



[6450-01-P]

**DEPARTMENT OF ENERGY**

**Office of Energy Efficiency and Renewable Energy**

[Case No. CAC-039]

**Notice of Petition for Waiver of Fujitsu General Limited from the Department of Energy Commercial Package Air Conditioner and Heat Pump Test Procedure, and Grant of Interim Waiver**

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

**ACTION:** Notice of petition for waiver, notice of grant of interim waiver, and request for comments.

**SUMMARY:** This notice announces receipt of and publishes the Fujitsu General Limited (FUJITSU) petition for waiver and application for interim waiver (hereafter, “petition”) from the U.S. Department of Energy (DOE) test procedure for determining the energy consumption of commercial package air-source central air conditioners and heat pumps. Today’s notice also grants an interim waiver of the commercial package air-source central air conditioners and heat pumps test procedure. Through this notice, DOE also solicits comments with respect to the FUJITSU petition.

**DATES:** DOE will accept comments, data, and information with respect to the FUJITSU petition until **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** You may submit comments, identified by case number CAC-039, by any of the following methods:

- Federal eRulemaking Portal: [www.regulations.gov](http://www.regulations.gov). Follow the instructions for submitting comments.
- E-mail: [AS\\_Waiver\\_Requests@ee.doe.gov](mailto:AS_Waiver_Requests@ee.doe.gov). Include “Case No. CAC-039” in the subject line of the message.
- Mail: Ms. Brenda Edwards, U.S. Department of Energy, Building Technologies Program, Mailstop EE-2J/1000 Independence Avenue, SW., Washington, DC 20585-0121. Telephone: (202) 586-2945. Please submit one signed original paper copy.
- Hand Delivery/Courier: Ms. Brenda Edwards, U.S. Department of Energy, Building Technologies Program, 950 L’Enfant Plaza SW., Suite 600, Washington, DC 20024. Please submit one signed original paper copy.

Docket: For access to the docket to review the background documents relevant to this matter, you may visit the U.S. Department of Energy, 950 L’Enfant Plaza SW., Washington, DC, 20024; (202) 586-2945, between 9:00 a.m. and 4:00 p.m., Monday through Friday, except on Federal holidays. Available documents include the following items: (1) this notice; (2) public comments received; (3) the petition for waiver and application for interim waiver; and (4) prior DOE rulemakings and waivers regarding similar central air conditioning and heat pump equipment.

Please call Ms. Brenda Edwards at the above telephone number for additional information.

**FOR FURTHER INFORMATION CONTACT:** Mr. Bryan Berringer, U.S. Department of Energy, Building Technologies Program, Mail Stop EE-2J, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585-0121. Telephone: (202) 586-0371. E-mail: [AS\\_Waiver\\_Requests@ee.doe.gov](mailto:AS_Waiver_Requests@ee.doe.gov).

Ms. Elizabeth Kohl, U.S. Department of Energy, Office of the General Counsel, Mail Stop GC-71, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585-0103. Telephone: (202) 586-7796. E-mail: <mailto:Elizabeth.Kohl@hq.doe.gov>.

## **SUPPLEMENTARY INFORMATION:**

### **I. Background and Authority**

Title III, Part B of the Energy Policy and Conservation Act of 1975 (EPCA), Pub. L. 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. Part B includes definitions, test procedures, labeling provisions, energy conservation standards, and the authority to require information and reports from manufacturers. Further, Part B authorizes the Secretary of Energy to prescribe test procedures that are reasonably designed to produce results which measure energy efficiency, energy use, or estimated operating costs, and that are not unduly burdensome to conduct. (42 U.S.C. 6293(b)(3)). Part C of Title III provides for a similar energy efficiency program titled “Certain Industrial Equipment,” which includes

commercial package central air conditioners and heat pumps and other types of commercial equipment.<sup>1</sup> (42 U.S.C. 6311-6317)

For commercial package air-conditioning and heating equipment, EPCA provides that “the test procedures shall be those generally accepted industry testing procedures or rating procedures developed or recognized by the Air-Conditioning and Refrigeration Institute [ARI] or by the American Society of Heating, Refrigerating and Air-Conditioning Engineers [ASHRAE], as referenced in ASHRAE/IES Standard 90.1 and in effect on June 30, 1992.” (42 U.S.C. 6314(a)(4)(A)) Under 42 U.S.C. 6314(a)(4)(B), if the industry test procedure for commercial package air-conditioning and heating equipment is amended, EPCA directs the Secretary to amend the corresponding DOE test procedure unless the Secretary determines, by rule and based on clear and convincing evidence, that such a modified test procedure does not meet the statutory criteria set forth in 42 U.S.C. 6314(a)(2) and (3).

On December 8, 2006, DOE published a final rule adopting test procedures for commercial package air-conditioning and heating equipment, effective January 8, 2007. 71 FR 71340. Table 1 to Title 10 of the Code of Federal Regulations (10 CFR) 431.96 directs manufacturers of commercial package air conditioning and heating equipment to use the appropriate procedure when measuring energy efficiency of those products. For commercial package air-source equipment with capacities between 65,000 and 760,000 Btu/h, ARI Standard 340/360-2004 is the applicable test procedure.

The regulations set forth in 10 CFR 431.401 contain provisions that enable a person to seek a

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<sup>1</sup> For editorial reasons, upon codification in the U.S. Code, Parts B and C were re-designated as Parts A and A-1, respectively.

waiver from the test procedure requirements for covered products. The Assistant Secretary for Energy Efficiency and Renewable Energy (the Assistant Secretary) will grant a waiver if it is determined that the basic model for which the petition for waiver was submitted contains one or more design characteristics that prevents testing of the basic model according to the prescribed test procedures, or if the 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 431.401(f)(4). 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. 10 CFR 430.401(b)(1)(iii). The Assistant Secretary may grant the waiver subject to conditions, including adherence to alternate test procedures. 10 CFR 431.401(f)(4). Waivers remain in effect pursuant to the provisions of 10 CFR 430.401(g).

The waiver process also allows the Assistant Secretary to grant an interim waiver from test procedure requirements to manufacturers that have petitioned DOE for a waiver of such prescribed test procedures. 10 CFR 430.401(e)(3). An interim waiver remains in effect for 180 days or until DOE issues its determination on the petition for waiver, whichever is sooner. DOE may extend an interim waiver for an additional 180 days. 10 CFR 430.401(e)(4).

## **II. Application for Interim Waiver and Petition for Waiver**

On December 16, 2011, FUJITSU submitted a petition for waiver from the DOE test procedure applicable to commercial package air-source and water-source central air conditioners and heat pumps set forth in 10 CFR 431.96. FUJITSU requested the waiver for the FUJITSU AIRSTAGE V-II multi-split heat pump with a capacity of 264,000 Btu/h, and specified

compatible indoor units. The applicable test procedure for these heat pumps is ARI 340/360-2004. Manufacturers are directed to use these test procedures pursuant to Table 1 of 10 CFR 431.96.

FUJITSU seeks a waiver from the applicable test procedures under 10 CFR 431.96 on the grounds that its AIRSTAGE V-II multi-split heat pumps contain design characteristics that prevent testing according to the current DOE test procedures. Specifically, FUJITSU asserts that the two primary factors that prevent testing of its AIRSTAGE V-II multi-split variable speed products are the same factors stated in the waivers that DOE granted to Mitsubishi Electric & Electronics America USA, Inc. (Mitsubishi) and other manufacturers for similar lines of commercial multi-split air-conditioning systems:

- Testing laboratories cannot test products with so many indoor units; and
- There are too many possible combinations of indoor and outdoor units to test.

*See, e.g.,* 72 FR 17528 (April 9, 2007) (Mitsubishi); 76 FR 19069 (April 6, 2011) (Daikin); 76 FR 19078 (April 6, 2011) (Mitsubishi); 76 FR 31951 (June 2, 2011) (Carrier); 76 FR 50204 (August 12, 2011) (Fujitsu General Limited); 76 FR 65710 (October 24, 2011) (Mitsubishi).

The AIRSTAGE V-II systems have operational characteristics similar to the commercial multi-split products manufactured by other manufacturers. As indicated above, DOE has already granted waivers for these products. The AIRSTAGE V-II system consists of multiple indoor units connected to an air-cooled outdoor unit. These multi-splits are used in zoned systems where an outdoor or water-source unit can be connected with up to 45 separate indoor units, which need not be the same models. According to FUJITSU, the various indoor and outdoor

models can be connected in a multitude of configurations, with many thousands of possible combinations. Consequently, FUJITSU requested that DOE grant a waiver from the applicable test procedures for its AIRSTAGE V-II product designs until a suitable test method can be prescribed.

On December 16, 2011, FUJITSU also submitted an application for an interim waiver from the test procedures at 10 CFR 431.96 for its AIRSTAGE V-II equipment. An interim waiver may be granted if it is determined that the applicant will experience economic hardship if the application for 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 of the petition for waiver. (10 CFR 430.401(e)(3)).

DOE has determined that FUJITSU's application for interim waiver does not provide sufficient market, equipment price, shipments, and other manufacturer impact information to permit DOE to evaluate the economic hardship FUJITSU might experience absent a favorable determination on its application for an interim waiver. DOE has determined, however, that it is likely FUJITSU's petition will be granted, and that it is desirable for public policy reasons to grant FUJITSU relief pending a determination on the petition. DOE believes that it is likely FUJITSU's petition will be granted because, as noted above, DOE has previously granted a number of waivers for similar product designs. The two principal reasons supporting the grant of the previous waivers also apply to FUJITSU's AIRSTAGE V-II products: (1) test laboratories cannot test products with so many indoor units; and (2) it is impractical to test so many

combinations of indoor units with each outdoor unit. DOE also believes that the energy efficiency of similar products should be tested and rated in the same manner. As a result, DOE grants an interim waiver to FUJITSU for the specified models of its AIRSTAGE V-II products. DOE also provides for the use of an alternative test procedure, ANSI/AHRI-1230-2010 with Addendum 1. Therefore, *it is ordered that*:

The application for interim waiver filed by FUJITSU is hereby granted for FUJITSU's AIRSTAGE V-II multi-split heat pumps, subject to the specifications and conditions below. FUJITSU shall be required to test and rate the specified AIRSTAGE V-II commercial multi-split products according to the alternate test procedure as set forth in section IV, "Alternate test procedure."

The interim waiver applies to the following basic model groups:

Add-on system models (Module models)  
AOUA264RLBVG (AOUA72RLBV + AOUA96RLBV + AOUA96RLBV)

With nominal cooling capacity of 264,000 Btu/h.

Compatible indoor units for the above listed outdoor units:

Compact cassette:

AUUA7RLAV, AUUA9RLAV, AUUA12RLAV, AUUA14RLAV, AUUA18RLAV and AUUA24RLAV with nominal cooling capacities of 7,500, 9,500, 12,000, 14,000, 18,000 and 24,000 Btu/hr respectively.

Cassette :

AUUB30RLAV and AUUB36RLAV with nominal cooling capacities of 30,000 and 36,000 Btu/hr respectively.

Slim cassette:

AUUB18RLAV and AUUB24RLAV with nominal cooling capacities of 18,000 and 24,000 Btu/hr respectively.

Compact wall mounted:

ASUA7RLAV, ASUE7RLAV, ASUA9RLAV, ASUE9RLAV, ASUA12RLAV, ASUE12RLAV, ASUA14RLAV and ASUE14RLAV with nominal cooling capacities of 7,500, 7,500, 9,500, 9,500, 12,000, 12,000, 14,000 and 14,000 Btu/hr respectively.

Wall mounted:

ASUB18RLAV and ASUB24RLAV with nominal cooling capacities of 18,000 and 24,000 Btu/hr respectively.

Floor/Ceiling (Universal):

ABUA12RLAV, ABUA14RLAV, ABUA18RLAV and ABUA24RLAV with nominal cooling capacities of 12,000, 14,000, 18,000, 24,000 Btu/hr respectively.

Ceiling:

ABUA30RLAV and ABUA36RLAV with nominal cooling capacities of 30,000 and 36,000 Btu/hr respectively.

Slim duct:

ARUL7RLAV, ARUL9RLAV, ARUL12RLAV, ARUL14RLAV and ARUL18RLAV with nominal cooling capacities of 7,500, 9,500, 12,000, 14,000 and 18,000 Btu/hr respectively.

Middle static pressure duct::

ARUM24RLAV, ARUM30RLAV, ARUM36RLAV, ARUM48RLAV and ARUM54RLAV with nominal cooling capacities of 24,000, 30,000, 36,000, 48,000 and 54,000 Btu/hr respectively.

High static pressure duct:

ARUH36RLAV, ARUH48RLAV, ARUH54RLAV, ARUH60RLAV, ARUH72RLAV, ARUH90RLAV and ARUH96RLAV with nominal cooling capacities of 36,000, 48,000, 60,000, 72,000, 90,000 and 96,000 Btu/hr respectively.

DOE makes decisions on waivers and interim waivers for only those models specifically set out in the petition, not future models that may be manufactured by the petitioner. FUJITSU may submit a petition for waiver and request for grant of interim waiver, as appropriate, for additional models of commercial package air conditioners and heat pumps for which it seeks a waiver from the DOE test procedure. In addition, DOE notes that grant of an interim waiver or waiver does not release a petitioner from the certification requirements set forth at 10 CFR part 429.

### **III. Alternate Test Procedure**

In responses to two petitions for waiver from Mitsubishi, DOE specified an alternate test procedure to provide a basis from which Mitsubishi could test and make valid energy efficiency representations for its R410A CITY MULTI products, as well as for its R22 multi-split products. Alternate test procedures related to the Mitsubishi petitions were published in the Federal Register on April 9, 2007. See 72 FR 17528 and 72 FR 17533. For reasons similar to those published in these prior notices, DOE believes that an alternate test procedure is appropriate in this instance.

DOE understands that existing testing facilities have limited ability to test multiple indoor units simultaneously. This limitation makes it impractical for manufacturers to test the large number of possible combinations of indoor and outdoor units for some variable refrigerant flow zoned systems. We further note that after DOE granted a waiver for Mitsubishi's R22 multi-split products, ARI formed a committee to discuss testing issues and to develop a testing protocol for variable refrigerant flow systems. The committee has developed a test procedure that has been adopted by AHRI – “ANSI/AHRI 1230 - 2010: Performance Rating of Variable Refrigerant Flow (VRF) Multi-Split Air-Conditioning and Heat Pump Equipment” and is referenced in ASHRAE 90.1-2010. ANSI/AHRI 1230-2010 with Addendum 1 (dated February 2011) allows the use of up to 12 indoor units (instead of 5 indoor units previously) in the configuration of a basic model. ANSI/AHRI 1230-2010 is consistent with the alternate test procedure established in the commercial multi-split waivers that DOE has granted to Mitsubishi and several other manufacturers. ANSI/AHRI 1230-2010 uses a definition of “tested combination” that is substantially the same as the definition in the alternate test procedure in those waivers. DOE

prescribed ANSI/AHRI 1230-2010 in decision and orders granted to Carrier Corporation (76 FR 31951, June 2, 2011), Fujitsu General Limited (76 FR 50204, August 12, 2011), and Mitsubishi (76 FR 65710, October 24, 2011).

Therefore, as a condition for granting this interim waiver to FUJITSU, DOE requires the use of ANSI/AHRI-1230-2010 with Addendum 1 as the alternate test procedure. This alternate test procedure will allow FUJITSU to test and make energy efficiency representations for its AIRSTAGE V-II products. As stated above, DOE has applied this alternate test procedure to other waivers for similar residential and commercial central air conditioners and heat pumps manufactured by other manufacturers.

#### **IV. Summary and Request for Comments**

Through today's notice, DOE announces receipt of FUJITSU's petition for waiver from the test procedures that apply to commercial multi-split heat pump products and grants an interim waiver to FUJITSU. For the reasons articulated above, DOE also grants FUJITSU an interim waiver from those procedures. DOE is publishing FUJITSU's petition for waiver in its entirety pursuant to 10 CFR 430.401(b)(1)(iv). The petition contains no confidential information. Furthermore, today's notice includes an alternate test procedure that FUJITSU is required to follow as a condition of its interim waiver.

DOE solicits comments from interested parties on all aspects of the petition. Pursuant to 10 CFR 431.401(d), any person submitting written comments must also send a copy of such

comments to the petitioner. The contact information for the petitioner is: Masami Kato, Manager, Engineering Attestation Administration Department, Air Conditioner Administration Division, FUJITSU General Limited, 1116 Suenaga, Takatsu-ku, Kawasaki 213-8502, Japan. All submissions received must include the agency name and case number for this proceeding. Submit electronic comments in WordPerfect, Microsoft Word, Portable Document Format (PDF), or text (American Standard Code for Information Interchange (ASCII)) file format and avoid the use of special characters or any form of encryption. Wherever possible, include the electronic signature of the author. DOE does not accept telefacsimiles (faxes). 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 two copies: one copy of the document

including all the information believed to be confidential, and one copy of the document with the information believed to be confidential deleted. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

Issued in Washington, DC, on February 28, 2012.

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Kathleen B. Hogan  
Deputy Assistant Secretary for Energy Efficiency  
Energy Efficiency and Renewable Energy

[FR Doc. 2012-5228 Filed 03/02/2012 at 8:45 am; Publication Date: 03/05/2012]