely Appalachian Power Company, Columbus Southern Power Company, Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company, and Wheeling Power Company) submitted a compliance filing pursuant to the Commission letter order issued November 1, 2004 in Docket Nos. ER04-1003-000, ER04-

1003-001, ER04-1007-000 and ER04-1007-001.

AEPSC states that copies of the filing were served on parties on the official service list in the above-captioned proceedings as well as on AEP transmission customers and the state utility regulatory commissions in the states in which the AEP operating companies do business.

Any person desiring to intervene or to protest this filing must file in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211, 385.214). Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a notice of intervention or motion to intervene, as appropriate. Such notices, motions, or protests must be filed on or before the comment date. Anyone filing a motion to intervene or protest must serve a copy of that document on the Applicant. On or before the comment date, it is not necessary to serve motions to intervene or protests on persons other than the Applicant.

The Commission encourages electronic submission of protests and interventions in lieu of paper using the "eFiling" link at <http://www.ferc.gov>. Persons unable to file electronically should submit an original and 14 copies of the protest or intervention to the Federal Energy Regulatory Commission, 888 First Street, NE., Washington, DC 20426.

This filing is accessible on-line at <http://www.ferc.gov>, using the "eLibrary" link and is available for review in the Commission's Public Reference Room in Washington, DC. There is an "eSubscription" link on the Web site that enables subscribers to receive email notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please e-mail [FERCOnlineSupport@ferc.gov](mailto:FERCOnlineSupport@ferc.gov), or call (866) 208-3676 (toll free). For TTY, call (202) 502-8659.

*Comment Date:* 5 p.m. Eastern Time on December 23, 2004.

**Magalie R. Salas,**

*Secretary.*

[FR Doc. E4-3685 Filed 12-16-04; 8:45 am]

**BILLING CODE 6717-01-P**

## DEPARTMENT OF ENERGY

### Federal Energy Regulatory Commission

[Docket No. RP99-301-124]

#### ANR Pipeline Company; Notice of Compliance Filing

December 10, 2004.

Take notice that on December 6, 2004, ANR Pipeline Company (ANR) tendered for filing an updated Primary Route Exhibit for Contract No. 107876 between ANR and Wisconsin Gas.

ANR states that the exhibit is being filed in compliance with the Commission's November 30, 2004 order accepting ANR's amended negotiated rate agreements for filing. ANR requests that the Commission accept and approve the subject negotiated rate agreement amendments to be effective November 1, 2004.

Any person desiring to protest this filing must file in accordance with Rule 211 of the Commission's Rules of Practice and Procedure (18 CFR 385.211). Protests to this filing will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Such protests must be filed in accordance with the provisions of section 154.210 of the Commission's regulations (18 CFR 154.210). Anyone filing a protest must serve a copy of that document on all the parties to the proceeding.

The Commission encourages electronic submission of protests in lieu of paper using the "eFiling" link at <http://www.ferc.gov>. Persons unable to file electronically should submit an original and 14 copies of the protest to the Federal Energy Regulatory Commission, 888 First Street, NE., Washington, DC 20426.

This filing is accessible on-line at <http://www.ferc.gov>, using the "eLibrary" link and is available for review in the Commission's Public Reference Room in Washington, DC. There is an "eSubscription" link on the Web site that enables subscribers to receive e-mail notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please e-mail [FERCOnlineSupport@ferc.gov](mailto:FERCOnlineSupport@ferc.gov), or call (866) 208-3676 (toll free). For TTY, call (202) 502-8659.

**Magalie R. Salas,**

*Secretary.*

[FR Doc. E4-3688 Filed 12-16-04; 8:45 am]

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