

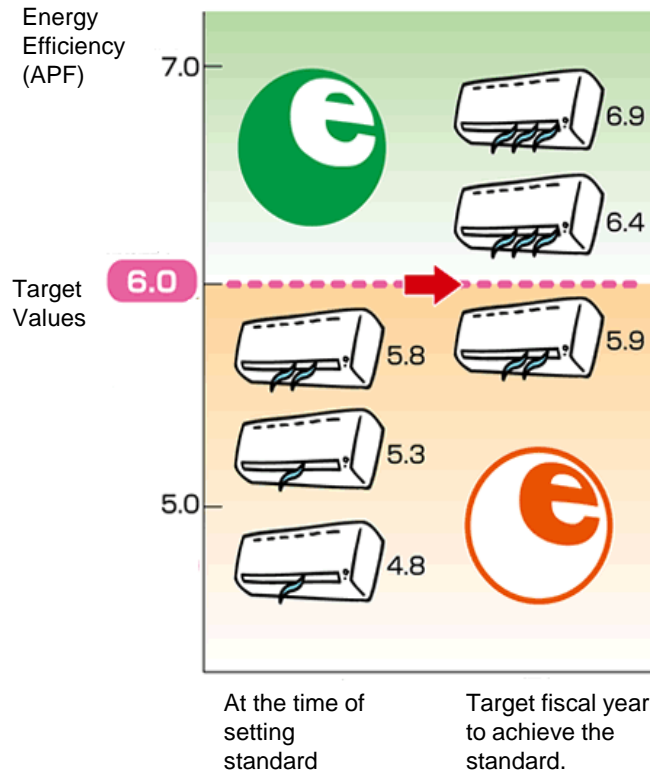
Japan's Energy Efficiency Standards and Labeling Program, and the Compliance Issues

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Energy efficiency Standard: Outline of Top Runner Program

Purpose

Top Runner program aims to raise energy performance of future products above that of the most energy efficient product in the current market.



Achievement of the standard is determined by weighted average for each category.

- Under the Energy Conservation Law, energy efficiency target for household appliances and vehicles are determined by Top Runner method, and manufacturers (and importers) are obligated to meet the standards.

Energy Efficiency Standard: Items Covered by Top Runner Program

23 items

- air conditioner, refrigerator, freezer
- micro-wave oven, rice cooker
- fluorescent lamp
- electric toilet seat
- TV set, VCR, DVD
- computer, magnetic disk, router, switching hub
- copy machine
- vending machine
- transformer
- space heater
- gas boiler, oil boiler, gas cooker
- light duty vehicle, freight vehicle

Heat pump water heat currently under consideration

Blue-ray disc and network machines would be next candidate.

Energy Efficiency Standard: Outcome of the Top Runner Program

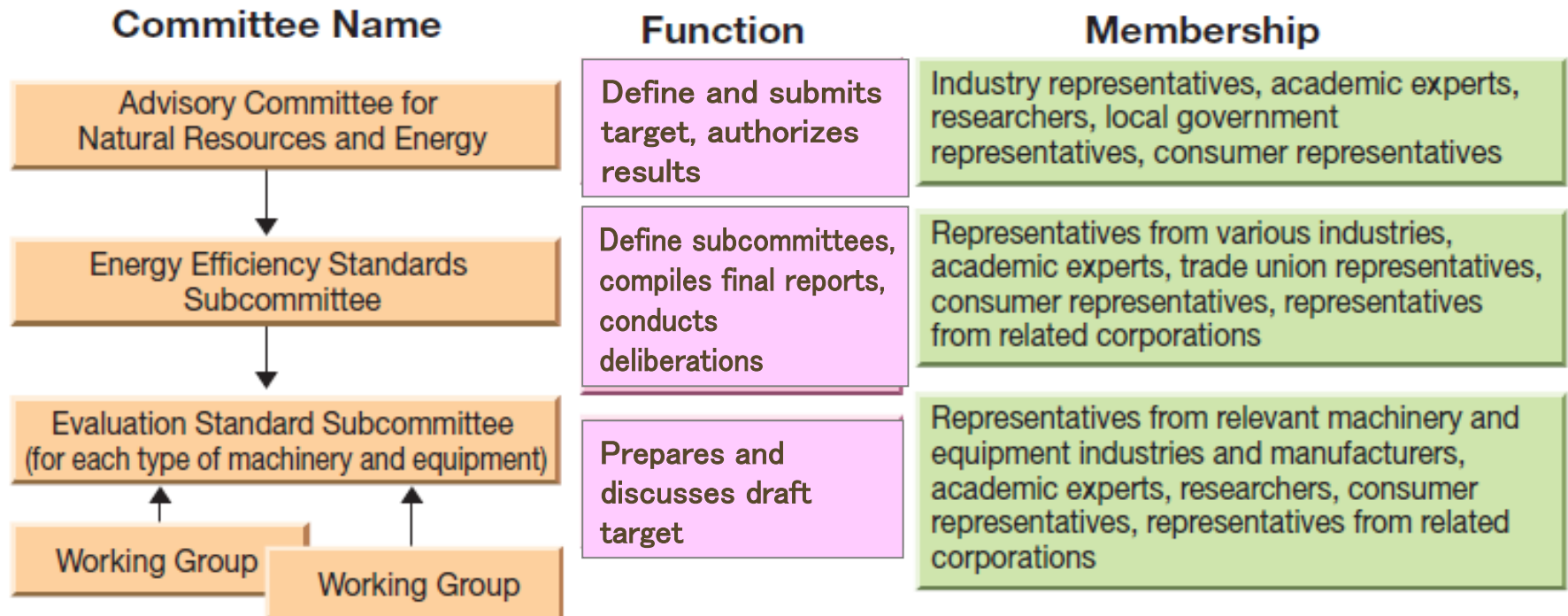
Equipment	Improvement of energy efficiency (Achievement)
Gasoline passenger vehicles*	48.8% (FY1995→FY2010)
LP gas passenger vehicles*	12.5% (FY2001→FY2010)
Gasoline freight vehicles*	13.2% (FY1995→FY2010)
Air-conditioners* (For ones of 4.0kW or less in cooling capacity)	16.3% (FY2005→FY2010)
Air-conditioners* (For ones of over 4.0kW in cooling capacity)	15.6% (FY2006→FY2010)
Electric refrigerators	43.0% (FY2005→FY2010)
Electric freezers	24.9% (FY2005→FY2010)
DVD recorders	45.2% (FY2006→FY2010)
Routers	40.9% (FY2006→FY2010)

* The energy conservation criteria for the products marked * are fixed by the energy consumption efficiency per unit (for example: km/l), while the energy conservation criteria for those not marked * are fixed by the amount of the energy consumption (for example: kWh/year). The “improvement of energy consumption efficiency” said in the above table indicates the improvement factor based on each criteria (for example: if 10km/l becomes 15km/l, it is regarded as 50% improvement (not that fuel consumption was improved by 33%, i.e. from 10 liter to 6.7 liter consumed to drive 100km), and if 10kWh/year becomes 5kWh/year, it is regarded as 50% improvement).

Advisory Committee for the Government

Three principles to designate the machinery & equipments

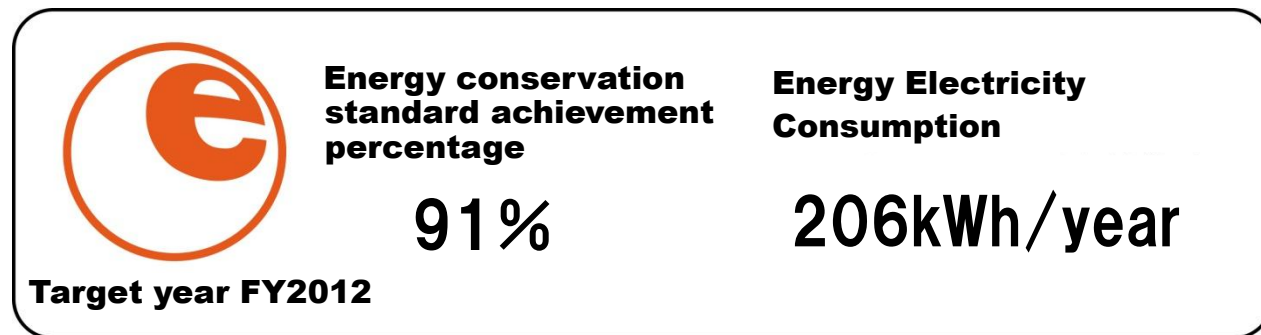
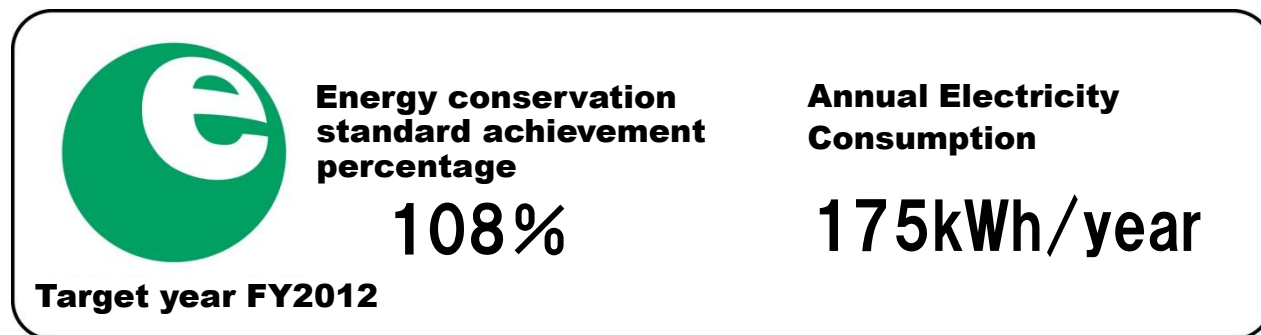
- 1) The machinery and equipment are used in large volumes in Japan.
- 2) The machinery and equipment use substantial amounts of energy while in use.
- 3) Improvement on the energy consumption efficiency of the machinery and equipment can be expected.



Labeling : Energy-Saving Labeling System

The energy-saving labeling system has been introduced to inform consumers of energy efficiency and to promote energy-efficient products.

Examples of energy-saving labeling



Label for the product's main unit

This labeling system covers the following 18 Top Runner products:
air conditioners, refrigerators, TV sets, freezers, fluorescent lights, electric toilet seats, electric rice cookers, microwave ovens, DVD recorders, gas cooking appliances, gas water heaters, oil water heaters, computers, magnetic disk units, gas/oil space heaters, transformers, routers, and switching units.

Labeling: Uniform Energy-Saving Labeling System for Retailers

- Energy Conservation Law stipulates that retailers shall make efforts to provide information. In light of this, a guideline was formulated, including providing information by using **uniform energy-saving labels**.
- The system started in **October 2006**.

Uniform Energy-saving Label



【Multi-stage rating system】

- Energy-saving performance is indicated in 5 stages, from 1 to 5 stars, from low to high performance of products offered in the market.
- In order to clarify the compliance level with the Top Runner standard, arrows are placed under the stars, showing achievement and non-achievement.

【Energy-saving labeling system】



- Products which achieved the Top Runner standard carry a **green** “e” mark, while others carry an **orange** “e” mark.
- Achievement level and annual electricity consumption are also indicated.


【Expected annual electricity bill】

- The expected annual electricity bill is indicated to show the energy consumption efficiency (annual electricity consumption) clearly.

This label is applied to TV sets, air conditioners, refrigerators, electric toilet seats and fluorescent light.

Labeling: Energy-Saving Labeling System in 3 ways

System Product Name	Top Runner Programme	Energy Saving Labeling system 	Uniform Energy-Saving Label(*) 
Air Conditioners	○	○	○
Electric Refrigerators	○	○	○
Electric Freezers	○	○	△
Fluorescent Lights	○	○	○
Electric Toilet Seats	○	○	○
TV Sets	○	○	○
Computers	○	○	
Magnetic Disk Units	○	○	
Passenger Vehicles	○		
Freight Vehicles	○		
Vending Machine	○		
Space Heaters	○	○	△

system Product Name	Top Runner Programme	Energy Saving Labeling system 	Uniform Energy-saving Label(*) 
Gas Cooking Appliances	○	○	△
Gas Water Heaters	○	○	△
Oil Water Heaters	○	○	△
Transformers	○	○	
Electric Rice Cookers	○	○	△
Microwave Ovens	○	○	△
Video Cassette Recorders	○		△
DVD Recorders	○	○	△
Copying machine	○		
Routers	○	○	
Switches	○	○	

(*) There is no 1 to 5 stars for the products with △ but they must indicate annual electricity bill.

Compliance Issues: Labeling by Manufactures

- **Background**

- Evaluation was conducted in 2009 to ensure the accuracy of labeling, and increase consumers' confidence on those energy efficiency labels posted on the products sold in the market.

- **Target**

- 150 manufactures evaluated the accuracy of labeling for those products sold in the market, and reported the results to the Agency for Natural Resources and Energy in 2009.

- **Evaluation Results**

- Some products were higher level representations than the actual performance due to mistakes in showing “*Annual electricity consumption*”, “*Top-runner achievement rate*”, and “*Number of stars*”.
- Some products were lower level representations.

Manufacturers' Action to Increase Labeling Compliance (1)

- JEITA

- **Products: TV, computer, magnetic disc, VCR, DVD recorder**
- Voluntary confirmation by each member company
- Ensuring the accuracy of “energy conservation representation guideline”
- Random performance test of TVs sold at the market, and check the accuracy of labeling

- JEMA

- **Products: Refrigerator, freezer, rice cooker, microwave oven, transformer**
- Investigate the causes for the wrong representations and share the outcomes among the member companies
- Periodical voluntary review by each company, and confirmation by JEMA
- Random performance test of refrigerators sold at the market, and check the accuracy of labeling

Manufacturers' Action to Increase Labeling Compliance (2)

- JBMIA
 - Product: copy machine
 - Establishment “energy conservation law guideline”
 - Revision on “guidelines on labeling”
 - Peer-review of new products catalogue by member company
- JLA
 - Product: Fluorescent light
 - Holding seminars regarding the energy efficiency labeling

Testing Capacities

- Testing for the products standard/labeling has been conducted by each manufacture, while the manufactures agree and share the testing methods – authorized by the Ministry of Economy Trade, and Industry.

Summary

- Top-runner program has successfully encouraged manufactures to develop technologies for energy efficiency improvement.
- Actions for ensuring labeling compliance differ by industry association.
- Although mandatory third-party labeling inspection is NOT specified by law, the peer-review among member companies are effective option in Japan to increase labeling compliance.
- Cooperation between manufacture and the association

Thank you!