

**FY2004 DRAFT
PRIORITIZATION DATA SHEETS**

**APPLIANCE STANDARDS
OFFICE OF BUILDING TECHNOLOGIES
U. S. DEPARTMENT OF ENERGY**

JULY 2003

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Coverage

Product: Beverage Merchandisers/ Vending Machines

Priority: High

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1995-2030	1.0 - 1.43
Potential Economic Benefits/Burdens	Not Available.
Potential Environmental or Energy Security Benefits	Specific estimates of emission reductions have not been developed
Status of Required Changes to Test Procedures	
Other Regulatory Actions	
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	
Issues	This is being considered in draft legislation by Congress.
FY 2003 Priority	N/A

Proposed Schedule and Rationale

Proposed Schedule	Final Rule FY 2004
Rationale for Priority Level	2003 Priority Setting

Coverage

Product: Ceiling Fans

Priority: High

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1995-2030	.47 – 5.3
Potential Economic Benefits/Burdens	Not Available.
Potential Environmental or Energy Security Benefits	Specific estimates of emission reductions have not been developed
Status of Required Changes to Test Procedures	
Other Regulatory Actions	
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	
Issues	This is being considered in draft legislation by Congress.
FY 2003 Priority	N/A

Proposed Schedule and Rationale

Proposed Schedule	Final Rule FY2004
Rationale for Priority Level	2003 Priority Setting

Standards

Product: Clothes Dryers - (Gas/Electric)

Priority: Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2008 – 2030	Heat Pump Elec. Dryer (5.5 EF) = 3.8 Microwave Elec. Dryer (3.5 EF) = 1.2 Modulating Gas Dryer (2.8 EF) = 0.06 Heat Pump Electric Dryer (5.2 EF) = 3.5
Potential Economic Benefits/Burdens	Not available
Potential Environmental or Energy Security Benefits	Not available
Status of Required Changes to Test Procedures	Reduced annual cycles needs to be considered, definitions and creation of new product class for condensing dryers.
Other Regulatory Actions	DOE regulation of clothes washers. DOE regulation of white goods for full line manufacturers.
Recommendations by Interested Parties	There appears to be a general consensus among stakeholders that updating clothes dryer standards should be given low priority.
Evidence of Market-Driven or Voluntary Efficiency Improvements	At least three U.S. manufacturers are marketing high efficiency clothes washers, which are likely to have improved moisture extraction.
Issues	Significant dryer savings potential has been considered in clothes washer rulemaking (greater moisture extraction). Mechanical extraction has been estimated to be much more cost effective than thermal extraction. New electric dryers advertise 30% reduction in energy usage.
FY 2003 Priority	Low

Proposed Schedule and Rationale

Proposed Schedule	DOE does not plan to actively pursue rulemaking in the next year. Work would be limited to basic technology investigation and monitoring of voluntary programs.
Rationale for Priority Level	Interested Parties believe this is a low priority product. Other DOE standards will impose cumulative burden on white goods manufacturers.

Test Procedure

Product: Clothes Dryers - (Gas/Electric)

Priority: Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure needs to be changed for standard. Low Canadian Standards Association (CSA) has conducted specialized dryer tests and has asked DOE to consider revisions to the test procedure. A new product class needs to be defined for condenser dryers; currently there is one waiver in effect. Numerous changes that are required prior to a standards rulemaking for clothes dryers, including the investigation of the same test cloth issues as for the clothes washer rulemaking.
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

Proposed Schedule and Rationale

Proposed Schedule	DOE does not plan to actively pursue rulemaking in the next year.
Rationale for Priority Level	Considered to be a low priority by stakeholders.

Standards

Product: Clothes Washers

Priority: Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2004-2030	The Final Rule energy savings equals 5.5 quads over 2004-2030. Required MEF of 1.04 in 2004 and 1.26 in 2007.
Potential Economic Benefits/Burdens	The Net Present Value (NPV) is \$15.3 billion cumulative from 2004 to 2030 in 1997 dollars.
Potential Environmental or Energy Security Benefits	For period 2004- 2030, 95 million metric tons of carbon and 254 thousand metric tons of NO _x .
Status of Required Changes to Test Procedures	Final Rule issued January 12, 2001. Changes to the test procedure were incorporated into the standards rulemaking.
Other Regulatory Actions	DOE regulation of clothes dryers. DOE regulation of white goods for full line manufacturers.
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	Consortium for Energy Efficiency program with utilities. Energy Star program. Federal Energy Management Program for procurement initiative. At least three U.S. manufacturers are marketing high efficient clothes washers.
Issues	
FY 2003 Priority	Low

Proposed Schedule and Rationale

Proposed Schedule	Final Rule - January, 2001
Rationale for Priority Level	Final Rule published January 12, 2001.

Test Procedure

Product: Clothes Washers

Priority: High

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure was changed as part of the standards rulemaking.
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	Low
	Concern over the correction factor applied to the test cloth needs to be resolved prior to effective date of the standard in 2004.

Proposed Schedule and Rationale

Proposed Schedule	Interim Final Rule FY 2004.
Rationale for Priority Level	The Association of Home Appliance Manufacturers (AHAM) requested revision to clothes washer test procedure per letter April 2, 2003.

Test Procedure

Product: Commercial Air Conditioners & Heat Pumps (DOE accepts ASHRAE 90.1-1999 test procedures for all commercial air conditioner and heat pump products.)

Priority: High

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Standards set by EPACT have been amended upon revision of ASHRAE 90.1 as of January 12, 2001.
Priority of Standard	Low for most products.
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

Proposed Schedule and Rationale

Proposed Schedule	Final Rule should be published in FY 2004.
Rationale for Priority Level	2003 Priority Setting

Standards

Product: Commercial Air-Cooled Central Air Conditioners and Air-Source Heat Pumps, 65-240 kBtu/h¹

Priority: High

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2005-2030	0.50 ² (to go beyond ASHRAE Standard 90.1-1999 levels)
Potential Economic Benefits/Burdens	0.4 (estimated NPV, billions of \$1998)
Potential Environmental or Energy Security Benefits	Carbon emissions reduction – est. 7 million tons.
Status of Required Changes to Test Procedures	DOE plans to publish Final Rule to incorporate the test procedures referred to in ASHRAE Standard 90.1 into the CFR in FY 2004.
Other Regulatory Actions	Possible State and regional environmental regulation (e.g. air quality).
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	None known.
Issues	Revised ASHRAE 90.1 standards approved June 1999, which would save an estimated 2.2 quads from 2005-2030. DOE will consider higher standards for additional energy savings.
FY 2003 Priority	High

Proposed Schedule and Rationale

Proposed Schedule	DOE initiated a rulemaking in FY 2002.
Rationale for Priority Level	Energy savings are significant. 2003 Priority Setting

¹ DOE is currently performing an analysis of impacts of standards including energy savings, life-cycle cost, national net-present-value, and engineering analyses. The results of this analysis will be made available for public comment once they are completed.

² Based on Screening Analysis Report for Commercial HVAC Standards, see 65 FR 30929

Standards

Product: Commercial Central Air Conditioners and Heat Pumps, 3 phase, <65 kBtu/h³

Priority: High

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2004 - 2030	SEER 13 standard level = 2.9 ⁴ SEER 12 standard level = 2.17
Potential Economic Benefits/Burdens	SEER 13 = (0.7) (NPV, billions of \$1998) SEER 12 = 1.1 (NPV, billions of \$1998)
Potential Environmental or Energy Security Benefits	Carbon emissions reduction: SEER 12 = 34 million tons, SEER 13 = 43 million tons
Status of Required Changes to Test Procedures	DOE plans to publish Final Rule to incorporate the test procedures referred to in ASHRAE Standard 90.1 into the CFR early in FY 2004.
Other Regulatory Actions	Possible State and regional environmental regulation (e.g. air quality).
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	None known.
Issues	
FY 2003 Priority	Medium

Proposed Schedule and Rationale

Proposed Schedule	DOE plans to initiate rulemaking for three phase in FY 2004.
Rationale for Priority Level	Energy savings are significant.

³ DOE is currently performing an analysis of impacts of standards including energy savings, life-cycle cost, national net-present-value, and engineering analyses. The results of this analysis will be made available for public comment once they are completed.

⁴ Based on Screening Analysis Report for Commercial HVAC Standards, see 65 FR 30929

Standards

Product: Commercial Furnaces

Priority: Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2005-2030	0.5 ⁵ (ASHRAE Standard 90.1-1999)
Potential Economic Benefits/Burdens	Not available.
Potential Environmental or Energy Security Benefits	Specific estimates of emission reductions have not been developed however, estimated energy savings indicated above are indicative of the comparative emission benefits that are likely to be possible. Expected oil savings are minimal.
Status of Required Changes to Test Procedures	DOE plans to publish Final Rule to incorporate the test procedures referred to in ASHRAE Standard 90.1 into the CFR early in FY 2004.
Other Regulatory Actions	Possible State and regional environmental regulation (e.g. air quality).
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	None known.
Issues	Revised ASHRAE 90.1 standards approved June 1999.
FY 2003 Priority	Low

Proposed Schedule and Rationale

Proposed Schedule	Final Rule published January 12, 2001.
Rationale for Priority Level	Standards set by EPACT were amended to adopt revised ASHRAE 90.1. No further action.

⁵ Based on Screening Analysis Report for Commercial HVAC Standards, see 65 FR 30929

Test Procedure

Product: Commercial Furnaces

Priority: High

Factors for Priority Setting	Assessment	
Relationship to Changes in Standard	Standards set by EPACT have been amended upon revision of ASHRAE 90.1 as of January 12, 2001.	
Priority of Standard		Low
International or Other Coordinating Activities		
Recommendation by Interested Parties		
Statutory Deadline		
Issues		

Proposed Schedule and Rationale

Proposed Schedule	Final rule should be published in FY2004
Rationale for Priority Level	

Standards

Product: Commercial Oil and Gas-Fired Packaged Boilers

Priority: High

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2004-2030	0.28 ⁶ (to go beyond ASHRAE Standard 90.1-1999 levels)
Potential Economic Benefits/Burdens	0.2 (NPV, billions of \$1998)
Potential Environmental or Energy Security Benefits	Carbon emissions reduction – 4 million tons.
Status of Required Changes to Test Procedures	DOE plans to publish Final Rule to incorporate the test procedures referred to in ASHRAE Standard 90.1 into the CFR early in FY 2004.
Other Regulatory Actions	Possible State and regional environmental regulation (e.g. air quality).
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	None known.
Issues	Revised ASHRAE 90.1 standards approved June 1999, which would save an estimated 0.06 quads from 2001-2030. DOE will consider higher standards for additional energy savings.
FY 2003 Priority	High

Proposed Schedule and Rationale

Proposed Schedule	DOE has initiated work in support of rulemaking in FY 2003.
Rationale for Priority Level	Energy savings are significant.

⁶ Based on Screening Analysis Report for Commercial HVAC Standards, see 65 FR 30929

Test Procedure

Product: Commercial Oil and Gas-Fired Packaged Boilers

Priority: High

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Standards set by EPACT are being amended upon revision of ASHRAE 90.1 High
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

Proposed Schedule and Rationale

Proposed Schedule	Final rule should be published in FY2004.
Rationale for Priority Level	

Coverage

Product: Commercial Reach-In Refrigeration/Freezers

Priority: High

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1995-2030	.09 – 1.16
Potential Economic Benefits/Burdens	Not Available.
Potential Environmental or Energy Security Benefits	Specific estimates of emission reductions have not been developed
Status of Required Changes to Test Procedures	
Other Regulatory Actions	
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	
Issues	This is being considered in draft legislation by Congress.
FY 2003 Priority	N/A

Proposed Schedule and Rationale

Proposed Schedule	Final Rule FY 2004.
Rationale for Priority Level	2003 Priority Setting

Standards

Product: Commercial Water Cooled Air Conditioners & Water Source Heat Pumps
(Products for which DOE adopted ASHRAE 90.1-1999 levels)

Priority: Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2005-2030	0.6 ⁷ (ASHRAE Standard 90.1-1999)
Potential Economic Benefits/Burdens	Not available.
Potential Environmental or Energy Security Benefits	Specific estimates of emission reductions have not been developed however, energy savings indicated above are indicative of the comparative emission benefits that are likely to be possible. Expected oil savings are minimal.
Status of Required Changes to Test Procedures	DOE plans to publish Final Rules to incorporate the test procedures referred to in ASHRAE Standard 90.1 into the CFR in FY 2004.
Other Regulatory Actions	EPA phase out of HCFC refrigerants.
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	None known.
Issues	
FY 2003 Priority	Low

Proposed Schedule and Rationale

Proposed Schedule	Final Rule published January 12, 2001. 1999 levels
Rationale for Priority Level	Standards set for water-source water-cooled and evaporatively cooled commercial air conditioning and heating equipment by EPACK were amended to adopt revised ASHRAE 90.1.

⁷ Based on Screening Analysis Report for Commercial HVAC Standards, see 65 FR 30929.

Standards

Product: Commercial Water Heaters

Priority: Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2005-2030	0.07 ⁸
Potential Economic Benefits/Burdens	Not available.
Potential Environmental or Energy Security Benefits	Specific estimates of emission reductions have not been developed however, estimated energy savings indicated above are indicative of the comparative emission benefits that are likely to be possible. Expected oil savings are minimal.
Status of Required Changes to Test Procedures	DOE plans to publish the Final Rule to incorporate the test procedures referred to in ASHRAE Standard 90.1 into the CFR in FY 2004.
Other Regulatory Actions	
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	None known.
Issues	Revised ASHRAE 90.1 standards approved June 1999.
FY 2003 Priority	Low

Proposed Schedule and Rationale

Proposed Schedule	Final Rule January 2001.
Rationale for Priority Level	Standards set by EPACT have been amended to adopt revised ASHRAE 90.1-1999 levels for gas- and oil-fired storage water heaters

⁸ Based on Screening Analysis Report for Commercial HVAC Standards, see 65 FR 30929

Test Procedure

Product: Commercial Water Heaters

Priority: High

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Standards set by EPACT have been amended upon revision of ASHRAE 90.1 as of January 12, 2001
Priority of Standard	Low
International or Other Coordinating Activities	ASHRAE is in process of revising (SPC 118.1). Will include heat pump water heaters.
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

Proposed Schedule and Rationale:

Proposed Schedule	Final rule should be published in FY2004
Rationale for Priority Level	

Standards

Product: Cooking Products - Gas & Electric Ovens, Cooktops, and Microwave Ovens

Priority: Low

Factors for Priority Setting	Assessment						
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1999 – 2030	Total ranges considered (Gas only): ⁹ <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><u>Ovens</u></td> <td style="text-align: center;"><u>Cooktops</u></td> </tr> <tr> <td style="text-align: center;">[0.2 - 0.4]</td> <td style="text-align: center;">[0.1 – 0.2]</td> </tr> </table>	<u>Ovens</u>	<u>Cooktops</u>	[0.2 - 0.4]	[0.1 – 0.2]		
<u>Ovens</u>	<u>Cooktops</u>						
[0.2 - 0.4]	[0.1 – 0.2]						
Potential Economic Benefits/Burdens	Total ranges considered (Gas only): <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><u>Ovens</u></td> <td style="text-align: center;"><u>Cooktops</u></td> </tr> <tr> <td style="text-align: center;">[(1.4) - 0.2]</td> <td style="text-align: center;">[(0.9) - 0.1]</td> </tr> </table> Cumulative Net Present Value, 1999-2030, billions 1990\$ @ 7% discount rate	<u>Ovens</u>	<u>Cooktops</u>	[(1.4) - 0.2]	[(0.9) - 0.1]		
<u>Ovens</u>	<u>Cooktops</u>						
[(1.4) - 0.2]	[(0.9) - 0.1]						
Potential Environmental or Energy Security Benefits	Total ranges considered (Gas and Electric not including Microwave): ⁹ <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><u>Ovens</u></td> <td style="text-align: center;"><u>Cooktops</u></td> </tr> <tr> <td style="text-align: center;">NOx [11 - 239]</td> <td style="text-align: center;">NOx [0 - 65]</td> </tr> <tr> <td style="text-align: center;">CO₂ [6 - 133]</td> <td style="text-align: center;">CO₂ [0 - 36]</td> </tr> </table> Cumulative emission reductions, 1999-2030, in (kt) for NOx, and (Mt) for CO ₂ .	<u>Ovens</u>	<u>Cooktops</u>	NOx [11 - 239]	NOx [0 - 65]	CO ₂ [6 - 133]	CO ₂ [0 - 36]
<u>Ovens</u>	<u>Cooktops</u>						
NOx [11 - 239]	NOx [0 - 65]						
CO ₂ [6 - 133]	CO ₂ [0 - 36]						
Status of Required Changes to Test Procedures							
Other Regulatory Actions	DOE regulation of white goods for full line manufacturers.						
Recommendations by Interested Parties							
Evidence of Market-Driven or Voluntary Efficiency Improvements	None known.						
Issues	Pilotless designs may require installation of an electrical outlet. Loss of consumer utility if loss of electrical power. If a loss of electricity, cannot use oven.						
FY 2003 Priority	Low						

Proposed Schedule and Rationale

Proposed Schedule	Final Rule, no new standards for electric cooking products including microwave ovens, issued - September 8, 1998 Final Rule gas cooking products - DOE does not plant to pursue rulemaking in the next year.
Rationale for Priority Level	Potential energy savings are low to moderate. Analysis too old to use - requires new analysis for rulemaking.

⁹ Based on Draft Report, April 1996 and Supplemental Analysis, November 1997

Test Procedure

Product: Cooking Products - Gas & Electric Ovens, Cooktops, and Microwave Ovens

Priority: Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure needed to be changed for standard. Low
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

Proposed Schedule and Rationale

Proposed Schedule	Final Rule issued - October 3, 1997
Rationale for Priority Level	

Standards

Product: Direct Heating Equipment (Gas)

Priority: Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1998-2030	Total range considered: [0 - 0.1] ¹⁰
Potential Economic Benefits/Burdens	[(1.4) - 0.1] NPV, Billions of 1990\$ @ 7%
	0 0.1 (0.6) (1.4)
Potential Environmental or Energy Security Benefits	SO ₂ 0 (7) (140) (320)
	NO _x 0 (6) (132) (301)
	CO ₂ 0 (3) (72) (165)
	Emission reductions in (kt) for SO ₂ and NO _x , and (Mt) for CO ₂ .
Status of Required Changes to Test Procedures	Final rule published 5/12/97.
Other Regulatory Actions	None known that will impact product.
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	None known.
Issues	Fuel switching. Rural communities use for backup heating during power outages. Utility concern with electronic ignition.
FY 2003 Priority	Low

Proposed Schedule and Rationale

Proposed Schedule	DOE does not plan to actively pursue rulemaking in the next year. Work would be limited to basic technology investigation and monitoring of voluntary programs.
Rationale for Priority Level	Interested parties believe this is a low priority product. Potential energy savings are low.

¹⁰ Based on DOE preliminary analysis, June 1995

Test Procedure

Product: Direct Heating Equipment (Gas)

Priority: Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure not needed to be changed for standard Low
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

Proposed Schedule and Rationale

Proposed Schedule Rationale for Priority Level	Final Rule issued May 12, 1997.
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Standards

Product: Dishwashers

Priority: Medium

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2008 - 2030	Best Available (as listed in Energy Star) (1.05 EF) = 1.4 Soil Sensor = 0.9 Current Energy Star Dishwasher (0.58 EF) = 0.4
Potential Economic Benefits/Burdens	Not available.
Potential Environmental or Energy Security Benefits	Not available.
Status of Required Changes to Test Procedures	Test procedure is being revised to better reflect energy consumption for new technologies (e.g. adaptive controls) and reduced annual cycles.
Other Regulatory Actions	DOE regulation for energy efficiency of other white goods for full line manufacturers.
Recommendations by Interested Parties	Some manufacturers believe that updating the dishwasher standard should be given a low priority.
Evidence of Market-Driven or Voluntary Efficiency Improvements	Energy Savers program. Federal Energy Management Program for procurement initiative. At least two U.S. manufacturers are marketing adaptive control dishwashers. ENERGY STAR program.
Issues	Increased efficiency may impact product utility (e.g. may require pre-rinsing of dishes or cleaning of filters) or the availability of affordable models (contract housing). Possible increase in standby energy consumption from displays.
FY 2003 Priority	Medium

Proposed Schedule and Rationale

Proposed Schedule	DOE does not plan to actively pursue rulemaking in the next year. Work would be limited to basic technology investigation and monitoring of voluntary programs.
Rationale for Priority Level	Estimated potential energy savings of the ENERGY STAR level are low; the "Best Available" level is not appropriate for rulemaking.

Test Procedure

Product: Dishwashers

Priority: High

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure needed to be changed for standard.
Priority of Standard	Medium
International or Other Coordinating Activities	Efforts underway to harmonize international test procedures should include dishwashers.
Recommendation by Interested Parties	Manufacturers support a test procedure revision for more accurate testing of new adaptive control models. Industry working on revising its test procedure suggestions to encompass the variety of sensor techniques now in the market.
Statutory Deadline	
Issues	New technology in product, i.e. smart controls, fuzzy logic.

Proposed Schedule and Rationale:

Proposed Schedule	DOE expects to publish a final rule in FY 2004.
Rationale for Priority Level	New technology in product, i.e. smart controls, fuzzy logic (e.g., dirt sensors).

Standards

Product: Distribution Transformers¹¹

Priority: High

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1995-2030	[0.39-10.7] ¹²
Potential Economic Benefits/Burdens	Not available.
Potential Environmental or Energy Security Benefits	Specific estimates of emission reductions have not been developed however, estimated energy savings indicated above are indicative of the comparative emission benefits that are likely to be possible. Expected oil savings are minimal.
Status of Required Changes to Test Procedures	Need to publish a test procedure before rule.
Other Regulatory Actions	None known.
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	EPA Energy Star program for liquid immersion transformers. NEMA IS TP-1 promotes energy efficient electrical products.
Issues	NEMA recommends adoption of voluntary standards as specified in TP-1. Potential energy savings from regulatory action questioned by NEMA.
FY 2003 Priority	High

Proposed Schedule and Rationale

Proposed Schedule	DOE expects to publish advance notice of proposed rulemaking in FY 2004
Rationale for Priority Level	Potential for significant energy savings through regulatory action under EPCA, as amended by EPAct.

¹¹ DOE is currently performing an analysis of impacts of standards including energy savings, life-cycle cost, national net-present-value, and engineering analyses. The results of this analysis will be made available for public comment once they are completed.

¹² Based on DOE determination notice, October 22, 1997

Test Procedure

Product: Distribution Transformers

Priority: High

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure needs to be established for standard.
Priority of Standard	High
International or Other Coordinating Activities	
Recommendation by Interested Parties	NEMA recommends using NEMA TP-2 test standard.
Statutory Deadline	
Issues	Sampling Plan; Definitions of Covered Products, Basic Mode Definition.

Proposed Schedule and Rationale:

Proposed Schedule	DOE plans to issue a supplemental notice of proposed rulemaking in FY 2004
Rationale for Priority Level	Test procedure needs to be established for Standard rulemaking in FY 2004.

Standards

Product: Electric Motors, 1 - 200 HP

Priority: Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads)	Estimated 31.3 billion kWh/yr (0.106Quad/yr) could be saved through enforcement of EPCA standards that became effective 1997. Certification program to take effect in early 2003.
Potential Economic Benefits/Burdens	Not Available.
Potential Environmental or Energy Security Benefits	Not Available.
Status of Required Changes to Test Procedures	Final rule for test procedures published October 5, 1999.
Other Regulatory Actions	None known that will impact product.
Recommendations by Interested Parties	Enforcement
Evidence of Market-Driven or Voluntary Efficiency Improvements	ASHRAE 90.1. Consortium for Energy Efficiency program with utilities. Motor Challenge. Motor Master+. NEMA Premium efficient motors programs.
Issues	DOE regulates system efficiencies (e.g. HVAC) where motors are components of such systems.
FY 2003 Priority	Low

Proposed Schedule and Rationale

Proposed Schedule	DOE does not plan to actively pursue rulemaking in the next two years. Work would be limited to basic technology investigation and monitoring of voluntary programs.
Rationale for Priority Level	Interested Parties believe this is a low priority product. Potential energy savings are unknown at this time. Determination required by EPCA

Test Procedure

Product: Electric Motors, 1 - 200 HP

Priority: Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure needed to be revised to support the standard
Priority of Standard	Low
International or Other Coordinating Activities	Natural Resources Canada: Energy Efficiency Regulations for Electric Motors International Electro technical Commission/International Standards Organization (IEC/ISO)
Recommendation by Interested Parties	Manufacturers and energy efficiency advocates support test procedure rulemaking.
Statutory Deadline	
Issues	Expect DOE test procedure to be revised for compatibility with global (IEC/ISO) test procedure.

Proposed Schedule and Rationale

Proposed Schedule	Final Rule – October 5, 1999
Rationale for Priority Level	Final Rule published .

Standards

Product: Fluorescent Lamp Ballasts

Priority: Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2005-2030	1.2 – 2.3 (FY 2000 Final Rule)
Potential Economic Benefits/Burdens	1.4 – 2.6 NPV, billions of 1997\$ @ 7% (FY 2000 Final Rule)
Potential Environmental or Energy Security Benefits	
Status of Required Changes to Test Procedures	None required.
Other Regulatory Actions	
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	EPA Green Lights and Energy Star Buildings, ASHRAE 90.1, DOE's FEMP Procurement Guidelines and Federal Relighting Initiative, EPCAct 1992 Voluntary Luminaire Testing and Rating Program, The Energy Cost Savings Council, and some utility DSM programs.
Issues	
FY 2003 Priority	Low

Dchedule and Rationale

Proposed Schedule	Final Rule –published in September, 2000
Rationale for Priority Level	Final Rule published in FY2000.

Test Procedure

Product: Fluorescent Lamp Ballasts

Priority: Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Efficiency levels for new standards are already in the market and are covered by existing standards and test procedures. Low
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

Proposed Schedule and Rationale

Proposed Schedule	DOE does not plan to pursue rulemaking in the next year.
Rationale for Priority Level	

Standards Determination

Product: High Intensity Discharge (HID) Lamps

Priority: High

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1995-2030	1.4
Potential Economic Benefits/Burdens	Not Available.
Potential Environmental or Energy Security Benefits	Specific estimates of emission reductions have not been developed
Status of Required Changes to Test Procedures	IES and ANSI procedures are in place. Issues with definitions, covered products and sampling.
Other Regulatory Actions	EPA mercury disposal requirements apply.
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	Market-driven replacement of inefficient mercury vapor lamps with metal halide and high-pressure sodium lamps has occurred but the Department does not expect this trend to continue into the future.
Issues	
FY 2003 Priority	High

Proposed Schedule and Rationale:

Proposed Schedule	DOE plans a determination notice for FY 2004.
Rationale for Priority Level	Determination required by EPACT.

Test Procedure

Product: High Intensity Discharge (HID) Lamp

Priority: Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure needs to be developed for standard. Low
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

Proposed Schedule and Rationale

Proposed Schedule	No work expected during FY2004.
Rationale for Priority Level	

Standards

Product: Lamps, Fluorescent

Priority: Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2008 - 2030	<i>Best Available</i> FEMP procurement recommendation levels (4-foot, 8-foot, and U-tube lamps) = 0.47 <i>Recommended</i> FEMP procurement recommendation levels (4-foot, 8-foot, and U-tube lamps) = 0.14
Potential Economic Benefits/Burdens	Not Available.
Potential Environmental or Energy Security Benefits	Not Available.
Status of Required Changes to Test Procedures	IES and ANSI procedures are in place, DOE test procedure Final Rule issued May 29, 1997.
Other Regulatory Actions	Existing EPA mercury disposal requirements apply, but EPA issued a final rule July 6, 1999, including lamps as Universal Hazardous Waste.
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	EPA Green Lights/Energy Star Buildings, ASHRAE 90.1, FEMP Procurement Guidelines and Federal Relighting Initiative, and some utility DSM programs.
Issues	Because lamps are components of systems, establishment of standards is more difficult.
FY 2003 Priority	Low

Proposed Schedule and Rationale

Proposed Schedule	DOE does not plan to actively pursue rulemaking in the next year.
Rationale for Priority Level	Low energy savings potential.

Test Procedure

Product: Lamps, Fluorescent

Priority: Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure changes not needed for standard
Priority of Standard	Low
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

Proposed Schedule and Rationale

Proposed Schedule	Final Rule issued May 29, 1997
Rationale for Priority Level	

Standards

Product: Lamps, Incandescent General Service

Priority: Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2008 - 2030	17% efficacy increase (halogen lamp)= 8.52 3% efficacy increase = 1.57 1.5% efficacy increase = 0.80
Potential Economic Benefits/Burdens	Not Available.
Potential Environmental or Energy Security Benefits	Not Available.
Status of Required Changes to Test Procedures	IES and ANSI procedures are in place, DOE test procedure Final Rule issued May 29, 1997.
Other Regulatory Actions	
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	EPA Green Lights/Energy Star Buildings, ASHRAE 90.1, FEMP Federal Relighting Initiative, and some utility DSM programs, Voluntary Luminaire Testing and Rating Program.
Issues	Because lamps are components of systems, establishment of standards is more difficult.
FY 2003 Priority	Low

Proposed Schedule and Rationale

Proposed Schedule	DOE does not plan to actively pursue rulemaking in the next year
Rationale for Priority Level	Low priority because the more efficient technologies do not appear to be economically viable for this very mature technology.

Test Procedure

Product: Lamps, Incandescent General Service

Priority: Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure changes not needed for standard.
Priority of Standard	Low
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

Proposed Schedule and Rationale

Proposed Schedule	Final Rule issued May 29, 1997
Rationale for Priority Level	

Standards

Product: Lamps, Incandescent Reflector

Priority: Low

Factors for Priority Setting	Assessment	
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2008 - 2030	Currently Regulated 30% efficacy increase (HIR) = 1.43 3% efficacy increase = 0.18 1.5% efficacy increase = 0.09 Note: Halogen (H); Halogen Infrared Reflector (HIR)	Currently Unregulated 54% efficacy increase (HIR) = 2.23 18% efficacy increase (H) = 1.0 1.5% efficacy increase = 0.1
Potential Economic Benefits/Burdens	Not Available.	
Potential Environmental or Energy Security Benefits	Not Available.	
Status of Required Changes to Test Procedures	IES and ANSI procedures are in place, DOE test procedure Final Rule issued May 29, 1997.	
Other Regulatory Actions		
Recommendations by Interested Parties		
Evidence of Market-Driven or Voluntary Efficiency Improvements	EPA Green Lights/Energy Star Buildings, ASHRAE 90.1, FEMP Federal Relighting Initiative, and some utility DSM programs, Voluntary Luminaire Testing and Rating Program.	
Issues	Because lamps are components of systems, establishment of standards is more difficult.	
FY 2003 Priority	Low	

Proposed Schedule and Rationale

Proposed Schedule	DOE plans to assess whether to classify currently exempt incandescent reflector lamps as covered products.
Rationale for Priority Level	Based on completion of assessment.

Test Procedure

Product: Lamps, Incandescent Reflector

Priority: Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure changes not needed for standard.
Priority of Standard	Low
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

Proposed Schedule and Rationale

Proposed Schedule	Final Rule issued May 29, 1997
Rationale for Priority Level	

Coverage

Product: Lamps, Incandescent Reflector – ER/BR

Priority: High

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1995-2030	0.19 – 3.17
Potential Economic Benefits/Burdens	Not Available.
Potential Environmental or Energy Security Benefits	Specific estimates of emission reductions have not been developed
Status of Required Changes to Test Procedures	
Other Regulatory Actions	
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	
Issues	
FY 2003 Priority	N/A

Proposed Schedule and Rationale

Proposed Schedule	Final Rule FY 2004
Rationale for Priority Level	2003 Priority Setting

Standards

Product: Packaged Terminal Air Conditioners and Heat Pumps

Priority: High

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2004 - 2030	0.56 ¹³ (to go beyond ASHRAE Standard 90.1-1999 replacement equip. levels) 0.03 (to go beyond ASHRAE Standard 90.1-1999 new construction equip. levels)
Potential Economic Benefits/Burdens	0.6 above replacement equip. levels (NPV, billions of \$1998) .01 above new construction equip. levels (NPV, billions of \$1998)
Potential Environmental or Energy Security Benefits	Carbon emissions reduction = 8 million tons (above replacement equip. levels), 1 million tons (above new construction equip. levels)
Status of Required Changes to Test Procedures	DOE plans to publish Final Rules to incorporate the test procedures referred to in ASHRAE Standard 90.1 into the CFR by FY 2004.
Other Regulatory Actions	EPA phase out of HCFC refrigerants.
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	None known.
Issues	Revised ASHRAE 90.1 standards approved 6/99, which would save an estimated 0.11 quads from 2001-2030. DOE will consider higher standards for additional energy savings.
FY 2004 Priority	High

Proposed Schedule and Rationale

Proposed Schedule	DOE has initiated a rulemaking in FY2003.
Rationale for Priority Level	Energy savings are significant.

¹³ Based on Screening Analysis Report for Commercial HVAC Standards, see 65 FR 30929

Standards

Product: Plumbing Fixtures/Fittings

Priority: Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads)	The Department has not conducted any recent analysis regarding potential energy savings for this product.
Potential Economic Benefits/Burdens	Not available.
Potential Environmental or Energy Security Benefits	Not available.
Status of Required Changes to Test Procedures	
Other Regulatory Actions	None.
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	None known.
Issues	As flow rates and water consumption decline the effects on utility need to be carefully considered.
FY 2003 Priority	Low

Proposed Schedule and Rationale

Proposed Schedule	DOE does not plan to actively pursue rulemaking in the next year. Work would be limited to basic technology investigation and monitoring of voluntary programs.
Rationale for Priority Level	Dependent upon revision by ASME and approval by ANSI to ASME/ANSI A112.18.1 and ASME/ANSI A112.19.6.

Test Procedure

Product: Plumbing Fixtures/Fittings

Priority: Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Low
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

Proposed Schedule and Rationale

Proposed Schedule	Final Rule - March 18, 1998
Rationale for Priority Level	

Standards

Product: Pool Heaters (Gas)

Priority: Low

Factors for Priority Setting	Assessment												
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2000-2030	Total range considered: [0.2 - 0.9] ¹⁴ Specific examples below: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"><u>IID, (78% E_T)</u></td> <td style="text-align: center;"><u>Non-condensing limit, (82.2% E_T)</u></td> <td style="text-align: center;"><u>Condensing, (90.8% E_T)</u></td> </tr> <tr> <td style="text-align: center;">0.2</td> <td style="text-align: center;">0.4</td> <td style="text-align: center;">0.7</td> </tr> </table>	<u>IID, (78% E_T)</u>	<u>Non-condensing limit, (82.2% E_T)</u>	<u>Condensing, (90.8% E_T)</u>	0.2	0.4	0.7						
<u>IID, (78% E_T)</u>	<u>Non-condensing limit, (82.2% E_T)</u>	<u>Condensing, (90.8% E_T)</u>											
0.2	0.4	0.7											
Potential Economic Benefits/Burdens	Total range: [(1.4) - 0.2] ¹⁶ Cumulative Net Present Value, Billions 1990\$ @ 7% <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"><u>IID, (78% E_T)</u></td> <td style="text-align: center;"><u>Non-condensing limit, (82.2% E_T)</u></td> <td style="text-align: center;"><u>Condensing, (90.8% E_T)</u></td> </tr> <tr> <td style="text-align: center;">0.2</td> <td style="text-align: center;">0.2</td> <td style="text-align: center;">(0.6)</td> </tr> </table>	<u>IID, (78% E_T)</u>	<u>Non-condensing limit, (82.2% E_T)</u>	<u>Condensing, (90.8% E_T)</u>	0.2	0.2	(0.6)						
<u>IID, (78% E_T)</u>	<u>Non-condensing limit, (82.2% E_T)</u>	<u>Condensing, (90.8% E_T)</u>											
0.2	0.2	(0.6)											
Potential Environmental or Energy Security Benefits	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"><u>IID, (78% E_T)</u></td> <td style="text-align: center;"><u>Non-cond. limit, (82.2% E_T)</u></td> <td style="text-align: center;"><u>Condensing, (90.8% E_T)</u></td> </tr> <tr> <td>NOx</td> <td style="text-align: center;">42</td> <td style="text-align: center;">42</td> </tr> <tr> <td>CO₂</td> <td style="text-align: center;">11</td> <td style="text-align: center;">18</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">35</td> </tr> </table> <p>Cumulative Emission reductions in (kt) for SO₂ and NO_x, and (Mt) for CO₂</p>	<u>IID, (78% E_T)</u>	<u>Non-cond. limit, (82.2% E_T)</u>	<u>Condensing, (90.8% E_T)</u>	NOx	42	42	CO ₂	11	18			35
<u>IID, (78% E_T)</u>	<u>Non-cond. limit, (82.2% E_T)</u>	<u>Condensing, (90.8% E_T)</u>											
NOx	42	42											
CO ₂	11	18											
		35											
Status of Required Changes to Test Procedures	Final rule issued 5/12/97.												
Other Regulatory Actions	None known that will impact product.												
Recommendations by Interested Parties													
Evidence of Market-Driven or Voluntary Efficiency Improvements	None known.												
Issues													
FY 2003 Priority	Low												

Proposed Schedule and Rationale

Proposed Schedule	DOE does not plan to actively pursue rulemaking in the next year. Work would be limited to basic technology investigation and monitoring of voluntary programs.
Rationale for Priority Level	Interested Parties believe this is a low priority product. Potential energy savings are low.

¹⁴ Based on DOE preliminary analysis, June 1995

Test Procedure

Product: Pool Heaters (Gas)

Priority: Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure not needed to be changed for standard.
Priority of Standard	Low
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

Proposed Schedule and Rationale

Proposed Schedule	Final rule issued May 12, 1997.
Rationale for Priority Level	

Standards

Product: Refrigerators, Refrigerator/Freezers, & Freezers

Priority: Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1998-2030	Energy Star (~10% more efficient) = 1.40 ¹⁵
Potential Economic Benefits/Burdens	Not available
Potential Environmental or Energy Security Benefits	Not available
Status of Required Changes to Test Procedures	No changes required for standards.
Other Regulatory Actions	EPA phase out of insulation HCFCs in 2003. DOE regulation of white goods for full line manufacturers.
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	Super Efficient Refrigerator Program (Golden Carrot). New York Housing Authority mass procurement. Energy Savers program. Significant quantities of new high efficiency models are being marketed.
Issues	Final Rule Issued - April 28, 1997.
FY 2003 Priority	Low

Proposed Schedule and Rationale

Proposed Schedule	Final Rule Issued - April 28, 1997
Rationale for Priority Level	Rule issued, effective July 1, 2001

¹⁵ Based on LBNL rough estimate, September, 2001. No formal analysis has been conducted for Department since the Final Rule was issued in 1997

Test Procedure

Product: Refrigerators, Refrigerator/Freezers, & Freezers

Priority: Medium for compact refrigerators and refrigerator/freezers, Low for all others.

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure not needed to be changed for standard.
Priority of Standard	Low
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	Tests at NIST have revealed deficiencies in the compact refrigerator test procedure. These will be corrected, probably by revising the test procedure for refrigerator to reference the AHAM HRF-1-2002.

Proposed Schedule and Rationale

Proposed Schedule	NIST tested compact refrigerators, and proposed a modification of the compact refrigerator test procedure. A separate Direct Final Rule to make a small modification to the defrost calculations for some models was published March 7, 2003.
Rationale for Priority Level	Compact refrigerator manufacturers have obtained inconsistent results when testing each other's products. Deficiencies in test procedure have been identified.

Standards

Product: Residential Central Air Conditioners & Heat Pumps (including Small Duct High Velocity)¹⁶

Priority: High - drops to Low priority upon completion of Small Duct High Velocity (SDHV)

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2006 - 2030 Potential Economic Benefits/Burdens Potential Environmental or Energy Security Benefits Status of Required Changes to Test Procedures Other Regulatory Actions Recommendations by Interested Parties Evidence of Market-Driven or Voluntary Efficiency Improvements Issues FY 2003 Priority	<p>N/A</p> <p>SDHV test procedures will be conducted concurrently with the standards.</p> <p>Separate rulemaking being conducted for SDHV.</p> <p>High</p>

Proposed Schedule and Rationale

Proposed Schedule	Residential CAC Final Rule May 23, 2002. The Department expects to publish a notice of proposed rule in FY 2004 (for SDHV).
Rationale for Priority Level	Separate class needed for SDHV.

¹⁶ DOE is currently performing an analysis of impacts of standards including energy savings, life-cycle cost, national net-present-value, and engineering analyses. The results of this analysis will be made available for public comment once they are completed.

Test Procedure

Product: Residential Central Air Conditioners & Heat Pumps (including SDHV)

Priority: High

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure for SDHV will be changed concurrently with the standard rulemaking. High
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

Proposed Schedule and Rationale

Proposed Schedule	Residential CAC Final Rule planned for FY2004 Residential CAC (SDHV) NOPR planned for FY2004
Rationale for Priority Level	A separate rulemaking to change the minimum external static test pressure for small duct high velocity units and promulgate new cycle degradation defaults began in early FY 2003. Test procedure being conducted concurrent with standards.

Test Procedure

Product: Residential Central Air Conditioners & Heat Pumps – Ductless Split Systems

Priority: Medium

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure does not need to be changed for standard.
Priority of Standard	High
International or Other Coordinating Activities	
Recommendation by Interested Parties	Ductless split system manufacturers would prefer to use calorimeter test.
Statutory Deadline	
Issues	Calorimeter test (which is used for room air conditioners) is more suitable and accurate for testing ductless split central air conditioners, but this test is not currently in the DOE central air conditioning test procedure.

Proposed Schedule and Rationale

Proposed Schedule	DOE plans to initiate work in support of rulemaking
Rationale for Priority Level	Change would make test procedure more accurate for this product.

Standards

Product: Residential Furnaces & Boilers¹⁷

Priority: High

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2012 - 2042	Total range considered: [1.8 - 15.1] ¹⁸ Specific examples below:
Potential Economic Benefits/Burdens	Not available.
Potential Environmental or Energy Security Benefits	Specific estimates of emission reductions have not been developed however, estimated energy savings indicated above are indicative of the comparative emission benefits that are likely to be possible. Expected oil savings are more significant than other products.
Status of Required Changes to Test Procedures	Final rule issued May 12, 1997.
Other Regulatory Actions	Possible State and regional environmental regulation. DOE regulation of central air conditioning/heat pump products.
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	Energy Star program. Wisconsin state condensing furnace/boiler program. ACEEE indicated that trend for higher efficiency products stopped in 1994.
Issues	Regional variations, venting and electricity issues.
FY 2003 Priority	High

Proposed Schedule and Rationale

Proposed Schedule	The Department expects to publish a notice in FY 2004.
Rationale for Priority Level	Potential energy savings are significant. Higher standards levels requiring technologies such as condensing furnaces would impact utility to consumers.

¹⁷ DOE is currently performing an analysis of impacts of standards including energy savings, life-cycle cost, national net-present-value, and engineering analyses. The results of this analysis will be made available for public comment once they are completed.

¹⁸ Based on LBNL rough estimate for gas only, September 2001. DOE is currently performing an analysis of impacts of standards including energy savings, life-cycle cost, rational net-present-value, and engineering analyses. The results of this analysis will be made available for public comment once they are completed.

Test Procedure

Product: Residential Furnaces & Boilers

Priority: Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure not needed to be changed for standard. The test procedure for combined space- and water-heating appliances (a separate product class within the standards rulemaking) needs to be developed. High ASHRAE SPC 124 has released for public review a test procedure for combined appliances.
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

Proposed Schedule and Rationale

Proposed Schedule	Final rule issued May 12, 1997.
Rationale for Priority Level	

Standards

Product: Residential Water Heaters - Gas, Oil & Electric

Priority: Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2004-2030	The Final Rule energy savings equals 4.6 quads over 2004-2030.
Potential Economic Benefits/Burdens	The Net Present Value (NPV) is \$2.0 billion cumulative from 2004 to 2030 in 1997 dollars.
Potential Environmental or Energy Security Benefits	For period 2004- 2030, 152 million metric tons of carbon and 273 thousand metric tons of NO _x .
Status of Required Changes to Test Procedures	Changes not required for standards. Final rule for test procedure was published in 1998.
Other Regulatory Actions	EPA phase out of HCFCs for insulation (2003). Consumer Product Safety Commission initiative for prevention of ignition of flammable vapors by gas water heaters.
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	Demand-side management programs for high efficiency water heaters.
Issues	Fuel switching. Replacement blowing agent for insulation. Installation in small spaces.
FY 2003 Priority	Low

Proposed Schedule and Rationale

Proposed Schedule	NOPR – April, 2000 Final Rule - January, 2001
Rationale for Priority Level	Final Rule published January 17, 2001. Reviewed April 12, 2001.

Test Procedure

Product: Residential Water Heaters - Gas, Oil & Electric

Priority: Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	No change needed
Priority of Standard	Low
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

Proposed Schedule and Rationale

Proposed Schedule	DOE does not plan to pursue rulemaking in the next year.
Rationale for Priority Level	Test procedure published in May, 1998.

Standards

Product: Room Air Conditioners

Priority: Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2008 -2030	~7% more efficient than Energy Star (~10.8 EER) = 0.7 ~15% more efficient than Energy Star (~11.5 EER) = 1.2 ¹⁹
Potential Economic Benefits/Burdens	Not available
Potential Environmental or Energy Security Benefits	Not available
Status of Required Changes to Test Procedures	Not required for standards.
Other Regulatory Actions	EPA phase out of HCFC-22 refrigerant.
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	DSM programs. Labeling program very effective.
Issues	Final Rule Issued - September 24, 1997
FY 2003 Priority	Low

Proposed Schedule and Rationale

Proposed Schedule	Final Rule Issued - September 24, 1997
Rationale for Priority Level	

¹⁹ LBNL estimate, September, 2001. No formal analysis has been conducted for Department since the Final Rule was issued in 1997

Test Procedure

Product: Room Air Conditioners

Priority: Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard Priority of Standard International or Other Coordinating Activities Recommendation by Interested Parties Statutory Deadline Issues	<p>Test Procedure not needed to be changed for standard</p> <p>Low</p> <p>There are no other existing or proposed test procedures specifically targeted at room air conditioners. The only possible alternative would be to develop a seasonal energy efficiency measure analogous to the SEER used for central air conditioners. It is uncertain how valuable such a seasonal standard would be in better predicting actual energy usage, as many people tend to use RACs as on-off devices.</p>

Proposed Schedule and Rationale

Proposed Schedule Rationale for Priority Level	DOE does not plan to pursue rulemaking in the next year.
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Standards Determination

Product: Small Electric Motors²⁰

Priority: High

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2010-2040	.15 – .121 quads ²¹
Potential Economic Benefits/Burdens	\$.09 billion – 1.29 billion
Potential Environmental or Energy Security Benefits	Specific estimates of emission reductions have not been developed however, estimated energy savings indicated above are indicative of the comparative emission benefits that are likely to be possible. Expected oil savings are minimal.
Status of Required Changes to Test Procedures	IEEE 114 – 2001 test procedure for single-phase induction motors was published May 24, 2002. IEEE 112 – 1996 test procedure for poly phase motors is in effect.
Other Regulatory Actions	Small motors used in NAECA “covered products” (e.g. white goods) and certain commercial equipment are exempt.
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	None known.
Issues	None.
FY 2003 Priority	High

Proposed Schedule and Rationale

Proposed Schedule	DOE plans to publish determination in FY2004.
Rationale for Priority Level	Determination required by EPCA.

²⁰ DOE is currently performing an analysis of impacts of standards including energy savings, life-cycle cost, national net-present-value, and engineering analyses. The results of this analysis will be made available for public comment once they are completed.

²¹ Based on analysis of Federal Conservation Standards for Small Electric Motors, Draft for Public Comment, June 2003

Test Procedure

Product: Small Electric Motors

Priority: Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard Priority of Standard International or Other Coordinating Activities Recommendation by Interested Parties Statutory Deadline Issues	Low

Proposed Schedule and Rationale

Proposed Schedule Rationale for Priority Level	Dependent upon Determination.
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Standards

Product: Tankless Gas-Fired Instantaneous Water Heaters²²

Priority: High

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2004-2030	0.10 ²³ (to go beyond ASHRAE Standard 90.1-1999 levels)
Potential Economic Benefits/Burdens	0.05 (NPV, billions of \$1998)
Potential Environmental or Energy Security Benefits	Carbon emissions reduction = 2 million tons.
Status of Required Changes to Test Procedures	DOE plans to publish the Final Rule to incorporate the test procedures referred in ASHRAE Standard 90.1 into the CFR in 2004.
Other Regulatory Actions	
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	None known.
Issues	This is being considered in draft legislation by Congress.
FY 2003 Priority	High

Proposed Schedule and Rationale:

Proposed Schedule	DOE has initiated work in support of rulemaking
Rationale for Priority Level	Re-evaluation of ASHRAE 90.1 1999 levels.

²² DOE is currently performing an analysis of impacts of standards including energy savings, life-cycle cost, national net-present-value, and engineering analyses. The results of this analysis will be made available for public comment once they are completed.

²³ Based on Screening Analysis Report for Commercial HVAC Standards, see 65 FR 30929

Coverage

Product: Torchieres

Priority: High

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1995-2030	.83 - 1.7
Potential Economic Benefits/Burdens	Not Available.
Potential Environmental or Energy Security Benefits	Specific estimates of emission reductions have not been developed
Status of Required Changes to Test Procedures	
Other Regulatory Actions	
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	
Issues	
FY 2003 Priority	N/A

Proposed Schedule and Rationale

Proposed Schedule	DOE expects to publish a notice in FY 2004.
Rationale for Priority Level	2003 Priority Setting