

Energy Efficiency Standards 101

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Introduction

Chris Granda – private citizen

- ❑ Former staff member at Efficiency Vermont from 2000 – 2009
- ❑ Member of consultant team that prepared Total Energy Study for the VT Legislature 12/2013
- ❑ Former staff member at ASAP (2015-2029). Currently at Energy Solutions (2020-present) focused on federal and state energy efficiency standards
- ❑ Testified before this committee in 2017 and 2018 on H.140 and H.141
- ❑ Develop municipal solar projects (Huntington, Hinesburg) in my spare time
- ❑ Resident of Richmond, VT since 2004. Former select board member

What are Appliance and Lighting Efficiency Standards?

Mandatory technical regulations that manufacturers products must meet to be legally made, imported, and/or sold in a jurisdiction.

- Federal standards
- State standards
- Procurement standards

Voluntary technical specifications that manufacturers may choose to meet to earn the right to be recognized or receive incentives.

- ENERGY STAR
- Energy efficiency programs like Efficiency Vermont
- Industry or technical association standards like ASHRAE, AHRI, etc.

US Federal Energy Efficiency Standards Mandatory Technical Regulations

Consumer

- Household appliances
- Residential HVAC
- Consumer electronics

(28 categories)

Commercial & Industrial

- Commercial appliances
- Commercial HVAC
- Pumps
- Motors

(27 categories)

US Federal Energy Efficiency Standards

Mandatory Technical Regulations

Lighting

- Lamps
- Luminaires

(15 categories)

Plumbing

- Faucets & showerheads
- Toilets & urinals
- Commercial pre-rinse spray valves

(5 categories)

Characteristics of Federal Standards

1. Mostly developed through multi-year administrative rulemakings with
 - Extensive technical, market, economic and environmental impact research
 - Multiple opportunities for public and industry input
 - Transparent DOE review
2. Accompanied by DOE test procedures
3. Compliant products must be listed in a DOE database
4. Usually, non-compliant products may not be made or imported but can be sold
5. Gap of 3-5 years between effective and compliance date
6. Subject to review every six years
7. Subject to “anti-backsliding” provision
8. Preempt state standards for same products (except for plumbing)

What do standards mean for industry?

1. Standards improve product performance information to consumers
2. Standards reduce energy costs, putting money into appliance and lighting buyers pockets
3. Industry may or may not want standards depending upon the product category. However, all industry needs regulatory certainty.
4. Industry is our partner. Manufacturer innovation makes better efficiency happen. Manufacturer success fuels technology advances.

US Federal Energy Efficiency Standards

Mandatory Technical Regulations

Established

- ❑ First standards authorized by Congress in 1975, EPCA set implemented standards for some products in 1987, and subsequent amendments have strengthened and broadened the program.

Effective

- ❑ The 70 federal energy efficiency standards helped keep demand for electricity flat, and electricity prices comparatively low, for almost 20 years (2005 – 2024).

Characteristics of State Standards

1. Can only be applied to products not preempted by federal standards (except for plumbing)
2. Mostly enacted through legislation*
3. Usually use industry or DOE test procedures
4. Compliant products must sometimes be listed in a database
5. Non-compliant products may not be sold but may be made and shipped out-of-state and may transit

The Role of State Standards

State standards often become federal standards

State standards help protect federal standards

Two Tracks:

- States with capacity to administer standards – California, New York
- Other states that have adopted state energy efficiency standards – AZ, CA, CO, CT, DC, GA, HI, ME, MD, MA, NV, NJ, OR, RI, TX, VT, WA

Vermont State Standards (preempted)

Medium voltage dry-type distribution transformers

Metal halide lamp fixtures

Residential furnaces and boilers

External Power Supplies

State regulated incandescent reflector lamps

Air compressors

Uninterruptible Power Supplies

Portable Air Conditioners

General Service Lamps

Vermont State Standards (active)

T12 fluorescent luminaires

Ban mercury in lighting (8)

High CRI fluorescent lamps (10)

Commercial dishwashers (11)

Commercial fryers (10)

Commercial hot-food holding cabinets (3)

Commercial steam cookers (11)

Computer or computer monitors (12)

Portable electric spas (16)

Residential ventilating fans (12)

Spray sprinkler bodies (13)

Water Coolers (1)

Adopts all current federal standards as Vermont state standards if federal standards are voided

Q&A
