

Implementation Report:
Energy Conservation Standards Activities

Submitted Pursuant to:
Section 141 of the Energy Policy Act of 2005
&
Section 305 of the Energy Independence and
Security Act of 2007

U.S. Department of Energy
February 2009

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List of Acronyms

ANOPR – Advance Notice of Proposed Rulemaking
ANSI – American National Standards Institute
ASHRAE – American Society of Heating, Refrigerating and Air-Conditioning Engineers
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
GSFL – General Service Fluorescent Lamp
GSIL – General Service Incandescent Lamp
HID – High-Intensity Discharge (lamps)
IES – Illuminating Engineering Society of North America (or IESNA)
IRL – Incandescent Reflector Lamp
NODA – Notice of Data Availability
NOPM – Notice of Public Meeting
NOPR – Notice of Proposed Rulemaking
SNOPR – Supplemental Notice of Proposed Rulemaking

Introduction

This report was prepared in response to section 141 of the Energy Policy Act of 2005 (EPACT 2005), Pub. L. 109-58, which pertains to the Department of Energy's (DOE) past noncompliance with statutory deadlines for the issuance of new or amended energy conservation standards, and in response to section 305 of the Energy Independence and Security Act of 2007 (EISA 2007), Pub. L. 110-140.

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 standards. This document represents the sixth such 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 third semi-annual EISA 2007 implementation report.

Backlog and EPACK 2005

DOE submitted its initial report to Congress 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 minimum efficiency 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 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.

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, and DOE reached a similar conclusion in subsequent implementation reports (submitted in February 2007, August 2007, February 2008, and August 2008) that it has met all commitments in its previous reports.

DOE remains committed to complying with future deadlines. In this report, DOE provides an update of its progress toward meeting the schedule set forth in the January 2006 report to Congress, as well as the schedule agreed to in the consent decree in the case of *State of New York, et al. v. Bodman* (discussed subsequently). DOE is expediting its activities to the extent practicable in order to complete rulemakings as soon as possible. However, 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 the consent decree order schedule was submitted to the Court.

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

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 "Bundling" refers to the combination of two or more products within a single rulemaking. "Valley-filling" is a management technique where an analytical team can divert its resources from one rulemaking to another while documents are being reviewed.

1. The consent decree requires DOE to publish a small electric motors test procedure by June 30, 2009, and 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).
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.

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 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 several 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.

EISA 2007 prescribes energy conservation standards for a number of products which were already the subject of an active rulemaking. By prescribing standards for these products, EISA 2007 eliminated or modified DOE's obligation to develop these standards. As a result, some rulemakings underway were significantly impacted. For example, the electric motors (1-200 hp) rulemaking was scheduled to be initiated in the first quarter of fiscal year 2008. This rule was superseded by standards set in section 313 of EISA 2007, and, therefore, the work underway was terminated.

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 is moving forward but was required to modify the scope of the rulemaking in light of the EISA 2007 enactments. Particularly because of these modifications, DOE will be challenged to maintain the original schedule set forth in the initial report to Congress for this rulemaking but will strive to do so.

In addition, 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). However, 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. In addition, all energy conservation standards for covered products adopted after July 1, 2010 must incorporate standby mode and off mode energy consumption. Several rulemakings to amend the aforementioned test procedures are now underway. For each product, DOE is working with stakeholders 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 imposed by other standards-making bodies, and the technical characteristics of the product.

Furthermore, some of the new standards required by EISA 2007 have deadlines that necessitate immediate action to ensure meeting a final deadline. For instance, a final rule determining whether to amend standards for residential refrigerators is due December 31, 2010 (section 311 of EISA 2007). This provides DOE less than three years to complete all phases of the rulemaking process. DOE's

compressed rulemaking schedule, first published in the January 31, 2006 report to Congress, calls for a 36-month schedule starting at the Framework public meeting. Because of the short amount of time remaining and the highly detailed analyses required, DOE will need to add this complex rulemaking to other high-priority activities.

DOE is also attempting to integrate into its existing schedule standards rulemakings for three new products (residential clothes washers, walk-in coolers and freezers, and metal halide lamp fixtures) that are all due to be completed by the end of 2011. Moreover, the statute directs DOE to undertake other standards rulemakings for battery chargers, external power supplies, furnace fans, dishwashers, and general service incandescent lamps. Of the fifteen products for which EISA 2007 specified schedules for incorporating standby mode and off mode into the test procedures, eight are due before the end of 2009. The remaining seven are scheduled for completion in 2010 and 2011.

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. Six years after issuance of a final rule establishing a standard, DOE must either publish a NOPR 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 on a seven-year cycle (42 U.S.C. 6293(b)(1)(A) and 6314(a)(1)).

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.

Multi-Year Schedule

Table 1 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 now also include a standards rulemaking and a test procedure rulemaking for small electric motors (added pursuant to the November 2006 consent decree discussed above) as well as 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.

Since DOE developed the original multi-year schedule in the January 31, 2006 report to Congress, DOE has issued efficiency standard final rules for six of the 20 backlogged products² (residential furnaces; residential boilers; mobile home furnaces; small furnaces; distribution transformers (medium voltage dry-type and liquid immersed); and packaged terminal air-conditioners and heat pumps). EISA 2007 prescribed standards for another three backlogged products (electric motors (1-200 hp); general service incandescent lamps; and dishwashers). As discussed above, the consent decree also added small electric motors to the list of backlogged standards DOE must issue. Thus, the current multi-year schedule (Table 1) will result in the issuance of one standard for each of the remaining 12 backlogged products.

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

Furthermore, the current schedule addresses the first cycle³ of standards that DOE must develop to comply with EPACT 2005 and EISA 2007. In addition, the multi-year schedule also addresses the following:

- Determination analyses for high-intensity discharge (HID) lamps.
- Efficiency standards for certain commercial heating, air-conditioning, and water heating equipment contained in ASHRAE Standard 90.1-2007.

³ For some products, EPCA, as amended by EPACT 2005 and EISA 2007, requires DOE to develop multiple standards over time.

Table 1. Multi-Year Schedule to Issue One Standard for Each Product in the Backlog, and to Develop One Standard for Each Product per EPACT 2005 and EISA 2007

Rulemaking Team	Rule Type	Product(s)	EPACT 2005, EISA 2007, Other	Approx. Rule Initiation Date	Final Action Date*
Heating Team	Standards	<ul style="list-style-type: none"> • Water Heaters (Residential) [Backlog Cycle 2] • Direct Heating Equipment [Backlog Cycle 1] • Pool Heaters [Backlog Cycle 1] 	Backlog Backlog Backlog	FY2006, Q4	March 2010
		<ul style="list-style-type: none"> • Furnace Fans 	EISA 2007	FY2009, Q2	December 2013
		<ul style="list-style-type: none"> • Certain Commercial Heating, Air-Conditioning and Water Heating Equipment Contained in ASHRAE Standard 90.1 	EISA 2007	FY2008, Q2	July 2009 / July 2010 ^{4*}
	Test Procedures	<ul style="list-style-type: none"> • Furnaces and Boilers, Standby Mode and Off Mode 	EISA 2007	FY2009, Q1	September 2009
		<ul style="list-style-type: none"> • Water Heaters (Residential), Standby Mode and Off Mode • Direct Heating Equipment, Standby Mode and Off Mode • Pool Heaters, Standby Mode and Off Mode 	EISA 2007 EISA 2007 EISA 2007	FY2009, Q1	March 2010
Transformers and Motors	Standards	<ul style="list-style-type: none"> • Small Electric Motors 	Backlog	FY2007, Q3	February 2010
		<ul style="list-style-type: none"> • Electric Motors, 1-200hp 	EISA 2007	FY2010, Q2	December 2012
	Test Procedure	<ul style="list-style-type: none"> • Small Electric Motors 	Backlog	FY2007, Q3	June 2009
Lighting Team	Determination Analysis	<ul style="list-style-type: none"> • High-Intensity Discharge Lamps 	Backlog	FY2007, Q3	June 2010

* 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 (By Product) in the Implementation Update section of this report below.

⁴ DOE will adopt as uniform national energy standards the amendments in ASHRAE 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 the ASHRAE/Illuminating Engineering Society of North America (IES) Standard 90.1 for the product.

Rulemaking Team	Rule Type	Product(s)	EPACT 2005, Backlog, EISA 2007, Other	Approx. Rule Initiation Date	Final Action Date*
	Standards	<ul style="list-style-type: none"> • Incandescent Reflector Lamps [Backlog Cycle 1] • Fluorescent Lamps [Backlog Cycle 1] 	Backlog Backlog	FY2006, Q3	June 2009
		<ul style="list-style-type: none"> • Fluorescent Lamp Ballasts [Backlog Cycle 2] 	Backlog	FY2008, Q1	June 2011
		<ul style="list-style-type: none"> • Metal Halide Lamp Fixtures 	EISA 2007	FY2009, Q2	January 2012
		<ul style="list-style-type: none"> • General Service Incandescent Lamps 	EISA 2007	FY2014, Q2	January 2017
	Test Procedure	<ul style="list-style-type: none"> • Metal Halide Lamp Ballasts 	EISA 2007	FY2008, Q3	September 2009*
		<ul style="list-style-type: none"> • Fluorescent Lamp Ballasts, Standby Mode and Off Mode 	EISA 2007	FY2008, Q2	September 2009*
Home Appliance Team	Standards	<ul style="list-style-type: none"> • Ranges and Ovens (Electric and Gas) [Backlog Cycle 1 for Gas, Backlog Cycle 2 for Electric] • Microwave Ovens [Backlog Cycle 2] 	Backlog Backlog	FY2006, Q2	March 2009
		<ul style="list-style-type: none"> • Clothes Washers (Commercial) [Revision 1] 	EPACT 2005	FY2006, Q2	January 2010*
		<ul style="list-style-type: none"> • Clothes Dryers (Residential) [Backlog Cycle 2] • Room Air Conditioners [Backlog Cycle 2] 	Backlog Backlog	FY2008, Q1	June 2011
		<ul style="list-style-type: none"> • Dishwashers 	EISA 2007	FY2012, Q2	January 2015
		<ul style="list-style-type: none"> • Refrigerators (Residential) 	EISA 2007	FY2008, Q2	December 2010
		<ul style="list-style-type: none"> • Clothes Washers (Residential) 	EISA 2007	FY2009, Q1	December 2011
	Test Procedure	<ul style="list-style-type: none"> • Clothes Dryers, Standby Mode and Off Mode • Room Air Conditioners, Standby Mode and Off Mode 	EISA 2007 EISA 2007	FY2008, Q2	March 2009
		<ul style="list-style-type: none"> • Microwave Ovens, Standby Mode and Off Mode 	EISA 2007	FY2008, Q2	March 2011
		<ul style="list-style-type: none"> • Clothes Washers (Residential), Standby Mode and Off Mode 	EISA 2007	FY2009, Q1	June 2009
		<ul style="list-style-type: none"> • Dishwashers (Residential), Standby Mode and Off Mode • Ranges and Ovens (Electric and Gas), Standby Mode and Off Mode • Dehumidifiers (Residential), Standby Mode and Off Mode 	EISA 2007 EISA 2007 EISA 2007	FY2009, Q2	March 2011

Rulemaking Team	Rule Type	Product(s)	EPACT 2005, Backlog, EISA 2007, Other	Approx. Rule Initiation Date	Final Action Date*
Space Cooling Team	Standards	<ul style="list-style-type: none"> Central Air Conditioners and Heat Pumps (Residential) [Backlog Cycle 2] 	Backlog	FY2008, Q2	June 2011
Commercial Refrigeration Team	Standards	<ul style="list-style-type: none"> Refrigerated Bottle or Canned Beverage Vending Machines 	EPACT 2005	FY2006, Q3	August 2009
		<ul style="list-style-type: none"> Automatic Ice Makers (Commercial) [Revision 1] 	EPACT 2005	FY2011, Q3	January 2015
		<ul style="list-style-type: none"> Walk-In Coolers and Freezers 	EISA 2007	FY2009, Q1	January 2012
	Test Procedure	<ul style="list-style-type: none"> Walk-In Coolers and Freezers 	EISA 2007	FY2009, Q1	January 2010
Battery Chargers and External Power Supplies Team	Determination Analysis	<ul style="list-style-type: none"> External Power Supplies (non-Class A) 	EPACT 2005, EISA 2007	FY2007, Q1	December 2009
	Standards	<ul style="list-style-type: none"> Battery Chargers External Power Supplies (Class A) 	EISA 2007 EISA 2007	FY2008, Q2	July 2011
	Test Procedure	<ul style="list-style-type: none"> Battery Chargers, External Power Supplies, Standby Mode and Off Mode 	EISA 2007	FY2008, Q2	February 2009*

Implementation Update

Since the last implementation report, DOE has explored process efficiency improvements afforded it by EISA 2007. Section 307 of EISA 2007 removed the requirement for DOE to publish an advance notice of proposed rulemaking (ANOPR) for rulemakings on energy conservation standards for residential products. Because it has been DOE's experience that stakeholder comment at the early stages of the rulemaking is vital to producing a sound standard, DOE is continuing to hold the public meetings typically conducted during the ANOPR stage. In lieu of the ANOPR, DOE has begun to issue a notice of public meeting (NOPM) and issue preliminary technical support documents on its website. The meetings allow DOE to discuss the analysis presented in the preliminary technical support document with stakeholders and to request comment thereon.

On January 20, 2009, the Assistant to the President and Chief of Staff issued a memorandum regarding regulatory review. DOE is assessing how this memorandum impacts ongoing rulemakings.

Published Rulemaking Documents Since the Last Implementation Report

Since publication of the August 2008 semi-annual implementation report, DOE has:

- Published a notice of proposed rulemaking (NOPR) to amend the battery chargers and external power supplies test procedure regarding standby mode and off mode energy consumption. The NOPR was issued on August 1, 2008 and was published in the *Federal Register* on August 15, 2008 (73 Fed. Reg. 48054).
- Published a NOPR for the commercial refrigeration equipment energy conservation standard. The NOPR was issued on August 12, 2008 and was published in the *Federal Register* on August 25, 2008 (73 Fed. Reg. 50072).
- Published a notice of availability of the Framework Document for the residential refrigerator energy conservation standards rulemaking. This notice was issued on September 12, 2008 and was published in the *Federal Register* on September 18, 2008 (73 Fed. Reg. 54089).
- Published the final rule for the packaged terminal air-conditioner and packaged terminal heat pump energy conservation standard. The final rule was issued on September 29, 2008 and was published in the *Federal Register* on October 7, 2008 (73 Fed. Reg. 58772).

- Published a NOPR for the gas and electric ranges and ovens, microwave ovens, and commercial clothes washers energy conservation standard. The NOPR was issued on September 29, 2008 and was published in the *Federal Register* on October 17, 2008 (73 Fed. Reg. 62034).
- Published a NOPR to amend the microwave ovens test procedure regarding standby mode and off mode energy consumption. The NOPR was issued on October 1, 2008 and was published in the *Federal Register* on October 17, 2008 (73 Fed. Reg. 62134)
- Published a NOPR to amend the clothes dryers and room air-conditioners test procedures regarding standby mode and off mode energy consumption. The NOPR was issued on December 1, 2008 and was published in the *Federal Register* on December 9, 2008 (73 Fed. Reg. 74639).
- Published a notice of proposed meeting (NOPM) to consider establishing a new metal halide ballast test procedure (including provisions to consider standby mode and off mode energy consumption). The NOPM was issued on December 11, 2008 and was published in the *Federal Register* on December 17, 2008 (73 Fed. Reg. 76569).
- Published a NOPR to amend the electric motors (1-200 hp) test procedure and to establish a new small motors test procedure. The NOPR was issued on December 11, 2008 and was published in the *Federal Register* on December 22, 2008 (73 Fed. Reg. 78220).
- Published a notice of data availability (NODA) for the five exempted lamp types rulemaking. 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).
- Published a NOPM for the small electric motors energy conservation standard. The NOPM was issued on December 19, 2008 and was published in the *Federal Register* on December 30, 2008 (73 Fed. Reg. 79723).
- Published a notice of availability of the Framework Document for the walk-in coolers and freezers energy conservation standards rulemaking. This notice was issued on December 24, 2008 and was published in the *Federal Register* on January 6, 2009 (74 Fed. Reg. 411).
- Published the final rule for the commercial refrigeration equipment energy conservation standard. The final rule was issued on December 31, 2008 and was published in the *Federal Register* on January 9, 2009 (74 Fed. Reg. 1092).

- Published a NOPM for the heating products energy conservation standards rulemaking. The NOPM was issued on January 5, 2008 and was published in the *Federal Register* on January 13, 2009 (74 Fed. Reg. 1643).
- Published a NOPR to amend the fluorescent lamp ballast test procedure regarding standby mode and off mode energy consumption. The NOPR was issued on January 8, 2009 and was published in the *Federal Register* on January 21, 2009 (74 Fed. Reg. 3450).
- Issued the technical amendment to codify the definitions and energy conservation standards contained in EISA 2007. The technical amendment was issued on November 20, 2008 and is awaiting publication by the *Federal Register*.
- Issued a NOPR to establish a new metal halide ballast test procedure (including provisions to consider standby mode and off mode energy consumption). The NOPR was issued on December 4, 2008 and is awaiting publication by the *Federal Register*.
- Issued a NOPR for the lamps energy conservation standard. The rulemaking addresses general service fluorescent lamps and incandescent reflector lamps. The NOPR was issued on January 12, 2009 and is awaiting publication by the *Federal Register*.

Progress Reports of Appliance Product Teams (By Product)

HEATING TEAM

Heating Products. The final rule establishing energy conservation standards for heating products (residential water heaters, direct heating equipment, and pool heaters) is on schedule for issuance in March 2010. DOE published the notice of availability of the Framework Document in the *Federal Register* on November 24, 2006 (71 Fed. Reg. 67825). A public meeting to discuss the Framework Document was held on January 16, 2007 at DOE headquarters in Washington, DC.

On January 13, 2009, DOE published a notice of public meeting and availability of the preliminary Technical Support Document in the *Federal Register* (74 Fed. Reg. 1643). The public meeting to discuss the analyses is scheduled for February 9, 2009, at DOE headquarters in Washington DC. DOE is preparing the NOPR for this rulemaking.

ASHRAE 90.1-2007. On January 9, 2008, ASHRAE's Board of Directors gave final approval to ASHRAE Standard 90.1-2007⁵, which ASHRAE released on January 10, 2008. Because of the provisions in the consent decree and EISA 2007 discussed above and in the August 2008 implementation report, the release of ASHRAE Standard 90.1-2007 triggered DOE to act. DOE was 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 July 9, 2008 DOE issued a notice of data availability which was published in the *Federal Register* on July 16, 2008 (73 Fed. Reg. 40770). The NODA discusses the results of DOE's analysis of the energy savings potential of amended energy conservation standards for certain commercial equipment covered by ASHRAE Standard 90.1. In the NODA, DOE first assessed whether the efficiency levels in ASHRAE Standard 90.1-2007 for a given piece of equipment represented an increase in efficiency from the existing Federal energy conservation standards for such equipment. For the equipment where it was determined that ASHRAE increased the efficiency of the equipment, DOE assessed the potential energy savings of a national standard set at the ASHRAE efficiency level or at a more stringent level. DOE is now finalizing the NOPR for certain commercial equipment covered by ASHRAE Standard 90.1-2007 and will either adopt as uniform national energy conservation standards the amendments in ASHRAE Standard 90.1-2007 by July 10, 2009 (18 months after date of publication of the amended ASHRAE Standard 90.1) or set more stringent standards no later than July 10, 2010 (30 months after the date of publication of the ASHRAE amendments).⁶

⁵ This document is officially referred to as American National Standards Institute (ANSI)/ASHRAE/Illuminating Engineering Society of North America (IESNA) Standard 90.1-2007.

⁶ The dates that appeared in Table 1 of the August 2008 implementation report mistakenly listed the final action dates as July 2009 and July 2011. This has been corrected in this report.

Furnaces and Boilers. EISA 2007 requires that DOE prescribe an amended test procedure for residential furnaces and boilers not later than September 2009. This test procedure will address standby mode and off mode energy consumption for these products. DOE is on schedule and is currently reviewing the draft test procedure NOPR.

TRANSFORMERS AND MOTORS TEAM

Small Electric Motors. The final rule for small electric motors is on schedule for issuance not later than February 2010. DOE published an announcement of the availability of the energy conservation standard Framework Document in the *Federal Register* on August 10, 2007 (72 Fed. Reg. 44990). A public meeting to discuss the Framework Document was held on September 13, 2007 at DOE headquarters in Washington, DC. DOE issued a NOPM on December 19, 2008 which was published in the *Federal Register* on December 30, 2008 (73 Fed. Reg. 79723). DOE discussed preliminary analytical results from the work performed to date at a public meeting on January 30, 2009 at DOE headquarters in Washington, DC. DOE is working toward publication of the standards final rule.

In addition to the energy conservation standard activities, DOE is also currently preparing a test procedure for small electric motors. The final rule for the test procedure is scheduled for issuance not later than June 2009. 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). DOE discussed issues related to the test procedure rulemaking at a public meeting on January 29, 2009 at DOE headquarters in Washington, DC. DOE is working toward publication of the test procedure final rule.

Electric Motors (1-200 hp). DOE planned to initiate the standards rulemaking for electric motors (1-200 hp) during the first quarter of fiscal year 2008. This rulemaking, covered by the consent decree, was scheduled for issuance of the final rule not later than June 30, 2011. As the Framework Document was being prepared, EISA 2007 was enacted. EISA 2007 contains prescriptive standards for the same group of motors covered in DOE's rulemaking. The prescribed standards will be codified in a separate technical amendment that has been issued and is pending publication in the *Federal Register*. The EISA 2007 standards for these motors become effective well before the final rule for motors was scheduled to be completed under the consent decree.

LIGHTING TEAM

High-Intensity Discharge Lamps. DOE has begun work on the determination analysis for HID lamps. DOE is currently assessing the market and gathering recent, publicly-available technology and pricing data in preparation for the engineering analysis. The determination notice is scheduled for June 2010 (although DOE anticipates earlier issuance).

Lamps. The final rule regarding energy conservation standards for two categories of lamps (general service fluorescent lamps (GSFL) and incandescent reflector lamps (IRL)) is scheduled for June 2009. DOE published a notice of availability of the Framework Document on May 31, 2006 (71 Fed. Reg. 30834). Thereafter, DOE began work on an ANOPR for these products. DOE notes that this rulemaking initially considered a third type of lamp (general service incandescent lamps (GSIL)). However, EISA 2007 prescribed standards for GSILs and eliminated DOE's authority to consider standards for such lamps, thereby significantly altering the scope of coverage for the standards rulemaking.

In parallel to the energy conservation standard, DOE was also progressing on a test procedure for GSFLs, IRLs, and GSILs. Following enactment of EISA 2007, substantial revisions were thus required to the analysis and to both the standards ANOPR and test procedure NOPR *Federal Register* notices (both of which had been nearly complete at the time of the Act's passage). DOE made the necessary adjustments to be consistent with EISA 2007 and issued the energy conservation standard ANOPR and test procedure NOPR on February 21, 2008. The notices appeared in the *Federal Register* on March 13, 2008 (73 Fed. Reg. 13620 and 73 Fed. Reg. 13465).

The energy conservation standard NOPR for GSFL and IRL lamps was issued on January 12, 2009, and was sent to the Office of the Federal Register for publication. DOE discussed the issues related to the lamps standards NOPR at a public meeting held on February 3, 2009 at DOE headquarters in Washington, DC. DOE is working toward publication of the standards final rule and the test procedure final rule in the lamps rulemaking.

Five Exempted Lamp Types. DOE published a notice of data availability for the five exempted lamp types rulemaking. 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 will track actual United States unit sales data for each of the five lamp types and compare it to this model.

Fluorescent Lamp Ballasts. The final rule for fluorescent lamp ballasts energy conservation standards is on schedule for issuance not later than June 2011. DOE completed the Framework Document and published a NODA in the *Federal Register* on January 22, 2008 (73 Fed. Reg. 3653). DOE held a framework public meeting at its Washington D.C. headquarters on February 6, 2008. DOE is conducting the engineering analysis and market and technology assessments for this rulemaking.

In addition to the energy conservation standard, DOE is developing a test procedure for fluorescent lamp ballasts. EPCA, as amended by section 310 of EISA 2007, directs DOE to develop a test procedure for fluorescent lamp ballasts that accounts for standby mode and off mode energy consumption by March 31, 2009 (42 U.S.C. 6295(gg)(2)(A)(B)).

DOE issued the test procedure NOPR for fluorescent lamp ballast standby mode and off mode energy consumption on January 8, 2009. The notice was published in the *Federal Register* on January 21, 2009 (74 Fed. Reg. 3450). DOE discussed issues related to the fluorescent lamp ballast test procedure NOPR at a public meeting on February 2, 2009 at DOE headquarters in Washington, DC. Because the NOPR comment period ends on April 6, 2009, and DOE cannot issue a final rule until after the comment period, the final rule will not be issued before the date specified in EISA 2007. DOE is working to expeditiously publish the test procedure final rule for these products which it has scheduled for completion no later than September 2009.

Metal Halide Lamp Ballasts. Section 324 of EISA 2007 set efficiency standards for metal halide lamp fixtures that became effective January 1, 2009 (42 U.S.C. 6295(hh)(1)(C)). The statute further amended EPCA by requiring that test procedures for metal halide lamp ballasts be based on ANSI Standard C82.6-2005 (42 U.S.C. 6293(b)(18)). DOE planned to adopt a test procedure final rule for metal halide lamp ballasts by the effective date of the energy conservation standards for those products. DOE issued a NOPR to establish a test procedure for metal halide lamp ballasts (including consideration of standby mode and off mode energy consumption) on December 4, 2008. DOE published a NOPM on December 17, 2008 (73 Fed. Reg. 76569) and held the public meeting at DOE headquarters in Washington, DC on December 19, 2008 to discuss preliminary results from the test procedure rulemaking. DOE is working to expeditiously publish the test procedure final rule for metal halide lamp ballasts.

HOME APPLIANCE TEAM

Home Appliances, Group 1. The final rule regarding energy conservation standards for three home appliances (ranges and ovens, microwave ovens, and commercial clothes washers) is scheduled to be published no later than March 2009. Originally, this rule also included dishwashers and dehumidifiers. All of these products were included in the ANOPR that was published in the *Federal Register* on November 15, 2007 (72 Fed. Reg. 64432). This rulemaking was subsequently affected by EISA 2007, which prescribed standards for both dehumidifiers and dishwashers. The prescribed standards for dehumidifiers and dishwashers will be codified in a separate technical amendment. The home appliances energy conservation standards rulemaking continued with the remaining products, and on October 17, 2008, DOE published a NOPR for gas and electric ranges and ovens, microwave ovens, and commercial clothes washers (73 Fed. Reg. 62034).

Related to the standards rulemaking above, DOE is simultaneously developing a test procedure for residential microwave ovens that addresses standby mode and off mode energy consumption. EISA 2007 requirements dictate that a revised test procedure for microwave ovens that includes standby and off mode energy consumption shall be completed no later than March 2011. DOE is including standby mode and off mode energy consumption in this revision of the test procedure in advance of the EISA 2007 deadline in hopes that it can be completed in tandem with an efficiency standard for

microwave ovens in order to obtain the maximum energy savings that is economically justified and technologically feasible. DOE published the NOPR for the microwave oven test procedure on standby mode and off mode power in the *Federal Register* on October 17, 2008 (73 Fed. Reg. 62134). Public meetings were held at DOE headquarters in Washington, DC to discuss the proposed energy conservation standard on November 13, 2008 and the proposed test procedure on November 14, 2008.

Stakeholder comments at the public meeting and submitted in response to the energy conservation standard NOPR suggest that de-bundling certain aspects of this rulemaking may be beneficial, as explained below. For commercial clothes washers, commenters alleged certain data problems affecting DOE's rulemaking analyses. DOE's preliminary assessment suggests that these concerns may be valid, thereby necessitating additional, supplemental rulemaking analyses. For microwave ovens, commenters urged DOE to consider an upcoming, soon-to-be-finalized version of the industry consensus test procedure for measuring microwave oven standby mode and off mode energy consumption; this later version is purported to contain significant modifications and improvements, as compared to the current draft which many commenters believe to be inadequate. DOE agrees that it would be preferable to harmonize the U.S. test procedure with the prevailing international standard, assuming its timely adoption.

In light of the above, DOE plans to de-bundle the commercial clothes washers energy conservation standard and the microwave oven test procedure provisions from the current rulemaking. DOE is working toward publication of the final rule for energy conservation standards for kitchen ranges and ovens and microwave ovens by the March 31, 2009 deadline set forth in the consent decree. For commercial clothes washers, DOE will work toward publication of a final rule for energy conservation standards by January 1, 2010, the statutory deadline set by EPACT 2005. For the microwave ovens test procedure, DOE will work toward publication of a final rule for test procedures by before March 31, 2011, the statutory deadline set by EISA 2007.

Home Appliances, Group 2. The rulemaking for clothes dryers and room air conditioners is underway and scheduled to be completed in June 2011. DOE published a notice of availability for the Framework Document in the *Federal Register* on October 9, 2007 (72 Fed. Reg. 57254). DOE held the Framework Document Public Meeting in Washington, DC on October 24, 2007. DOE is conducting the preliminary analyses for this rulemaking.

Pursuant to EISA 2007, revisions to the test procedures for clothes dryers and room air conditioners to account for standby and off mode energy consumption are required by March 31, 2009. DOE published the NOPR to amend these test procedures on December 9, 2008 (73 Fed. Reg. 74639). DOE held a public meeting to discuss the issues raised in the test procedures NOPR at DOE headquarters in Washington, DC on December 17, 2008. DOE will work toward publication of the test procedure final rule for clothes dryers and room air conditioners.

Residential Clothes Washers. DOE is undertaking two rulemakings to address the requirements pertaining to residential clothes washers in EISA 2007. DOE is initiating both an energy conservation standards rulemaking (scheduled for completion in December 2011), as well as a test procedure rulemaking to address standby mode and off mode energy consumption (scheduled for completion in June 2009). For the energy conservation standards rulemaking, DOE is currently reviewing the draft Framework Document. For the test procedure rulemaking, DOE is currently reviewing the draft NOPR.

Residential Refrigerators. Under EISA 2007, DOE is 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 which was issued on September 12, 2008 and was 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 is conducting the preliminary analyses for this rulemaking.

SPACE COOLING TEAM

Packaged Terminal Air-Conditioners and Heat Pumps. The final rule regarding energy conservation standards for packaged terminal air conditioners and heat pumps was issued on September 29, 2008, and it was published in the *Federal Register* on October 7, 2008 (73 Fed. Reg. 58772). The final rule for this consent decree rulemaking was completed on schedule, and the rulemaking is now complete.

Residential Central Air Conditioners and Heat Pumps. The final rule regarding energy conservation standards for residential central air conditioners and heat pumps is scheduled for issuance no later than June 2011. DOE published a notice of availability of the Framework Document in the *Federal Register* on June 6, 2008 (73 Fed. Reg. 32243) and held the Framework Document public meeting at DOE headquarters in Washington, DC on June 12, 2008. DOE is conducting the engineering analysis and market and technology assessments for this rulemaking.

COMMERCIAL REFRIGERATION TEAM

Beverage Vending Machines. The final rule regarding energy conservation standards for beverage vending machines is scheduled to be issued by August 2009. DOE published a notice of availability of the Framework Document for these products in the *Federal Register* on June 28, 2006 (71 Fed. Reg. 36715). A public meeting on the Framework Document was held at DOE headquarters in Washington, DC on July 11, 2006. The ANOPR for beverage vending machine standards was published in the *Federal Register* on June 16, 2008 (73 Fed. Reg. 34094). A public meeting to discuss the ANOPR was held June 26, 2008. DOE is currently preparing the draft NOPR.

Commercial Refrigeration Equipment. The final rule regarding energy conservation standards for commercial refrigeration equipment was issued on December 31, 2008, and it was published in the *Federal Register* on January 9, 2009 (74 Fed. Reg. 1092). The EPCA 2005 schedule was met, and this rulemaking is now complete.

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 is scheduled for completion no later than January 2012. The notice of availability of the Framework Document was published in the *Federal Register* on January 6, 2009 (74 Fed. Reg. 411). DOE held the Framework public meeting at DOE headquarters in Washington, DC on February 4, 2009. DOE is conducting the preliminary analyses to support the energy conservation standards rulemaking.

BATTERY CHARGERS AND EXTERNAL POWER SUPPLIES TEAM

Battery Chargers and External Power Supplies. As discussed in previous implementation reports, EISA 2007 removed battery chargers from the determination analysis that was already underway (leaving only external power supplies) and reduced the schedule for completing the determination to two years after the date of enactment (*i.e.*, by December 19, 2009). DOE is preparing the draft determination analysis and remains on schedule.

Also 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 scheduled for completion by July 1, 2011. DOE is currently preparing the Framework Document for this rulemaking.

Lastly, EISA 2007 requires DOE to complete a test procedure for battery chargers and external power supplies which includes standby mode and off mode energy consumption. (42 U.S.C. 6295(gg)(2)(A)). DOE published the NOPR for the battery chargers and external power supplies test procedure on August 15, 2008 (73 Fed. Reg. 48054). The public meeting to discuss the test procedure NOPR was held on September 12, 2008 at DOE headquarters in Washington, DC, and the comment period closed on October 29, 2008. Since then, the team has been working expeditiously to issue the test procedure final rule. Although the final rule was not issued by the December 31, 2008 date specified in EPCA (as amended by EISA 2007), DOE is making every effort to issue it as soon as possible.

Process Changes

Section 308 of EISA 2007 permits DOE to issue direct final rules in cases where a fairly representative group of stakeholders (including manufacturers, States, and efficiency advocates) jointly submit a recommended standard. This could eliminate months from the timeline for each consensus rule, usually a three-year process. Furthermore, section 307 of EISA 2007 removes the requirement for DOE to publish ANOPRs in rulemakings on energy conservation standards for residential products. In lieu of ANOPRs, DOE has begun to hold public meetings to receive stakeholder input on DOE's preliminary analyses. DOE has continued to implement process improvements, such as "bundling" and "valley-filling," to take advantage of economies of scale for related rulemakings and to maximize rulemaking capacity.