

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

[Case No. RF-007]

Energy Conservation Program for Consumer Products: Publication of the Petition for Waiver of General Electric Company From the Department of Energy (DOE) Refrigerator and Refrigerator-Freezer Test Procedures**AGENCY:** Office of Energy Efficiency and Renewable Energy, Department of Energy.**ACTION:** Notice of Petition for Waiver and request for public comments.

SUMMARY: Today's notice announces General Electric Company's (GE's) Petition for Waiver (hereafter, "Petition") from parts of the DOE test procedure for determining the energy consumption of electric refrigerators and refrigerator-freezers. GE has developed a new product line of refrigerators and refrigerator-freezers that contain sensors to detect temperature and humidity, and which interact with controls to vary the effective wattage of anti-sweat heaters to evaporate excess moisture. The existing test procedure does not take ambient temperature, humidity, or adaptive control technology into account. Therefore, GE proposes an alternate test procedure that takes adaptive control technology into account when measuring energy consumption. DOE is soliciting comments, data, and information concerning GE's Petition and the proposed alternate test procedure.

DATES: DOE will accept comments, data, and information not later than May 17, 2007.**ADDRESSES:** Please submit comments, identified by case number RF-007, 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. Include case number RF-007, or "GE Petition," or both in the subject line of the message.

- *Postal Mail:* Ms. Brenda Edwards-Jones, U.S. Department of Energy, Building Technologies Program, Mailstop EE-2J, Petition for Waiver Case No. RF-007, 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.

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 (ASCII) file format. 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 will not accept telefacsimiles (faxes). According to section 430.27(b)(1)(iv) of 10 CFR Part 430, any person submitting written comments must also send a copy of the comments to the Petitioner: Mr. Earl F. Jones, Senior Counsel, GE Consumer & Industrial, Appliance Park 2-225, Louisville, KY 40225.

Under 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 that determination.

Docket: For access to the docket to read this notice, the petition for waiver, background documents, or comments received, go to the U.S. Department of Energy, Forrestal Building, Room 1J-018 (Resource Room of the Building Technologies Program), 1000 Independence Avenue, SW., Washington, DC, (202) 586-9127, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays. Please call Ms. Brenda Edwards-Jones at (202) 586-2945 for additional information regarding visiting the Resource Room. Please note that the DOE's Freedom of Information Reading Room (formerly Room 1E-190 in 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, 1000 Independence Avenue, SW., Washington, DC 20585-0121, (202) 586-9611. E-mail: Michael.Raymond@ee.doe.gov, or Ms. Francine Pinto, Esq., U.S. Department of

Energy, Office of General Counsel, Mail Stop GC-72, 1000 Independence Avenue, SW., Washington, DC 20585-0103, (202) 586-9507. E-mail: Francine.Pinto@hq.doe.gov.

SUPPLEMENTARY INFORMATION:

- I. Background and Authority
- II. Petition for Waiver
- III. Alternate Test Procedure
- IV. 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 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)) The test procedure for residential refrigerators and refrigerator-freezers is contained in 10 CFR Part 430, Subpart B, Appendix A1.

The regulations set forth in 10 CFR 430.27 contain provisions that enable a person to seek a waiver from the test procedure requirements for a covered consumer product. A waiver will be granted by the Assistant Secretary if it is determined that the basic model for which the Petition for Waiver was submitted contains a design characteristic which either prevents testing of the basic model according to the prescribed test procedures, or 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 430.27(l). In general, a waiver will remain in effect until final test procedure amendments become effective, thereby resolving the problem that is the subject of the waiver. 10 CFR Part 430.27(m).

II. Petition for Waiver

On November 18, 2006, GE filed a Petition for Waiver from the uniform test method for measuring the energy consumption of electric refrigerators and electric refrigerator-freezers set forth at appendix A1 to subpart B of 10 CFR Part 430. GE subsequently modified its Petition; the final version was filed

December 21, 2006. (GE's original Petition was drafted in the form of a test procedure revision, with changes to the CFR. It also included an Application for Interim Waiver, which was not included in the final version). GE is designing new refrigerators and refrigerator-freezers that contain variable anti-sweat heater controls that detect and respond to a broad range of temperature and humidity conditions, and then activate adaptive heaters as needed to evaporate excess moisture. GE's alternate test procedure simulates the energy used by the adaptive heaters in a typical consumer household. Because the existing test procedure under 10 CFR Part 430 takes neither ambient humidity nor adaptive technology into account, it does not accurately measure the energy consumption of GE's new refrigerators and refrigerator-freezers that feature variable anti-sweat heater controls and adaptive heaters. Consequently, GE has submitted to DOE for approval an alternate test procedure to assure that it is correctly calculating the energy consumption of this new product line.

III. Alternate Test Procedure

When test procedures for refrigerators and refrigerator-freezers under 10 CFR Part 430 were first developed, simple mechanical defrost timers were the norm. Today, GE's new line of refrigerators and refrigerator-freezers contains sensors that detect ambient temperature and humidity, and interact with controls that vary the effective wattage of anti-sweat heaters to evaporate excess moisture. In sum, GE proposes to "run the energy-consumption test with the anti-sweat heater switch in the 'off' position and then, because the test chamber is not humidity-controlled, to add to that result the kilowatt hours per day derived by calculating the energy used when the anti-sweat heater is in the 'on' position." (GE Petition, page 4.) According to GE, the objective of the approach is to simulate the average energy used by the adaptive anti-sweat heaters as activated in typical consumer households across the United States. (Id.)

To determine the conditions in a typical consumer household, DOE understands that GE compiled historical data for the monthly average outdoor temperature and humidity for the top 50 metropolitan areas of the U.S. over approximately the last 30 years. Then, GE used the average exterior monthly temperature and humidity values to determine in-home conditions. In addition, GE includes in the test procedure a "system-loss factor" to calculate system losses attributed to

operating anti-sweat heaters, controls, and related components.

IV. Summary and Request for Comments

Today's notice announces GE's Petition to waive certain parts of the test procedures for its new line of refrigerators and refrigerator-freezers with variable anti-sweat heater controls and adaptive heaters. DOE is publishing the Petition under the provisions of 10 CFR 430.27(b)(1)(iv). DOE has deleted information that it considers to be confidential. The Petition includes an alternate test procedure and calculation methodology to determine the energy consumption of GE's new refrigerators and refrigerator-freezers with adaptive anti-sweat heaters. DOE is interested in receiving comments from interested parties on all aspects of the Petition and, in particular, the proposed alternate test procedure and calculation methodology. Any person submitting written comments to DOE must also send a copy of such comments to GE. See 10 CFR 430.27(b)(1)(iv).

Issued in Washington, DC, on April 9, 2007.

Alexander A. Karsner,

Assistant Secretary, Energy Efficiency and Renewable Energy.

U.S. Department of Energy Petition for Waiver; Non-Confidential Version [Case No. RF-007]

Submitted by:

Earl F. Jones, Senior Counsel, GE Consumer & Industrial, Appliance Park 2-225, Louisville, KY 40225, earl.f.jones@ge.com, 502-452-3164 (voice), 502-452-0395 (fax).

Introduction

GE Consumer & Industrial, an operating division of General Electric Co. ("GE"), is a leading manufacturer and marketer of household appliances, including, as relevant to this proceeding, refrigerators, files this Petition for Waiver ("Petition"). GE requests that the Assistant Secretary grant it a waiver from certain parts of the test procedure promulgated by the U.S. Department of Energy ("DOE" or "the Department") for determining refrigerator-freezer energy consumption and allow GE to test its refrigerator-freezer pursuant to the modified procedure submitted herewith. This request is filed pursuant to 10 CFR 430.27.

Background

GE is designing a new refrigerator. A total investment of \$XXXX is being made for research, development, facility upgrade, acquisition of tooling and equipment and product testing. Significant effort will be required before the new product can be sold.

In order to be assured that it is correctly calculating the energy consumption of the product, that the product meets the minimum energy requirements for its

product class and is properly labeled, GE seeks the Department's expeditious concurrence to its proposed amendment to the refrigerator test procedure.

Even a casual review of the refrigerator energy-consumption test procedure¹² reveals that this 1970's-era regulation has been overtaken by advances in technology, especially the increased use of electronic controls. In developing its new refrigerator, GE could have disregarded the test procedure's gaps, which could have resulted in a better energy test result. GE decided, however, to strive to attain the regulations' intent to obtain test results that more closely reflect the energy that would be consumed by the new model when used by consumers. Accordingly, GE has filed this Petition for Waiver to eliminate or modify the portions of the regulations that are inappropriate or irrelevant.

The Department's regulations provide that the Assistant Secretary will grant a Petition upon: "determin[ation] that the basic model for which the waiver was requested contains a design characteristic which either prevents testing of the basic model according to the prescribed test procedures, or 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."¹³

GE requests that the Assistant Secretary grant this Petition on both grounds. First, because the refrigerator energy test procedure does not allow the energy used by GE's new refrigerator to be accurately calculated. The new refrigerator contains adaptive anti-sweat heaters, i.e., anti-sweat heaters that respond to humidity conditions found in consumers' homes. Since the test conditions specified by the test procedure neither define required humidity conditions nor otherwise take ambient humidity conditions into account in calculating energy consumption, the adaptive feature of GE's new model cannot be tested.

Second, if GE were to test its new smart-technology refrigerator per the test procedure, i.e., as if it contained old-technology "dumb" anti-sweat heaters, the results of the energy test so conducted would not accurately measure the energy used by the new models.

The Refrigerator Energy Test Procedure

The test procedure for calculating energy consumption¹⁴ specifies that the test chamber be maintained at 90°F. While clearly not typical of conditions in the typical consumer household, these conditions are intended to simulate the energy used by a refrigerator in a typical 72 °F household where the refrigerator door is opened several times a day.

But the test procedure does not specify test chamber humidity conditions. Humidity causes refrigerators to sweat. Manufacturers combat this excess moisture by installing anti-sweat heaters on mullions and other locations where sweat accumulates. Old-style "dumb" technology anti-sweat heaters

¹² 10 CFR Part 430, Subpart B, App. A1.

¹³ 10 CFR Part 430.27(l).

¹⁴ 10 CFR Part 430, Subpart B, App. A1.

achieve and are tested at a pre-set level, i.e., number of watts, and turned on or off regardless of the humidity or amount of excess moisture on the unit.

GE's Proposed Modifications

In developing the approach proposed in this Petition, GE reviewed the Department's earlier decisions on waiver petitions, including the waiver granted in the Matter of Electrolux Home Appliances.¹⁵ When the test procedure was originally developed, simple mechanical defrost timers were the norm. The Electrolux petition sought a test procedure waiver to accommodate its advanced defrost timer. The Assistant Secretary, in granting the waiver, acknowledged the role of technology advances in evaluating the need for test procedure waivers.

GE now seeks to change how it tests its new models¹⁶ to take into account advances in sensing technology, i.e., sensors that detect temperature and humidity conditions and interact with controls to vary the effective wattage of anti-sweat heaters to evaporate excess moisture.¹⁷

GE proposes to run the energy-consumption test with the anti-sweat heater switch in the "off" position and then, because the test chamber is not humidity-controlled, to add to that result the kilowatt hours per day derived by calculating the energy used when the anti-sweat heater is in the "on" position. GE's proposed modification is further described on page 7. The objective of the proposed approach is to simulate the average energy used by the adaptive anti-sweat heaters as activated in typical consumer households across the United States.¹⁸

Extensive research went into determining what the average energy use of the adaptive feature would be. The top 50 metropolitan areas of the U.S., which represent 56% of the total U.S. population according to the 2000 Census¹⁹, were selected. The monthly average exterior temperature and humidity for these cities over approximately the last 30 years was determined.²⁰

¹⁵ FR Vol. 66 40689 et. seq. (Aug. 3, 2001).

¹⁶ The GE models subject to this Petition are PGCS1NJW, PGCS1NFW, PGSS5NJW, PGSS5NFW, PGCF1NJW, PGCF1NFW, PGSF5NJW, PGSF5NFW, PFC1NFW, PFC1NFX. These models have GE's new temperature-humidity sensor.

¹⁷ GE could have devised a control that did not energize the anti-sweat heaters when on test, thereby not counting energy used by these features even though it is foreseeable that they would be energized when used by most consumers. We have chosen instead to file this Petition.

¹⁸ The Association of Home Appliance Manufacturers, the appliance industry's trade association, has forwarded to the Department its recently agreed-to state of principles that should govern any revision of the refrigerator test procedure. Crafted in response to the DOE's concerns about energy test practices that may circumvent the regulatory purpose that energy tests yield results that correlate to typical consumer energy use, AHAM members endorsed the use of calculation in appropriate circumstances. See Exhibit A.

¹⁹ <http://www.census.gov/population/www/cen2000/phc-t3.html>.

²⁰ DEPT. OF METEOROLOGY AT THE UNIVERSITY OF UTAH Web site, <http://>

GE used the average external monthly temperature and humidity values to determine in-home conditions.²¹ And, in an effort to establish a national average of energy used by a variably controlled anti-sweat heater, the population-weighted humidity values were grouped into 10 bands, each with a range of 10% relative humidity. The table below sets out the percent probability that any U.S. household will experience the listed average humidity conditions during any month of the year.²²

Ten population-weighted bands of ranges of relative humidity were created:

% RH	Probability (percent)	Constant designation
1. 0–10	3.4	A1
2. 10–20	21.1	A2
3. 20–30	20.4	A3
4. 30–40	16.6	A4
5. 40–50	12.6	A5
6. 50–60	11.9	A6
7. 60–70	6.9	A7
8. 70–80	4.7	A8
9. 80–90	0.8	A9
10. 90–100	1.5	A10

In recognition of the fact that there are system losses involved with operating anti-sweat heaters, GE proposes to include in the calculation a factor to account for such energy. This additional energy includes the electrical energy required to operate the anti-sweat heater control and related components, and the additional energy required to increase compressor run time to remove heat introduced into the refrigerator compartments by the anti-sweat heater, and is accounted for by the "System-loss Factor," which, based on GE's historical experience, is 1.3.²³

Simply stated, the Correction Factor that GE proposes to add to the energy-consumption test results obtained with the anti-sweat heater switch in the "off" position, is calculated as follows:

Correction Factor = (Anti-sweat Heater Power × System-loss Factor) × (24 hours/1 day) × (1 kW/1000 W)

www.met.utah.edu/jhorel/html/wx/climo.html,
<http://www.met.utah.edu/jhorel/html/wx/climate/normtemp.html>, and <http://www.met.utah.edu/jhorel/html/wx/climate/rh.html>.

²¹ The outside temperature and humidity were converted to internal household conditions with the assumption that (1) The absolute humidity remained constant, and (2) average monthly ambient outdoor temperatures below 71 degrees were increased to 71 and average ambient outdoor temperatures above 75 degrees were cooled to 75. The energy-saving benefits of dehumidification due to air conditioning have not been taken into account. This resulted in an over-estimation of the energy used by the refrigerator.

²² See discussion at p. 6, *infra*, for validity of using 10 bands to calculate national average anti-sweat heater wattage.

²³ GE's experience with previous anti-sweat heater applications shows that system losses associated with such features can cause an increase in energy use, e.g., by harnesses, boards, additional compressor run-time, etc., than added by the operation of the heater alone. To account for these "systems losses" GE has used a multiplier of 1.3 in calculating the Correction Factor.

In further explanation of this calculation, begin by calculating the national average power in watts used by the anti-sweat heaters. This is done by totaling the product of constants A1–A10 multiplied by the respective heater watts used by a refrigerator operating in the median percent relative humidity for that band and standard refrigerator conditions: ambient temperature of 72 °F, fresh food (FF) average temperature of 45 °F and freezer (FZ) average temperature of 5 °F.

Anti-sweat Heater Power = A1 * (Heater Watts at 5% RH) + A2 * (Heater Watts at 15% RH) + A3 * (Heater Watts at 25% RH) + A4 * (Heater Watts at 35% RH) + A5 * (Heater Watts at 45% RH) + A6 * (Heater Watts at 55% RH) + A7 * (Heater Watts at 65% RH) + A8 * (Heater Watts at 75% RH) + A9 * (Heater Watts at 85% RH) + A10 * (Heater Watts at 95% RH)

As explained above, bands A1–A10 were selected as representative of humidity conditions of all U.S. households. Therefore, in developing its design for optimum anti-sweat heater performance, GE and manufacturers using adaptive anti-sweat heaters must submit, as part of their data submission under section 430.62(a)(4)(xii), the watts used at the relative humidity specified in each band. By reviewing this information, the Department, competitors and other stakeholders can be assured that the calculated energy attributed to this adaptive feature is accurate.

Based on the above, GE proposes to test its new models as if the test procedure were modified to calculate the energy of the unit with the anti-sweat heaters in the on position as equal to the energy of the unit tested with the anti-sweat heaters in the off position plus the Anti-Sweat Heater Power times the System Loss Factor (expressed in KWH/YR).

Conclusion

GE urges the Assistant Secretary to grant this Petition and allow GE to test its new refrigerator models (PGCS1NJW, PGCS1NFW, PGSS5NJW, PGSS5NFW, PGCF1NJW, PGCF1NFW, PGSF5NJW, PGSF5NFW, PFC1NFW and PFC1NFX) as described above. We believe that granting our request will encourage the introduction of advanced technologies that neither penalize innovation by over-calculating energy used by the new feature nor encourage the creation of special energy-test modes that avoid accounting for that energy.

Approving this Petition will also help ensure that consumers can continue to rely on the Department's test procedures—and the level playing field that they help create—to evaluate energy use among competing products. A favorable ruling on this Petition is necessary for GE to avoid the hardship that otherwise would be imposed if its production design and development plan is delayed and commitments to suppliers cannot be assured.

Finally, granting the Petition will send a clear message to manufacturers that the Department's waiver process should be used to ensure that energy-using features are properly measured.

Respectfully submitted,

Earl F. Jones, Senior Counsel, GE Consumer & Industrial, Appliance Park 2–225,

Louisville, KY 40225, earlf.jones@ge.com, 502-452-3164 (voice), 502-452-0395 (fax).

Affected Persons

Primary affected persons in the refrigerator-freezer category include BSH Home Appliances Corp. (Bosch-Siemens Hausgerate GmbH), Electrolux Home Products, Equator, Fisher & Paykel Appliances, Inc., Gorenje USA, Haier America Trading, L.L.C., Heartland Appliances, Inc., Kelon Electrical Holdings Col, Ltd., Liebherr Hausgerate, LG Electronics USA Inc., Northland Corporation, Samsung Electronics America, Inc., Sanyo Fisher Company, Sears, Sub-Zero Freezer Company, U-Line, Viking Range, and Whirlpool Corporation. The Association of Home Appliance Manufacturers is also generally interested in energy efficiency requirements for appliances. Consumers' Union, ACEEE, NRDC, Alliance to Save Energy are not manufacturers but have an interest in this matter. GE will notify all these organizations as required by the Department's rules and provide them with a non-confidential version of this Petition.

Exhibit A—AHAM Statement on Interpretation of HRF-1 and DOE Refrigerator-Freezer Test Procedure

(As revised during 9/15/06 conference call of AHAM's DOE Test Procedures Task Force)

AHAM's position is that the following principles of interpretation should be applied to the existing refrigerator-freezer test procedure, and should apply to and guide any revisions to the test procedure. The intent of the energy test procedure is to simulate typical room conditions (approximately 70 °F) with door openings, by testing at 90 °F without door openings.

Except for operating characteristics that are affected by ambient temperature (for

example, compressor percent run time), the unit, when tested under this standard, shall operate equivalent to the unit in typical room conditions. The energy used by the unit shall be calculated when a calculation is provided by the standard.

Energy-consuming components that operate in typical room conditions (including as a result of door openings, or a function of humidity), and that are not exempted by this standard, shall operate in an equivalent manner during energy testing under this standard, or be accounted for by all calculations as provided for in the standard.

Examples:

1. Energy saving features that are designed to operate when there are no door openings for long periods of time shall not be functional during the energy test.

2. The defrost heater should not either function or turn off differently during the energy test than it would when in typical room conditions.

3. Electric heaters that would normally operate at typical room conditions with door openings should also operate during the energy test.

4. Energy used during adaptive defrost shall continue to be tested and adjusted per the calculation provided for in this standard.

[FR Doc. E7-7232 Filed 4-16-07; 8:45 am]

BILLING CODE 6450-01-P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Sunshine Act Notice

April 12, 2007.

The following notice of meeting is published pursuant to section 3(a) of the

government in the Sunshine Act (Pub. L. No. 94-409), 5 U.S.C 552b:

AGENCY HOLDING MEETING: Federal Energy Regulatory Commission.

DATE AND TIME: April 19, 2007, 10 a.m.

PLACE: Room 2C, 888 First Street, NE., Washington, DC 20426.

STATUS: Open.

MATTERS TO BE CONSIDERED: Agenda.

Note: Items listed on the agenda may be deleted without further notice.

FOR FURTHER INFORMATION CONTACT: Kimberly D. Bose, Secretary, Telephone (202) 502-8400. For a recorded message listing items Struck from or added to the meeting, call (202) 502-8627.

This is a list of matters to be considered by the Commission. It does not include a listing of all documents relevant to the items on the agenda. All public documents, however, may be viewed on line at the Commission's Web site at <http://www.ferc.gov> using the eLibrary link, or may be examined in the Commission's Public Reference Room.

917TH—Meeting

Regular Meeting

April 19, 2007, 10 a.m.

Item No.	Docket No.	Company
Administrative		
A-1	AD02-1-000	Agency Administrative Matters.
A-2	AD02-7-000	Customer Matters, Reliability, Security and Market Operations.
A-3	AD06-3-000	Energy Market Update.
Electric		
E-1	RR06-1-006	North American Electric Reliability Corporation.
E-2	RR06-3-001	North American Electric Reliability Corporation.
E-3	RM06-4-002	Promoting Transmission Investment through Pricing Reform.
E-4	ER06-615-001, ER06-615-002, ER02-1656-027, ER02-1656-029, ER02-1656-031.	California Independent System Operator Corporation.
E-5	EL07-33-000	California Independent System Operator Corporation.
E-6	EL07-37-000	Californians for Renewable Energy, Inc. v. California Public Utilities Commission, Southern California Edison, and Long Beach Generation, L.L.C.
	EL07-40-000	Californians for Renewable Energy, Inc. v. California Public Utilities Commission, Pacific Gas and Electric Company, Metcalf Energy Center, L.L.C. and the Los Medanos Energy Center, L.L.C.
E-7	OMITTED.	
E-8	EL05-121-000, EL05-121-002	PJM Interconnection, L.L.C.
E-9	EL06-102-000	American Electric Power Service Corporation.
E-10	EL05-102-002	Southern Company Services, Inc., Alabama Power Company, Georgia Power Company, Gulf Power Company, Mississippi Power Company, Savannah Electric and Power Company and Southern Power Company.
E-11	ER07-568-000	Pacific Gas and Electric Company.
E-12	ER07-543-000	Linden VFT, L.L.C.