



# ***Energy Efficient Product Standards***

*NARUC Energy Regulatory Partnership Program*

*The Energy Regulatory Commission of the Republic of Macedonia  
and  
The Vermont Public Service Board*

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# *Appliance Standards*

- ❖ GOAL: INCREASED USE OF HIGH EFFICIENCY PRODUCTS
- ❖ YOU MAY ACCOMPLISH THIS BY:
  - ❖ ■ GOVERNMENT STANDARDS FOR MINIMUM EFFICIENCY PERFORMANCE
  - ❖ ■ PRODUCT LABELING PROGRAM (ENERGY STAR, EU's "Eco-Label").
  - ❖ ■ PAYING INCENTIVE TO CONSUMERS, RETAILERS, or MANUFACTURERS (THE "GOLDEN CARROT" INITIATIVE).

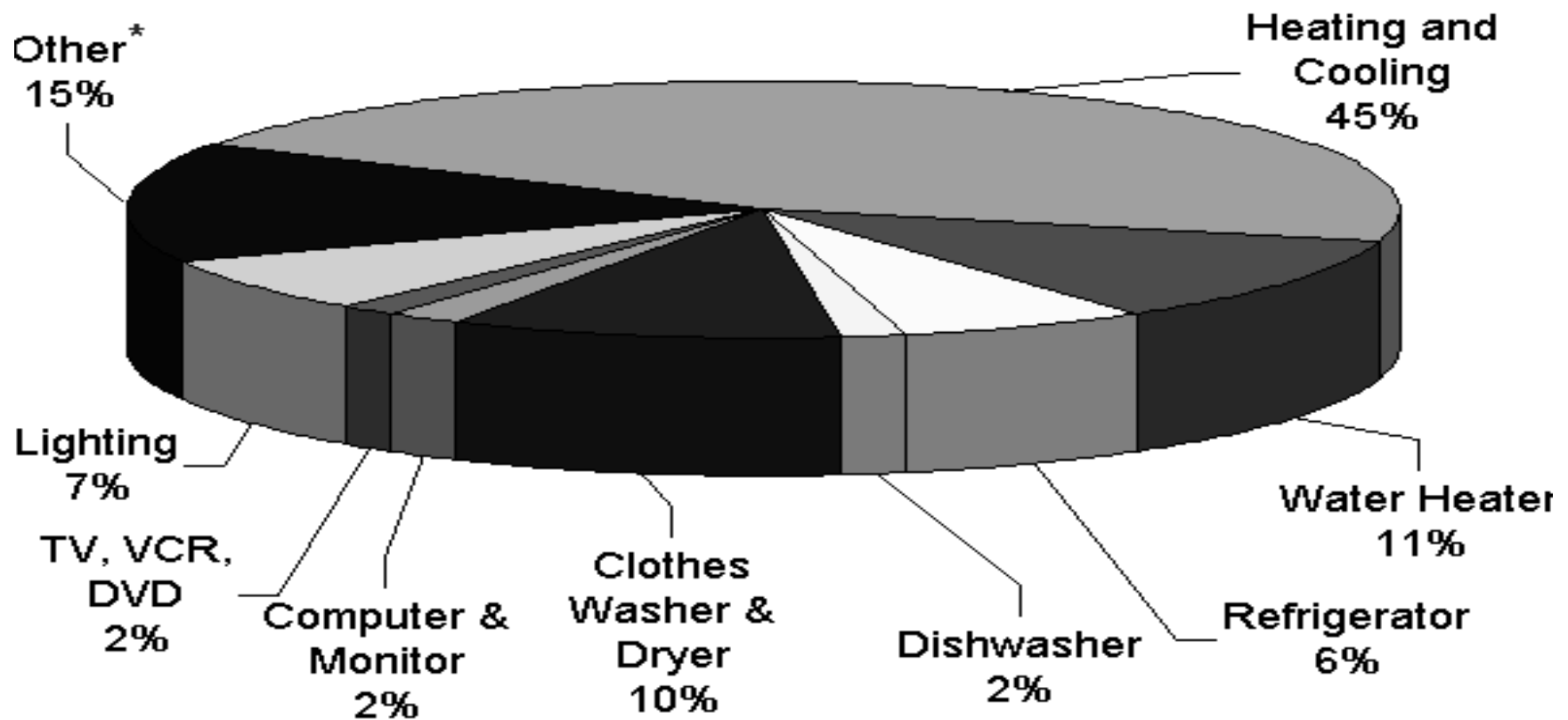


# *Appliance Standards*

- ❖ U.S. Department of Energy is active in standards and test procedure development for the following 14 products:•
  - ❖ Central Air Conditioners & Heat Pumps•
  - ❖ Clothes Washers•
  - ❖ Dishwashers•
  - ❖ General Service Fluorescent•
  - ❖ Plumbing Products•
  - ❖ Refrigerators & Freezers•
  - ❖ Small Duct, High Velocity Air Conditioners
  - Clothes Dryers•
  - Cooking Products•
  - Furnaces & Boilers•
  - Incandescent Reflector•
  - Pool Heaters•
  - Room Air Conditioners•



## *How Consumers spend their energy dollar*





# *Appliance Standards*

- ❖ The federal appliance energy efficiency standards program began in 1987 after several states passed appliance standards
- ❖ Patchwork of state standards made problems for manufacturers
- ❖ Appliance manufacturers then asked Congress for uniform national standards under federal law



# *Appliance Standards*

- ❖ Federal appliance standards are successful in reducing energy use and air pollution, and in saving consumers money.
- ❖ Standards in place through the year 2000 have reduced U.S. electricity use by 2.5 percent (88 billion kWh annually) and reduced peak power demand by approximately 21,000 MW .
- ❖ Savings equivalent to seventy 300-megawatt fossil fuel power plants.



# *Appliance Standards*

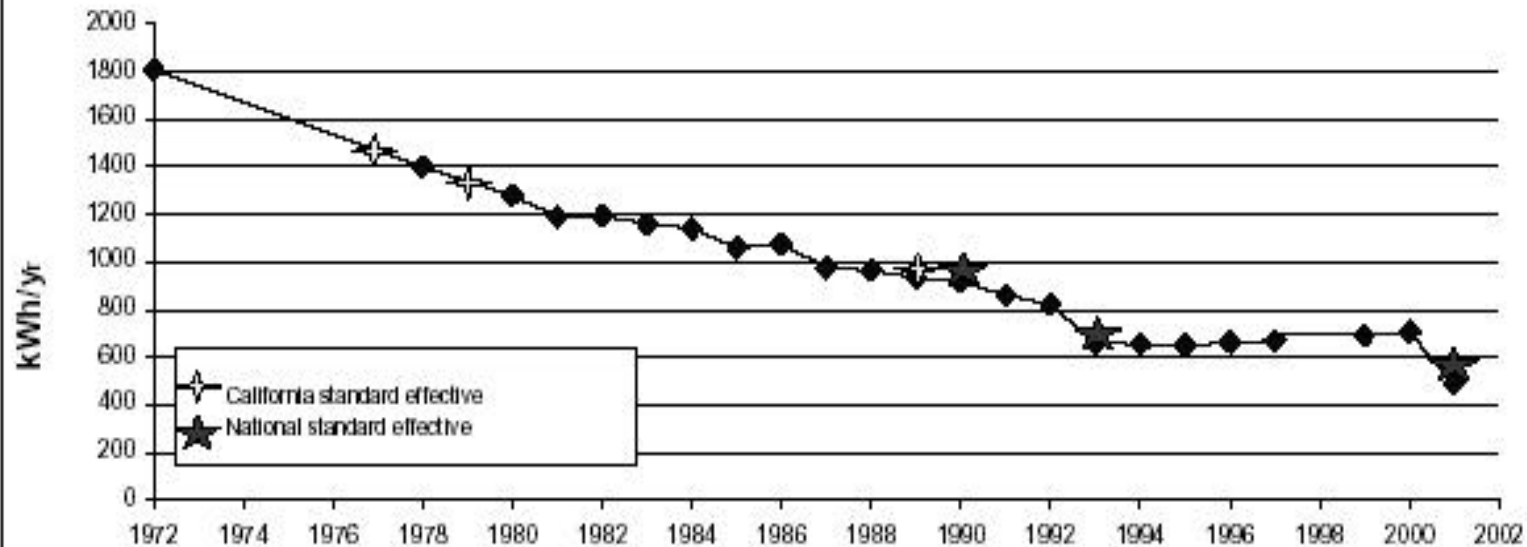
- ❖ *More Energy savings potential remains*
- ❖ By the year 2020, projected savings from standards already in place are expected to reduce U.S. electricity consumption by 7.8 percent, peak demand by enough to displace 400 power plants, and carbon emissions by 75 million metric tons.
- ❖ Through 2030, consumers will save \$186 billion—about \$1,750 per household.

Source: Alliance to Save Energy



# *Appliance Standards*

Figure 1.1: Improvements in Refrigerator Efficiency  
1972-2001







# *Appliance Standards*

- ❖ Energy efficiency standards are one of lowest-cost, highest-benefit energy policies employed by state and federal governments.



# *Appliance Standards*

- ❖ Developing Standards
- ❖ In U.S., environmental organizations and appliance manufacturers negotiate standards.
- ❖ U.S. Department of Energy is government rulemaking body



# *Appliance Standards*

- ❖ An alternative to standards: Consumer Product Labeling
- ❖ In the U.S.: Energy Star by U.S. Environmental Protection Agency (EPA)
- ❖ European Union: Eco-Label





# *Appliance Standards*



- ❖ Recognized by 40 percent of consumers
- ❖ Covers 35 energy-using categories
- ❖ Selects products using 10-15% less energy
- ❖ Applies to products, buildings
- ❖ Covers Residential and Commercial sectors



# *EU's Eco-Label*



- ❖ Cleaning Products
- ❖ Appliances
- ❖ Paper Products
- ❖ Home and garden
- ❖ Clothing
- ❖ Tourism
- ❖ Lubricants