

Implementation Report:
Energy Conservation Standards Activities

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

U.S. Department of Energy

August 2007

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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

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's) past failure to comply with statutory deadlines for new or amended energy conservation standards. Section 141 of EPACT 2005 requires both an initial report and semi-annual implementation reports, until such time as the Department has promulgated all of the overdue mandated standards. This document represents the third 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 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 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, one that will permit DOE to both address backlog rulemakings and meet deadlines associated with the new requirements of EPACT 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 reports that it was meeting all obligations as scheduled in the initial Report to Congress, and the Department reached a similar conclusion in its second semi-annual implementation report (submitted in February 2007).

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 practical in order to complete rulemakings as soon as possible. Furthermore, DOE notes that it is pursuing a modification of the consent decree in the case of *State of New York, et al v. Bodman* with regard to the schedule for the Furnaces and Boilers rulemaking in order to consider additional stakeholder input received during the NOPR comment period. In accordance

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.

with the terms of the Consent Decree, the Government has reached out to counsel for the plaintiffs and interveners. Counsel for the plaintiffs has advised that plaintiffs are still in the process of considering the Government's request. Interveners Gas Appliance Manufacturers Association, Air-Conditioning and Refrigeration Institute, and Association of Home Appliance Manufacturers have objected to the extension request. If the extension request is granted by the court, the final action date for conclusion of the rulemaking would be extended from September 30, 2007 until June 30, 2008.

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 (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 EPCACT 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 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 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. Under the consent decree, DOE will publish a final rule for packaged terminal air conditioners and heat pumps by September 30, 2008.

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, modified to now also include a standards rulemaking and a test procedure rulemaking for small electric motors. (These latter modifications to the schedule were added pursuant to the November 2006 consent decree discussed above.) This schedule will result in the issuance of one standard for each of 18 products with one or more backlogged standards (plus small electric motors). Furthermore, the schedule addresses the first cycle² of standards that DOE must develop to comply with EPCACT 2005. In addition, the multi-year schedule also addresses the following:

- Determination analyses for: (1) small electric motors (completed); (2) high-intensity discharge (HID) lamps; and (3) battery chargers and external power supplies.
- Test procedures for: (1) distribution transformers (completed); (2) residential central air-conditioners and heat pumps; (3) ice-cream freezers, self-contained commercial refrigerators, freezers, and refrigerator-freezers without doors, and remote-condensing commercial refrigerators, freezers, and refrigerator-freezers (required by EPCACT 2005) (completed); and (4) battery chargers and external power supplies (contingent on determination but already completed) (required by EPCACT 2005).
- Test procedure rulemaking conducted en masse in response to EPCACT 2005 (a complete list of products is reported in the February 2007 implementation report).

² For some products, EPCACT 2005 requires DOE to develop multiple standards over time.

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

Published Rulemaking Documents Since the Last Implementation Report

During the six months since the February 2007 semi-annual implementation report, DOE has continued to meet its commitments in terms of the schedule presented to Congress. Since publication of the February 2007 report, DOE has:

- Published the standards advance notice of proposed rulemaking (ANOPR) for ice-cream freezers; self-contained commercial refrigerators, freezers, and refrigerator-freezers without doors; and remote-condensing commercial refrigerators, freezers and refrigerator-freezers. That ANOPR was issued on July 19, 2007, and it was published in the *Federal Register* on July 26, 2007 (72 FR 41162 (July 26, 2007));
- Published a final rule addressing the efficiency of commercial heating, air-conditioning and water heating equipment (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). (72 FR 10038 (March 7, 2007))

Progress Reports of Appliance Product Teams (By Product)

HEATING TEAM

Residential Furnaces and Boilers. The final rule regarding energy conservation standards for furnaces and boilers is scheduled for issuance not later than September 2007. However, DOE notes that it is pursuing a modification of the consent decree in the case of *State of New York, et al v. Bodman* with regard to the schedule for the Furnaces and Boilers rulemaking in order to consider additional stakeholder input received during the NOPR comment period.

DOE has tentatively determined that further consideration should be given to whether: (1) the annual fuel utilization efficiency (“AFUE”) standard level for non-weatherized gas furnaces and requests to consider a more stringent 90 percent AFUE standard level merit reexamination; (2) the emphasis DOE placed on the waiver procedure proposed in the NOPR, which would allow states to seek a waiver from federal preemption of state energy conservation standards, is warranted; and (3) the consideration of the potential economic benefit of lower natural gas prices (resulting from the potential reductions in natural gas demand that might be expected to result from higher efficiencies, if such efficiencies were incorporated into the standards applicable to certain products) merits further analysis within the context of the rulemaking.

DOE believes that its decision making process, as well as interested parties, would benefit by providing to all participants in this rulemaking a further opportunity to comment on these issues prior to the adoption of the final rule. DOE further believes that a Supplemental Notice of Proposed Rulemaking (SNOPR) is the most appropriate means to accomplish this goal because additional consideration of these issues in establishing final standards (particularly standards for non-weatherized gas furnaces and mobile home furnaces) would be outside the scope of notice that the NOPR provided.

Heating Products. The final rule establishing energy conservation standards for heating products (water heaters, direct heating equipment, and pool heaters) is scheduled for issuance in March 2010. As reported in the February 2007 implementation report, DOE initiated this rulemaking in November 2006. (71 FR 67825 (November 24, 2006)) DOE has been doing the analytical work necessary to prepare for the ANOPR, including preparation of the market and technology assessment.

TRANSFORMERS AND MOTORS TEAM

Small Electric Motors. DOE will be posting the Framework Document for small electric motors on its website, thereby initiating the standards rulemaking for these products (see http://www.eere.energy.gov/buildings/appliance_standards/commercial/small_electric_motors.html). The corresponding public meeting will be held in September 2007. (The final rule regarding energy conservation standards for small electric motors is scheduled for issuance not later than February 2010.)

As a related matter, DOE is also currently preparing a notice of proposed rulemaking (NOPR) for test procedures for small electric motors (with a corresponding final rule scheduled for issuance not later than June 2009).

Distribution Transformers. DOE is nearing completion of the final rule setting energy conservation standards for distribution transformers, which is scheduled for issuance not later than September 2007.

Electric Motors (1-200 hp). DOE plans to initiate the standards rulemaking for large motors (1-200 hp) during the first quarter of fiscal year 2008. DOE will initiate the rulemaking by publishing a framework document and holding a public meeting.

LIGHTING TEAM

High-Intensity Discharge Lamps. DOE has begun work on the determination analysis for high-intensity discharge 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.

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. As reported in the August 2006 implementation report, DOE has initiated this rulemaking. (71 FR 30834 (May 31, 2006)) DOE has been doing the analytical work necessary to prepare for the ANOPR, including preparation of draft analyses and draft documentation for all requisite portions of the ANOPR.

Fluorescent Lamp Ballasts. DOE plans to initiate the standards rulemaking for fluorescent lamp ballasts during the first quarter of fiscal year 2008. DOE will initiate the rulemaking by publishing a framework document and holding a public meeting.

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 preparing the necessary analyses and is nearing completion of the ANOPR for those products.

The rulemaking for clothes dryers and room air conditioners is scheduled to be completed in June 2011. DOE will initiate the rulemaking by publishing a framework document and holding a public meeting.

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. The statute does not require an ANOPR for commercial products, including the ones encompassed by this rulemaking, so the NOPR is the next regulatory step. DOE has completed most of the analyses and much of the documentation in preparation for the NOPR, scheduled for publication in January 2008.

Residential Central Air Conditioners and Heat Pumps. DOE is nearing completion of the final rule establishing test procedures for residential central air conditioners and heat pumps, which is scheduled for publication by September 2007.

DOE plans to issue an efficiency standard for these same products no later than June 2011. DOE has not yet initiated this standards rulemaking. DOE will initiate the rulemaking by publishing a framework document (no later than the second quarter of fiscal year 2008) and holding a public meeting.

Commercial Heating, Air-Conditioning, and Water Heating. Since the last implementation report, DOE published a final rule addressing the efficiency of commercial heating, air-conditioning and water heating equipment (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). (72 FR 10038 (March 7, 2007))

COMMERCIAL REFRIGERATION TEAM

Beverage Vending Machines. The final rule regarding energy conservation standards for beverage vending machines is scheduled for August 2009. As reported in the August 2006 implementation report, DOE already initiated this rulemaking. (71 FR 36715 (June 28, 2006)) DOE has been doing the analytical work necessary to prepare for the ANOPR, including preparation of all of the requisite draft analyses in preparation for the ANOPR.

Commercial Refrigeration Products. Since the last implementation report, DOE has published the standards ANOPR for commercial refrigeration products in the *Federal Register*. (72 FR 41162 (July 26, 2007)) The final rule regarding energy conservation standards for commercial refrigeration products is scheduled for no later than January 1, 2009. DOE will hold an ANOPR public meeting, review written and oral comments from stakeholders, and then begin the NOPR analyses.

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. DOE has been preparing the engineering analysis for this determination analysis. 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.