

## DEPARTMENT OF ENERGY

## Office of Energy Efficiency and Renewable Energy

[EERE-2007-BT-WAV-0005]

**Energy Conservation Program for Consumer Products: Publication of the Petition for Waiver and Granting of the Application for Interim Waiver of Daikin U.S. Corporation From the DOE Residential and Commercial Package Air Conditioner and Heat Pump Test Procedures (Case No. CAC-011)**

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

**ACTION:** Notice of Petition for Waiver, Granting of Extension of Interim Waiver, and Request for Comments.

**SUMMARY:** Today's notice publishes a Petition for Waiver from Daikin U.S. Corporation (Daikin). This Petition for Waiver (hereafter "Daikin Petition") requests a waiver of the Department of Energy (DOE) test procedures applicable to residential and commercial package central air conditioners and heat pumps. The waiver request is specific to Daikin's VRV-S (residential) and VRV (commercial) Variable Refrigerant Volume multi-split heat pumps and heat recovery systems. DOE is soliciting comments, data, and information with respect to the Daikin Petition. Today's notice also extends the Interim Waiver granted to Daikin on August 14, 2006. An alternate test procedure from the DOE test procedure for residential air conditioners and heat pumps is added to the Interim Waiver.

**DATES:** DOE will accept comments, data, and information regarding this Petition for Waiver until, but no later than, August 1, 2007. The Interim Waiver was granted August 14, 2006, and expired February 10, 2007. This Notice extends the Interim Waiver 180 days, until August 9, 2007.

**ADDRESSES:** Please submit comments, identified by case number (CAC-011), by any of the following methods:

- **Mail:** Ms. Brenda Edwards-Jones, U.S. Department of Energy, Building Technologies Program, Mailstop EE-2J, Forrestal Building, 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-Jones, U.S. Department of Energy, Building Technologies Program, Room 1J-018, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585-0121.

- **E-mail:**

*Michael.Raymond@ee.doe.gov*. Include either the case number [CAC-011], and/or "Daikin Petition" in the subject line of the message.

- **Federal eRulemaking Portal:** <http://www.regulations.gov>. Follow the instructions for submitting comments.

**Instructions:** All submissions received must include the agency name and case number for this proceeding. Submit electronic comments in WordPerfect, Microsoft Word, PDF, or text (ASCII) file format and avoid the use of special characters or any form of encryption. Wherever possible, include the electronic signature of the author. Absent an electronic signature, comments submitted electronically must be followed and authenticated by submitting the signed original paper document. DOE does not accept telefacsimiles (faxes). Any person submitting written comments must also send a copy of such comments to the petitioner. 10 CFR 430.27(d). The contact information for the petitioner of today's notice is: Russell Tavalacci, Director of Product Marketing, Daikin AC (Americas), Inc., 1645 Wallace Drive, Suite 110, Carrollton, TX 75006, (972) 245-1510, [Russell.tavollacci@daikinac.com](mailto:Russell.tavollacci@daikinac.com).

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.

**Docket:** For access to the docket to read the background documents relevant to this matter, 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) 586-2945, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays. Available documents include the following items: This notice, public comments received, the Petition for Waiver and Application for Interim Waiver, and prior DOE rulemakings regarding central air conditioners and heat pumps. Please call Ms. Brenda Edwards-Jones at the above telephone number for additional information regarding visiting the Resource Room. Please note that DOE's Freedom of Information Reading Room (formerly Room 1E-190 at the Forrestal Building)

is no longer housing rulemaking materials.

**FOR FURTHER INFORMATION CONTACT:** Dr. Michael G. Raymond, U.S. Department of Energy, Building Technologies Program, Mail Stop EE-2J, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585-0121, (202) 586-9611; e-mail:

*Michael.Raymond@ee.doe.gov*; or Francine Pinto, Esq., U.S. Department of Energy, Office of General Counsel, Mail Stop GC-72, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585-0103, (202) 586-9507; e-mail: [Francine.Pinto@hq.doe.gov](mailto:Francine.Pinto@hq.doe.gov).

**SUPPLEMENTARY INFORMATION:**

- I. Background and Authority
- II. Petition for Waiver
- III. Application for Interim Waiver
- IV. Alternate Test Procedure
- V. Summary and Request for Comments

**I. Background and Authority**

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." Part C of Title III (42 U.S.C. 6311-6317) provides for an energy efficiency program entitled "Certain Industrial Equipment," which is similar to the program in Part B, and which includes commercial air conditioning equipment, packaged boilers, water heaters, and other types of commercial equipment.

Today's notice involves both residential products under Part B, and commercial equipment under Part C. Both parts provide for definitions, test procedures, labeling provisions, energy conservation standards, and the authority to require information and reports from manufacturers. With respect to test procedures, both parts generally authorize the Secretary of Energy to prescribe test procedures that are reasonably designed to produce results which reflect energy efficiency, energy use, and estimated annual operating costs, and that are not unduly burdensome to conduct. (42 U.S.C. 6293(b)(3); 42 U.S.C. 6314(a)(2))

Daikin's petition requests a waiver from the DOE residential central air conditioner and heat pump test procedure for its VRV-S multi-split products. For testing and rating purposes, residential air conditioners and heat pumps use single-phase power, have a rated capacity less than 65 kBtu/h, and are not packaged terminal units. Daikin's petition also requests a waiver from the DOE commercial package air

conditioners and heat pump test procedure for its VRV multi-split products. Daikin makes this request for their VRV units because their rated capacities of 72 kBtu/h and 96 kBtu/h fall within the scope of the test procedure specified by DOE for small commercial package air conditioning and heating equipment.

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. DOE adopted ARI Standard 210/240–2003 for commercial package air conditioning and heating equipment with capacities <65,000 Btu/h and ARI Standard 340/360–2004 for commercial package air conditioning and heating equipment with capacities ≥65,000 Btu/h and <240,000 Btu/h. *Id.* at 71371. The capacities of Daikin's commercial VRV multi-split products fall in the ranges covered by ARI Standard 340/360–2004. The test procedures for Daikin's VRV–S residential multi-split air conditioners and heat pumps are set forth in 10 CFR Part 430, Subpart B, Appendix M.

DOE's regulations contain provisions allowing a person to seek a waiver from the test procedure requirements for covered products. These provisions are set forth in 10 CFR 430.27 for covered consumer/residential products and 10 CFR 431.401 for covered commercial equipment. The waiver provisions for commercial equipment are substantively identical to those for covered consumer products.

The waiver provisions allow the Assistant Secretary for Energy Efficiency and Renewable Energy (hereafter "Assistant Secretary") to temporarily waive test procedures 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(a)(1), 431.401(a)(1). The Assistant Secretary may grant the waiver subject to conditions, including adherence to alternate test procedures. 10 CFR Sections 430.27(1), 431.401(f)(4). Waivers generally remain in effect until final test procedure amendments become effective, thereby resolving the problem that is the subject of the waiver.

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 430.27(a)(2), 431.401(a)(2). An Interim Waiver remains in effect for a period of 180 days or until DOE issues its determination on the Petition for Waiver, whichever is sooner, and may be extended for an additional 180 days, if necessary. 10 CFR 430.27(h), 431.401(e)(4).

## II. Petition for Waiver

On May 12, 2005, Daikin filed an Application for Interim Waiver and a Petition for Waiver from the test procedures applicable to residential and commercial package air conditioners and heat pumps. In particular, Daikin requests a waiver from the DOE test procedures for its residential VRV–S multi-split models with nominal cooling capacities of 36, 48, and 60 kBtu/h. For these products, the applicable test procedure is set forth in 10 CFR part 430, subpart B, appendix M. Further, Daikin requests a waiver from the test procedures for its commercial VRV multi-split models with nominal cooling capacities of 72 and 96 kBtu/h, with and without heat recovery. For this equipment, the applicable test procedure is ARI 340/360–2004.

Daikin seeks a waiver from the DOE test procedures on the grounds that the VRV–S Series and VRV Series multi-split heat pump and heat recovery systems contain design characteristics that prevent testing according to the current DOE test procedures. Daikin asserts that the two primary factors that prevent testing of multi-split variable speed products, regardless of manufacturer, are the same factors stated in the waiver granted to Mitsubishi Electric for its line of commercial multi-splits:

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

69 FR 52661, August 27, 2004.

Further, Daikin states that although the VRV and VRV–S product lines fit within the scope of the applicable DOE residential and commercial test procedures, the basic design of both lines is not commensurate with the intent of the test procedures. In particular, the test procedures do not provide for:

- Testing products with a large quantity of indoor units operating simultaneously.
- Testing of multi-split products whereas all connected indoor units physically cannot be located in a single room.

- Operating indoor units at several different static pressure ratings during a single test.

- Identifying the precise number of part load tests required (ARI 340/360) for fully or infinitely variable speed products.

- Testing systems that have millions of combinations of indoor units configurable to a single outdoor unit.

- Measuring part load performance of a system operating in simultaneous operation (performing both heating and cooling functions at the same time).

Daikin requests that DOE grant to Daikin, for its VRV and VRV–S product designs, the same test procedure waiver previously granted to Mitsubishi Electric, until a suitable test method is determined (Daikin Petition, page 5). There is no substantive difference between the MEUS and Daikin products which would preclude DOE from granting the same waiver to both. Daikin states that failure to grant the waiver would prevent it from marketing its product. Also, it states it is the goal of Daikin to work closely with DOE, ARI, and other agencies to develop appropriate test procedures.

## III. Application for Interim Waiver

On May 12, 2005, in addition to its Petition for Waiver, Daikin submitted to DOE an Application for Interim Waiver. 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 on the Petition for Waiver. 10 CFR 430.27(g), 431.401(e)(3).

Daikin's Application for Interim Waiver does not provide sufficient information to evaluate what, if any, economic hardship Daikin will likely experience if its Application for Interim Waiver is denied. However, in those instances where the likely success of the Petition for Waiver has been demonstrated, based upon DOE having granted a waiver for a similar product design, it is in the public interest to have similar products tested and rated for energy consumption on a comparable basis. DOE has previously granted interim waivers to Fujitsu and Samsung for comparable residential and commercial multi-split air conditioners and heat pumps. 70 FR 5980, February 4, 2005; 70 FR 9629, February 28, 2005, respectively. DOE approved the Petition for Waiver to Mitsubishi for its comparable line of commercial multi-

split air conditioners and heat pumps. 69 FR 52660, August 27, 2004. The two prevailing reasons for granting the past waivers also apply to Daikin's VRV-S and VRV products: (1) Test laboratories cannot test products with so many indoor units (up to seventeen according to the Daikin petition—the practical limit is about five); and (2) it is impractical to test so many combinations of indoor units with each outdoor unit.

On August 14, 2006, DOE granted to Daikin an Interim Waiver from the DOE test procedures for its VRS-S and VRV product lines. However, that Interim Waiver expired February 10, 2007. Daikin has requested an 180-day extension of the Interim Waiver, or until DOE acts on Daikin's Petition for Waiver. 10 CFR 430.27(h), 10 CFR 431.401(e)(4). DOE is extending the Interim Waiver, and modifying it to specify that Daikin must use an alternate test procedure, which has also been included in two recent Mitsubishi waivers. Hence, it is ordered that:

The Application for Interim Waiver filed by Daikin is hereby modified and extended for 180 days, until August 9, 2007, for Daikin's new VRV and VRV-S central air conditioners and central air conditioning heat pumps.

For the models listed below:

1. Daikin shall not be required to test or rate its VRV-S residential products on the basis of the currently applicable test procedure, which is set forth in 10 CFR Part 430, subpart B, appendix M.

2. Daikin shall not be required to test or rate its VRV commercial products on the basis of the currently applicable test procedure, which incorporates by reference ARI Standard 340/360-2004.

3. Daikin shall be required to test and rate its VRV-S and VRV products according to the alternate test procedure as set forth in section IV (3), "Alternate test procedure."

Outdoor units:

1. RXYMQ Series Heat Pumps with nominal capacities of 36, 48, and 60 kBtu/h, when combined with two or more of the below listed indoor units.

2. RXYQ Series Heat Pumps with nominal capacities of 72 and 96 kBtu/h, when combined with two or more of the below listed indoor units.

3. REYQ Series Heat Recovery units with nominal capacities of 72 and 96 kBtu/h, when combined with two or more of the below listed indoor units.

Indoor units:

1. FXAQ Series wall mounted indoor units with nominally rated capacities of 7, 9, 12, 18, and 24 kBtu/h.

2. FXLQ Series floor mounted indoor units with nominally rated capacities of 12, 18, and 24 kBtu/h.

3. FXNQ Series concealed floor mounted indoor units with nominally rated capacities of 12, 18, and 24 kBtu/h.

4. FXDQ Series low static ducted indoor units with nominally rated capacities of 7, 9, 12, 18, and 24 kBtu/h.

5. FXSQ Series medium static ducted indoor units with nominally rated capacities of 7, 9, 12, 24, 30, 36, and 48 kBtu/h.

6. FXMQ Series high static ducted indoor units with nominally rated capacities of 30, 36, and 48 kBtu/h.

7. FXZQ Series recessed cassette indoor units with nominally rated capacities of 7, 9, 12, 18, and 24 kBtu/h.

8. FFXQ Series recessed cassette indoor units with nominally rated capacities of 12, 18, 24, 30, and 36 kBtu/h.

9. FXHQ Series ceiling suspended indoor units with nominally rated capacities of 12, 24, and 36 kBtu/h.

This Interim Waiver is conditioned upon the presumed validity of statements, representations, and documentary materials provided by the petitioner. This Interim Waiver may be revoked or modified at any time upon a determination that the factual basis underlying the petition is incorrect, or DOE determines that the results from the alternate test procedure are unrepresentative of the basic models' true energy consumption characteristics. This Interim Waiver shall remain in effect until August 9, 2007.

#### IV. Alternate Test Procedure

In response to two recent 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. The MEUS petitions, including the alternate test procedure, were published in the **Federal Register** on April 9, 2007. 72 FR 17528, 17532.

DOE is including a similar alternate test procedure in the Interim Waiver for Daikin's products, and considering the same alternate test procedure in Daikin's future Decision and Order. This will allow Daikin to test and make energy efficiency representations regarding its products. DOE is also considering applying a similar alternate test procedure to other similar waivers for residential and commercial central air conditioners and heat pumps. Such cases include Samsung's petition for its multi-split products (70 FR 9629, February 28, 2005), Fujitsu's petition for its multi-split products (70 FR 5980, February 4, 2005), and Mitsubishi's

petition for its R22 multi-split products (69 FR 52660, August 27, 2004).

As noted above, existing testing facilities have a limited ability to test multiple indoor units at one time, and the number of possible combination of indoor and outdoor units for some variable refrigerant flow zoning systems is impractical to test. Subsequent to the waiver that DOE granted for Mitsubishi's R22 models, ARI developed a committee to discuss the issue and work on developing an appropriate test protocol for variable refrigerant zoning systems. However, to date, no additional test methodologies have been adopted by the committee or put forth to DOE.

DOE believes that an alternate test procedure is needed in order that manufacturers can make representations for their products. DOE specified an alternate test procedure in the Mitsubishi waiver for R410A CITY MULTI products, and is considering including the following similar waiver language in the Decision and Order for Daikin's variable refrigerant flow multi-split air conditioner and heat pump models:

(1) The Petition for Waiver filed by Daikin AC (Americas), Inc. (Daikin) is hereby granted as set forth in the paragraphs below.

(2) Daikin shall be not be required to test or rate its variable refrigerant flow multi-split air conditioner and heat pump products covered in this waiver on the basis of the currently applicable test procedure, but shall be required to test and rate its products covered in this waiver according to the alternate test procedure as set forth in paragraph (3).

(3) Alternate test procedure.

(A) Daikin shall be required to test the products listed above according to those test procedures for central air conditioners and heat pumps prescribed by DOE at 10 CFR Parts 430 and 431, except that:

(i) For products covered by 10 CFR Part 430 (consumer products), Daikin shall not be required to comply with: (1) The first sentence in 10 CFR 430.24(m)(2), which refers to "that combination manufactured by the condensing unit manufacturer likely to have the highest volume of retail sales;" and (2) the third sentence in 10 CFR 430(m)(2) and the provisions of 10 CFR 430(m)(2)(i) and (ii). Instead of testing the combinations likely to have the highest volume of retail sales, Daikin may test a "tested combination" selected in accordance with the provisions of subparagraph (B) of this paragraph. Additionally, instead of following the provisions of 10 CFR 430(m)(2)(i) and (ii) for every other

system combination using the same outdoor unit as the tested combination, Daikin shall make representations concerning the VRV-S products covered in this waiver according to the provisions of subparagraph (C) below.

(ii) For products covered by 10 CFR Part 430 (consumer products), Daikin shall be required to comply with 10 CFR 430 Appendix M as amended in accordance with designated changes that are listed in the July 20, 2006 **Federal Register** Notice. 71 FR 41320, July 20, 2006. These designated changes are with respect to the following test procedure sections: 2.1, 2.2.3, 2.4.1, 3.2.4 (including Table 6), 3.6.4 (including Table 12), 4.1.4.2, and 4.2.4.2.

(iii) For products covered by 10 CFR Part 431 (commercial products), Daikin shall test a "tested combination" selected in accordance with the provisions of subparagraph (B) of this paragraph. For every other system combination using the same outdoor unit as the tested combination, Daikin shall make representations concerning the VRV products covered in this waiver according to the provisions of subparagraph (C) below.

(B) Tested combination. The term "tested combination" means a sample basic model comprised of units that are production units, or are representative of production units, of the basic model being tested. For the purposes of this waiver, the tested combination shall have the following features:

(i) The basic model of a variable refrigerant flow system used as a tested combination shall consist of an outdoor unit that is matched with between 2 and 5 indoor units.

(ii) The indoor units shall

(a) Represent the highest sales volume type models;

(b) Together, have a capacity between 95 percent and 105 percent of the capacity of the outdoor unit;

(c) Not, individually, have a capacity greater than 50 percent of the capacity of the outdoor unit;

(d) Have a fan speed that is consistent with the manufacturer's specifications; and

(e) All have the same external static pressure.

(C) Representations. Daikin may make representations about the energy efficiency of variable refrigerant flow multi-split air conditioner and heat pump products, for compliance, marketing, or other purposes, only to the extent that such representations are made consistent with the provisions outlined below:

(i) For multi-split combinations tested in accordance with this paragraph,

Daikin may make representations based on these test results.

(ii) For multi-split combinations that are not tested, Daikin may make representations which are based on the testing results for the tested combination and which are consistent with either of the two following methods, except that only method (a) may be used, if available:

(a) Representation of non-tested combinations according to an Alternative Rating Method (ARM) approved by DOE.

(b) Representation of non-tested combinations at the same energy efficiency level as the tested combination with the same outdoor unit.

## V. Summary and Request for Comments

Today's notice publishes Daikin's Petition for Waiver and extends Daikin's Interim Waiver until August 9, 2007, and modifies it by including an alternate test procedure. DOE is publishing Daikin's Petition for Waiver in its entirety. The petition contains no confidential information. Furthermore, today's notice includes an alternate test procedure that DOE is considering including in the final Decision and Order. In this alternate test procedure, DOE proposes defining a "tested combination" which Daikin could test in lieu of testing all retail combinations of its VRV and VRV-S multi-split air conditioner and heat pump products. Furthermore, should a manufacturer not be able to test all retail combinations, DOE proposes allowing manufacturers to rate waived products according to an alternate rating method approved by DOE, or to rate waived products the same as that for the specified tested combination.

DOE will also consider applying a similar alternate test procedure to other comparable petitions for waiver for residential and commercial central air conditioners and heat pumps. Such cases include Samsung's petition for its DVM products (70 FR 9629, February 28, 2005), and Fujitsu's petition for its Airstage variable refrigerant flow (VRF) products (70 FR 5980, February 4, 2005).

DOE is interested in receiving comments on this notice. Any person submitting written comments must also send a copy of such comments to the petitioner, whose contact information is included in the section entitled **ADDRESSES**, above. 10 CFR 430.27(d), 431.401(d)(2).

Issued in Washington, DC, on June 12, 2007.

**Alexander A. Karsner,**

*Assistant Secretary, Energy Efficiency and Renewable Energy.*

May 12, 2005.

Mr. David K. Garman

Assistant Secretary for Energy Efficiency and Renewable Energy

U.S. Department of Energy 1000

Independence Ave, SW., Washington, DC 20585-0121.

Re: Petition for Waiver of Test Procedure

Dear Assistant Secretary Garman: Daikin U.S. Corporation (DUS) respectfully submits this document as our Petition for Waiver of Test Procedure applicable to residential and commercial package air conditioners and heat pumps to the Department of Energy (DOE) for review and approval. This petition is submitted pursuant to the provisions of 10 CFR 431.29 *on the grounds that the basic models addressed herein contain design characteristics which prevent testing according to prescribed procedures.* This petition is being requested for Daikin's VRV and VRV-S multi-split heat pump and heat recovery systems incorporating variable speed compressor technology.

There are two primary factors that prevent the testing of multi-split variable speed product regardless of manufacturer which are:

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

Existing test standards that most closely relate to such product are ARI 210/240 (2003) and ARI 340/360 (2004).

## Background

Daikin Industries Limited is a leading manufacturer of variable speed and Variable Refrigerant Volume (VRV) zoning systems which are offered for sale by DUS in the North American market. These products combine advanced technologies such as high efficiency variable speed compressors and fan motors along with electronic expansion valves and other devices to insure peak operating performance of the overall system. The systems are applied in both commercial and residential applications whereas zoning is applied in both commercial and residential applications whereas zoning is applied to provide users with peak utility of the system and energy savings. The capacity of this DUS product offerings range from 36,000 BTU/Hr to 96,000 BTU/Hr.

Our product offering shares many of the same design and characteristic features as that of the City Multi product manufactured and distributed by Mitsubishi Electric and Electronics USA, Inc. (MEUS), of which DOE has granted a waiver as described in the **Federal Register**/Vol. 69 No. 166/Friday, August 27, 2004/Notices, page 52,660. DOE granted MEUS' petition for waiver on the basis that 1) testing laboratories cannot test products with so many indoor units, and 2) there are too many possible combinations of indoor and outdoor units to test, therefore

preventing testing of the basic models according to prescribed test procedures.

An additional problem that prevents testing is the wide variety of indoor unit static pressure ratings available with these and other multi-split products. Testing facilities cannot effectively control multiple indoor static pressures that would be required with many of the indoor unit combinations available. To accomplish such testing a large number of test rooms would need to be utilized simultaneously, networked with data recording instrumentation and extensive piping configurations would need to be routed throughout the various test rooms. Obviously this process would be cost and time prohibitive.

Daikin's VRV and VRV-S product offering consists of multiple indoor units being connected to an outdoor unit. Indoor units for these products are available in Ducted (with many different indoor static pressure ratings as standard), 4-Way Cassette, Wall Mounted, Ceiling Suspended, Floor Standing and other models being readied for market introduction. There are over one million combinations possible with the current product offering and additional models continue to be manufactured for use with the VRV and VRV-S product line.

#### Characteristics of the VRV and VRV-S Products

Daikin's VRV and VRV-S systems have the following characteristics and application:

- Multi-split, multi-zone units utilizing an outdoor unit that serves up to as many as twenty indoor units.
- Variable speed technology that matches system capacity to the current load thereby utilizing only as much energy as required.
- Multi-zone applications, each indoor unit can be independently controlled with a local controller allowing the occupant to alter their environmental condition to meet their needs including set temperature, fan speed and mode of operation. This is a key feature of the system's utility to an end user.
- Ability to efficiently operate the compressor at loads as small as 10% of the rated capacity and variable up to the rated capacity of the system.
- Some products offer a "heat recovery" mode of operation which allows heat that is absorbed from one indoor zone (operating in the cooling mode) to be discharged into another calling for heat. This function reduces the load on the outdoor unit and improves overall system performance and utility.
- Variable speed indoor and outdoor high efficiency fan motors to precisely control operating pressures and airflow rates.
- Electronically controlled expansion valves to precisely control refrigerant flow, superheat, sub-cooling, pump down functions and even oil flow throughout the system.
- Indoor units comprising a wide variety of static pressure ratings.

#### Basic Models for Which a Waiver From Test Procedure Is Requested

Daikin requests a waiver from test procedures for the following basic model groups:

- VRV Series Outdoor Units:
  - RXYQ Series, Heat Pumps with nominally rated capacities of 72,000 and 96,000 BTU/Hr.
  - REYQ Series, Heat Recovery units with nominally rated capacities of 72,000 and 96,000 BTU/Hr.
- VRV-S Series Outdoor Units:
  - RXYMQ Series, Heat Pumps with nominal capacities of 36,000, 48,000 and 60,000 BTU/Hr.
- Compatible Indoor Units for Above Listed Outdoor Units:
  - FXAQ Series all mounted indoor units with nominally rated capacities of 7,000, 9,000, 12,000, 18,000 and 24,000 BTU/Hr.
  - FXLQ Series floor mounted indoor units with nominally rated capacities of 12,000, 18,000 and 24,000 BTU/Hr.
  - FXNQ Series concealed floor mounted indoor units with nominally rated capacities of 12,000, 18,000 and 24,000 BTU/Hr.
  - FXDQ Series low static ducted indoor units with nominally rated capacities of 7,000, 9,000, 12,000, 18,000 and 24,000 BTU/Hr.
  - FXSQ Series medium static ducted indoor units with nominally rated capacities of 7,000, 9,000, 12,000, 18,000, 24,000, 30,000, 36,000 and 48,000 BTU/Hr.
  - FXMQ Series high static ducted indoor units with nominally rated capacities of 30,000, 36,000 and 48,000 BTU/Hr.
  - FXZQ Series recessed cassette indoor units with nominally rated capacities of 7,000, 9,000, 12,000, 18,000 and 24,000 BTU/Hr.
  - FXFQ Series recessed cassette indoor units with nominally rated capacities of 12,000, 18,000, 24,000, 30,000 and 36,000 BTU/Hr.
  - FXHQ Series ceiling suspended indoor units with nominally rated capacities of 12,000, 24,000 and 36,000 BTU/Hr.

#### Test Procedures Applicable to Requested Waiver

DUS seeks a waiver to the test procedures as identified in ARI 210/240 (2003); Unitary Air Conditioning and Air Source Heat Pump Equipment and to ARI 340/360 (2004); Performance Rating of Commercial and Industrial Unitary Air Conditioning and Heat Pump Equipment. Although the capacity of Daikin's VRV and VRV-S product offering fit within the scope of these standards, the basic design of the product is not commensurate with the intent of the standards. The testing procedures outlined in these standards do not make provisions for:

- Testing products with a large quantity of indoor units operating simultaneously.
- Testing of multi-split products whereas all connected indoor units physically cannot be located in a single room.
- Having indoor units operating at several different static pressure ratings during a single test.
- The precise number of part load tests required (ARI 340/360) for fully or infinitely variable speed products are not identified.
- ARI 210/240 and ARI 340/360 provide no direction about how to test systems that have millions of combinations of indoor units configurable to a single outdoor unit.
- ARI 210/240 and ARI 340/360 do not provide a test method to measure part load

performance of a system operating in simultaneous operation (performing both heating and cooling functions at the same time).

#### Alternative Test Procedures

There are no alternative test procedures available within the United States to provide a means to test and to rate the performance of such variable speed, multi-split, multi-zone product types. A draft ISO standard (ISO CD 15042 Multi-Split Systems) is nearing completion and will soon be distributed as a Draft Internal Ballot for comments. The actual final completion date of this ISO standard is unknown. The Engineering Committee of ARI's Ductless Section is also evaluating possible methods to provide testing and rating of such systems but no conclusion has been achieved as of this date.

#### Manufacturers of Similar Models Incorporating the Same Design Characteristics

Manufacturers of similar product within the United States market are:

- Samsung Electronics Co., Ltd.
- Sanyo Fisher (USA) Corp.
- Mitsubishi Electric & Electronics USA, Inc.
- Fujitsu General America
- Environmaster International
- LG Electronics USA, Inc.

#### Summary

As ruled in the **Federal Register** (page 52,660, Vol. 69, no. 166/Friday, August 27, 2004/Notices) DOE has previously concluded that the testing of product with the same design characteristic of Daikin's VRV and VRV-S product is not feasible under currently established test methods as a result of:

- "Test laboratories cannot test products with so many indoor units"
- "And there are too many possible combinations of indoor and outdoor units to test."

Daikin U.S. Corporation respectfully asks that DOE grant the same waiver of test procedure for the VRV and VRV-S product design until a suitable test method is determined. Failure to receive such waiver or exemption from test standards would prevent Daikin U.S. from marketing our product even though DOE has previously granted waiver for other products currently in the market with similar design characteristics.

It is the goal of Daikin U.S. to work closely with DOE, ARI and other agencies in an effort to define an acceptable testing procedure as soon as possible. This type of product provides superior comfort to the end user, allows for independent zoning of facilities from a single outdoor unit, and incorporates state of the art technology such as variable speed compressors utilizing neodymium magnets to increase efficiency and electronic control of compressor speed, fan speed and even metering device opening positions. This type of product introduces technologies that will not only increase system efficiency and reduce National Energy Consumption but it also brings about a new level of comfort and control of end users.

We would be pleased to respond to any questions you may have regarding this

Petition for Waiver of Test Procedure. Please direct such comments and questions to Gary Nettinger, Director of Product Support at 404-395-8333, by e-mail at [gary.nettinger@daikin-ny.com](mailto:gary.nettinger@daikin-ny.com), or by mail at 65 Millennial Ct., Lawrenceville, GA 30045.

Sincerely,  
Yoshinobu Inoue,  
President; Daikin U.S. Corporation,  
375 Park Avenue, Suite 3308, New York, NY  
10152

[FR Doc. E7-12733 Filed 6-29-07; 8:45 am]

BILLING CODE 6450-01-P

## ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-OPPT-2004-0122; FRL-8136-4]

### Pollution Prevention through Nanotechnology Conference; Notice of Public Meeting

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Notice.

**SUMMARY:** EPA is convening a conference to better understand the benefits that nanotechnology can offer by preventing pollution, and to encourage development of nanotechnology that offers such benefits. A multi-stakeholder Steering Committee has helped develop a scope and agenda for the conference. Through a series of presentations and case studies, this conference will help inform subsequent research and commercialization of nanotechnology and nanomaterials that promote pollution prevention in an environmentally responsible manner.

**DATES:** The conference will be held on September 25 and 26, 2007.

You may register for the conference on or before September 14, 2007. See also Unit IV. for additional registration information.

To request accommodation of a disability, please contact the person listed under **FOR FURTHER INFORMATION CONTACT**, preferably at least 10 days prior to the conference, to give EPA as much time as possible to process your request.

Poster applications are due July 31, 2007.

**ADDRESSES:** The conference will be held at the Holiday Inn Rosslyn at Key Bridge, 1900 Fort Myer Dr., Arlington, VA 22209.

See Unit III. for poster application submissions.

See Unit IV. for registration submissions.

**FOR FURTHER INFORMATION CONTACT:** For general information contact: Colby

Lintner, Regulatory Coordinator, Environmental Assistance Division (7408M), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001; telephone number: (202) 564-1404; e-mail: [TSCA-Hotline@epa.gov](mailto:TSCA-Hotline@epa.gov).

For technical information contact: Clive Davies, Design for the Environment Branch, Economics, Exposure, and Technology Division (7406M), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001; telephone number: (202) 564-3821; email: [davies.clive@epa.gov](mailto:davies.clive@epa.gov).

#### SUPPLEMENTARY INFORMATION:

##### I. General Information

###### A. Does this Action Apply to Me?

This action is directed to the public in general, and may be of particular interest to those persons who manufacture, import, process, or use nanoscale materials, especially to prevent pollution. Representatives from industry; non-governmental organizations concerned with the environment and human health; academia; and government may all be interested in attending.

Since many entities may be interested, the Agency has not attempted to fully describe all of the entities that may have an interest in this matter. If you have questions regarding the applicability of this action to a particular entity, consult the technical person listed under **FOR FURTHER INFORMATION CONTACT**.

###### B. How Can I Get Copies of this Document and Other Related Information?

1. *Docket.* EPA has established a docket for this action under docket ID number EPA-HQ-OPPT-2004-0122. All documents in the docket are listed in the docket's index available at <http://www.regulations.gov>. Although listed in the index, some information is not publicly available, e.g., Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available electronically at <http://www.regulations.gov>, or, if only available in hard copy, at the OPPT Docket. The OPPT Docket is located in the EPA Docket Center (EPA/DC) at Rm. 3334, EPA West Bldg., 1301 Constitution Ave., NW., Washington, DC. The EPA/DC Public Reading Room

hours of operation are 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding Federal holidays. The telephone number of the EPA/DC Public Reading Room is (202) 566-1744, and the telephone number for the OPPT Docket is (202) 566-0280. Docket visitors are required to show photographic identification, pass through a metal detector, and sign the EPA visitor log. All visitor bags are processed through an X-ray machine and subject to search. Visitors will be provided an EPA/DC badge that must be visible at all times in the building and returned upon departure. 2. *Electronic access.* You may access this **Federal Register** document electronically through the EPA Internet under the "Federal Register" listings at <http://www.epa.gov/fedrgstr>. All documents relating to this conference are available at <http://www.epa.gov/oppt/nano>.

##### II. Background

###### A. Pollution Prevention

Pollution prevention is reducing or eliminating waste at the source by modifying production processes, promoting the use of non-toxic or less-toxic substances, implementing conservation techniques, and re-using materials rather than putting them into the waste stream.

###### B. Beneficial Characteristics

The unique and potentially useful properties of nanomaterials include dramatically increased surface areas and reactivities, improved strength-weight ratios, increased electrical conductivity, and changes in color and opacity. Materials designed to take advantage of these properties are finding application in a variety of areas, such as electronics, medicine, and environmental protection.

This conference is focused on three major areas of pollution prevention:

- *Products.* Products that are less toxic, less polluting, and wear-resistant.
- *Processes.* Processes that are more efficient and waste-reducing.
- *Energy and resource efficiency.*

Processes and products that use less energy and fewer raw materials because of greater efficiency.

To emphasize the importance of the responsible development <sup>1</sup> of

<sup>1</sup> A Matter of Size: Triennial Review of the National Nanotechnology Initiative, 2006, The National Academies Press, "Responsible Development", page 73, "...responsible development of nanotechnology can be characterized as the balancing of efforts to maximize the technology's positive contributions and minimize its negative consequences. Thus, responsible development involves an examination both of applications and of potential implications.

Continued