

**DEPARTMENT OF ENERGY****Office of Energy Efficiency and Renewable Energy**

[Docket No. EERE-2007-BT-WAV-0011]

**Energy Conservation Program for Consumer Products: Publication of the Petition for Waiver From LG Electronics and Granting of the Application for Interim Waiver From the Department of Energy Residential Central Air Conditioner and Heat Pump Test Procedure [Case No. CAC-014]****AGENCY:** Office of Energy Efficiency and Renewable Energy, Department of Energy.**ACTION:** Notice of Petition for Waiver, granting of Application for Interim Waiver, and request for comments.

**SUMMARY:** This notice announces receipt of and publishes a Petition for Waiver from LG Electronics USA, Inc. (LG). This Petition for Waiver (hereafter "LG Petition") requests a waiver of the Department of Energy (DOE) test procedures applicable to residential central air conditioners and heat pumps. The waiver request is specific to LG's variable refrigerant flow multi-split heat pumps. Through this document, DOE is: (1) Soliciting comments, data, and information with respect to the LG Petition; and (2) granting an Interim Waiver to LG from the DOE test procedure for residential central air conditioners and heat pumps.

**DATES:** DOE will accept comments, data, and information with respect to the LG Petition until, but no later than October 18, 2007.

**ADDRESSES:** You may submit comments, identified by case number CAC-014, by any of the following methods:

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

- *E-mail:* [Michael.Raymond@ee.doe.gov](mailto:Michael.Raymond@ee.doe.gov). Include either "case number CAC-014," and/or "LG Petition" in the subject line of the message.

- *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. Please submit one signed original paper copy.

*Instructions:* 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. 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, pursuant to 10 CFR 430.27(d). The contact information for the petitioner is: Mr. Richard Donner, Product Planning Manager, North America Product Planning Group, LG Electronics USA, Inc., 2000 Millbrook Drive, Lincolnshire, IL 60069. Telephone: (201) 906-9878. Fax: (847) 941-8340. E-mail: [rdonner@lge.com](mailto:rdonner@lge.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 review the documents relevant to this matter, you may visit 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: (1) This notice; (2) public comments received; (3) the Petition for Waiver and Application for Interim Waiver; and (4) 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 (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. Telephone: (202) 586-9611. E-mail: [Michael.Raymond@ee.doe.gov](mailto:Michael.Raymond@ee.doe.gov).

Francine Pinto or Eric Stas, U.S. Department of Energy, Office of the General Counsel, Mail Stop GC-72, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585-0103. Telephone: (202) 586-9507. E-mail: [Francine.Pinto@hq.doe.gov](mailto:Francine.Pinto@hq.doe.gov) or [Eric.Stas@hq.doe.gov](mailto:Eric.Stas@hq.doe.gov).

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**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 establishes the "Energy Conservation Program for Consumer Products Other Than Automobiles." (42 U.S.C. 6291-6309) This notice involves residential products under Part B, and the statute specifically includes definitions, test procedures, labeling provisions, energy conservation standards, and the authority to require information and reports from manufacturers.

With respect to test procedures, Part B generally authorizes the Secretary of Energy (the Secretary) to prescribe test procedures that are reasonably designed to produce results which reflect energy efficiency, energy use, and estimated operating costs, and that are not unduly burdensome to conduct. (42 U.S.C. 6293(b)(3))

Relevant to the current Petition for Waiver, the test procedures for residential central air conditioners and central air-conditioning heat pumps are set forth in 10 CFR Part 430, Subpart B, Appendix M. Section 323 of EPCA provides that the Secretary of Energy may amend test procedures for consumer products if the Secretary determines that amended test procedures would more accurately reflect energy efficiency, energy use or estimated annual operating costs, and are not unduly burdensome to conduct. (42 U.S.C. 6293(b)(1)(A) and (b)(3))

DOE's regulations contain provisions allowing a person to seek a waiver from the test procedure requirements for covered products, for which the petitioner's 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). Petitioners must include in their petition any alternate test procedures known to evaluate the basic model in a manner representative of its energy consumption. 10 CFR 430.27(b)(1)(iii). The Assistant Secretary for Energy Efficiency and Renewable Energy (the Assistant Secretary) may grant the waiver subject to conditions, including adherence to alternate test procedures. 10 CFR 430.27(l). Waivers generally remain in effect until final test procedure amendments become effective, thereby resolving the problem that instigated the Petition for Waiver. 10 CFR 430.27(m).

The waiver process also permits parties petitioning DOE for a waiver to apply for an Interim Waiver from the prescribed 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). 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).

## II. Petition for Waiver

On December 28, 2005, LG filed a Petition for Waiver from the test procedures applicable to residential central air conditioners and central air-conditioning heat pumps and an Application for Interim Waiver, related to numerous models listed in Appendix A of LG's petition. The applicable test procedure for LG's residential products is the DOE residential test procedure found in 10 CFR Part 430, Subpart B, Appendix M.

LG seeks a waiver from the DOE test procedure because, LG asserts, its line of variable refrigerant flow multi-split air conditioners and heat pumps would be evaluated in a manner unrepresentative of their true energy consumption characteristics. According to LG, such evaluation under the existing test procedure would "provide materially

inaccurate comparative data," due in part to potential barriers arising from "design characteristics that prevent testing of the basic models according to the prescribed test procedures." As described below, the primary problem is the large number of combinations of indoor and outdoor units potentially subject to testing.

By way of background, an LG multi-split product consists of one outdoor unit, using a scroll or rotary type compressor with variable capacity, which can connect to multiple indoor units and that uses variable refrigerant flow and control systems. The multi-split product is intended to be used in zoned systems where an outdoor unit can be connected with up to eight separate indoor units, which need not be the same models. These operating characteristics allow each indoor unit to have a different set temperature and a different mode of operation (i.e., on/off/fan). All the indoor units are capable of operating independently, each with its own temperature and fan setting. Subject to these controls, the outdoor unit will determine the cooling or heating capacity delivered into the zones. LG offers 70 indoor models (35 heat pump-type indoor units and 35 cooling-only type indoor units) and 40 outdoor models (20 heat pump-type indoor units and 20 cooling-only type indoor units). Each central air conditioner outdoor unit can be matched with up to 35 different cooling-only indoor units. Likewise, each central air-conditioning heat pump outdoor unit can be matched with up to 35 heat pump indoor units. Further, an outdoor unit can be connected with up to eight separate indoor units. Thus, for each outdoor unit, there are many possible combinations of indoor units that can be used in a system configuration, and given that there are 40 outdoor units, LG argues that it would be impractical to test the multitude of possible combinations for the LG multi-split line of products.

Accordingly, LG requests that DOE grant a test procedure waiver for its variable refrigerant flow multi-split product designs until a suitable test method can be prescribed. Furthermore, LG states that failure to grant the waiver would result in economic hardship because it would prevent the company from marketing its variable refrigerant flow multi-split products. Also, LG states that it is willing to work closely with DOE, the Air-Conditioning and Refrigeration Institute (ARI), and other agencies to develop appropriate test procedures, as necessary.

## III. Application for Interim Waiver

On December 28, 2005, in addition to its Petition for Waiver, LG submitted to DOE an Application for Interim Waiver. LG's Application for Interim Waiver does not provide sufficient information to evaluate the level of economic hardship LG 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 (Feb. 4, 2005); 70 FR 9629 (Feb. 28, 2005), respectively. In addition, DOE approved the Petition for Waiver from Mitsubishi Electric & Electronics USA, Inc. (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 these waivers also apply to LG's variable refrigerant flow multi-split products: (1) Test laboratories cannot test products with so many indoor units<sup>1</sup>; and (2) it is impractical to test so many combinations of indoor units with each outdoor unit. Thus, DOE has determined that it is likely that LG's Petition for Waiver will be granted for its new variable refrigerant flow multi-split models. Hence, it is ordered that:

The Application for Interim Waiver filed by LG is hereby granted for LG's new variable refrigerant flow multi-split central air conditioners and central air-conditioning heat pumps, subject to the specifications and conditions below.

1. LG shall not be required to test or rate its variable refrigerant flow multi-split residential products on the basis of the currently applicable test procedure, which is set forth in 10 CFR Part 430, Subpart B, Appendix M; and

2. LG shall be required to test and rate its variable refrigerant flow multi-split products according to the alternate test procedure as set forth in section IV (3), "Alternate test procedure," of today's notice.

The Interim Waiver applies to the following models:

<sup>1</sup> According to the LG petition, up to eight indoor units may be connected to its multi-split air conditioners and heat pumps and would accordingly be possible candidates for testing (out of an even greater number of potential indoor units). However, DOE believes that the practical limits for testing would be about five units.

*Heat Pump Type**Indoor Units:*

AMNH073LQ\*0, AMNH093LQ\*0,  
 AMNH093LR\*0, AMNH093D4\*0,  
 AMNH123LR\*0, AMNH183LT\*0,  
 AMNH243LT\*0, AMNH093DE\*0,  
 AMNH073DZ\*0, AMNH093DU\*0,  
 AMNH123DEM0, AMNH123DU\*0,  
 AMNH183D3\*0, AMNH243D3\*0,  
 AMNH093AP\*0, AMNH093AP\*1,  
 AMNH123AP\*0, AMNH123AP\*1,  
 AMNH093TC\*0, AMNH123TC\*0,  
 AMNH093TE\*0, AMNH123TE\*0,  
 AMNH183TE\*0, AMNH243TF\*0,  
 AMNH093BP\*0, AMNH123BP\*0,  
 AMNH093BT\*0, AMNH126BT\*0,  
 AMNH183BT\*0, AMNH183BH\*0,  
 AMNH243BH\*0, AMNH093VE\*0,  
 AMNH123VE\*0, AMNH183VB\*0,  
 AMNH243VB\*0

*Outdoor Units:*

A2UW143FA0, A2UW143FA1,  
 A2UW143FA2, A2UW163FA0,  
 A2UW163FA1, A2UW183FA0,  
 A3UW183FA0, A3UW183FA1,  
 A3UW243FA0, A4UW243FA0,  
 A4UW243FA1, A4UW303FA0,  
 A6UW403FA0, A7UW483FA0,  
 A8UW563FA0, A2UH143FA0,  
 A2UH183FA0, A2UH303FA0,  
 A2UH243FA0, A3UH363FA0

*Cooling-Only Type**Indoor Units:*

AMNC073LQ\*0, AMNC093LQ\*0,  
 AMNC093LR\*0, AMNC093D4A\*0,  
 AMNC123LR\*0, AMNC183LT\*0,  
 AMNC243LT\*0, AMNC073DZ\*0,  
 AMNC093DU\*0, AMNC123DU\*0,  
 AMNC123DEM0, AMNC183D3\*0,  
 AMNC243D3\*0, AMNC093DE\*0,  
 AMNC093AP\*0, AMNC093AP\*1,  
 AMNC123AP\*0, AMNC123AP\*1,  
 AMNC093TC\*0, AMNC123TC\*0,  
 AMNC093TE\*0, AMNC123TE\*0,  
 AMNC183TE\*0, AMNC243TF\*0,  
 AMNC093BP\*0, AMNC123BP\*0,  
 AMNC093BT\*0, AMNC126BT\*0,  
 AMNC183BT\*0, AMNC183BH\*0,  
 AMNC243BH\*0, AMNC093VE\*0,  
 AMNC123VE\*0, AMNC183VB\*0,  
 AMNC243VB\*0

*Outdoor Units:*

A2UQ143FA0, A2UQ143FA1,  
 A2UQ143FA2, A2UQ163FA0,  
 A2UQ163FA1, A2UQ183FA0,  
 A3UQ183FA0, A3UQ183FA1,  
 A3UQ243FA0, A4UQ243FA0,  
 A4UQ243FA1, A4UQ303FA0,  
 A6UQ403FA0, A7UQ483FA0,  
 A8UQ563FA0, A2UC143FA0,  
 A2UC183FA0, A4UC303FA0,  
 A2UC243FA0, A3UC363FA0

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 for Waiver is incorrect, or DOE determines that the results from the alternate test procedure are unrepresentative of the basic models' true energy consumption characteristics.

**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 for its R410A CITY MULTI products, as well as for its R22 multi-split products. The Mitsubishi Decision and Order, including the alternate test procedure, were published in the **Federal Register** on April 9, 2007. 72 FR 17528, 17531. For similar reasons, DOE believes that alternate test procedures are necessary here.

In general, DOE understands that existing testing facilities have a limited ability to test multiple indoor units at one time, and the number of possible combinations of indoor and outdoor units for some variable refrigerant flow zoned systems is impractical to test. We further note that subsequent to the waiver that DOE granted for Mitsubishi's R-22 multi-split products, ARI formed a committee to discuss this issue and to work on developing an appropriate test protocol for variable refrigerant flow systems. However, to date, no additional test methodologies have been adopted by the committee or submitted to DOE.

Therefore, as discussed below, DOE is including an alternate test procedure as a condition in granting the Interim Waiver for LG's products, and plans to consider the same alternate test procedure in the context of the subsequent Decision and Order pertaining to LG's Petition for Waiver. Utilization of this alternate test procedure will allow LG to test and make energy efficiency representations regarding its above-discussed products. More broadly, DOE is also considering applying a similar alternate test procedure to other existing waivers for similar residential and commercial central air conditioners and heat pumps. Such cases include Samsung's Petition for Waiver for its multi-split products at 70 FR 9629 (Feb. 28, 2005), and Fujitsu's Petition for Waiver for its multi-split products at 70 FR 5980 (Feb. 4, 2005). Similarly, DOE is considering use of this alternate test procedure for other products of this type for which manufacturers seek waivers, until such time as the DOE test procedure has been updated appropriately.

In the present case, DOE is modifying the alternate test procedure in the above-referenced waiver granted to Mitsubishi for the R-410A CITY MULTI products, and plans to consider inclusion of the following similar waiver language in the Decision and Order for LG's variable refrigerant flow multi-split air conditioner and heat pump models:

(1) The "Petition for Waiver" filed by LG Electronics USA, Inc. (LG) is hereby granted as set forth in the paragraphs below.

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

(3) *Alternate test procedure.*

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

(i) LG shall not be required to comply with: 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 largest volume of retail sales;" and the third sentence in 10 CFR 430(m)(2), including 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, LG 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, LG shall make representations concerning the variable refrigerant flow multi-split products covered in this waiver according to the provisions of subparagraph (C) below.

(ii) LG shall be required to comply with 10 CFR 430 Appendix M as amended in accordance with designated changes that are set forth in the July 20, 2006 **Federal Register** notice. 71 FR 41320. 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.

(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 two and five 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.* LG may make representations about the energy efficiency of its 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, LG may make representations based on these test results.

(ii) For multi-split combinations that are not tested, LG 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 approved by DOE; or

(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

Through today's notice, DOE announces receipt of LG's Petition for Waiver from the test procedures applicable to LG's variable refrigerant flow multi-split air conditioner and heat pump products, and for the reasons articulated above, DOE is granting LG an Interim Waiver from those procedures. As part of this notice, DOE is publishing LG's Petition for Waiver in its entirety. The Petition contains no confidential information. Furthermore, today's notice includes an alternate test procedure that LG is required to follow as a condition of the Interim Waiver and

which DOE is considering to include in its subsequent Decision and Order. In this alternate test procedure, DOE is defining a "tested combination" which LG could use in lieu of testing all retail combinations of its variable refrigerant flow multi-split air conditioner and heat pump products.

Furthermore, should a subsequent manufacturer be unable to test all retail combinations, DOE is considering allowing such 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 is also considering 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 Waiver for its DVM products at 70 FR 9629 (Feb. 28, 2005), and Fujitsu's Petition for Waiver for its Airstage variable refrigerant flow products at 70 FR 5980 (Feb. 4, 2005).

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

Issued in Washington, DC, on September 4, 2007.

**Alexander A. Karsner,**

*Assistant Secretary, Energy Efficiency and Renewable Energy.*

December 28, 2005

Mr. Douglas L. Faulkner, Acting Assistant Secretary for Energy Efficiency and Renewable Energy, United States Department of Energy, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585.

Re: Petition for Waiver and Application for Interim Waiver, LG Electronics Variable Refrigerant Flow Multi-Split Air Conditioners and Heat Pumps

Dear Mr. Faulkner: LG Electronics, Inc. (LG) submits this Petition for Waiver and Application for Interim Waiver, pursuant to 10 CFR 430.27, for its LG variable refrigerant flow multi-split air conditioners and heat pumps with variable capacity ("multi-splits"). Waiver relief has been granted to Mitsubishi Electric and Samsung Air Conditioning for the same kinds of product. 69 FR 52660 (Aug. 27, 2004) (Mitsubishi; waiver); 70 FR 9629 (Feb. 28, 2005) (Samsung; interim waiver).

LG is a manufacturer of digital appliances, as well as mobile communications, digital displays, and digital media products. Its appliances include air-conditioners, washing machines, clothes dryers, refrigerators, refrigerator-freezers, air cleaners, ovens, microwave ovens, dishwashers, and vacuum

cleaners and are sold worldwide, including in the United States. LG's U.S. operations are LG Electronics USA, Inc., with headquarters at 1000 Sylvan Avenue, Englewood Cliffs, NJ 07632 (tel. 201-816-2000). Its worldwide headquarters are located at LG Twin Towers 20, Yoido-dong, Youngdungpo-gu Seoul, Korea 150-721 (tel. 011-82-2-3777-1114) URL: <http://www.LGE.com>. LG's principal brands include LG®, and OEM brands including GE® and Kenmore®. LG's appliances are produced in Korea and Mexico.

LG intends to market multi-splits and requests waiver relief for this product. LG has 70 indoor units and 40 outdoor units for the product. The model numbers are set forth in Appendix A. As shown therein, 35 cooling-only indoor units can be matched with 20 outdoor units, and 35 heat pump indoor units can be matched with the other 20 outdoor units. The electrical rating for this product is 208/230V 60Hz.

An LG multi-split is a beneficial product consisting of one outdoor unit, using a scroll or rotary type compressor with variable capacity, that can connect to multiple indoor units and that uses variable refrigerant flow and control systems. The multi-split is intended to be used in zoning systems where an outdoor unit can be connected with up to 8 separate indoor units in a zoned system, which need not be the same models. The operating characteristics allow each indoor unit to have a different set temperature and a different mode of operation (i.e., on/off/fan). All of the indoor units are capable of operating independently, with their own temperature and fan speed setting. Based on those controls, the outdoor unit will then determine the cooling or heating capacity delivered into the zones. The system therefore offers great flexibility and convenience to the consumer, permitting precise space conditioning control throughout the building, and thus saving energy.

As stated above, 35 cooling-only indoor units can be matched with each related outdoor unit, and 35 heat pump indoor units with each related outdoor unit. And an outdoor unit can be connected with up to 8 separate indoor units. Thus, for each outdoor unit, there are millions of possible combinations of indoor units that can be matched in a system configuration. And since there are 40 outdoor units, there is a total of hundreds of millions of combinations for the LG multi-split line of products.

The variable speed, constant speed or dual compressors and the associated system controls can direct refrigerant flow throughout the system to precisely meet the various heating or cooling loads required in the conditioned areas. The compressor is capable of reducing its operating capacity to as little as 40 percent of its rated capacity. The outdoor fan motor also has a variable speed drive to properly match the outdoor coil to indoor loads. Zone diversity enables the system to have a total connected indoor unit capacity of up to 130 percent of the capacity of the outdoor unit.

A waiver and interim waiver for LG multi-splits are warranted because test procedures under the Energy Policy and Conservation

Act (EPCA), 42 U.S.C. 6291, *et seq.*, evaluate the basic models in a manner so unrepresentative of their true energy consumption characteristics as to provide materially inaccurate comparative data, and/or the basic models contain one or more design characteristics that prevent testing of the basic model according to the prescribed test procedures. In such circumstances a waiver "will be granted." 10 CFR 430.27(l). In that regard:

- The test procedure provides for testing of a pair of indoor and outdoor assemblies making up a typical split system, but does not specify how an LG multi-split system, with literally millions of combinations of indoor units for each outdoor unit, could be evaluated. The situation is further complicated by the fact that there are 40 outdoor units. It is not practical to test each possible combination, and the test procedure provides no alternative rating method for generating efficiency ratings for systems with more than one indoor unit. Thus, the test procedure does not contemplate, and cannot practically be applied to, LG multi-split systems.
- The test procedure provides for testing "matched assemblies," which does not apply to LG multi-split systems. Indoor and outdoor coils in split systems are typically balanced; that is, the capacity of the outdoor coil is equivalent to the capacity of the indoor coil. The test procedure's application to "matched assemblies" contemplates such a balance between indoor and outdoor coil capacity. With the LG multi-split systems, however, the sum of the capacity of the indoor units connected into the system can be as much as 130 percent of the capacity of the outdoor coil. Such unbalanced combinations of LG indoor and outdoor units are permitted by the zoning characteristics of the system, the use of electronic expansion valves to precisely control refrigerant flow to each indoor coil, and the system intelligence for overall system control. The test procedure designed for "matched assemblies" therefore does not contemplate or address testing for substantially unbalanced zoning systems such as the LG multi-splits.
- The existing test standards do not provide a test method for integrated part load value (IPLV) in the heating mode of a heat pump. Thus, the LG heat pump's part load capability in the heating mode is not accounted for in the test procedure. Due to the constant variation of the system capacity, it is patently inaccurate to rate the unit at its full load capacity or at any other fixed point of capacity when the unit capacity is constantly varying between 10 percent and 100 percent of the rated capacity. Any test method utilized to rate these types of full variable refrigerant flow units should be indicative of the ability of these units to operate at 10%, 20%, 30% \* \* \* 100% of rated capacity as this is the true operation of the unit in the field.
- The existing test procedure does not account for the inherent benefits of eliminating air duct losses in a system, such as LG's, that is ductless.

For all of these reasons, the existing test procedures evaluate the LG multi-splits in a manner so unrepresentative of their true energy consumption characteristics as to provide materially inaccurate comparative data and/or the basic models contain one or more design characteristics that prevent testing of the basic model according to the prescribed test procedures. 10 CFR 430.27. Therefore, DOE should grant a waiver for LG multi-split systems. The waiver should continue until a test procedure can be developed and adopted that will provide the U.S. market with a fair and accurate assessment of the LG system energy consumption and efficiency levels. LG intends to work with DOE, stakeholders, and the Air-Conditioning and Refrigeration Institute (ARI) to develop the appropriate test procedure.

There are no alternative test procedures known to LG that could evaluate these products in a representative manner.

That a waiver is warranted is borne out by the fact that DOE has granted waiver relief to Mitsubishi Electric and Samsung for the same types of product. 69 FR 52660 (Aug. 27, 2004); 69 FR 9629 (Feb. 28, 2005).

Manufacturers of all other basic models marketed in the United States and known to LG to incorporate similar design characteristics as found in the LG multi-splits include Samsung Air Conditioning, Sanyo Fisher (USA) Corp., Fujitsu General Limited, Mitsubishi Electric and Electronics USA, and Mitsubishi Heavy Industries Climate Control, Inc.

LG also requests immediate relief by grant of an interim waiver. Grant of an interim waiver is fully justified:

- The petition for waiver is likely to be granted, as evidenced not only by its merits, but also because DOE has already granted waiver relief to Mitsubishi Electric and Samsung.
- Without a waiver of the test procedure, LG will be at a competitive disadvantage in the market and suffer economic hardship. LG would be placed in an untenable situation: The product would be subject to a set of regulations that DOE already acknowledges should not apply to such a product, while at the same time other manufacturers are allowed to operate relieved from such regulations.
- Significant investment has already been made in LG multi-splits. Lack of relief would not allow LG to recoup this investment and would deny LG anticipated sales revenue. This does not take into account significant losses in goodwill and brand acceptance.
- The basic purpose of EPCA, as amended by the National Appliance Energy Conservation Act, is to foster purchase of energy-efficient appliances, not hinder such purchases. LG multi-splits produce a benefit to consumers and are in the public interest. To encourage and foster the availability of these products is in the public interest. Standards programs should not be used as a means to block innovative, improved designs.<sup>2</sup> DOE's rules should

<sup>2</sup> See FTC Advisory Opinion No. 457, TRRP 1718.20 (1971 Transfer Binder); 49 FR 32213 (Aug. 13, 1984); 52 FR 49141, 49147–48 (Dec. 30, 1987).

accommodate and encourage—not act to block—such a product.

- Granting the interim waiver and waiver would also eliminate a non-tariff trade barrier.
- Grant of relief would also help enhance economic development and employment, including not only LG Electronics USA's operations in New Jersey, Illinois and Alabama, but also at major national retailers and regional dealers that carry LG products. Furthermore, continued employment creation and ongoing investments in its marketing, sales and servicing activities will be fostered by approval of the interim waiver. Conversely, denial of the requested relief would harm the company and would be anticompetitive.

## Conclusion

LG respectfully requests that DOE grant a waiver and interim waiver from existing test standards for LG multi-splits until such time as a representative test procedure is developed and adopted for such products.

We would be pleased to discuss this request with DOE and provide further information as needed.

We hereby certify that all manufacturers of domestically marketed units of the same product type have been notified by letter of this petition and application, copies of which letters are attached (Appendix B).

Sincerely,

Richard Donner, Product Planning Manager, North America Product Planning Group, LG Electronics USA, Inc., 2000 Millbrook Drive, Lincolnshire, IL 60069, Phone: 201-906-9878, Fax: 847-941-8340, E-mail: [rdonner@lge.com](mailto:rdonner@lge.com).

John I. Taylor, Vice President, Government Relations, LG Electronics USA, Inc., 1750 K Street, NW., Washington, DC 20006, Phone: 202-719-3490, Fax: 847-941-8177, Email: [jtaylor@lge.com](mailto:jtaylor@lge.com).

Of Counsel:

John A. Hodges, James T. Bruce, Wiley Rein & Fielding, LLP., 1776 K Street, NW., Washington, DC 20006, Phone: 202-719-7000, Fax: 202-719-7049, E-mail: [jhodges@wrf.com](mailto:jhodges@wrf.com), [jbruce@wrf.com](mailto:jbruce@wrf.com).

## Appendix A

### Heat Pump

#### Indoor

AMNH073LQ\*0, AMNH093LQ\*0, AMNH093LR\*0, AMNH093D4\*0, AMNH123LR\*0, AMNH183LT\*0, AMNH243LT\*0, AMNH093DE\*0, AMNH073DZ\*0, AMNH093DU\*0, AMNH123DEMO, AMNH123DU\*0, AMNH183D3\*0, AMNH243D3\*0, AMNH093AP\*0, AMNH093AP\*1, AMNH123AP\*0, AMNH123AP\*1, AMNH093TC\*0, AMNH123TC\*0, AMNH093TE\*0, AMNH123TE\*0, AMNH183TE\*0, AMNH243TF\*0, AMNH093BP\*0, AMNH123BP\*0, AMNH093BT\*0, AMNH126BT\*0, AMNH183BT\*0, AMNH183BH\*0, AMNH243BH\*0, AMNH093VE\*0, AMNH123VE\*0, AMNH183VB\*0, AMNH243VB\*0

#### Outdoor

A2UW143FA0, A2UW143FA1,  
A2UW143FA2, A2UW163FA0,  
A2UW163FA1, A2UW183FA0,  
A3UW183FA0, A3UW183FA1,  
A3UW243FA0, A4UW243FA0,  
A4UW243FA1, A4UW303FA0,  
A6UW403FA0, A7UW483FA0,  
A8UW563FA0, A2UH143FA0,  
A2UH183FA0, A4UH303FA0,  
A2UH243FA0, A3UH363FA0

#### Cooling Only

##### Indoor

AMNC073LQ\*0, AMNC093LQ\*0,  
AMNC093LR\*0, AMNC093D4A\*0,  
AMNC123LR\*0, AMNC183LT\*0,  
AMNC243LT\*0, AMNC073DZ\*0,  
AMNC093DU\*0, AMNC123DU\*0,  
AMNC123DEMO, AMNC183D3\*0,  
AMNC243D3\*0, AMNC093DE\*0,  
AMNC093AP\*0, AMNC093AP\*1,  
AMNC123AP\*0, AMNC123AP\*1,  
AMNC093TC\*0, AMNC123TC\*0,  
AMNC093TE\*0, AMNC123TE\*0,  
AMNC183TE\*0, AMNC243TF\*0,  
AMNC093BP\*0, AMNC123BP\*0,  
AMNC093BT\*0, AMNC126BT\*0,  
AMNC183BT\*0, AMNC183BH\*0,  
AMNC243BH\*0, AMNC093VE\*0,  
AMNC123VE\*0, AMNC183VB\*0,  
AMNC243VB\*0

##### Outdoor

A2UQ143FA0, A2UQ143FA1,  
A2UQ143FA2, A2UQ163FA0,  
A2UQ163FA1, A2UQ183FA0,  
A3UQ183FA0, A3UQ183FA1,  
A3UQ243FA0, A4UQ243FA0,  
A4UQ243FA1, A4UQ303FA0,  
A6UQ403FA0, A7UQ483FA0,  
A8UQ563FA0, A2UC143FA0,  
A2UC183FA0, A4UC303FA0,  
A2UC243FA0, A3UC363FA0

## Appendix B

### Certification

This is to certify that LG Electronics, Inc. has sent by next day delivery a copy of its petition for waiver and application for interim waiver for LG variable refrigerant flow multi-split air conditioners and heat pumps with variable capacity to manufacturers, known to LG, of domestically marketed units of the same product type (as listed in Section 322(a) of the Energy Policy and Conservation Act). The cover letter to each person states that the person may submit comments to DOE.

Attached are the names and addresses of each person to whom a copy of the petition and waiver was sent by next day delivery.

#### Certified by:

John I. Taylor, Vice President, Government Relations, LG Electronics USA, Inc., Date: December 28, 2005.

December 28, 2005

Re: LG Electronics, Inc. Petition for Waiver and Application for Interim Waiver; Opportunity for Comment

To Whom It May Concern: This is to notify you by next day delivery of LG Electronics Inc.'s enclosed Petition for Waiver and Application for Interim Waiver of the United States Department of Energy (DOE) regulations on energy conservation test procedures. In accordance with DOE rules,

we are also advising you of your opportunity to comment to DOE. The Assistant Secretary for Conservation and Renewable Energy will consider timely written comments. Comments are to be submitted to: Assistant Secretary for Energy Efficiency and Renewable Energy, U.S. Department of Energy, 1000 Independence Avenue, SW., Washington, DC 20585-0107.

Pursuant to DOE's rules, please provide us with a copy of any comments.

Sincerely,

John I. Taylor, Vice President, Government Relations, LG Electronics USA, Inc.

Aaon, Inc., 2425 South Yukon, Tulsa, OK 74107-2728, Attn: Jim Parro.

Advanced Distributor Products, Industrial Park Road, Grenada, MS 38901, Attn: Joseph P. Bush.

Allstyle Coil Company, LP, 7037 Brittmore (77041), P.O. Box 40696, Houston, TX 77240-0696, Attn: Robert W. Magee.

American Best, LLC, 1845 W. First Street, Ste. 101, Tempe, AZ 85281-7253, Attn: Daniel H. Burke.

Apex Coil, LLC, 400 Dean Street, P.O. Box 756, Gilmer, TX 75644, Attn: Candice Coscione.

Armstrong Air Conditioning, Inc., 421 Monroe Street, Bellevue, OH 44811, Attn: Bruce R. Maika.

Aspen Manufacturing, Inc., 373 Atascocita Road, Humble, TX 77396, Attn: John McAndrews.

Bard Manufacturing Company, 1914 Randolph Drive, P.O. Box 607, Bryan, OH 43506, Attn: Irvin L. Derks.

Benchmark Manufacturing, Inc., 211 S. Industrial Street, P.O. Box 2170, Lindale, TX 75771, Attn: Steven W. Hallock.

Carrier Corporation, Carrier Parkway, A&R Building, P.O. Box 4808, Syracuse, NY 13221, Attn: John Mandyck.

Compu-Aire, Inc., 8167 Bryon Road, Whittier, CA 90606, Attn: Balbir Narang.  
Daikin Industries, Ltd., Nakaz'aki-Nishi Kita-Ku, Osaka 530-8323, JAPAN, Attn: Gary Nettinger.

Eubank Manufacturing Enterprises, Inc., Subsidiary of Fedders Corp., P.O. Box 7938, Longview, TX 75607, Attn: Todd Duckwitz.

Excel Comfort Systems, Inc., 990 Main Street, Blackville, SC 29817, Attn: William E. Dalton.

Firm Group Co., Ltd., 213.215 Moo 9, Luang Pang Road, Tab Yao, Ladkrabang, Bangkok, Thailand, Attn: Suvit Jirapavasuti.

Friedrich Air Conditioning Co., 4200 North Pan Am Expressway, P.O. Box 1540, San Antonio, TX 78295-1540, Attn: Sarup Bakhshi.

Fujitsu General America, 353 Route 46 West, Fairfield, NJ 07004, Attn: Tedd Rozyłowicz.

Goodman Manufacturing Corp., 2550 North Loop West, Suite 400, Houston, TX 77092, Attn: Gary Clark.

International Comfort Products, LLC, 650 Heil-Quaker Avenue, Lewisburg, TN 37091, Attn: Halsey Cook.

International Environmental Corp., P.O. Box 2598, Oklahoma City, OK 73101-2598, Attn: Warren Shoulders.

Lennox International Inc., P.O. Box 799900, Dallas, TX 75379-9900, Attn: David F. Lewis.

Magic Aire, 501 Galveston, Wichita Falls, TX 76301, Attn: Steve Wilson.

Mestek, Inc., 260 North Elm Street, Westfield, MA 01085, Attn: Anthony C. Novak.

Mitsubishi Electric & Electronics, USA, Inc. HV AC Products, 4505-A Newpoint Place, Lawrenceville, GA 30043, Attn: Paul Doppel.

Mortex Products, Inc., 501 Terminal Road (76106), P.O. Box 9380, Ft. Worth, TX 76147, Attn: Terrell J. Small.

National Comfort Products, 539 Dunksferry Road, Bensalem, PA 19020-5908, Attn: John Morris.

NORDYNE Inc., 8000 Phoenix Parkway, P.O. Box 8809, O'Fallon, MO 63366-8809, Attn: David J. Lagrand.

Rheem Manufacturing Company, 5600 Old Greenwood Road (72903), P.O. Box 17010, Fort Smith, AR 72917-7010, Attn: Alan F. Kessler.

Samsung Electronics Co., LTO, 416 Maetan3-Dong, Pal-dal-gu Suwon Kyungki-Do.442-742, Korea, Attn: Byong-Jim Kong.

Superior Coils, Inc., P.O. Box 24325, Fort Worth, TX 76124, Attn: Deborah H. Hawkins.

Trane, 3600 Pammel Creek Road, La Crosse, WI 54601, Attn: Mike Ray.

Unico, Inc., 7401 Alabama Avenue, Saint Louis, MO 63111, Attn: Craig Messmer.

York International Corporation, 631 South Richland Avenue, P.O. Box 1592, York, PA 17405, Attn: Daniel J. Arnold.

Air-Conditioning and Refrigeration Institute, 4100 North Fairfax Drive, Suite 200, Arlington, VA 22203, Attn: Stephen R. Yurek, Esq.

[FR Doc. E7-18338 Filed 9-17-07; 8:45 am]

BILLING CODE 6450-01-P

## DEPARTMENT OF ENERGY

### Federal Energy Regulatory Commission

#### Combined Notice of Filings #1

September 11, 2007.

Take notice that the Commission has received the following Natural Gas Pipeline Rate and Refund Report filings:

*Docket Numbers:* RP05-422-022.

*Applicants:* El Paso Natural Gas Company.

*Description:* El Paso Natural Gas Company submits Thirty-Fourth Revised Sheet 20 *et al.* to FERC Gas Tariff, Second Revised Volume 1-A.  
*Filed Date:* 09/10/2007.

*Accession Number:* 20070911-0089.  
*Comment Date:* 5 p.m. Eastern Time on Monday, September 24, 2007.

*Docket Numbers:* RP07-38-003.

*Applicants:* Eastern Shore Natural Gas Company.

*Description:* Eastern Shore Natural Gas Company submits Revised Sheets 4, 5, and 6 to FERC Gas Tariff, Second Revised Volume 1, effective 9/1/07.