

Implementation Report:
Energy Conservation Standards Activities

Submitted Pursuant to Section 141 of the
Energy Policy Act of 2005

U.S. Department of Energy

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List of Acronyms

ANOPR – Advance Notice of Proposed Rulemaking

ASHRAE – American Society of Heating, Refrigerating and Air-Conditioning Engineers

DOE – U.S. Department of Energy

EPACT 2005 – Energy Policy Act of 2005

EPCA – Energy Policy and Conservation Act

HID – High-Intensity Discharge (lamps)

NOPR – 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's) failure to comply with statutory deadlines for new or amended energy conservation standards. Section 141 requires both an initial report and semi-annual implementation reports. This document represents the second semi-annual implementation report.

DOE submitted the 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. The initial report provided a description of the rulemaking process and detailed the statutory requirements that the Appliance Standards Program needs to fulfill. The initial report explained the historical reasons for DOE's failure to meet statutory deadlines and described current and planned productivity enhancements that DOE began to implement. Finally, the initial report set an aggressive rulemaking schedule, addressing both backlog rulemakings and the new requirements of EPACT 2005.

In the first semi-annual implementation report, DOE described the execution of the productivity enhancements (bundling and valley-filling¹) 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 August 2006 that it was meeting all obligations as scheduled in the initial report to Congress. DOE remains committed to complying with future deadlines in the schedule and is currently on-schedule.

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.

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 have resulted in a consent decree between the plaintiffs and DOE (finalized November 6, 2006). The consent decree adopts the schedule DOE published in its January 31, 2006, initial report under, section 141. In addition, it adds two additional details:

1. The consent decree requires the publication of 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 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 that 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). Within 6 months of an ASHRAE amendment, DOE must publish an analysis of the energy savings potential of amended energy efficiency standards. DOE must either adopt ASHRAE's amendment within 18 months of ASHRAE's adoption or establish a more stringent standard within 30 months.

Multi-Year Schedule and Implementation Update

This section provides a copy of the rulemaking schedule provided in the initial report to Congress, along with a detailed description of activities and progress to date.

Multi-Year Schedule

Table 1 presents the multi-year schedule to which DOE committed in its initial report to Congress (with the addition of a standards rulemaking and a test procedure rulemaking for small electric motors). This schedule results in the issuance of one standard for each of 18 products with one or more backlogged standards (plus small electric motors). Additionally, the schedule addresses the first cycle of standards that DOE must develop to comply with EPCACT 2005 (for some products, EPCACT 2005 requires DOE to develop multiple standards over time). Also addressed are determination analyses for small electric motors, high-intensity discharge (HID) lamps, and battery chargers and external power supplies; the distribution transformer test procedure; the residential central air-conditioning test procedure; two test procedures that EPCACT 2005 requires DOE to develop; and the test procedure rulemaking conducted en masse in response to EPCACT 2005.

As discussed above, the November 2006 consent decree requires the publication of 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. Table 1 has been modified to depict these requirements.

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

Rulemaking Team	Rule Type	Product(s)	EPACT 2005, Backlog, Other	Approx. Rule Initiation Date	Final Action Date
Heating Team	Standards	<ul style="list-style-type: none"> Furnaces and Boilers (Residential) [Backlog Cycle 1 including Mobile Home Furnaces, Backlog Cycle 2 for Small Furnaces] 	Backlog	NA	September 2007
		<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
Transformers and Motors Team	Determination Analysis	<ul style="list-style-type: none"> Small Electric Motors 	Backlog	NA	June 2006
	Standards	<ul style="list-style-type: none"> Small Electric Motors 	Backlog	FY2007, Q3	February 2010
		<ul style="list-style-type: none"> Distribution Transformers, MV Dry-Type and Liquid-Immersed 	Backlog	NA	September 2007
		<ul style="list-style-type: none"> Electric Motors, 1-200 HP [Backlog Cycle 1] 	Backlog	FY2008, Q1	June 2011
	Test Procedures	<ul style="list-style-type: none"> Small Electric Motors 	Backlog	FY2007, Q3	June 2009
		<ul style="list-style-type: none"> Distribution Transformers 	Backlog	NA	April 2006
Lighting Team	Determination Analysis	<ul style="list-style-type: none"> High-Intensity Discharge Lamps 	Backlog	NA	June 2010
	Standards	<ul style="list-style-type: none"> Ceiling Fan Light Kits (other than those with prescribed standards) 	EPACT 2005	NA	January 2007
		<ul style="list-style-type: none"> Incandescent Reflector Lamps [Backlog Cycle 1] Fluorescent Lamps [Backlog Cycle 1] Incandescent General Service Lamps [Backlog Cycle 1] 	Backlog Backlog Backlog	FY2006, Q3	June 2009
		<ul style="list-style-type: none"> Fluorescent Lamp Ballasts [Backlog Cycle 2] 	Backlog	FY2008, Q1	June 2011
Home Appliance Team	Standards	<ul style="list-style-type: none"> Dishwashers (Residential) [Backlog Cycle 2] Ranges and Ovens (Electric and Gas) and Microwave Ovens [Backlog Cycle 1 for Gas, Backlog Cycle 2 for Electric] Dehumidifiers (Residential) [Revision] Clothes Washers (Commercial) [Revision 1] 	Backlog Backlog EPACT 2005 EPACT 2005	FY2006, Q2	March 2009
		<ul style="list-style-type: none"> Clothes Dryers (Residential) [Backlog Cycle 2] Room Air Conditioners [Backlog Cycle 2] 	Backlog Backlog	FY2008, Q1	June 2011

Rulemaking Team	Rule Type	Product(s)	EPACT 2005, Backlog, Other	Approx. Rule Initiation Date	Final Action Date
Space Cooling Team	Standards	• Packaged Terminal Air Conditioners and Heat Pumps	Backlog	FY2006, Q4	September 2008
		• Central Air Conditioners and Heat Pumps (Residential) [Backlog Cycle 2]	Backlog	FY2008, Q2	June 2011
	Test Procedure	• Central Air Conditioners and Heat Pumps (Residential)	Other	NA	September 2007
Commercial Refrigeration Team	Standards	• Refrigerated Bottle or Canned Beverage Vending Machines	EPACT 2005	FY2006, Q3	August 2009
		• Ice-Cream Freezers, Self-Contained Commercial Refrigerators, Freezers, and Refrigerator-Freezers without Doors, and Remote-Condensing Commercial Refrigerators, Freezers and Refrigerator-Freezers (initial)	EPACT 2005	FY2006, Q2	January 2009
		• Automatic Ice Makers (Commercial) [Revision 1]	EPACT 2005	FY2011, Q3	January 2015
	Test Procedure	• Ice-Cream Freezers, Self-Contained Commercial Refrigerators, Freezers, and Refrigerator-Freezers without Doors, and Remote-Condensing Commercial Refrigerators, Freezers and Refrigerator-Freezers	EPACT 2005	NA	January 2008
Battery Chargers and External Power Supplies Team	Determination Analysis	• Battery Chargers and External Power Supplies	EPACT 2005	NA	August 2008
	Standards	• Battery Chargers and External Power Supplies (Contingent on Determination)	EPACT 2005	FY2008, Q4	August 2011
	Test Procedure	• Battery Chargers and External Power Supplies	EPACT 2005	NA	February 2007
Other EPACT 2005	Test Procedure	• 11 Test Procedures Prescribed by EPACT 2005	EPACT 2005	NA	November 2006

Implementation Update

During the six months since the first semi-annual implementation report, DOE continued to meet the commitments in the schedule presented to Congress. While continuing rulemakings that were already in progress prior to the initial report and rulemakings that were initiated during the six months prior to the August 2006 implementation report, DOE has recently initiated another rulemaking addressing heating products in the backlog. Since publication of the August 2006 report, DOE has:

- Published the standards NOPR for distribution transformers: issued on July 20, 2006, and published in the *Federal Register* on August 4, 2006, at 71 FR 44356 (August 4, 2006);
- Published the standards NOPR for residential furnaces and boilers: issued on September 25, 2006, and published in the *Federal Register* on October 6, 2006, at 71 FR 59204 (October 6, 2006);
- Published the Framework Document for heating products standards rulemaking: issued on November 13, 2006, and initiating on November 24, 2006, at 71 FR 67825 (November 24, 2006);
- Issued test procedures en masse for 14 types of products: issued on November 28, 2006, and published in the *Federal Register* on December 8, 2006, at 71 FR 71340 (December 8, 2006);
- Released a planning document and a projected market study document on December 29, 2006, in preparation for the January 2007 scoping workshop regarding possible energy conservation standards for battery chargers and external power supplies issued on December 22, 2006, and published in the *Federal Register* on December 29, 2006, at 71 FR 78389 (December 29, 2006); and
- Published a technical amendment adopting the EPACT 2005 statutory standards for ceiling fan light kits: issued on December 29, 2006 and published in the *Federal Register* on January 11, 2007 at 72 FR 1270 (January 11, 2007).

The paragraphs below describe the progress of each rulemaking team.

Heating Team

Residential Furnaces and Boilers. The standards NOPR for furnaces and boilers was issued on September 25, 2006, and published at 71 FR 59204 (October 6, 2006). The final rule is scheduled for issuance not later than September 2007.

Heating Products. The schedule in the initial report indicated that the heating products rulemaking (water heaters, direct heating equipment, and pool heaters) would be initiated during the fourth quarter of fiscal year 2006. DOE published the framework document to initiate this standards rulemaking on November 24, 2006, at 71 FR 67825 (November 24, 2006), and the public meeting was held on January 16, 2007.

Transformers and Motors Team

Distribution Transformers. The standards NOPR for distribution transformers was issued on July 20, 2006, and published at 71 FR 44356 (August 4, 2006). The final rule is scheduled for issuance not later than September 2007.

Electric Motors. For small electric motors, DOE issued a positive determination in June 2006 at 71 FR 38799 (July 10, 2006) to initiate the process of establishing, by notice and comment rulemaking, test procedures and energy conservation standards. DOE will initiate both of these activities before the next report to Congress in August 2007. The final rule for this standards rulemaking is scheduled for issuance by February 28, 2010.

DOE plans to initiate the standards rulemaking for large motors during the first quarter of fiscal year 2008.

Lighting Team

Lamps. The final rule regarding energy conservation standards for three broad categories of lamps (fluorescent lamps, incandescent reflector lamps, and additional fluorescent and incandescent lamps) is scheduled for June 2009. DOE has been doing the analytical work necessary to prepare for the ANOPR.

Ceiling Fan Light Kits. For ceiling fan light kits with sockets other than medium screw base or pin-based for fluorescent lamps, DOE codified the statutory standards provided in EPCACT 2005 through a technical amendment in the Federal Register. The technical amendment was issued on December 29, 2006, and was published in the Federal Register on January 11, 2007 at 72 FR 1270 (January 11, 2007).

For this category of equipment, EPCACT 2005 required DOE to issue a final rule with energy efficiency requirements by January 1, 2007. (42 U.S.C. 6295(ff)(4)(A)) If DOE failed to meet this deadline, EPCACT 2005 provided a statutory standard for this equipment. (42 U.S.C. 6295(ff)(4)(C)) In its initial Report to Congress at page vi (January 2006), DOE stated that it was not feasible to meet this statutory deadline and planned to adopt the statutory standard in fiscal year 2007, which it did in the above-referenced Federal Register notice.

Fluorescent Lamp Ballasts. DOE plans to initiate the standards rulemaking for fluorescent lamp ballasts during the first quarter of fiscal year 2008.

Home Appliance Team

Home Appliances. The final rule regarding energy conservation standards for four home appliances (dishwashers, ranges and ovens, dehumidifiers, and commercial clothes washers) is scheduled for March 2009. DOE has been doing the analytical work necessary to prepare for the ANOPR.

DOE plans to initiate the rulemaking for clothes dryers and room air conditioners during the first quarter of fiscal year 2008.

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 is scheduled for September 2008. DOE has been doing the analytical work necessary to prepare for the NOPR.

Commercial Heating, Air-Conditioning, and Water Heating. DOE will publish a final rule that addresses commercial heating, air-conditioning and water heating equipment by February 28, 2007, (includes commercial packaged boilers, instantaneous water heaters, 3-phase air-conditioners and heat pumps less than 65,000 Btu/hr, and single-package vertical air-conditioners and heat pumps less than 65,000 Btu/hr).

Residential Central Air Conditioners. The final rule for the residential central air conditioner and heat pump test procedure is scheduled for September 2007.

Commercial Refrigeration Team

Commercial Refrigeration. The final rule regarding energy conservation standards for commercial refrigeration products is scheduled for January 2009. DOE has been doing the analytical work necessary to prepare for the ANOPR.

EPACT 2005 required DOE to develop commercial refrigeration test procedures. DOE had scheduled the final rule for January 2008, however, DOE accelerated the schedule and issued a final rule for the commercial refrigeration products as part of the test procedures adopted en masse on November 28, 2006, and published at 71 FR 71340 (December 8, 2006).

Beverage Vending Machines. The final rule regarding energy conservation standards for beverage vending machines is scheduled for August 2009. DOE has been doing the analytical work necessary to prepare for the ANOPR.

Battery Chargers and External Power Supplies Team

Battery Chargers and External Power Supplies. DOE is on track to publish a determination notice for battery chargers and external power supplies by the scheduled date of August 2008. If the determination is positive, DOE would then proceed with a standards rulemaking, issuing a final rule on or before the scheduled date of August 2011. DOE held its scoping workshop on January 24, 2007, a few weeks prior to the EPACT 2005 deadline of February 8, 2007. In preparation for the workshop, DOE publicly released two documents on December 29, 2006, entitled, “Plans for Developing Energy Conservation Standards for Battery Chargers and External Power Supplies” and “The Current and Projected Future Market for Battery Chargers and External Power Supplies,” published at 71 FR 78389 (December 29, 2006).

EPACT 2005 required DOE to develop test procedures for battery chargers and external power supplies. DOE had scheduled the final rule for February 2007, however, DOE accelerated the schedule and issued a final rule for battery chargers and external power supplies as part of the test procedures adopted en masse that was issued on November 28, 2006, and published at 71 FR 71340 (December 8, 2006).

Test Procedures Adopted en Masse

DOE issued the final rule for the test procedures adopted en masse on November 28, 2006, and published at 71 FR 71340 (December 8, 2006). This final rule addresses the products listed below. While the August 2006 implementation report indicated that some products might need to be separated into another rulemaking, DOE was able to issue final test procedures for all products addressed in the NOPR.

Products Addressed in the Final Rule Adopting EPACT 2005 Test Procedures En Masse 71 FR 71340 – December 8, 2006

Prescribed by EPACT 2005

- Ceiling fans
- Ceiling fan light kits
- Dehumidifiers
- Medium base compact fluorescent lamps
- Torchieres
- Automatic commercial ice makers
- Commercial prerinse spray valves
- Illuminated exit signs
- Traffic signal modules and pedestrian modules
- Refrigerated bottled or canned beverage vending machines

- Commercial package air-conditioning and heating equipment (including very large)

Developed by DOE in Response to EPCACT 2005

- Commercial refrigerators, freezers, refrigerator-freezers, and ice-cream freezers
- Battery chargers
- External power supplies

Joint-Proposal Recommendations

As discussed in the initial January 2006 report, DOE is actively encouraging joint-proposal recommendations from stakeholders. While the Department must review any such joint proposal recommendations to determine that EPCA's legislative requirements are met, it nevertheless encourages stakeholders to develop these kinds of recommendations. After receiving a joint proposal recommendation, an accelerated or expedited rulemaking process could sometimes be applied that would combine a notice of proposed rulemaking along with a direct final rule. If there are no substantial adverse comments received during the comment period, the direct final rule could take effect within 30 days following the end of the comment period. This could reduce the typical rulemaking timeline by up to seven months.

DOE regrets that it was not able to accept the joint proposal recommendation offered by stakeholders shortly before the furnaces and boilers' notice of proposed rulemaking. While DOE sincerely appreciated the joint-proposal recommendation, DOE determined that the proposal was beyond the scope of its legal authority.

Other such efforts are underway. DOE has actively supported the development of a joint proposal recommendation for the home appliance rulemaking (dishwashers, ranges and ovens, dehumidifiers, and commercial clothes washers). DOE has provided analytical support to assist the manufacturers, trade association, and the energy efficiency advocacy organizations in preparing for their discussions.

DOE believes that successful joint proposal recommendations can lead to an acceleration of schedules and the initiation of additional standards and test procedure rulemakings. This would be very beneficial, especially with regard to keeping test procedures and standards requirements in line with new technologies such as "smart" and multi-functional appliances.