



U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy

Appliance and Equipment Standards

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Appliance & Equipment Standards Mission

The Appliance and Equipment Standards Program's Mission to Fulfill its Statutory Obligation to:

- Develop and amend energy conservation standards that achieve the maximum energy efficiency that is technologically feasible and economically justified.
- Develop and amend test procedures that are repeatable, reproducible, representative, and enforceable.
- Enforce its certification and compliance regulations to ensure consumer savings and manufacturer adherence to DOE requirements.

Appliance Standards Program History

- Over 60 products are covered by DOE's appliance standards program. These are known as "covered products."
- Covered products are responsible for 90% of residential building energy consumption, 60% of commercial building energy consumption, and approximately 29% of industrial energy consumption.
- DOE promulgates energy conservation standards and test procedures in a stakeholder-driven regulatory process that bases decisions on technical and economic merit, impacts on consumers, manufacturers, and the environment.
- Since 2010, DOE has vigorously enforced its standards and has assessed over \$7 million in penalties from manufacturers for various violations.
- DOE supports the Environmental Protection Agency ENERGY STAR program and Federal Trade Commission ENERGY GUIDE labeling through test procedure development and verification testing.

Impact of Appliance Standards

- The Department's Appliance and Equipment Standards Program helps consumers save billions of dollars on their energy bills by establishing minimum energy efficiency requirements for common household appliances and commercial products.
- Consumer utility bill savings totaled about \$40 billion a year as of 2010 and are expected to increase by more than 50 percent by 2030.
- Obama Administration greatly increasing impact:
 - **Since 2009**, the Obama administration issued **21 final rules** adopting energy conservation standards for **more than 30 products**. These standards could save consumers a total of over \$420 billion dollars off their utility bills between now and 2030 and reduce carbon dioxide emissions by nearly 2 billion metric tons.
 - Through the **end of 2016**, as outlined in the **Climate Action Plan**, DOE plans to issue additional energy conservation standards final rules that could save consumers an additional \$150 billion dollars off their utility bills and reduce carbon pollution by an additional 1 billion metric tons between now and 2030.
- Federal standards provide manufacturers with national marketplace versus state patchwork that would otherwise exist.

Appliance & Equipment Standards Goals

Goals: Appliance & Equipment Standards	
Mid-term (2020)	Issue 47 final rules between fiscal years 2014 and 2020.
Long-term (2030)	Reduce annual energy use by 10% (4 quads), reducing cumulative and carbon pollution by at least 3 billion metric tons by 2030.

Appliance & Equipment Standards Barriers & Strategies

Key Barriers

Informational: Limited understanding of technical analyses and procedures by those that are directly impacted by standards.

Technical: Practicability and availability issues related to including increasingly higher performance products in minimum standards.

Market: Impact of standards on manufacturers and first cost to consumers must be considered.

Institutional: Aggressive mandated deadlines must be met, while maximizing savings within budget.

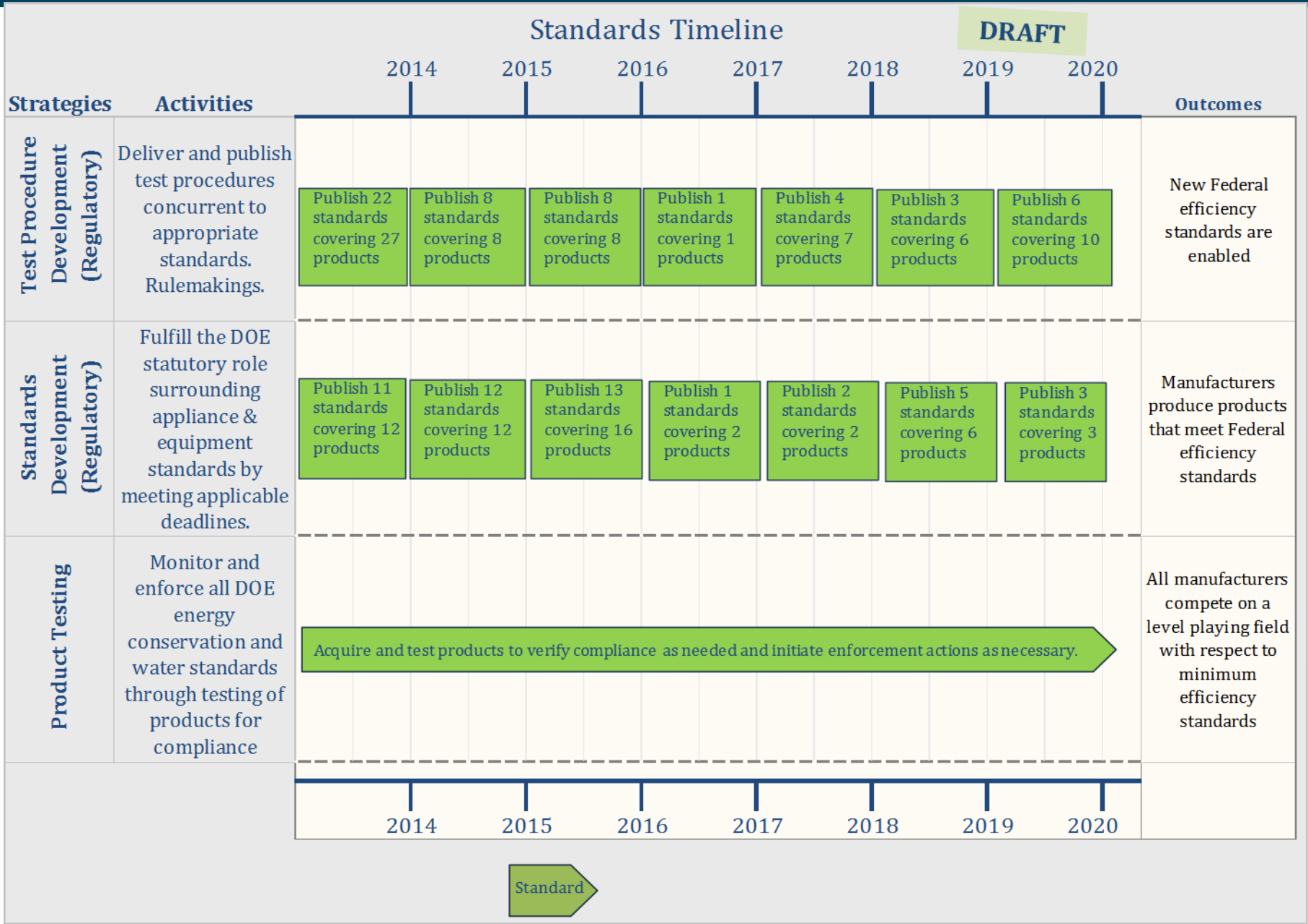
Strategies

Test Procedure Development: Enhance test procedures to capture innovative designs and are resistant to gaming.

Standards Development: Raise minimum standards and expand the scope of covered products.

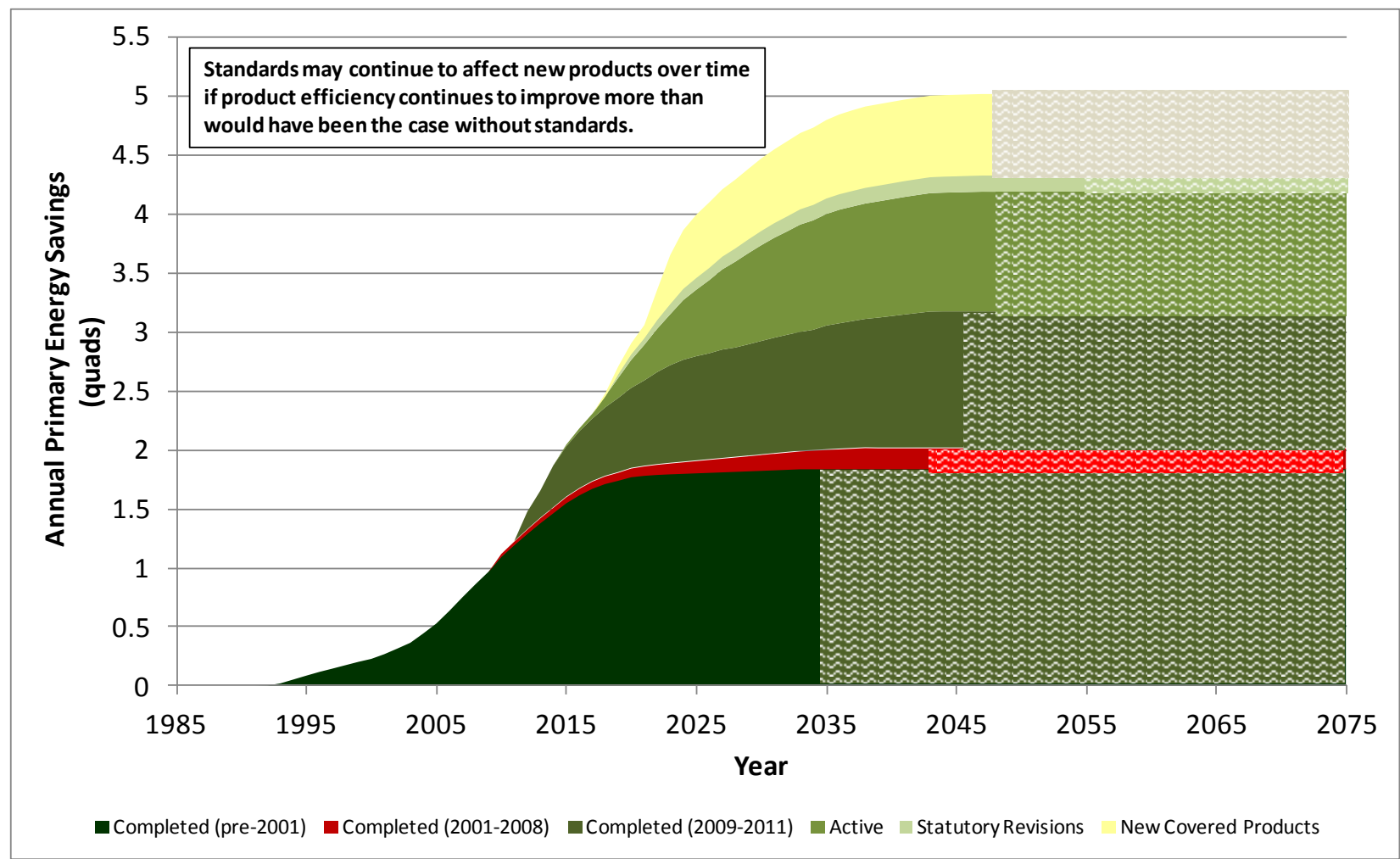
Enforcement: Increase compliance testing and enforce certification and compliance to standards and product representation.

Appliance & Equipment Standards Multi-Year Plan Timeline



Benefits of Standards: Energy Savings

The Energy Savings resulting from standards issued since January 2009 will accrue for decades and new standards will continue to provide savings



Appliance & Equipment Standards Priorities for FY15 and beyond

The Program's top priority will be the test procedure and standards rulemakings necessary to support the President's Climate Action Plan.

High priority will also be placed on:

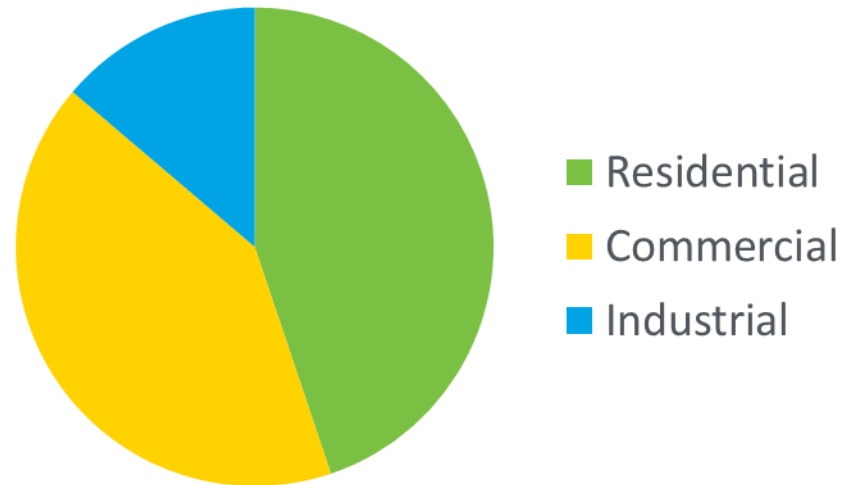
- Completing other test procedure rules needed to support DOE Standards and ENERGY STAR
- Ensuring compliance with DOE Standards and ENERGY STAR
- Supporting the technology assessments and test procedure development needed to meet the longer term needs of the program (post 2016).
- Improving linkages to BTO technology development programs

Current and Future Rulemakings:

2014-2016: Complete 26 standards rulemakings, covering 30 products

2017-2020: Complete 10 standards rulemakings, covering 12 products

Standards Rulemakings by Sector



Active Rulemakings

Product Category	Standards Stage	Test Procedure Stage
Automatic Commercial Ice Makers	Final Rule	
Ballast (Clarification)		NOPR
Beverage Vending Machines	Framework	NOPR
Battery Chargers	SNOPR	
Ceiling Fans and Ceiling Fan Light Kits	Preliminary Analysis	NOPR
Central Air Conditioners and Heat Pumps		SNOPR
Cooking Products	RFI	NOPR
Commercial and Industrial Fans and Blowers	Preliminary Analysis	NOPR
Commercial and Industrial Pumps	Preliminary Analysis	NOPR
Commercial Clothes Washers	NOPR	NOPR
Commercial Compressors	Preliminary Analysis	NOPR
Commercial Packaged Boilers	Framework	
Commercial Unitary Air Conditioners	NOPR	NOPR
Commercial Warm-Air Furnaces	NOPR	

Active Rulemakings - Continued

Product Category	Standards Stage	Test Procedure Stage
Commercial Water Heaters	NOPR	
Compact Fluorescent Lamps		NOPR
Computers and Related Equipment	Framework	NOPR
Dehumidifiers	Preliminary Analysis	NOPR
Direct Heating Equipment and Pool Heaters (Active Mode)		NOPR
Electric Motors	Final Rule	
Furnace Fans	Final Rule	
General Service Lamps	Framework	
GSFL and Incandescent Reflector Lamps	Final Rule	
Hearth Products	Framework	
High Intensity Discharge Lamps	NOPR	SNOPR
Illuminated Exit Signs		NOPR
Induction Cooking Products (Active-Mode)		NOPR
Light Emitting Diodes		SNOPR
Luminaires Lighting Systems		RFI
Microwave Ovens (Active Mode)		NOPR

Active Rulemakings - Continued

Product Category	Standards Stage	Test Procedure Stage
Miscellaneous Residential Refrigeration	Preliminary Analysis	NOPR
Packaged Boilers		NOPR
Packaged Terminal Air Conditioners and Heat Pumps	Preliminary Analysis	NOPR
Portable Air Conditioners	Framework	
Residential and Commercial Water Heaters		NOPR
Residential Boilers	NOPR	
Residential Clothes Washers		NOPR
Residential Furnaces & Boilers (Active Mode)		Final Rule
Residential Refrigerators - Ice Making		NOPR
Residential Water Heaters (Grid-Enabled)	SNOPR	
Single Package Vertical Air Conditioners and Heat Pumps	NOPR	
Traffic Signal Modules and Pedestrian Modules		NOPR
Walk-in Coolers and Freezers	Final Rule	