



U.S. Department of
ENERGY

Energy Conservation Standards Activities

Report to Congress

February 2012

United States Department of Energy
Washington, DC 20585

Message from the Acting Assistant Secretary

Pursuant to statutory requirements, this report is being provided to the following members of Congress:

- **The Honorable Joseph R. Biden Jr.**
President of the Senate
- **The Honorable John Boehner**
Speaker of the House of Representatives
- **The Honorable Jeff Bingaman**
Chairman, U.S. Senate Committee of Energy and Natural Resources
- **The Honorable Lisa Murkowski**
Ranking Member, U.S. Senate Committee of Energy and Natural Resources
- **The Honorable Fred Upton**
Chairman, U.S. House Committee on Energy and Commerce
- **The Honorable Henry A. Waxman**
Ranking Member, Committee on Energy and Commerce

I am pleased to provide you with the semi-annual Implementation Report on Energy Conservation Standards Activities of the U.S. Department of Energy (DOE). This report meets the requirements of Section 141 of the Energy Policy Act of 2005 (EPACT 2005) and Section 305 of the Energy Independence and Security Act of 2007 (EISA 2007). Because the reporting intervals and requirements are similar for the EPACT 2005 and EISA 2007 reports, DOE provides a consolidated report.

DOE is required by EPACT 2005 and EISA 2007 to provide semi-annual implementation reports pertaining to the DOE's deadlines for issuance of new or amended energy conservation standards. The implementation reports include a summary of DOE's progress relative to an initial report provided on January 31, 2006, which set an aggressive rulemaking schedule.

In total, action has been finalized for 22 of the original 22 backlogged products subject to a consent decree. Since the last report, DOE completed a total of 40 rulemaking actions, including 7 final rules. The final rules amended energy conservation standards for refrigerators, freezers, and refrigerator-freezers, fluorescent lamp ballasts, and direct heating equipment, and test procedures for walk-in coolers and walk-in freezers, automatic commercial ice makers, refrigerators, freezers, and refrigerator-freezers, general service fluorescent lamps, general service incandescent lamps, and incandescent reflector lamps. Furthermore, DOE has ongoing efforts to meet energy conservation standards obligations for more than 15 additional products.

The recently-passed Consolidated Appropriations Act, 2012 (Public Law 112-74), in relevant part here, restricts the use of appropriated funds in connection with several aspects of DOE's incandescent lamps program. Specifically, section 315 states that none of the funds made available by the Act may be used to implement or enforce section 430.32(x) of title 10, Code of Federal Regulations; or any of the standards established by the tables contained in section 325(i)(1)(B) of the Energy Policy and Conservation Act (42 U.S.C. 6295(i)(1)(B)) with respect to blown parabolic aluminized reflector (BPAR) incandescent reflector lamps, bulge reflector (BR) incandescent reflector lamps, and elliptical reflector (ER) incandescent reflector lamps. These restrictions will prevent the Department from taking action to implement or enforce standards for general service incandescent lamps, the first set of which began to take effect on January 1, 2012, and section 315 is also expected to impact a number of ongoing DOE rulemakings during fiscal year 2012, as explained in further detail later in this report.

If you have further questions, please contact me at (202) 586-9220 or Ms. Martha Oliver, Office of Congressional and Intergovernmental Affairs, at (202) 586-5450.

Sincerely,

A handwritten signature in cursive script that reads "Henry Kelly".

Henry C. Kelly
Acting Assistant Secretary
Energy Efficiency and Renewable Energy

Executive Summary

This semi-annual implementation report covers past, present, and future DOE rulemaking activities within the Appliance Standards Program. As of this report, action has been finalized for all 22 backlogged products subject to a consent decree and identified in the original multi-year schedule from the January 2006 report to Congress. Since the last report, DOE has completed 40 rulemaking actions, including 7 final rules. The final rules amended energy conservation standards for refrigerators, freezers, and refrigerator-freezers, fluorescent lamp ballasts, and direct heating equipment, and test procedures for walk-in coolers and walk-in freezers, automatic commercial ice makers, refrigerators, freezers, and refrigerator-freezers, general service fluorescent lamps, general service incandescent lamps, and incandescent reflector lamps. Included in this report are an updated multi-year schedule and a detailed progress report for each rulemaking team.

List of Acronyms

AC – Air Conditioner
AHAM – Association of Home Appliance Manufacturers
ANSI – American National Standards Institute
ASHRAE – American Society of Heating, Refrigerating and Air-Conditioning Engineers
ASME – American Society of Mechanical Engineers
BPAR – Blown Parabolic Aluminized Reflector (lamps)
BR – Bulge Reflector (lamps)
CDV – Committee Draft for Vote
CFL – Compact Fluorescent Lamp
DOE – U.S. Department of Energy
EISA 2007 – Energy Independence and Security Act of 2007
EPACT 2005 – Energy Policy Act of 2005
EPCA – Energy Policy and Conservation Act
ER – Elliptical Reflector (lamps)
FY – Fiscal Year
GSFL – General Service Fluorescent Lamp
GSIL – General Service Incandescent Lamp
HID – High-Intensity Discharge (lamps)
HP – Heat Pump
IEC – International Electrotechnical Commission
IESNA – Illuminating Engineering Society of North America
IRL – Incandescent Reflector Lamp
LED – Light-Emitting Diode
MV – Medium Voltage
NODA – Notice of Data Availability
NOPD – Notice of Proposed Determination
NOPR – Notice of Proposed Rulemaking
OLED – Organic Light-Emitting Diode
OMB – Office of Management and Budget
Q – Quarter
RFI – Request for Information
SNOPR – Supplemental Notice of Proposed Rulemaking
SPVU – Single Package Vertical Unit (air conditioner and/or heat pump)
TP – Test Procedure
U.S.C. – United States Code
VRF – Variable Refrigerant Flow



ENERGY CONSERVATION STANDARDS ACTIVITIES

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I. Introduction

This report responds to requirements in section 141 of the Energy Policy Act of 2005 (EPACT 2005), Pub. L. 109-58, and section 305 of the Energy Independence and Security Act of 2007 (EISA 2007), Pub. L. 110-140, to provide semi-annual updates of the U.S. Department of Energy's (DOE) progress with respect to rulemaking actions regarding the implementation of energy conservation standards and test procedures.

Section 141 of EPACT 2005 requires both an initial report and semi-annual implementation reports, until such time as DOE has promulgated all of the overdue energy conservation standards. This document represents the eleventh semi-annual implementation report.

Section 305 of EISA 2007 expands DOE's existing reporting requirements to include progress reports on all rulemaking activities required by EISA 2007. Because the topics and reporting intervals in section 141 of EPACT 2005 and section 305 of EISA 2007 are substantially similar, DOE began consolidating the reports starting with the first EISA 2007 implementation report in February 2008. This report constitutes the eighth semi-annual EISA 2007 implementation report.

Since the last report, DOE completed a total of 40 rulemaking actions, including 7 final rules. These include:

- Seven final rules including:
 - Standards for refrigerators, freezers, and refrigerator-freezers
 - Standards for fluorescent lamp ballasts
 - Standards for direct heating equipment
 - Test procedures for walk-in coolers and walk-in freezers
 - Test procedures for automatic commercial ice makers
 - Test procedures for refrigerators, freezers, and refrigerator-freezers
 - Test procedures for general service fluorescent lamps, general service incandescent lamps, and incandescent reflector lamps
- Eight notices of proposed rulemaking (NOPR) including:
 - Standards for direct heating equipment
 - Standards for certain products contained in the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 90.1 – 2010

- Standards for distribution transformers
- Test procedures for walk-in coolers and walk-in freezers
- Test procedures for furnaces and residential boilers
- Test procedures for general service fluorescent lamps, general service incandescent lamps, and incandescent reflector lamps
- Test procedures for high-intensity discharge lamps
- Test procedures for television sets
- Six supplemental notices of proposed rulemaking (SNOPR) including:
 - Standards for microwave ovens
 - Test procedures for water heaters, direct heating equipment, and pool heaters (gas-fired)
 - Test procedures for dishwashers, kitchen ranges and ovens, and dehumidifiers
 - Test procedures for central air conditioners and central air-conditioning heat pumps
 - Test procedures for residential clothes washers
 - Test procedures for microwave ovens
- One preliminary analysis of standards for:
 - Standards for automatic commercial ice makers
- One framework document for standards rulemakings for:
 - Standards for general service fluorescent lamps and incandescent reflector lamps
- Seventeen other rulemakings notices including:
 - Interim final rule for test procedures for refrigerators, freezers, and refrigerator-freezers
 - Notice of data availability for standards for fluorescent lamp ballasts
 - Notice of data availability for enforcement of regional standards for central air conditioners, heat pumps, and furnaces
 - Notice of proposed determination for standards for non-compressor residential refrigeration products
 - Notice of proposed determination for standards for residential central air conditioner split-system condensing units and residential heat pump split-system outdoor units

- Request for information for standards for faucets, showerheads, urinals, and water closets
- Request for information for standards for spa lamps (120 volt, 100 watt, R20 short incandescent reflector lamps)
- Request for information for standards and test procedures for set-top boxes and network equipment
- Request for information for standards for miscellaneous electrical equipment
- Request for information for test procedures for luminaires
- Request for information for test procedures for clothes dryers
- Request for information for test procedures for water heaters, direct heating equipment, and pool heaters (gas-fired)
- Request for information for test procedures for microwave ovens
- Notice of intent to establish a subcommittee and negotiate a proposed rule for standards for distribution transformers (low-voltage dry-type)
- Notice of intent to establish a subcommittee and negotiate a proposed rule for standards for distribution transformers (liquid-immersed and medium-voltage dry-type)
- Notice of effective date for standards for clothes dryers and room air conditioners
- Notice of effective date for standards for central air conditioners, heat pumps, and furnaces

This report details the past, current, and future rulemaking actions of the DOE with respect to the implementation of energy conservation standards and test procedures.

II. Backlog and EPACK 2005

DOE began providing semi-annual reports to Congress regarding progress of the Appliance Standards Program with an initial report on January 31, 2006. In the initial report, DOE documented the history of the Appliance Standards Program, which is the program responsible for the development of test procedures and energy conservation standards for residential appliances and commercial equipment subject to regulation. The initial report provided a description of the rulemaking process and detailed the statutory requirements applicable to the Appliance Standards Program. The initial report also explained the historical reasons for DOE's past failure to meet identified statutory deadlines, and described current and planned productivity enhancements that DOE began to implement in order to expedite the standards rulemaking process. Finally, the initial report set an aggressive rulemaking schedule, designed to permit DOE to both address the backlog of rulemakings and to meet deadlines associated with the new requirements of EPACK 2005.

State of New York, et al. v. Bodman; and NRDC, Inc. et al. v. Bodman

This report also provides information regarding DOE's compliance with obligations under a consolidated consent decree. DOE notes that the separate court proceedings (*State of New York, et al. v. Bodman* and *NRDC, Inc. et al. v. Bodman*) mentioned in the August 2006 report resulted in a consolidated consent decree between the plaintiffs and DOE (filed November 6, 2006). The consent decree largely adopts the schedule DOE published in its January 31, 2006, initial report to Congress under section 141 of EPACK 2005. However, the consent decree's rulemaking schedule adds the following two additional items:

1. The consent decree requires DOE to publish a small electric motors test procedure by June 30, 2009, and requires an energy conservation standard final rule for the same product by February 28, 2010. These two actions were not included in the initial report to Congress because DOE was conducting the determination analysis for small electric motors at the time the initial report was written (*i.e.*, DOE had not yet determined whether a rulemaking and test procedure were necessary). Both of these actions are now complete.
2. The consent decree puts into place a binding schedule for DOE action in response to future amendments of Standard 90.1 by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). Specifically, within six months of an ASHRAE amendment, DOE must publish an analysis of the energy savings potential of amended energy conservation standards. DOE must either adopt ASHRAE's amendment within 18 months of ASHRAE's adoption or establish a more stringent standard within 30 months.

III. Energy Independence and Security Act of 2007

On December 19, 2007, the President signed into law the Energy Independence and Security Act of 2007, Pub. L. 110-140. This statute, in part, amends the Energy Policy and Conservation Act of 1975 (EPCA), Pub. L. 94-163 (42 United States Code (U.S.C.) 6291 *et seq.*), and increases the number of rulemakings DOE must issue beyond the obligations set forth in EPACT 2005 and the backlogged products mentioned in previous implementation reports. The enactment of EISA 2007 has substantially elevated the level of activity within the Appliance Standards Program. The statute requires DOE to develop new test procedures and energy conservation standards, as discussed below. In addition, EISA 2007 prescribes new energy conservation standards and test procedures for certain products, which DOE must also implement.

- New test procedures and energy conservation standards. EISA 2007 introduces new standby power requirements for residential products. All test procedures for covered residential products are required to be amended to include test procedures for standby mode and off mode energy consumption (section 310 of EISA 2007). EISA 2007 specifies deadlines for the incorporation of standby mode and off mode energy consumption into the test procedures of certain enumerated products, including battery chargers, external power supplies, clothes dryers, room air conditioners, fluorescent lamp ballasts, residential clothes washers, residential furnaces, residential boilers, residential water heaters, direct heating equipment, pool heaters, dishwashers, ranges and ovens, microwave ovens, and residential dehumidifiers. All energy conservation standards for covered products adopted after July 1, 2010, must also incorporate standby mode and off mode energy consumption. Several rulemakings to amend the aforementioned test procedures are underway. For each product, DOE is working with interested parties to apply the statutory definitions in EISA 2007 (*e.g.*, the definitions for “standby mode” and “off mode”) to the product. In doing so, DOE remains cognizant of industry norms, definitions set by other standards-making bodies, and the technical characteristics of the products. Moreover, the statute directs DOE to undertake other standards rulemakings for battery chargers, external power supplies, furnace fans, dishwashers, general service incandescent lamps (GSIL), residential clothes washers, walk-in coolers and freezers, and metal halide lamp fixtures.

- Prescribed energy conservation standards and test procedures. For some rulemakings in which products were bundled, EISA 2007 altered the rulemaking scope by setting standards for some products. Examples of this include the lamps rulemaking and the home appliances, Group 1, rulemaking. In these cases, DOE was able to move forward but was required to modify the scope of the rulemaking in light of the EISA 2007 enactments.

Also, pursuant to a statutory change in EISA 2007, all energy conservation standards and test procedures established by DOE will now be subject to regular periodic review. Not later than six years after issuance of a final rule establishing or amending a standard, DOE must either publish a notice of proposed rulemaking to amend the standard or a notice of determination that an amended standard is not warranted (42 U.S.C. 6295(m)(1) and 6313(a)(6)(C)(i)). DOE must review all test procedures at least once every seven years (42 U.S.C. 6293(b)(1)(A) and 6314(a)(1)).

DOE is also integrating into its existing schedule new standards rulemaking mandates for three products (residential clothes washers, walk-in coolers and freezers, and metal halide lamp fixtures).

IV. Multi-Year Schedule and Implementation Update

This section provides a schedule of upcoming DOE rulemakings, along with a detailed description of activities and progress to date. In summary, additional increases in productivity will be required in 2012 to allow DOE to meet all its obligations.

In the first semi-annual implementation report (submitted in August 2006), DOE described the execution of the productivity enhancements (“bundling” and “valley-filling”¹) that were discussed in the initial report. DOE also provided an update on its improved document review and clearance process, identifying the newly established intra-agency Crosscutting Review Team as the cornerstone of this process. As a result of the productivity enhancements and improved document review and clearance process, DOE was able to report in its first semi-annual implementation report that it was meeting all obligations as scheduled in the initial report to Congress. DOE reached a similar conclusion in subsequent implementation reports.

With the addition of the EISA 2007 requirements since the initial report to Congress in 2006, the workload of the Appliance Standards Program substantially increased in 2009. During 2009, while DOE met all of its obligations with respect to energy conservation standards, DOE missed several energy efficiency test procedure deadlines codified in EISA 2007. Additional statutory deadlines for test procedures and energy conservation standards were missed in 2010 and 2011. As a result, DOE has further streamlined standard and test procedure reviews and approvals, and is building additional program capacity. DOE is also working closely with the Office of Management and Budget (OMB) to review key rulemaking documents such as notices of proposed rulemaking (NOPRs) and final rules. Additional detail is provided below.

DOE remains committed to complying with applicable deadlines. Given the aggressive schedule for the rulemaking requirements established in EISA 2007, DOE is working on a greater number of contemporaneous rulemaking proceedings than had been contemplated at the time of the initial report to Congress. As a result, in order to address its expanded rulemaking obligations, DOE has designed further enhancements to program productivity and capacity beyond what was foreseen in the initial report to Congress. In the second half of 2009, DOE implemented a streamlined internal

¹ “Bundling” refers to the combination of two or more products within a single rulemaking. “Valley-filling” is a management technique in which an analytical team can divert its resources from one rulemaking to another while waiting for documents to be reviewed.

process to accelerate regulatory approvals in the program. In addition, DOE is hiring additional staff and building organizational capacity to address the increased rulemaking workload.

Update on Backlogged Standards

When DOE developed the original multi-year schedule in the January 31, 2006, report to Congress, it identified 20 products with backlogged standards.² Of these products, seven had two rounds of backlogged standards, bringing the total number of backlogged standards to 27. In addition, DOE had two backlogged determinations (small electric motors and high-intensity discharge (HID) lamps). As discussed above, DOE completed the determination for small electric motors in July 2006, and based upon this positive determination, the consent decree added small electric motors to the list of backlogged standards DOE must issue. In addition, DOE completed a positive determination for HID lamps in 2010. This brought the number of backlogged products to 22, and the number of backlogged standards to 29.

Since the initial report, DOE has issued efficiency standard final rules for 18 of the 22 original backlogged products (residential furnaces; residential boilers; mobile home furnaces; small furnaces; distribution transformers (medium voltage (MV) dry-type and liquid-immersed); packaged terminal air-conditioners and heat pumps; ranges and ovens; microwave ovens; general service fluorescent lamps; incandescent reflector lamps; small electric motors; residential water heaters; direct heating equipment; pool heaters, clothes dryers, room air conditioners, residential central air conditioners, and fluorescent lamp ballasts). In addition, EISA 2007 prescribed standards for another three backlogged products (electric motors (1-200 hp); general service incandescent lamps; and dishwashers); DOE codified these standards in its regulations at Parts 430 and 431. Thus, standards have been completed for 21 of the 22 backlogged products as shown in Table 1.

The one remaining product, HID lamps, is the subject of an ongoing DOE rulemaking. For HID lamps, the obligations under the consent decree were met when DOE issued the final determination. Consequently, all the actions required by the consent decree have been completed. Because DOE issued a positive determination for HID lamps, DOE is pursuing an energy conservation standard rulemaking for that product.

² The original backlog consists of 20 products, counting residential boilers separately from residential furnaces, and microwaves separately from ranges and ovens.

Table 1. Status of Backlogged Rulemakings from the 2006 Report

Backlogged Product	Status of Backlogged Rule
1. Residential furnaces	DOE issued final rule
2. Residential boilers	DOE issued final rule
3. Mobile home furnaces	DOE issued final rule
4. Small furnaces	DOE issued final rule
5. Residential water heaters [Cycle 2 of 2]	DOE issued final rule
6. Direct heating equipment [Cycle 1 of 2]	DOE issued final rule
7. Pool heaters [Cycle 1 of 2]	DOE issued final rule
8. Distribution transformers (MV dry-type and liquid-immersed)	DOE issued final rule
9. Electric motors (1-200 hp) [Cycle 1 of 2]	Standards prescribed by EISA 2007
10. Incandescent reflector lamps [Cycle 1 of 2]	DOE issued final rule
11. Fluorescent lamps [Cycle 1 of 2]	DOE issued final rule
12. General service incandescent lamps ³	Standards prescribed by EISA 2007
13. Fluorescent lamp ballasts	DOE issued final rule
14. Residential dishwashers	Standards prescribed by EISA 2007
15. Ranges and ovens [Gas-powered Cycle 1 of 2] [Electric-powered Cycle 2 of 2]	DOE issued final rule
16. Microwave ovens	DOE issued final rule
17. Residential clothes dryers	DOE issued final rule
18. Room air conditioners	DOE issued final rule

³ The rulemaking for general service incandescent lamps was previously listed as cycle 1 of 2 backlogged rulemakings. However, EISA 2007 prescribed new standards for general service incandescent lamps (42 U.S.C. 6295(i)(1)(A)) and also set a new deadline to complete a rulemaking for these lamps by January 1, 2017 (42 U.S.C. 6295(i)(6)). Therefore, general service incandescent lamps are no longer in the backlog.

19. Packaged terminal air conditioners and heat pumps	DOE issued final rule
20. Residential central air conditioners and heat pumps	DOE issued final rule
21. Small electric motors	DOE issued final rule
22. HID Lamps	DOE issued final determination; Ongoing energy conservation standards rulemaking

Since the August 2008 implementation report, DOE has noted several missed statutory deadlines as follows:

- EISA 2007 set a deadline of December 31, 2008 for the battery chargers and external power supplies test procedure final rule (related to standby mode and off mode energy consumption). DOE subsequently issued the test procedure final rule on March 11, 2009, and it was published in the *Federal Register* on March 27, 2009 (74 Fed. Reg. 13318).
- EISA 2007 set a deadline of March 31, 2009, for the test procedure final rule for standby mode and off mode energy consumption for fluorescent lamp ballasts. DOE subsequently issued the test procedure final rule on September 17, 2009, which was published in the *Federal Register* on October 22, 2009 (74 Fed. Reg. 54445).
- EISA 2007 set a deadline of March 31, 2009 for the test procedure final rule for the standby mode and off mode energy consumption for clothes dryers and room air conditioners. DOE subsequently issued the test procedure final rule on December 15, 2010, which was published in the *Federal Register* on January 6, 2011 (76 Fed. Reg. 972).
- EISA 2007 set a deadline of June 30, 2009, for the test procedure final rule for the standby mode and off mode energy consumption for residential clothes washers. DOE issued a NOPR for the clothes washers test procedure on August 27, 2010, which was published in the *Federal Register* on September 21, 2010 (75 Fed. Reg. 57556). DOE issued an SNOPR for this rulemaking on July 26, 2011, which was published in the *Federal Register* on August 9, 2011 (76 Fed. Reg. 49238). A second SNOPR, which focused on the energy test cycle definition, was issued on October 27, 2011 and published in the *Federal Register* on November 9, 2011 (76 Fed. Reg. 69870).

- EISA 2007 required DOE to publish a test procedure final rule for residential furnaces and boilers (standby mode and off mode) by September 30, 2009. DOE subsequently issued the test procedure final rule on August 20, 2010, which was published in the *Federal Register* on October 20, 2010 (75 Fed. Reg. 64621).
- EISA 2007 required DOE to issue a determination whether to issue energy conservation standards for non-Class A external power supplies, by December 19, 2009. DOE subsequently issued a final determination on May 7, 2010, which was published in the *Federal Register* on May 14, 2010 (75 Fed. Reg. 27170).
- EISA 2007 required DOE to publish a test procedure final rule for walk-in coolers and walk-in freezers by January 1, 2010. DOE subsequently issued the final rule on March 30, 2011, which was published in the *Federal Register* on April 15, 2011 (76 Fed. Reg. 21580).
- EISA 2007 required DOE to publish a test procedure final rule for the standby mode and off mode energy consumption of residential heating products (residential water heaters, direct heating equipment, and pool heaters) by March 31, 2010. DOE issued a NOPR on August 20, 2010, which was published in the *Federal Register* on August 30, 2010 (75 Fed. Reg. 52892). An SNOPR, which proposes further amendments to the test procedures, was issued on August 30, 2011 and published in the *Federal Register* on September 13, 2011 (76 Fed. Reg. 56347).
- EISA 2007 required DOE to review the most recently published ASHRAE/Illuminating Engineering Society of North America IESNA Standard 90.1 with respect to single package vertical air conditioners and heat pumps no later than December 19, 2010. DOE has begun this review by issuing a Notice of Data Availability on April 27, 2011, which was published in the *Federal Register* on May 5, 2011 (76 Fed. Reg. 25622).
- EISA 2007 required DOE to publish an energy conservation standard final rule for refrigerators, refrigerator-freezers, and freezers by December 31, 2010. DOE issued the final rule on August 25, 2011, which was published in the *Federal Register* on September 15, 2011 (76 Fed. Reg. 57516).
- EISA 2007 required DOE to publish a test procedure final rule for the standby mode and off mode energy consumption of microwave ovens, residential dishwashers, ranges and ovens, and dehumidifiers by March 31, 2011. For microwave ovens, DOE issued an interim final rule on February 23, 2011, which was published in the *Federal Register* on March 9, 2011 (76 Fed. Reg. 12825). On November 17, 2011, DOE issued an SNOPR for the microwave ovens test procedure, which was published in the *Federal Register* on November 23, 2011 (76 Fed. Reg. 72332) for microwave ovens which incorporates the latest edition of International Electrotechnical

Commission (IEC) Standard 62301. For dishwashers, ranges and ovens, and dehumidifiers, DOE issued a NOPR on November 18, 2010, which was published in the *Federal Register* on December 2, 2010 (75 Fed. Reg. 75290). DOE then issued an SNOPR on August 30, 2011 which was published in the *Federal Register* on September 20, 2011 (76 Fed. Reg. 58346).

Since the last implementation report, DOE has missed four deadlines for energy conservation standards. The status of these rulemakings is as follows:

- EISA 2007 required DOE to issue a final rule prescribing amended energy conservation standards for battery chargers and external power supplies by July 1, 2011. The NOPR for this rulemaking was received by the Office of Management and Budget (OMB) on July 19, 2011 and is currently undergoing OMB review.
- EISA 2007 required DOE to issue a final rule prescribing amended energy conservation standards for residential clothes washers by December 31, 2011. The direct final rule and accompanying NOPR for this rulemaking were received by OMB on September 23, 2011 and are currently undergoing OMB review.
- EISA 2007 required DOE to issue a final rule prescribing amended energy conservation standards for walk-in coolers and walk-in freezers by January 1, 2012. The NOPR for this rulemaking was received by OMB on September 23, 2011 and is currently undergoing OMB review.
- EISA 2007 required DOE to issue a final rule prescribing energy conservation standards for metal halide lamp fixtures by January 1, 2012. DOE has prepared a draft NOPR for this rulemaking that was received by OMB on February 17, 2012 and is currently undergoing OMB review.

All of these actions are described in greater detail in the Progress Report section of this report. For those rulemakings yet to be completed, DOE is working towards completion of the final rules as expeditiously as possible and will prioritize them in the context of DOE's other rulemaking obligations.

Multi-Year Schedule

Table 2 presents DOE's revised multi-year schedule. It is based on the schedule to which DOE committed in its initial report to Congress, modified to also include the requirements of EISA 2007 and progress to date. Completed rulemakings and rulemakings involving products for which EISA 2007 prescribed standards were removed from the schedule.

The current schedule addresses the ongoing or upcoming cycle⁴ of standards that DOE must develop to comply with EPCA 2005 and EISA 2007. In addition, DOE is beginning the first of the periodic reviews of test procedures (at least once every seven years) and energy conservation standards (not later than six years after issuance of a final rule amending standards) as required under sections 302 and 305 of EISA 2007, respectively. These rulemakings are listed as part of the schedule presented in this report.

⁴ For some products, EPCA, as amended by EPCA 2005 and EISA 2007, requires DOE to develop multiple standards over time.

Table 2. Multi-Year Schedule

Table 2 presents DOE's currently scheduled rulemaking activities for energy conservation standards and test procedures. It is noted that the test procedure rulemakings listed below for residential products include revisions to all facets of the test procedure unless otherwise specified as a revision to the active mode or standby/off modes only. Test procedures for commercial and industrial products address active mode only.

Appliance Standards			
Product Categories	Driver	Approx. Rule Initiation Date	Final Action Date
Heating Products Rulemakings			
Residential Water Heaters, Direct Heating Equipment, and Pool Heaters (Standby Mode and Off Mode) Test Procedure	EISA 2007	Fiscal Year (FY) 2009, Quarter (Q) 1	Mar. 2012 *
Furnaces and Boilers (Standby Mode and Off Mode) Test Procedure	EISA 2007	FY 2011, Q2	Apr. 2012
Certain Commercial Heating, Air-Conditioning, and Water-Heating Equipment Contained in ASHRAE Standard 90.1 Standard	EISA 2007	FY 2011, Q2	Apr. 2012 / Apr. 2013 ♦
Certain Commercial Heating, Air-Conditioning, and Water-Heating Equipment Contained in ASHRAE Standard 90.1 Test Procedure	EISA 2007	FY 2012, Q2	Apr. 2013
Single-Package Vertical Air Conditioner (AC) and Heat Pump (HP) Standard	EISA 2007	FY 2012, Q1	May 2013
Residential Water Heaters, Direct Heating Equipment, and Pool Heaters (Active Mode) Test Procedure	7-Year Review	FY 2011, Q3	Sept. 2013
Furnace Fans Standard	EISA 2007	FY 2010, Q2	Dec. 2013
Furnace Fans Test Procedure	Test Procedure (TP) for new covered product	FY 2010, Q2	Dec. 2013

* Final action dates followed by an asterisk represent a change from the last semi-annual implementation report. For further detail, consult the Progress Reports of Appliance Product Teams in the Implementation Update section of the report to Congress.

♦ DOE will adopt as uniform national energy standards the amendments in ASHRAE/Illuminating Engineering Society of North America (IESNA) Standard 90.1 within 18 months of the date of publication of ASHRAE Standard 90.1 or set more-stringent standards not later than 30 months after the date of publication of the amendment to ASHRAE Standard 90.1 for the product.

Residential Boilers Standard	Backlog / 6-Year Review	FY 2013, Q1	Jul. 2016
Residential Water Heaters, Direct Heating Equipment, Pool Heaters Standard	Backlog / 6-Year Review	FY 2014, Q1	Mar. 2018
Residential Furnaces Standard	6-Year Review	FY 2015, Q1	Jun. 2019
Transformers and Motors Rulemakings			
Electric Motors Test Procedure	7-Year Review	FY 2009, Q1	Feb. 2012 [*]
Distribution Transformers Standard	Settlement Agreement	FY 2010, Q1	Feb. 2012 [*] / Oct. 2012 [†]
Distribution Transformers Test Procedure	7-Year Review	FY 2010, Q2	Oct. 2012
Electric Motors Standard	EISA 2007	FY 2010, Q2	Dec. 2012
Lighting Rulemakings			
Elliptical Reflector (ER), Bulge Reflector (BR), and Small-Diameter Incandescent Reflector Lamps Standard	EPACT 1992	FY 2010, Q1	TBD [*]
Metal Halide Lamp Fixtures Standard	EISA 2007	FY 2009, Q2	Nov. 2012 [*]
Light-Emitting Diodes (LED) Test Procedure	7-Year Review	FY 2012, Q1	Nov. 2012
High-Intensity Discharge Lamps Test Procedure	Backlog	FY 2010, Q3	Dec. 2012
Candelabra-Base Incandescent Lamps and Intermediate-Base Incandescent Lamps Test Procedure	7-Year Review	FY 2012, Q3	TBD [*]
Illuminated Exit Signs Test Procedure	7-Year Review	FY 2012, Q3	Jan. 2014 [*]
Ceiling Fan Light Kits Test Procedure	7-Year Review	FY 2012, Q3	May 2014
Medium-Base Compact Fluorescent Lamps (CFL) Test Procedure	7-Year Review	FY 2012, Q3	May 2014 [*]
High-Intensity Discharge Lamps Standard	Backlog	FY 2010, Q3	Jun. 2014

[†] DOE will conduct a review of the standards for distribution transformers and complete by February 1, 2012, either: (1) a determination that standards do not need to be amended, or (2) a NOPR proposing amended standards. If DOE determines amended standards are warranted, DOE will publish the final rule in the *Federal Register* no later than October 1, 2012.

* Pursuant to section 315 of Public Law 112-74, DOE has ceased work on this rulemaking activity

General Service Fluorescent Lamps and Incandescent Reflector Lamps Standard	EPACT 1992	FY 2011, Q2	Jul. 2014*
Traffic Signal and Pedestrian Modules Test Procedure	7-Year Review	FY 2012, Q2	Dec. 2014
General Service Incandescent Lamps, Compact Fluorescent Lamps, General Service LEDs, and General Service Organic Light-Emitting Diodes (OLEDs) Standard	EISA 2007	FY 2014, Q2	Jan. 2017
Home Appliances Rulemakings			
Microwave Ovens (Standby Mode and Off Mode) Test Procedure	EISA 2007	FY 2008, Q2	Mar. 2012 ^{†*}
Residential Clothes Washers Standard	EISA 2007	FY 2009, Q1	Mar. 2012*
Residential Clothes Washers Test Procedure	EISA 2007	FY 2009, Q1	Mar. 2012*
Dishwashers, Kitchen Ranges and Ovens, and Dehumidifiers (Standby Mode and Off Mode) Test Procedure	EISA 2007	FY 2009, Q3	Apr. 2012*
Microwave Ovens Standard	6-Year Review	FY 2009, Q3	May 2012*
Wine Chillers and Miscellaneous Refrigeration Products Test Procedure	Expanded coverage under EPCA	FY2012, Q2	Apr. 2013
Microwave Ovens (Active Mode) Test Procedure	7-Year Review	FY 2012, Q2	Jun. 2013
Ceiling Fans Test Procedure	7-Year Review	FY 2012, Q3	May 2014
Wine Chillers and Miscellaneous Refrigeration Products Standard	Expanded coverage under EPCA	FY2011, Q3	Jun. 2014
Commercial Clothes Washers Standard	EPACT 2005	FY 2012, Q2	Jan. 2015

[†] DOE published an interim final rule for the microwave ovens test procedure (standby mode and off mode) in the *Federal Register* on March 9, 2011. (76 Fed. Reg. 12825) The rule was largely based upon the First Edition of IEC Standard 62301, but it left open the possibility of further consideration of the Second Edition, based upon public comments. On November 23, 2011, DOE published an SNOPR in the *Federal Register* (76 Fed. Reg. 72332), which proposes to incorporate the latest edition of IEC Standard 62301.

* Pursuant to section 315 of Public Law 112-74, DOE has revised the scope of this rulemaking activity

Dishwashers Standard	EISA 2007	FY 2011, Q2	Jan. 2015
Kitchen Ranges and Ovens Standard	Backlog / 6-Year Review	FY 2014, Q1	Mar. 2017
Space Cooling Rulemakings			
Residential Central Air Conditioners and Heat Pumps Test Procedure	7-Year Review	FY 2009, Q3	May 2012*
Packaged Terminal Air Conditioners and Heat Pumps Standard	6-Year Review	FY 2013, Q2	Sept. 2016
Commercial Refrigeration Rulemakings			
Commercial Refrigeration Equipment Standard	EPACT 2005	FY 2010, Q2	Jan. 2013
Commercial Refrigeration Equipment Test Procedure	7-Year Review	FY 2010, Q3	Jan. 2013
Walk-In Coolers and Walk-In Freezers Standard	EISA 2007	FY 2009, Q1	Jan. 2013*
Commercial Automatic Ice Makers Standard	EPACT 2005	FY 2011, Q3	Jan. 2015
Electronics Rulemakings			
Battery Chargers and External Power Supplies Standard	EISA 2007	FY 2008, Q2	Dec. 2012*
Plumbing Products Rulemakings			
Faucets, Showerheads, Urinals, Water Closets, and Commercial Pre-rinse Spray Valves Test Procedure	7-Year Review	FY2012, Q1	Sept. 2012
Enforcement Rulemakings			
Enforcement of Regional Standards for Furnaces and Central Air Conditioners	EISA 2007	FY 2012, Q1	Jan. 2013

V. Implementation Update

Since the last implementation report, DOE has continued to explore process efficiency improvements afforded it by EISA 2007. To this point, DOE posted additional changes to its regulatory process on its website on November 16, 2010. Specifically, DOE plans to: (1) gather preliminary data informally and begin the rulemaking process with a NOPR in appropriate cases; (2) move additional analytical information from the energy conservation standards document published in the *Federal Register* to the technical support document for the rulemaking where appropriate; and (3) consider the use of negotiated rulemaking where appropriate. These changes represent another step in DOE's effort to save energy for American consumers and businesses by completing all outstanding energy conservation standard rulemakings and ensuring that future statutory deadlines are met. DOE expects that these process improvements will make DOE's rulemaking process more efficient, while ensuring robust public participation. For further information, see:

http://www1.eere.energy.gov/buildings/appliance_standards/pdfs/changes_standards_process.pdf.

Since the last semi-annual implementation report, DOE has, among others, published four test procedure final rules for six products and three energy conservation standard final rules for three products. More specifically, DOE published test procedure final rules for walk-in coolers and walk-in freezers, automatic commercial ice makers, refrigerators, freezers, and refrigerator-freezers, general service fluorescent lamps, general service incandescent lamps, and incandescent reflector lamps. DOE also published energy conservation standard final rules for refrigerators, freezers, and refrigerator-freezers, fluorescent lamp ballasts, and direct heating equipment. Publications since the last implementation report are listed in greater detail below.

Published Rulemaking Documents since the Last Implementation Report

Since publication of the last implementation report, DOE has completed the following rulemaking notices as set forth below in chronological order by date of publication.

Product	Type	Event	Issuance Date	Publish Date	Citation
Direct Heating Equipment	Energy Conservation Standard	NOPR	7/14/2011	7/22/2011	<u>76 FR 43941</u>
Distribution Transformers	Energy Conservation Standard	Notice of Intent	7/26/2011	7/29/2011	<u>76 FR 45471</u>
Luminaires	Test Procedure	Request for Information	7/29/2011	8/4/2011	<u>76 FR 47178</u>

Walk-in Coolers and Walk-in Freezers	Test Procedure	NOPR	8/2/2011	8/9/2011	76 FR 48745
Distribution Transformers	Energy Conservation Standard	Notice of Intent	8/9/2011	8/12/2011	76 FR 50148
Clothes Dryers	Test Procedure	Request for Information	8/9/2011	8/12/2011	76 FR 50145
Faucets, Showerheads, Water Closets, and Urinals	Energy Conservation Standard	Request for Information	8/16/2011	8/23/2011	76 FR 52644
Fluorescent Lamp Ballasts	Energy Conservation Standard	Notice of Data Availability	8/18/2011	8/24/2011	76 FR 52892
Clothes Dryers and Room Air Conditioners	Energy Conservation Standard	Notice of Effective Date	8/18/2011	8/24/2011	76 FR 52854
120 volt, 100 watt, R20 Short Incandescent Reflector Lamps (Spa Lamps)	Energy Conservation Standard	Request for Information	8/30/2011	9/8/2011	76 FR 55609
Residential Water Heaters, Direct Heating Equipment, and Pool Heaters (Gas-Fired)	Test Procedure	SNOPR	8/30/2011	9/13/2011	76 FR 56351
Furnaces and Residential Boilers	Test Procedure	NOPR	8/30/2011	9/13/2011	76 FR 56339
General Service Fluorescent Lamps and Incandescent Reflector Lamps	Energy Conservation Standard	Framework	9/6/2011	9/14/2011	76 FR 56678
General Service Fluorescent Lamps, General Service Incandescent Lamps, and Incandescent Reflector Lamps	Test Procedure	NOPR	9/6/2011	9/14/2011	76 FR 56661
Refrigerators, Freezers and Refrigerator-Freezers	Test Procedure	Interim Final Rule	8/25/2011	9/15/2011	76 FR 57612
Refrigerators, Freezers and Refrigerator-Freezers	Energy Conservation Standard	Final Rule	8/25/2011	9/15/2011	76 FR 57516
Dishwashers, Kitchen Ranges and Ovens, and Dehumidifiers	Test Procedure	SNOPR	8/30/2011	9/20/2011	76 FR 58346
Residential Water Heaters, Direct Heating Equipment, and Pool Heaters (Gas-Fired)	Test Procedure	Request for Information	9/29/2011	10/12/2011	76 FR 63211
Walk-in Coolers and Walk-in Freezers	Test Procedure	Final Rule	10/13/2011	10/21/2011	76 FR 65362
Central Air Conditioners and Central Air-Conditioning Heat Pumps	Test Procedure	SNOPR	9/29/2011	10/24/2011	76 FR 65616

Microwave Ovens	Test Procedure	Request for Information	10/18/2011	10/24/2011	<u>76 FR 65631</u>
Central Air Conditioners and Central Air-Conditioning Heat Pumps and Furnaces	Energy Conservation Standard	Notice of Effective Date	10/24/2011	10/31/2011	<u>76 FR 67037</u>
Non-Compressor Residential Refrigeration Products	Energy Conservation Standard	Proposed Determination	11/1/2011	11/8/2011	<u>76 FR 69147</u>
Residential Clothes Washers	Test Procedure	SNOPR	8/27/2011	11/9/2011	<u>76 FR 69870</u>
Fluorescent Lamp Ballasts	Energy Conservation Standard	Final rule	10/20/2011	11/14/2011	<u>76 FR 70548</u>
Direct Heating Equipment	Energy Conservation Standard	Final rule	11/8/2011	11/18/2011	<u>76 FR 71836</u>
Microwave Ovens	Test Procedure	SNOPR	11/17/2011	11/23/2011	<u>76 FR 72332</u>
Central Air Conditioners and Central Air-Conditioning Heat Pumps and Furnaces	Energy Conservation Standard	Notice of Data Availability	11/29/2011	12/7/2011	<u>76 FR 76328</u>
High-intensity Discharge Lamps	Test Procedure	NOPR	11/28/2011	12/15/2011	<u>76 FR 77914</u>
Set-top Boxes and Network Equipment	Energy Conservation Standard and Test Procedure	Request for Information	12/12/2011	12/16/2011	<u>76 FR 78174</u>
Automatic Commercial Ice Makers	Test Procedure	Final Rule	12/20/2011	1/11/2012	<u>77 FR 1591</u>
Residential Central Air Conditioner Split-System Condensing Units and Residential Heat Pump Split-System Outdoor Units	Energy Conservation Standard	Proposed Determination	12/23/2011	1/11/2012	<u>77 FR 1649</u>
Certain Products in ASHRAE Standard 90.1	Energy Conservation Standard	NOPR	12/20/2011	1/17/2012	<u>77 FR 2356</u>
Television Sets	Test Procedure	NOPR	12/20/2011	1/19/2012	<u>77 FR 2830</u>
Miscellaneous Electrical Equipment	Energy Conservation Standard	Request for Information	1/4/2012	1/24/2012	<u>77 FR 3461</u>
Automatic Commercial Ice Makers	Energy Conservation Standard	Notice of Public Meeting and Document Availability	1/17/2012	1/24/2012	<u>77 FR 3404</u>
Refrigerators, Freezers and Refrigerator-Freezers	Test Procedure	Final Rule	1/9/2012	1/25/2012	<u>77 FR 3559</u>

General Service Fluorescent Lamps, General Service Incandescent Lamps, and Incandescent Reflector Lamps	Test Procedure	Final Rule	12/21/2011	1/27/2012	<u>77 FR 4203</u>
Microwave Ovens	Energy Conservation Standard	SNOPR	1/31/2012	2/14/2012	<u>77 FR 8526</u>
Distribution Transformers	Energy Conservation Standard	NOPR	2/1/2012	2/10/2012	<u>77 FR 7282</u>

Progress Reports of Appliance Product Teams

Heating Team

Heating Products. EISA 2007 requires DOE to develop a standby mode and off mode test procedure for residential water heaters, direct heating equipment, and pool heaters (heating products) by March 31, 2010. DOE was unable to complete the test procedure final rule for measurement of standby mode and off mode energy consumption by the date specified in EISA 2007. DOE issued a NOPR on August 20, 2010, which was published in the *Federal Register* on August 30, 2010 (75 Fed. Reg. 52892). A public meeting to discuss the NOPR was held on September 24, 2010 at DOE headquarters in Washington, DC. An SNOPR that updated the test procedure based on IEC Standard 62301 (Second Edition) was issued on August 30, 2011 and published in the *Federal Register* on September 13, 2011 (76 Fed. Reg. 56347). DOE is currently preparing the final rule for this test procedure.

Additionally, DOE is evaluating the test procedure for residential water heaters, pool heaters, and direct heating equipment in light of the requirement to review all test procedures no later than every 7 years. On September 29, 2011, DOE issued a Request for Information (RFI) to solicit comment on issues regarding any aspect of the test procedure that may warrant modification. The RFI was published in the *Federal Register* on October 12, 2011 (76 Fed. Reg. 63211). DOE is reviewing comments received on the RFI.

DOE also recently revisited the standards for direct heating equipment, specifically the existing definitions of “vented hearth heater.” DOE issued a NOPR in July 14, 2011, which was published in the *Federal Register* on July 22, 2011 (76 Fed. Reg. 43941). DOE amended the definitions in a final rule issued on November 8, 2011, which was published in the *Federal Register* on November 18, 2011 (76 Fed. Reg. 71836).

Furnaces and Boilers. EISA 2007 requires that DOE prescribe an amended test procedure for residential furnaces and boilers not later than September 2009 to address standby mode and off mode energy consumption for these products. DOE issued the test procedure final rule on August 20, 2010, which was published in the *Federal Register* on October 20, 2010 (75 Fed. Reg. 64621).

Since issuing the final rule, DOE has begun a new test procedure rulemaking for furnaces and boilers. DOE issued a test procedure NOPR on August 30, 2011 that was published in the *Federal Register* on September 13, 2011 (76 Fed. Reg. 56339). The NOPR proposes to further

update the DOE test procedure through incorporation by reference of the latest edition of the relevant industry standard, specifically IEC Standard 62301 (Second Edition), “Household electrical appliances – Measurement of standby power.” DOE is currently preparing the final rule for the furnaces and boilers test procedure.

It is further noted that DOE previously published an energy conservation standard final rule for residential furnaces and boilers in the *Federal Register* on November 19, 2007 (72 Fed. Reg. 65136). As discussed in the February 2008 implementation report, this rulemaking was bound by a consent decree deadline, and DOE had requested additional time to analyze the effect of alternative standards on natural gas prices for the final rule. The Court denied DOE’s motion to modify the consent decree and required DOE to issue the rule. Petitioners then challenged this final rule on several grounds. DOE filed a motion for voluntary remand to allow the agency to consider: (1) the application of regional standards in addition to national standards for furnaces and boilers, as authorized by EISA 2007 (enacted December 19, 2007); and (2) the effect of alternative standards on natural gas prices. This motion for voluntary remand was granted on April 21, 2009.

As a result, DOE initiated a rulemaking to consider amended energy conservation standards for residential furnaces. The rulemaking will not consider amended standards for residential boilers because EISA 2007 prescribed standards for residential boilers (42 U.S.C. 6295(f)(3)) that superseded the levels in the November 2007 final rule. Originally scheduled for completion in May 2011, the schedule was revised to align with the June 30, 2011 consent decree deadline for the amended energy conservation standards for residential central air conditioners and heat pumps. The schedule change better enabled DOE to compare efficiency levels to the levels recommended by stakeholders in a consensus agreement on furnaces and central air conditioners that was submitted to DOE on January 15, 2010. The stakeholder consensus agreement can be downloaded at:

http://www1.eere.energy.gov/buildings/appliance_standards/residential/pdfs/furnaces_framework_jointstakeholdercomments.pdf.

DOE issued an announcement of the availability of the energy conservation standard rulemaking action plan on February 22, 2010, which was published in the *Federal Register* on March 15, 2010 (75 Fed. Reg. 12144). A public meeting to discuss the data and methodology was held on March 31, 2010 at DOE headquarters in Washington, DC. DOE issued a direct final rule and accompanying NOPR on June 6, 2011. Both the direct final rule and NOPR were published in the *Federal Register* on June 27, 2011 (76 Fed. Reg. 37408; 76 Fed. Reg. 37549). DOE issued a notice of effective date and compliance dates on October 24, 2011, which

confirmed the standard levels in the direct final rule. The notice was published in the *Federal Register* on October 31, 2011 (76 Fed. Reg. 67037).

Furnace Fans. EISA 2007 requires DOE to issue an energy conservation standard for furnace fans by December 31, 2013. DOE issued an announcement of the availability of the energy conservation standard framework document for furnace fans on May 27, 2010, which was published in the *Federal Register* on June 3, 2010 (75 Fed. Reg. 31323). A public meeting to discuss the data and methodology was held on June 18, 2010 at DOE headquarters in Washington, DC. DOE is currently working on the NOPR for the furnace fans standard.

DOE is also currently developing a test procedure for furnace fans. DOE is currently reviewing the NOPR for the furnace fans test procedure and plans to complete the test procedure with the energy conservation standard in December 2013.

ASHRAE 90.1-2010. As discussed above, the consent decree contains provisions requiring action should ASHRAE amend ASHRAE Standard 90.1 with respect to any product covered by the consent decree. These products include commercial packaged terminal air conditioners, commercial packaged boilers, and instantaneous water heaters. Specifically, within six months of an ASHRAE amendment, DOE must publish an analysis of the energy savings potential of amended energy efficiency standards. DOE must either adopt the amended ASHRAE standard as a new national standard within 18 months of ASHRAE's adoption or establish a more stringent standard within 30 months.

Section 305(b) of EISA 2007 amends EPCA to include identical requirements to those described in the consent decree. However compared to the consent decree, EISA 2007 more broadly addresses small commercial package air conditioning and heating equipment, large commercial package air conditioning and heating equipment, very large commercial package air conditioning and heating equipment, packaged terminal air conditioners, packaged terminal heat pumps, warm air furnaces, packaged boilers, storage water heaters, instantaneous water heaters, and unfired hot water storage tanks (42 USC 6313(a)(6)(A)(i)).

On October 28, 2010, ASHRAE's Board of Directors published ASHRAE Standard 90.1-2010.⁸ Because of the provisions in the consent decree and EISA 2007 discussed above, the release of ASHRAE Standard 90.1-2010 triggered DOE to act. DOE is required to publish an analysis of the potential energy savings of amended standards within six months of ASHRAE's adoption and must either adopt the amended ASHRAE standard as a new national standard within 18 months or establish a more stringent standard within 30 months.

On April 27, 2011, DOE issued a notice of data availability (NODA) which discusses the results of DOE's analysis of the energy savings potential of amended energy conservation standards for certain types of commercial equipment covered by ASHRAE Standard 90.1. The NODA was published in the *Federal Register* on May 5, 2011 (76 Fed. Reg. 25622). Also included in the NODA is a review of standards for single-package vertical air conditioners and heat pumps (SPVUs). The SPVU rulemaking was split off into its own rulemaking for the NOPR phase (see SPVU section below).

On December 20, 2011, DOE issued a NOPR to consider amended standards for water-cooled air conditioners, evaporatively-cooled air conditioners, and water-source variable refrigerant flow heat pumps with a cooling capacity less than 17,000 Btu/h, and new standards for computer room air conditioners and water-source variable refrigerant flow heat pumps with a cooling capacity greater than or equal to 135,000 Btu/h. The NOPR was published in the *Federal Register* on January 17, 2012 (77 Fed. Reg. 2356). DOE will hold a public meeting at its headquarters in Washington, DC on February 14, 2012 in order to receive comment on the NOPR and its accompanying analyses.

DOE is also taking the opportunity to update the test procedures for small, large, and very large commercial package air conditioning and heating equipment, commercial warm air furnaces, and commercial water heaters, and adopt new test procedures for computer room air conditioners, SPVUs, and variable refrigerant flow (VRF) systems. The test procedure rulemaking will satisfy the 7-year test procedure review requirement for these products. The test procedure NOPR was published in the *Federal Register* on January 17, 2012 (77 Fed. Reg. 2356), bundled with the NOPR for energy conservation standards discussed immediately above.

⁸ This document is officially referred to as American National Standards Institute (ANSI)/ASHRAE/Illuminating Engineering Society of North America (IESNA) Standard 90.1-2010.

Single-Package Vertical Air Conditioners and Heat Pumps.

EISA 2007 requires DOE to review the most recently published ASHRAE/IES Standard 90.1 with respect to single-package vertical air conditioners and heat pumps no later than December 19, 2010. DOE began this review and issued a NODA on April 27, 2011, which was published in the *Federal Register* on May 5, 2011 (76 Fed. Reg. 25622). DOE is currently preparing the NOPR for this rulemaking.

As discussed in the ASHRAE 90.1 section, DOE is also pursuing a test procedure rulemaking for SPVUs. The test procedure for single-package vertical air conditioners and heat pumps will be addressed in the broader test procedure NOPR for a number of commercial products in ASHRAE Standard 90.1.

Transformers and Motors Team

Electric Motors (1-500 hp). EPCA requires that DOE publish a final rule no later than 24 months after the effective date of the previous final rule to determine whether to amend the motors standards currently in effect (42 U.S.C. 6313(b)(4)(B)). EISA 2007 prescribed standards for electric motors that become effective three years after the date of EISA 2007's enactment (*i.e.*, December 19, 2010). All the prescribed standards were codified in a final rule technical amendment that was issued on March 11, 2009 and published in the *Federal Register* on March 23, 2009 (74 Fed. Reg. 12058). (For a more complete history of this rulemaking, see the August 2009 implementation report.) Thus, DOE is moving forward with a rulemaking to consider amending the standards for all the motor types included in 42 U.S.C. 6313, with a scheduled completion date of December 19, 2012.

DOE issued the framework document for this rulemaking on September 16, 2010, which was published in the *Federal Register* on September 28, 2010 (75 Fed. Reg. 59657). A public meeting to discuss the framework document was held at DOE's Washington, DC headquarters on October 18, 2010. DOE is currently preparing the preliminary analyses for this standards rulemaking.

EISA 2007 also requires that all test procedures be reviewed at least once every seven years, and as such, DOE is developing an amended test procedure for electric motors. DOE initially bundled the test procedure for electric motors (1-500 hp) with the test procedure for small electric motors. The test procedure NOPR was issued on December 11, 2008 and was published in the *Federal Register* on December 22, 2008 (73 Fed. Reg. 78220). In light of comments received at the public meeting and submitted to DOE during the comment period, DOE reevaluated its course for the 1-500 hp electric motor test procedure final rule. Because the

small electric motors test procedure was bound by an upcoming consent decree deadline, DOE split the test procedure rulemaking for 1-500 hp electric motors from the small electric motors test procedure and proceeded to a final rule on the small motors aspect of the rulemaking, which was issued on June 29, 2009, and was published in the *Federal Register* on July 7, 2009 (74 Fed. Reg. 32059).

DOE issued a test procedure SNOPR for electric motors on December 15, 2010, which was published in the *Federal Register* on January 5, 2011 (76 Fed. Reg. 648). DOE is currently reviewing the test procedure final rule.

Distribution Transformers. On September 28, 2007, DOE issued a final rule adopting energy efficiency standards for electric distribution transformers, which was published in the *Federal Register* on October 12, 2007 (72 Fed. Reg. 58190). Petitioners brought a lawsuit which challenged the final rule on several grounds. On July 10, 2009, DOE and the petitioners settled these challenges, agreeing that DOE shall conduct a review of the standards for liquid-immersed and medium-voltage dry-type distribution transformers and publish in the *Federal Register*, no later than October 1, 2011, either: (1) a determination pursuant to EPCA, that standards for these products do not need to be amended, or (2) a notice of proposed rulemaking including any new proposed standards for these products. If DOE determines after the review that amendment of the standards is warranted, DOE will publish in the *Federal Register*, no later than October 1, 2012, a final rule including any amendments to the standards for liquid-immersed and medium-voltage dry-type distribution transformers. Pursuant to the settlement agreement, petitioners dismissed their claims.

DOE has initiated work on the distribution transformers rulemaking on an accelerated timeframe. DOE issued a notice of public meeting and document availability on February 23, 2011 to describe the planned analytical methodology and preliminary results, which was published in the *Federal Register* on March 2, 2011 (76 Fed. Reg. 11396). The public meeting was held on April 5, 2011. On July 26, 2011, DOE issued a notice of intent to undertake a negotiated rulemaking for distribution transformers, which was published in the *Federal Register* on July 29, 2011 (76 Fed. Reg. 45471). On August 9, 2011, DOE issued a notice of intent to establish a subcommittee and negotiate a proposed rule, which was published in the *Federal Register* on August 12, 2011 (76 Fed. Reg. 50148).

Although DOE was originally required to complete a proposed rule by October 1, 2011, DOE and other parties in the settlement agreement for the 2007 rulemaking agreed to request additional

time from the court. As a result, the new deadline for the NOPR became February 1, 2012. DOE is scheduled to publish the final rule no later than October 1, 2012. DOE issued the NOPR for this rulemaking on February 1, 2012, which was published in the *Federal Register* on February 10, 2012 (77 Fed. Reg. 7282).

Because EISA 2007 requires DOE to review all test procedures at least once every seven years, DOE has also initiated a test procedure rulemaking for distribution transformers and is currently preparing the test procedure NOPR.

Lighting Team

High-Intensity Discharge Lamps. DOE was directed by the consent decree to make a determination by June 30, 2010 whether energy conservation standards for HID lamps are technologically feasible and economically justified. DOE issued the final determination for HID lamps on June 16, 2010, thereby meeting the deadline set forth in the consent decree. The final determination was published in the *Federal Register* on July 1, 2010 (75 Fed. Reg. 37975). Because DOE made a positive determination that energy conservation standards for HID lamps are warranted, DOE has initiated a test procedure rulemaking to be completed by December 2012. DOE issued the test procedure NOPR on November 28, 2011, which was published in the *Federal Register* on December 15, 2011 (76 Fed. Reg. 77914). DOE held a public meeting to discuss the test procedure on January 19, 2012 at DOE headquarters in Washington, DC. DOE is presently reviewing, researching, and responding to comments from the January 2012 public meeting. DOE will then continue by drafting the final rule. DOE has also initiated a standards rulemaking for HID lamps to be completed by June 2014. DOE is currently reviewing a standards framework document for the HID lamps rulemaking.

ER/BR and Small-Diameter Incandescent Reflector Lamps. As discussed in the August 2010 implementation report, DOE has determined that it has the authority to conduct an energy conservation standards rulemaking on elliptical reflector (ER), bulge reflector (BR), and small-diameter incandescent reflector lamps (IRL) and has begun work on an accelerated timeframe. On April 23, 2010, DOE issued a notice of public meeting and discussion of the framework document, which outlines the analytical approach to this rulemaking. The notice was published in the *Federal Register* on May 3, 2010 (75 Fed. Reg. 23191). A public meeting to discuss the framework document was held on May 26, 2010 at DOE headquarters in Washington, DC. DOE has prepared a draft NOPR for this rulemaking that must be reviewed by the Office of

Management and Budget. However, this standards rulemaking is impacted by the Consolidated Appropriations Act, 2012, so pursuant to section 315 of Public Law 112-74, DOE has ceased work on this rulemaking activity.

General Service Fluorescent Lamps and Incandescent Reflector Lamps. DOE issued an energy conservation standard final rule for general service fluorescent lamps (GSFL) and IRL on June 26, 2009, which was published in the *Federal Register* on July 14, 2009 (74 Fed. Reg. 34080). The 2009 final rule satisfied the first round of backlogged standards for these products. The second round of backlogged standards is due five years after publication of the previous final rule (42 USC 6295(i)(4)). On September 6, 2011, DOE issued a notice of public meeting and discussion of the framework document, which outlines the analytical approach to this rulemaking. The notice was published in the *Federal Register* on September 14, 2011 (76 Fed. Reg. 56678). The public meeting was held at DOE headquarters in Washington, DC on October 4, 2011.

Based on feedback on the framework document, DOE decided to revise its schedule for the standards rulemaking in order to allow the lamp market to adjust to the standards in the 2009 final rule. The standards in the 2009 final rule require compliance on July 14, 2012. By adjusting its internal analytical timeline for the current rule, DOE will be better able to base its analysis on a market that has already adjusted to the July 2012 standards. This would result in more accurate assessments of product classes, efficacy levels, prices, and energy use. The rule is currently scheduled for completion in July 2014. However, this rule has been impacted by the Consolidated Appropriations Act, 2012, so pursuant to section 315 of Public Law 112-74, DOE has revised the scope of this rulemaking activity.

DOE issued a final rule for test procedures for GSFLs, IRLs, and GSIL on June 26, 2009, which was published in the *Federal Register* on July 6, 2009 (74 Fed. Reg. 31829). However, for GSILs, no test procedure provision for product lifetime had been established by DOE, because this test procedure rulemaking was already at an advanced stage of development by the time EISA 2007 prescribed GSIL lifetime standards. Instead, DOE decided to address GSIL lifetime in a subsequent rulemaking. In addition, EISA 2007 requires DOE to review test procedures for all products every 7 years and amend them if amendments are warranted (42 USC 6293(b)(1)). Therefore, DOE initiated a test procedure rulemaking for GSIL lamps.

DOE also saw value in reviewing the test procedures for GSFL and IRL concurrently with the efficiency standard rulemaking discussed above, which would expedite the timeframe for the

test procedure rulemaking. In addition, due to the similarity in stakeholders and technologies of GSFL, IRL, and GSIL, DOE believed combining these products into one test procedure rulemaking would expedite the overall test procedure review process. For these reasons, DOE bundled the test procedure rulemakings into a single rulemaking that includes GSIL, GSFL, and IRL lamp types.

DOE issued a test procedure NOPR for GSFL, IRL, and GSIL lamps on September 6, 2011, which was published in the *Federal Register* on September 14, 2011 (76 Fed. Reg. 56661). A public meeting was held at DOE headquarters in Washington, DC on October 4, 2011. DOE issued the test procedure final rule on December 21, 2011, which was published in the *Federal Register* on January 27, 2012 (77 Fed. Reg. 4203).

Medium-Base Compact Fluorescent Lamps. Because EISA 2007 requires DOE to review test procedures for all products every 7 years and amend them if amendments are warranted (42 USC 6293(b)(1)), DOE initiated a test procedure rulemaking for medium-base CFL lamps in January 2012, with a scheduled completion date of May 2014. DOE is currently reviewing existing test procedures and planning for the test procedure update.

Illuminated Exit Signs. Illuminated exit signs are a covered product under EPCA with standards and test procedures prescribed by EPCA 2005 (42 USC 6295(w) and 42 USC 6293(b)(9)). In 2012, DOE anticipates initiating a rulemaking to review the test procedure for illuminated exit signs in accordance with the provisions for regular test procedure reviews every 7 years.

Five Exempted Lamp Types. DOE published a NODA announcing the completion of DOE's model of future lamp sales for five exempted lamp types as required by section 321 of EISA 2007 (42 U.S.C. 6295(l)(4)). The notice of data availability was issued on December 18, 2008 and was published in the *Federal Register* on December 24, 2008 (73 Fed. Reg. 79072). The notice announced the availability of historical shipment data for each lamp type and a model forecasting future unit sales. Beginning in calendar year 2010, DOE has begun to track actual United States unit sales data for each of the five lamp types and compare it to this model, not later than 90 days after the end of each calendar year. (42 U.S.C. 6295(l)(4)(C)(i)) When the annual sales rate for any of the five lamp types exceeds the modeled levels by at least 100 percent, DOE will initiate an accelerated rulemaking to establish an energy conservation

standard for that lamp type. DOE acquired the actual unit sales data for calendar year 2010 and, since the actual sales did not exceed the forecasted estimate by 100 percent for any lamp type, DOE determined that no regulatory action is necessary at that time. DOE issued the results of its comparison on March 30, 2011, in accordance with the deadlines in EPCA, and the notice of data availability was published in the *Federal Register* on April 4, 2011. (76 Fed. Reg. 18425) DOE is currently preparing its analysis of the 2011 sales data.

Fluorescent Lamp Ballasts. DOE completed the framework document for fluorescent lamp ballast energy conservation standards and issued a NODA on January 14, 2008, which was published in the *Federal Register* on January 22, 2008 (73 Fed. Reg. 3653). DOE held a framework public meeting at its Washington, DC headquarters on February 6, 2008. DOE issued a notice of public meeting and availability of the preliminary technical support document on February 22, 2010, which was published in the *Federal Register* on March 24, 2010 (75 Fed. Reg. 14319). A public meeting was held jointly with the active mode test procedure NOPR (discussed below) on April 26, 2010.

On March 24, 2011, DOE issued the NOPR for the energy conservation standard, which was published in *Federal Register* on April 11, 2011 (76 Fed. Reg. 20090). A public meeting was subsequently held on May 10, 2011. At the public meeting, industry commentators provided test data that are potentially inconsistent with DOE's test data and that could affect the standard established in the final rule. Therefore, DOE was granted a 120-day adjournment (extension) of the June 30, 2011 consent decree deadline concerning fluorescent lamp ballasts so that it has an adequate opportunity to seek public comment on and consider the industry data before publishing the final rule. DOE issued the final rule on October 20, 2011, which was published in the *Federal Register* on November 14, 2011 (76 Fed. Reg. 70548). This rulemaking is now complete.

Metal Halide Lamp Fixtures. Section 324 of EISA 2007 (42 U.S.C. 6295(hh)(2)) requires DOE to amend energy conservation standards for metal halide lamp fixtures by January 1, 2012. DOE issued a notice of public meeting and availability of the framework document on December 23, 2009, which was published in the *Federal Register* on December 30, 2009 (74 Fed. Reg. 69036). A public meeting to discuss the framework document was held on January 26, 2010 at DOE headquarters in Washington, DC. DOE issued the notice of public meeting and document availability for the preliminary analyses on March 24, 2011, which was published in the *Federal*

Register on April 1, 2011 (76 Fed. Reg. 18127). A public meeting to discuss the preliminary analyses was held on April 18, 2011 at DOE headquarters in Washington, DC. DOE has prepared a draft NOPR for this rulemaking that was received by OMB on February 17, 2012 and is currently undergoing OMB review. Although DOE was unable to complete the rule by the date specified in EISA 2007, DOE is working to finish it as quickly as possible.

LED Lamps.

DOE initiated a test procedure rulemaking to review the test procedures for general service light-emitting diodes (LED) and organic light-emitting diodes (OLED), in order to ensure that the Federal Trade Commission (FTC) has the required DOE test procedure necessary for its applicable labeling program. DOE is currently conducting the background analysis for the NOPR.

Candelabra Base and Intermediate Base Incandescent Lamps.

Because EISA 2007 requires DOE to review test procedures for all products every 7 years and amend them if amendments are warranted (42 USC 6293(b)(1)), DOE anticipates initiating a test procedure rulemaking for candelabra base and intermediate base incandescent lamps in 2012. Pursuant to section 315 of Public Law 112-74, DOE has ceased work on this rulemaking activity.

Home Appliance Team

The August 2010 implementation report contains a detailed history of the rulemaking activity for microwave ovens, dishwashers, dehumidifiers, kitchen ranges and ovens, and commercial clothes washers. These products were previously referred to as “Home Appliances – Group 1” but are listed separately in this report for clarity.

Microwave Ovens. DOE issued a final rule for energy conservation standards for microwave ovens on March 31, 2009. The final rule was published in the *Federal Register* on April 8, 2009 (74 Fed. Reg. 16040). DOE had initially hoped to include standby mode and off energy consumption for microwaves in this final rule but was unable to do so because a DOE test procedure was not adopted before the consent decree deadline for the standards rulemaking. Accordingly, DOE issued final standards for microwaves operating in the active mode, but continued the proposal for further rulemaking regarding microwaves operating in standby

mode and off mode. As discussed below, DOE completed an interim microwave oven test procedure to address standby mode and off mode energy consumption, as required by EISA 2007.

EISA 2007 requires that a revised test procedure for microwave ovens that includes standby mode and off mode energy consumption shall be completed no later than March 2011. DOE issued the NOPR for the microwave oven test procedure regarding standby mode and off mode energy consumption on October 1, 2008, which was published in the *Federal Register* on October 17, 2008 (73 Fed. Reg. 62134). A public meeting was held at DOE headquarters in Washington, DC to discuss the proposed test procedure on November 14, 2008.

At the public meeting, commenters urged DOE to consider an upcoming version of the industry consensus test procedure for measuring microwave oven standby mode and off mode energy consumption developed by the International Electrotechnical Commission (IEC Standard 62301, “Household electrical appliances – Measurement of standby power” (First Edition 2005-2006)). Commenters indicated that this later version (Second Edition) contains significant modifications and improvements as compared to the current draft, which many commenters believed to be inadequate. DOE agreed that it would be preferable to consider the international standard. The IEC ultimately adopted IEC Standard 62301 (Edition 2.0 2011-01), with a final publication date of January 27, 2011.

DOE issued an SNO PR for microwave oven test procedures on July 9, 2010, which was published in the *Federal Register* on July 22, 2010 (75 Fed. Reg. 42612). In the SNO PR, DOE considered proposed amendments to its definitions for operating modes based on an advanced draft of the latest version of IEC Standard 62301 (*i.e.*, Second Edition, Committee Draft for Vote (CDV)). A public meeting to discuss the SNO PR was held on September 16, 2010. Finally, on February 23, 2011, DOE issued an interim final rule that amended test procedures for microwave ovens to incorporate provisions from IEC Standard 62301; the rule was largely based upon the First Edition, but it left open the possibility of further consideration of the Second Edition, based upon public comments. It was published in the *Federal Register* on March 9, 2011 (76 Fed. Reg. 12825).

Based on comments received in response to the interim final rule, DOE issued another SNO PR on November 17, 2011 that proposes to incorporate the Second Edition of IEC Standard 62301. The SNO PR was published in the *Federal Register* on November 23, 2011 (76 Fed. Reg. 72332).

In addition to the microwave test procedure rulemaking for standby mode and off mode, DOE is also pursuing a test procedure rulemaking for microwave ovens in active mode. DOE is currently conducting the background analysis for the NOPR.

In conjunction with the test procedure rulemaking, DOE is simultaneously conducting a review to consider amendment of the energy conservation standards for microwave ovens to address standby mode and off mode energy consumption. DOE has prepared an SNOPR for the microwave energy conservation standard. The SNOPR was issued on January 31, 2012 and has been submitted to the Office of the *Federal Register* for publication.

Commercial Clothes Washers. For commercial clothes washers, EPCA 2005 requires that DOE publish a final rule by January 1, 2015 to determine whether the standards previously established should be amended (42 USC 6313(e)(2)(B)). DOE is currently preparing the framework document for this rulemaking.

Dishwashers, Ranges and Ovens, and Dehumidifiers. DOE initiated a test procedure rulemaking regarding standby mode and off mode for dishwashers, dehumidifiers, and ranges and ovens (electric and gas). The final rule was scheduled for completion by March 31, 2011, the statutory deadline set by EISA 2007. DOE issued a NOPR for these products on November 18, 2010, which was published in the *Federal Register* on December 2, 2010 (75 Fed. Reg. 75290). DOE held a public meeting to discuss the test procedure on December 17, 2010. On August 30, 2011, DOE issued an SNOPR for this test procedure to consider incorporation of IEC Standard 62301 (Second Edition). The SNOPR was published in the *Federal Register* on September 20, 2011 (76 Fed. Reg. 58346). DOE is currently preparing a second SNOPR that narrowly focuses on fan operation in cycle finished mode and dishwasher water softeners.

Home Appliances, Group 2. The energy conservation standards rulemaking for clothes dryers and room air conditioners was completed on time, and DOE met the deadline set forth in the consent decree. DOE issued a direct final rule on April 8, 2011, which was published in the *Federal Register* on April 21, 2011 (76 Fed. Reg. 22454). The direct final rule was paired with an accompanying NOPR that was published on the same date (76 Fed. Reg. 22324). DOE determined that the adverse comments received in response to the direct final rule did not provide a reasonable basis for withdrawing the direct final rule. Therefore, DOE issued two

notices on August 18, 2011 confirming adoption of the energy conservation standards established in the direct final rule and announcing the effective date and compliance dates of those standards. Both notices were published in the *Federal Register* on August 24, 2011 (76 Fed. Reg. 52852; 76 Fed. Reg. 52854). The notice published at 76 Fed. Reg. 52852 amended the compliance dates set forth in the direct final rule to be consistent with the compliance dates set out in the consensus agreement, and the notice published at 76 Fed. Reg. 52854 confirmed adoption of the standards set forth in the direct final rule and the effective date.

Residential Clothes Washers. DOE is undertaking two rulemakings to address the requirements pertaining to residential clothes washers in EISA 2007. Specifically, EISA 2007 requires both an energy conservation standard rulemaking (scheduled for completion in December 2011), as well as a test procedure rulemaking to address standby mode and off mode energy consumption (originally scheduled for completion in June 2009).

For the energy conservation standard, DOE issued a notice of public meeting and availability of the framework document on August 21, 2009, which was published in the *Federal Register* on August 28, 2009 (74 Fed. Reg. 44306). A public meeting to discuss the framework document was held on September 21, 2009 at DOE headquarters in Washington, DC. On July 30, 2010, stakeholders submitted to DOE a consensus agreement containing proposed efficiency levels for residential clothes washers. The stakeholder consensus agreement can be downloaded at: <http://www.aham.org/ht/a/GetDocumentAction/i/49956>. DOE reviewed this agreement, and as a result, prepared a direct final rule and accompanying NOPR which were received by OMB on September 23, 2011 and which are currently undergoing OMB review.

For the test procedure, DOE anticipated an international test procedure standard (IEC Standard 62301) revision that would have included procedures for measuring standby mode and off mode energy consumption in residential clothes washers. DOE determined it necessary to consider the updated, international consensus test procedure, which was expected to be finalized by July 31, 2009. Due to the delays in the IEC Standard 62301 revision (which was ultimately adopted on January 27, 2011), the schedule for completing the standby mode and off mode test procedures has followed a similar timeline as the active mode test procedure for residential clothes washers. In order to improve program efficiency, DOE decided to combine the test procedure rulemakings for active mode, standby mode, and off mode.

In order to complete the test procedure in a timely manner, DOE moved forward and issued a test procedure NOPR on August 27, 2010 for active mode, standby mode, and off mode energy

consumption, which was published in the *Federal Register* on September 21, 2010 (75 Fed. Reg. 57556). A public meeting to discuss the test procedure was held on October 28, 2010 at DOE headquarters in Washington, DC. DOE subsequently issued an SNOPR on July 26, 2011 to consider incorporation of IEC Standard 62301 (Second Edition), which was published in the *Federal Register* on August 9, 2011 (76 Fed. Reg. 49238). On October 27, 2011, DOE issued a second SNOPR that narrowly focused on the “energy test cycle” definition. The SNOPR was published in the *Federal Register* on November 9, 2011 (76 Fed. Reg. 69870). DOE is currently preparing the final rule for this rulemaking.

Residential Refrigerators. As required by section 311 of EISA 2007, DOE was scheduled to issue energy conservation standards for residential refrigerators by December 31, 2010. DOE initiated this rulemaking by publishing a notice of availability of the framework document. The framework document was issued on September 12, 2008 and published in the *Federal Register* on September 18, 2008 (73 Fed. Reg. 54089). A public meeting to discuss the rulemaking was held at DOE headquarters in Washington, DC, on September 29, 2008. DOE issued the notice of public meeting and availability of the preliminary technical support document on November 9, 2009, which was published in the *Federal Register* on November 16, 2009 (74 Fed. Reg. 58915). A public meeting to discuss the preliminary analyses was held on December 10, 2009 at DOE headquarters in Washington, DC. On July 30, 2010, stakeholders submitted to DOE a consensus agreement containing proposed efficiency levels for residential refrigerators, freezers, and refrigerator-freezers. The stakeholder consensus agreement can be downloaded at: <http://www.aham.org/ht/a/GetDocumentAction/i/49956>. DOE considered this agreement as part of the rulemaking process. DOE issued the NOPR on August 27, 2010, which was published in the *Federal Register* on September 27, 2010 (75 Fed. Reg. 59470). A public meeting to discuss the NOPR was held on October 14, 2010.

On December 8, 2010, OMB received DOE’s final rule submission for residential refrigerators, freezers, and refrigerator-freezers. While OMB was reviewing the draft final rule, DOE issued a NODA on February 15, 2011 (76 Fed. Reg. 9696) which outlines DOE’s approach to addressing Executive Order 13563 (Order), “Improving Regulation and Regulatory Review,” which was issued by the President on January 18, 2011. Under section 1(c), the Order states that agencies must “use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible.” To address the details of the Order in the final rule, the NODA describes how DOE may improve its regulatory analysis by further refining equipment price trends and potential consumer welfare impacts. DOE subsequently submitted a revised draft of

the final rule on April 22, 2011. The final rule was issued on August 25, 2011 and published in the *Federal Register* on September 15, 2011 (76 Fed. Reg. 57516).

In addition to the energy conservation standard, DOE also initiated a rulemaking to amend the test procedures for residential refrigerators. This test procedure was initiated in support of the residential refrigerators energy conservation standard required by EISA 2007, and it also addresses standby mode and off mode energy consumption. The revised test procedure accounts for standby mode and off mode energy use in the energy conservation standard, as required by section 310 of EISA 2007. DOE issued a test procedure NOPR on April 1, 2010, which was published in the *Federal Register* on May 27, 2010 (75 Fed. Reg. 29824). DOE held a public meeting at its headquarters in Washington, DC to discuss the proposed test procedure on June 22, 2010.

DOE issued the final rule/interim final rule for refrigerator test procedures on November 18, 2010. It was published in the *Federal Register* on December 16, 2010 (75 Fed. Reg. 78810). The final rule amends the current procedures, incorporating changes that will take effect 30 days after the final rule publication date. These changes will be mandatory for product testing to demonstrate compliance with the current energy standards, as well as for representations starting 180 days after publication. These changes, which will not affect measured energy use, include test procedures to account for refrigerator-freezers equipped with variable anti-sweat heater controls, establishing test procedures for refrigerator-freezers equipped with more than two compartments, making minor adjustments to eliminate any potential ambiguity regarding how to conduct tests, and clarifying certain reporting requirements.

The interim final rule establishes amended test procedures for refrigerators, refrigerator-freezers, and freezers that would be required for measuring the energy consumption of these products for the new energy conservation standards. These standards will apply to newly manufactured products starting in 2014. DOE issued a test procedure final rule on January 9, 2012 that finalized the methodology presented in the interim final rule. The test procedure final rule was published in the *Federal Register* on January 25, 2012 (77 Fed. Reg. 3559).

Wine Chillers. During DOE's efforts to amend standards for residential refrigerators, refrigerator-freezers, and freezers, interested parties urged DOE to also establish standards for wine chillers. However, because wine chillers have applications and performance characteristics that are markedly different from those of products covered in the residential refrigerators standards rulemaking, DOE decided that standards for wine chillers, as well as any

other residential refrigeration products not covered under existing standards, should be addressed in a separate rulemaking. Therefore, DOE is currently preparing a framework document for wine chillers and miscellaneous refrigeration products.

Dishwashers. EISA 2007 requires that DOE complete a final rule for energy conservation standards of dishwashers no later than January 1, 2015. While DOE was conducting an earlier rulemaking for Home Appliances, Group 1, stakeholders to that rule submitted to DOE on August 1, 2010 a consensus agreement containing proposed efficiency levels for dishwashers. The stakeholder consensus agreement can be downloaded at:

<http://www.aham.org/ht/a/GetDocumentAction/i/49956>. DOE is currently considering the efficiency levels from the consensus agreement in a direct final rule. The direct final rule and accompanying NOPR for this rulemaking were received by OMB on February 2, 2011, and are currently undergoing OMB review.

Space Cooling Team

Residential Central Air Conditioners and Heat Pumps. The final rule regarding energy conservation standards for residential central air conditioners and heat pumps was completed on time, and DOE met the deadline set forth in the consent decree. DOE issued a notice of availability of the framework document on June 2, 2008, which was published in the *Federal Register* on June 6, 2008 (73 Fed. Reg. 32243). DOE held the framework document public meeting at DOE headquarters in Washington, DC on June 12, 2008. On January 15, 2010, stakeholders submitted to DOE a consensus agreement recommending energy conservation standards for furnaces and central air conditioners. The stakeholder consensus agreement can be downloaded at:

http://www1.eere.energy.gov/buildings/appliance_standards/residential/pdfs/furnaces_framework_jointstakeholdercomments.pdf. DOE considered the consensus agreement as part of the rulemaking process. DOE issued a notice of public meeting and availability of the preliminary technical support document on February 22, 2010, which was published in the *Federal Register* on March 25, 2010 (75 Fed. Reg. 14368). DOE held a public meeting to discuss its preliminary analyses at its Washington, DC headquarters on May 5, 2010. On January 4, 2011, OMB received DOE's NOPR submission for residential furnaces, central air conditioners, and heat pumps, and subsequently, on March 11, 2011, OMB received DOE's direct final rule and accompanying NOPR submission for these products. DOE issued the direct final rule on June 6, 2011, which was accompanied by a NOPR. The direct final rule and NOPR were published in the *Federal Register* on June 27, 2011 (76 Fed. Reg. 37408; 76 Fed. Reg. 37549). DOE issued a notice

of effective date and compliance dates on October 24, 2011, which confirmed the standard levels in the direct final rule. The notice was published in the *Federal Register* on October 31, 2011 (76 Fed. Reg. 67037).

DOE also initiated a test procedure rulemaking for residential central air conditioners and heat pumps in support of the energy conservation standard rulemaking. The test procedure will address standby mode and off mode energy consumption in order to meet the requirements of section 310 of EISA 2007. DOE issued a test procedure NOPR on February 12, 2010, which was published in the *Federal Register* on June 2, 2010 (75 Fed. Reg. 31224). A public meeting at DOE headquarters in Washington, DC was held on June 11, 2010 to discuss the proposal. DOE issued a test procedure SNOPR for these products on March 24, 2011, which was published in the *Federal Register* on April 1, 2011 (76 Fed. Reg. 18105). A second SNOPR, which proposed changes to the off mode laboratory test steps and to the calculation algorithm used to determine off mode power consumption, was issued on September 29, 2011 and published in the *Federal Register* on October 24, 2011. (76 Fed. Reg. 65616) DOE is currently reviewing comments on the SNOPR in preparation for the final rule.

DOE is also undertaking a rulemaking that proposes to determine that residential central air conditioner split-system condensing units and residential heat pump split-system outdoor units qualify as covered products under Part A of Title III of the Energy Policy and Conservation Act, as amended. DOE issued a notice of proposed determination (NOPD) on December 23, 2011, which was published in the *Federal Register* on January 11, 2012. (77 Fed. Reg. 1649) DOE is currently accepting comments on the NOPD. Once the comment period has closed, DOE will consider the comments it received in response to the proposed coverage determination in order to determine next steps.

Commercial Refrigeration Team

Walk-In Coolers and Freezers. EISA 2007 requires DOE to develop an energy conservation standard for walk-in coolers and freezers (42 U.S.C. 6313(f)(4)) which was scheduled for completion no later than January 2012. DOE issued a notice of availability of the framework document on December 24, 2008, which was published in the *Federal Register* on January 6, 2009 (74 Fed. Reg. 411). DOE held the framework document public meeting at DOE headquarters in Washington, DC, on February 4, 2009. DOE issued a notice of public meeting and availability of the preliminary technical support document on March 29, 2010, which was published in the *Federal Register* on April 5, 2010 (75 Fed. Reg. 17080). DOE held a public meeting to discuss these analyses at its headquarters in Washington, DC on May 14, 2010. The

NOPR for this rulemaking was received by OMB on September 23, 2011, which is currently undergoing OMB review.

DOE has also completed a test procedure rulemaking for walk-in coolers and walk-in freezers. The Department issued the final rule on March 30, 2011, which was published in the *Federal Register* on April 15, 2011 (76 Fed. Reg. 21580). On June 9, 2011, DOE published a correction notice in the Federal Register that reproduced the regulatory text of the earlier final rule in order to incorporate a number of corrected formulas (76 Fed. Reg. 33631). On August 2, 2011, DOE issued a NOPR, which was published in the *Federal Register* on August 9, 2011 (76 Fed. Reg. 48745). The August 2011 NOPR proposed regulatory text changes to reflect DOE's intent that only manufacturers of components of walk-in coolers and walk-in freezers are required to submit certification reports, and it also proposed clarifications as to the types of test data needed to support the certification of compliance per DOE's existing test procedures and the recently promulgated test procedure for this equipment. On October 13, 2011, DOE issued another final rule which adopted the regulatory text changes and clarified the compliance date and types of test data needed to support the certification of compliance. The final rule was published in the *Federal Register* on October 21, 2011 (76 Fed. Reg. 65362).

Commercial Refrigeration Equipment. EPCACT 2005 requires DOE to consider amending the existing energy conservation standards for commercial refrigeration equipment by January 1, 2013 (42 U.S.C 6313(c)(5)(A)). This rulemaking will consider amending standards directly prescribed by EPCACT 2005 (for self-contained commercial refrigerators and freezers with doors) and standards included in the commercial refrigeration equipment final rule issued on December 31, 2008 (for self-contained equipment without doors, remote-condensing systems, and ice cream freezers), which was published in the *Federal Register* on January 9, 2009 (74 Fed. Reg. 1092). DOE issued a notice of public meeting and availability of the framework document on April 30, 2010, which was published in the *Federal Register* on May 6, 2010 (75 Fed. Reg. 24824). A public meeting to discuss the rulemaking approach was held at DOE headquarters in Washington, DC on May 18, 2010. On March 24, 2011, DOE issued a notice of public meeting and document availability for the preliminary analyses, which was published in the *Federal Register* on March 30, 2011 (76 Fed. Reg. 17573). The public meeting to discuss the preliminary analyses was held at DOE headquarters in Washington, DC on April 19, 2011. DOE has prepared a draft NOPR for this rulemaking that was received by OMB on February 17, 2012 and is currently undergoing OMB review.

Additionally, DOE has initiated a test procedure rulemaking for commercial refrigeration equipment in support of the energy conservation standard rulemaking. DOE issued the test procedure NOPR on November 10, 2010, which was published in the *Federal Register* on November 24, 2010 (75 Fed. Reg. 71596). A public meeting to discuss the proposed test procedure was held at DOE's headquarters in Washington, DC on January 6, 2011. DOE is currently reviewing the final rule for this rulemaking.

Commercial Automatic Ice Makers. EPCA 2005 established energy conservation standards for commercial automatic ice makers and requires DOE to consider revised standards by January 1, 2015 (42 U.S.C 6313(d)(3)(A)). DOE issued the framework document for this rulemaking on November 4, 2010. The notice of public meeting and availability of the framework document was published in the *Federal Register* on November 19, 2010 (75 Fed. Reg. 70852). A public meeting to discuss the rulemaking was held at DOE's Washington, DC headquarters on December 16, 2010. DOE is reviewing the preliminary analyses for the standards rulemaking.

DOE is also conducting a test procedure rulemaking for commercial automatic ice makers in support of the energy conservation standard rulemaking. DOE issued a test procedure NOPR on March 24, 2011, which was published in the *Federal Register* on April 4, 2011 (76 Fed. Reg. 18428). A public meeting to discuss the NOPR was held at DOE headquarters in Washington, DC on April 29, 2011. DOE issued the final rule on December 20, 2011, which was published in the *Federal Register* on January 11, 2012 (77 Fed. Reg. 1591).

Electronics Team

Battery Chargers and External Power Supplies. Pursuant to EISA 2007, DOE is bundling the two requirements to amend standards for Class A external power supplies (42 U.S.C. 6295(u)(3)(D)) and to prescribe energy conservation standards for battery chargers (42 U.S.C. 6295(u)(1)(E)(i)(II)) into a single rulemaking. Because DOE made a positive determination on May 7, 2010 that energy conservation standards are warranted for non-Class A external power supplies (75 Fed. Reg. 27170 (May 14, 2010)), this product is now also bundled in this rulemaking. The EISA 2007 deadline for this rulemaking was July 1, 2011. Although this date was not met, DOE is taking steps to complete the final rule as expeditiously as possible.

DOE issued a notice of availability of the framework document for the energy conservation standard on May 26, 2009, which was published in the *Federal Register* on June 4, 2009 (74 Fed. Reg. 26816). A public meeting to discuss the framework document was held on July 16,

2009 at DOE headquarters in Washington, DC. DOE issued a notice of public meeting and availability of the preliminary analysis on August 27, 2010, which was published in the *Federal Register* on September 15, 2010 (75 Fed. Reg. 56021). A public meeting to discuss it was held at DOE headquarters in Washington, DC on October 13, 2010. The NOPR for this rulemaking was received by OMB on July 19, 2011, which is currently undergoing OMB review.

Miscellaneous Electrical Equipment. DOE is currently evaluating the energy use and energy efficiency potential of miscellaneous residential and commercial electrical equipment, including: audio-video equipment, computer systems, household cleaning equipment, imaging equipment, network equipment, personal space heating equipment, thermal household equipment, thermal kitchen equipment, uninterruptible power supplies (UPS), and vertical transport equipment. DOE issued an RFI to solicit feedback on these products on January 4, 2012, which appeared in the *Federal Register* on January 24, 2012 (77 Fed. Reg. 3461). DOE is seeking data on the energy use, product markets, test procedures, and energy efficient product designs of miscellaneous residential and consumer electrical equipment. Upon receiving the data, DOE will analyze the information to determine the potential for improvement in the energy efficiency of these products, consider if any products are likely to meet the criteria to become covered products under EPCA, and decide upon a next course of action.

Plumbing Products Team

Residential Plumbing Products. National standards for water-using products, including faucets, showerheads, water closets, and urinals, are based on the American Society of Mechanical Engineers (ASME)/American National Standards Institute (ANSI) standards A112.18.1M, for showerheads and faucets, and A112.19.6, for water closets and urinals. (42 U.S.C. 6295(j), (k)) EPCA requires that if ASME/ANSI has not amended these faucet, showerhead, water closet, or urinal standards in order to improve water efficiency after a five-consecutive-year period, DOE must publish a final rule waiving Federal preemption under 42 U.S.C. 6297(c) with respect to any State regulation concerning the water use or water efficiency of a particular type or class of showerhead, faucet, water closet, or urinal that is both more stringent than the relevant Federal regulation and is applicable to any sale or installation of all products in that particular type or class. (42 U.S.C. 6295(j)(3)(C) and 6295(k)(3)(C)) ASME/ANSI last made a substantive amendment to its standards regarding the water efficiency requirements for showerheads and faucets on May 29, 1996 (ASME/ANSI A112.18.1M–1996), and for water closets and urinals on April 19, 1996 (ASME/ANSI A112.19.6–1995). Both of these standards were incorporated by

reference into the Code of Federal Regulations in a final rule issued by DOE on March 13, 1998, which was published in the *Federal Register* on March 18, 1998 (63 Fed. Reg. 13308). Because more than five years have passed since ASME/ANSI last amended the water efficiency requirements in either of these standards, DOE complied with the above-described provisions of 42 U.S.C. 6297(c) waiving Federal preemption. The waiver final rule was issued on December 15, 2010 and published in the *Federal Register* on December 22, 2010 (75 Fed. Reg. 80289).

On August 16, 2011, DOE issued a request for information (RFI) on State activity undertaken as a result of the 2010 final rule and on any recent actions taken by ASME/ANSI toward amending its water efficiency standards for these products. The RFI was published in the *Federal Register* on August 23, 2011 (76 Fed. Reg. 52644).

DOE has also initiated a test procedure rulemaking for water products including faucets, showerheads, urinals, water closets, and commercial pre-rinse spray valves. The test procedure rulemaking is being conducted to satisfy the 7-year review requirements in EISA 2007. DOE is currently preparing the NOPR for this rule.

Enforcement Team

Regional Enforcement of Furnaces and Central Air Conditioners.

As discussed above, on June 27, 2011, a direct final rule amending the energy conservation standards for residential furnaces, central air conditioners, and heat pumps was published in the *Federal Register* (76 Fed. Reg. 37408). On October 24, 2011, DOE issued a notice of effective date and compliance dates that confirmed the standard levels in the direct final rule. The notice was published in the *Federal Register* on October 31, 2011 (76 Fed. Reg. 67037). In addition to the national standard level, this rulemaking also amended the standards for furnaces and central air conditioners by implementing regional standard levels, where the applicable efficiency level is dependent upon the geographic region in which the product is sold. EPCA requires that DOE promulgate a final rule covering the enforcement of regional standards not later than 15 months after the date of issuance of a final rule that establishes regional standards. (42 U.S.C. 6295(o)(6)(G)(ii)(III)) Accordingly, DOE initiated a rulemaking to explore the enforcement of the regional standards for furnaces and central air conditioners. On November 29, 2011, DOE issued a notice of data availability (NODA) that announced possible approaches to the enforcement of regional standards for these products. The NODA was published in the *Federal Register* on December 7, 2011 (76 Fed. Reg. 76328). A public meeting

to discuss the approaches was held at DOE's Washington, DC headquarters on December 16, 2011. The comment period closed on February 6, 2012. DOE is currently preparing a NOPR.