DEPARTMENT OF ENERGY

Office of Energy Efficiency and Renewable Energy

[Case No. CAC–028]

Energy Conservation Program for Consumer Products: Decision and Order Granting a Waiver to Daikin AC (Americas), Inc. (Daikin) From the Department of Energy Residential Central Air Conditioner and Heat Pump Test Procedures


ACTION: Decision and Order.

SUMMARY: This notice publishes the U.S. Department of Energy’s (DOE) decision and order in Case No. CAC–028. DOE grants a waiver to Daikin from the existing DOE test procedure applicable to residential central air conditioners and heat pumps. The waiver request is specific to the Daikin Altherma air-water heat pump with integrated domestic water heating. This is a central air conditioning and heating system. neuen

DETALI RE: Energy Conservation Program for Consumer Products

Issued in Washington, DC, on February 23, 2011.

Cathy Zoi,
Assistant Secretary, Energy Efficiency and Renewable Energy.

Decision and Order

In the Matter of: Daikin AC (Americas), Inc. (Daikin) (Case No. CAC–028).

Background

Title III, Part B of the Energy Policy and Conservation Act of 1975 (EPCA), Public Law 94–163 (42 U.S.C. 6291–6309, as codified), established the Energy Conservation Program for Consumer Products Other Than Automobiles, a program covering most major household appliances, including the residential central air conditioners and heat pumps that are the focus of this notice. Part B of Title III includes definitions, test procedures, labeling provisions, energy conservation standards for covered products, and the authority to require information and reports from manufacturers. Further, EPCA authorizes the Secretary of Energy to prescribe test procedures that are reasonably designed to produce results that measure energy efficiency, energy use, or estimated annual operating costs, and that are not unduly burdensome to conduct. (42 U.S.C. 6293(b)(3)) The test procedure for residential central air conditioners and heat pumps is contained in the 10 CFR part 430, subpart B, appendix M.

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for a particular basic model from the test procedure requirements for covered consumer products, when (1) the petitioner’s basic model contains one or more design characteristics that prevent testing according to the prescribed test procedure, or (2) when prescribed test procedures may evaluate the basic model in a manner so unrepresentative of its true energy consumption characteristics as to provide materially inaccurate comparative data. 10 CFR 430.27(a)(1). Petitioners must include in their petition any alternate test procedures known to the petitioner to evaluate the basic model in a manner representative of its energy consumption characteristics. 10 CFR 430.27(b)(1)(iii). The Assistant Secretary for Energy Efficiency and Renewable Energy (the Assistant Secretary) may grant a waiver subject to conditions, including adherence to alternate test procedures. 10 CFR 430.27(l). Waivers remain in effect pursuant to the provisions of 10 CFR 430.27(m).

The waiver process also allows any interested person who has submitted a petition for waiver to file an application for interim waiver of the applicable test procedure requirements. 10 CFR 430.27(a)(2). The Assistant Secretary will grant an interim waiver request if it is determined that the applicant will experience economic hardship if the interim waiver is denied; if it appears likely that the petition for waiver will be granted; and/or the Assistant Secretary determines that it would be desirable for public policy reasons to grant immediate relief pending a determination on the petition for waiver. 10 CFR 430.27(g).

On August 27, 2009, Daikin filed a petition for waiver from the test procedures at 10 CFR part 430, subpart B, appendix M, which are applicable to residential central air conditioners and heat pumps, and an application for interim waiver. The Daikin Altherma system consists of an air-to-water heat pump that provides hydronic space heating and cooling as well as domestic hot water functions. It operates either as a split system with the compressor unit outdoors and the hydronic components in an indoor unit, or as a single package configuration in which all system components are combined in a single outdoor unit. In both the single package and the split system configurations, the system can include a domestic hot water supply tank that is located indoors. The DOE test procedure includes provisions for only air-to-air heat pumps, so the Altherma cannot be tested according to the DOE test procedure. Previously, DOE granted Daikin an interim waiver for the Altherma and published its petition for waiver on December 15, 2009. (74 FR 66319) DOE published a Federal Register notice granting Daikin’s waiver on June 18, 2010. (75 FR 34731) On July 29, 2010, Daikin filed this petition for waiver for the Altherma, which is similar in all respects to the previous Altherma waiver—the only difference is that this petition involves new models with different capacities in the same capacity range. DOE received no comments on this Daikin petition.

Assertions and Determinations

Daikin’s Petition for Waiver

The test method for central air conditioners and heat pumps contained in 10 CFR subpart B, appendix M does not include any provisions to account for the operational characteristics of an air-to-water heat pump, or a central air-conditioning heat pump with an integrated domestic hot water component. The applicable DOE test method does not account for the Daikin Altherma system’s energy performance because the test method does not accurately evaluate the integrated domestic hot water portion of the system, nor can it evaluate the space-conditioning performance of air-to-water heat pumps. Daikin has proposed using the European standards that are used for testing and rating the Altherma products in Europe. These standards use an energy efficiency ratio (EER) to measure the full load performance of the cooling subsystem; a coefficient of performance (COP) to measure the full load performance of the heating subsystem; and a Seasonal Performance Factor (SPF) to measure the seasonal performance of the combined heating and hot water subsystems. Daikin did not petition to include the performance of the combined cooling and hot water functions in the waiver, nor the stand-alone water heater performance.

The European test procedures are European Standard EN 14511, “Air conditioners, liquid chilling packages and heat pumps with electrically driven compressors for space heating and cooling,” and EN 15316, “Heating systems in buildings—Methods for calculation of system energy requirements and system efficiencies.” These European Standards use the rating parameters EER and COP. Although these parameters are not well-known to the average consumer, they are the steady-state efficiency parameters of the DOE test procedure in Appendix M, and are well-known to the domestic HVAC industry. This is not true of the combined performance parameter SPF, defined in European test standard EN 15316. SPF is entirely unknown in the U.S., and would be of no value to the U.S. consumer in making purchasing decisions.

There are no domestic test procedures for testing air-to-water heat pumps for space conditioning only, or for integrated space-conditioning and water heater performance. DOE has previously granted waivers to Carrier (55 FR 13607 (April 11, 1990)) and Nordyne (61 FR 11395 (March 20, 1996)) for comparable heat pumps with integrated domestic water heating. DOE granted Daikin an interim waiver and published Daikin’s petition for waiver for nearly identical Altherma products on December 15, 2009. (74 FR 66319) DOE granted Daikin’s waiver on June 18, 2010. (75 FR 34731) In this current petition, Daikin did not discuss testing or rating the Altherma products as a water heater only; however, we note that in mild weather, when no space heating or cooling is demanded, the Altherma will function as a heat pump water heater. If Daikin wants to characterize the Altherma’s performance as a stand-alone water heater, Daikin must test and rate it according to the DOE test procedure in 10 CFR part 430, subpart B, appendix E, or petition for a waiver if the Altherma cannot be so tested.

Consultations With Other Agencies

DOE consulted with the Federal Trade Commission (FTC) staff concerning the Daikin Petition for Waiver. The FTC staff did not have any objections to issuing a waiver to Daikin.

Conclusion

After careful consideration of all the materials submitted by Daikin and consultation with the FTC staff, it is ordered that:

(1) Daikin shall not be required to test or rate its Altherma heat pump products on the basis of the currently applicable test procedure under 10 CFR part 430 subpart B, appendix M.

(2) Daikin shall be required to test and rate its Altherma heat pump products according to the alternate test procedure as set forth in paragraph (3) below:
(3) **Alternate Test Procedure**

Daikin shall be required to test the basic models of Altherma products that are explicitly listed above according to:

a. Full Load Performance and Efficiency—The Daikin Altherma shall be tested and rated according to European Standard EN 14511. “Air conditioners, liquid chilling packages and heat pumps with electrically driven compressors for space heating and cooling,” except that the test operating and test condition tolerances in Tables 7, 13 and 15 of the DOE test procedure in 10 CFR part 430, subpart B, Appendix M shall apply. Daikin shall rate the Altherma full load heating and cooling performance (not including the DHW contribution) using coefficient of performance (COP) and energy efficiency ratio (EER).

b. The European Standard EN 14511 applies only to testing for COP and EER and does not supersede any DOE requirements in 10 CFR 430.24.

(4) **Representations.** Daikin may make representations about the energy use of its Altherma heat pump products for compliance, marketing, or other purposes only to the extent that such products have been tested in accordance with the provisions outlined above, and such representations fairly disclose the test results. Daikin may not make representations of annual operating cost, or any parameters other than COP and EER for the Altherma’s space heating and space cooling functions, respectively.

(5) This waiver shall remain in effect from the date this Decision and Order is issued, consistent with the provisions of 10 CFR 430.27(m).

(6) This waiver is issued on the condition that the statements, representations, and documentary materials provided by the petitioner are valid. DOE may revoke or modify the waiver at any time if it determines that the factual basis underlying the petition for waiver is incorrect, or the results from the alternate test procedure are unrepresentative of the basic models’ true energy consumption characteristics.

Issued in Washington, DC, on February 23, 2011.

**Cathy Zoi,**

Assistant Secretary, Energy Efficiency and Renewable Energy.

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**DEPARTMENT OF ENERGY**

Office of Energy Efficiency and Renewable Energy

**[Case No. CW–017]**

Energy Conservation Program for Consumer Products: Decision and Order Granting a Waiver to Electrolux From the Department of Energy Residential Clothes Washer Test Procedure

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

**ACTION:** Decision and Order.

**SUMMARY:** The U.S. Department of Energy (DOE) gives notice of the decision and order (Case No. CW–017) that grants to Electrolux Home Products (Electrolux) a waiver from the DOE clothes washer test procedure for determining the energy consumption of clothes washers. Under today’s decision and order, Electrolux shall be required to test and rate its clothes washers with larger clothes containers using an alternate test procedure that takes the larger capacities into account when measuring energy consumption.

**DATES:** This Decision and Order is effective March 2, 2011.


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**SUPPLEMENTARY INFORMATION:** In accordance with Title 10 of the Code of Federal Regulations (10 CFR 430.27(l)), DOE gives notice of the issuance of its decision and order as set forth below.

The decision and order grants Electrolux a waiver from the applicable clothes washer test procedure in 10 CFR part 430, subpart B, appendix J1 for certain basic models of clothes washers with capacities greater than 3.8 cubic feet, provided that Electrolux tests and rates such products using the alternate test procedure described in this notice. Today’s decision prohibits Electrolux from making representations concerning the energy efficiency of these products unless the product has been tested consistent with the provisions and restrictions in the alternate test procedure set forth in the decision and order below, and the representations fairly disclose the test results.

Distributors, retailers, and private labelers are held to the same standard when making representations regarding the energy efficiency of these products.

42 U.S.C. 6293(c).

Issued in Washington, DC, on February 23, 2011.

**Cathy Zoi,**

Assistant Secretary, Energy Efficiency and Renewable Energy.

**Decision and Order**

In the Matter of: Electrolux Home Products (Case No. CW–017).

**I. Background and Authority**