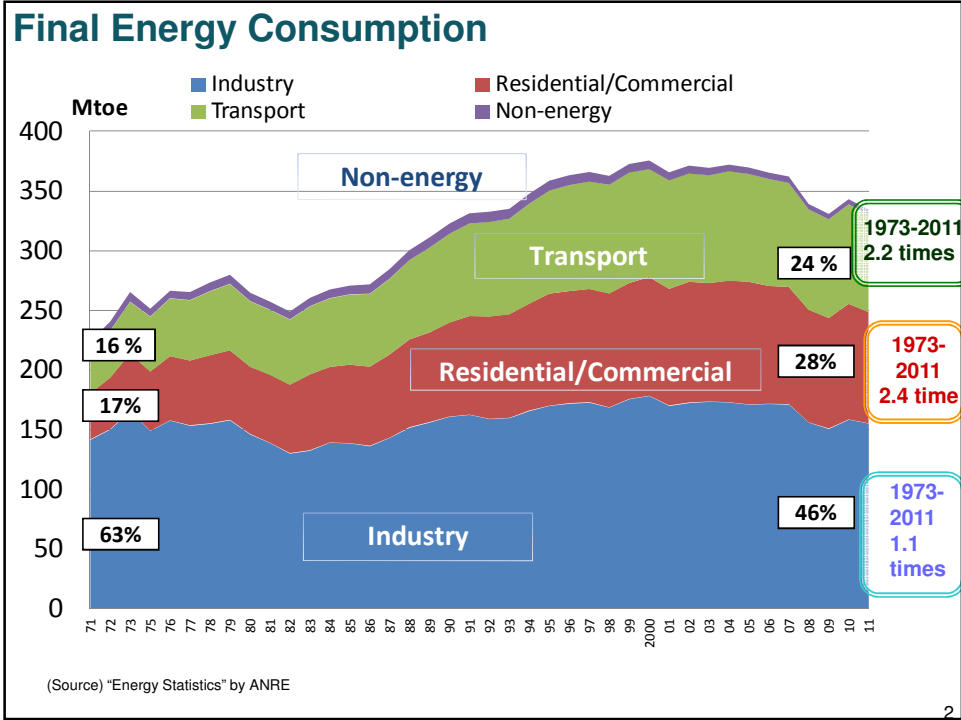
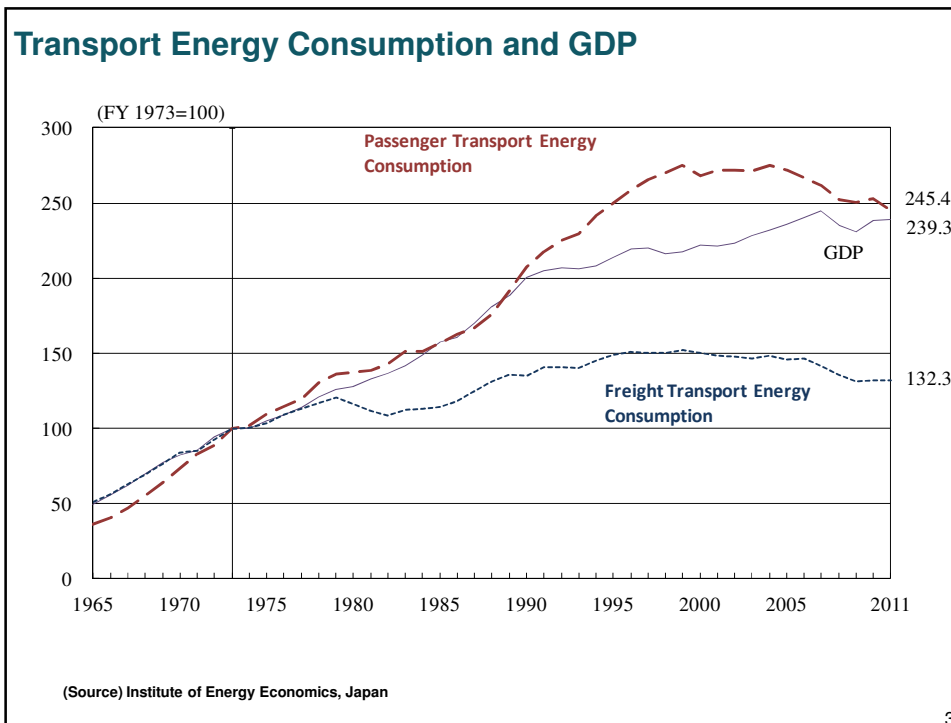


# Japan's Transport Energy Efficiency Policy

APEC Energy Working Group  
EGEE&C Meeting  
Bangkok, Thailand  
11-12 November, 2014





3

### Sectoral Policies and Measures for Energy Conservation

Sector	Specific Measures
Industry	<ul style="list-style-type: none"> <li>Voluntary Action Plan on the Environment</li> <li>Introduction of energy efficient equipment (e.g. High-performance industrial furnace, High-performance boiler, and Next-generation coke oven)</li> <li>Energy Management System in factory</li> </ul>
Transportation	<ul style="list-style-type: none"> <li>The "Top Runner Program" is a key driver to improve fuel efficiency of vehicles</li> <li>Promotion of clean energy automobiles</li> <li>Energy conservation measures for freight transport owners</li> </ul>
Buildings	<ul style="list-style-type: none"> <li>Improvements in energy efficiency of buildings, incl. promotion of High-Efficiency Air Conditioning Systems</li> <li>Expanding ESCO Market</li> <li>Improved efficiency of appliances in line with the "Top Runner Program"</li> </ul>
Household	<ul style="list-style-type: none"> <li>Energy-Saving Labeling System promotes energy efficient appliances</li> <li>Improved efficiency of appliances in line with the "Top Runner Program"</li> <li>Energy Efficient Product Retailer Assessment System</li> </ul>
Energy Conversion	<ul style="list-style-type: none"> <li>Improve energy intensity of power generation</li> <li>Develop clean and efficient technologies (e.g. IGCC)</li> </ul>

4

## Energy Conservation Measures: Transport

- **Transportation Sector**

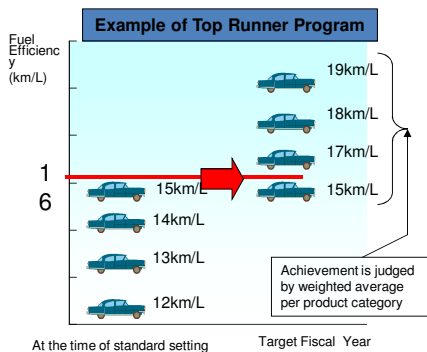
- Specified business operators in transportation sector
  - mid- and long-term energy conservation plans
  - periodical reporting on energy consumption
- Specified Cargo Operators
  - 300 or more railway cargo vehicles
  - 200 or more commercial cargo vehicles
  - 200 or more passenger cars
  - ships of 20,000 tons or more
- Specified Cargo Owners
  - 30 million kilo tons or more annually
- Specified Passenger Operators
  - 300 or more railway vehicles
  - 200 or more buses
  - 200 or more passenger vehicles
  - 20,000 tons or more ships
- Fuel Efficiency Standards based on Top Runner Program



5

## Top Runner Program

- Energy conservation law stipulates energy conservation standards for domestic appliances and vehicles according to the Top Runner method. Manufacturers and the like are under the obligation to comply with the standards. For in compliance, manufacturers and the like may be imposed recommendation, publication, order, penalty (under one million yen penalty).
- 23 product types were made the target of the program.



Energy conservation standards according to Top Runner method

### Target products (23 products)

- |                             |                            |
|-----------------------------|----------------------------|
| 1. Passenger vehicles       | 12. Space heaters          |
| 2. Freight vehicles         | 13. Gas cooking appliances |
| 3. Air-conditioners         | 14. Gas water heaters      |
| 4. TV sets                  | 15. Oil water heaters      |
| 5. Video-cassette recorders | 16. Electric toilet seats  |
| 6. Fluorescent lights       | 17. Vending machines       |
| 7. Copiers                  | 18. Transformers           |
| 8. Computers                | 19. Electric rice cookers  |
| 9. Magnetic disc units      | 20. Microwaves             |
| 10. Electric refrigerators  | 21. DVD recorders          |
| 11. Electric freezers       | 22. Residential router     |

### Top Runner Program:

The concept of the program is that fuel economy standards for vehicles and energy conservation standards for electric appliances, etc. shall be set exactly the same as or higher than the best standard value of each product item currently available in the market.

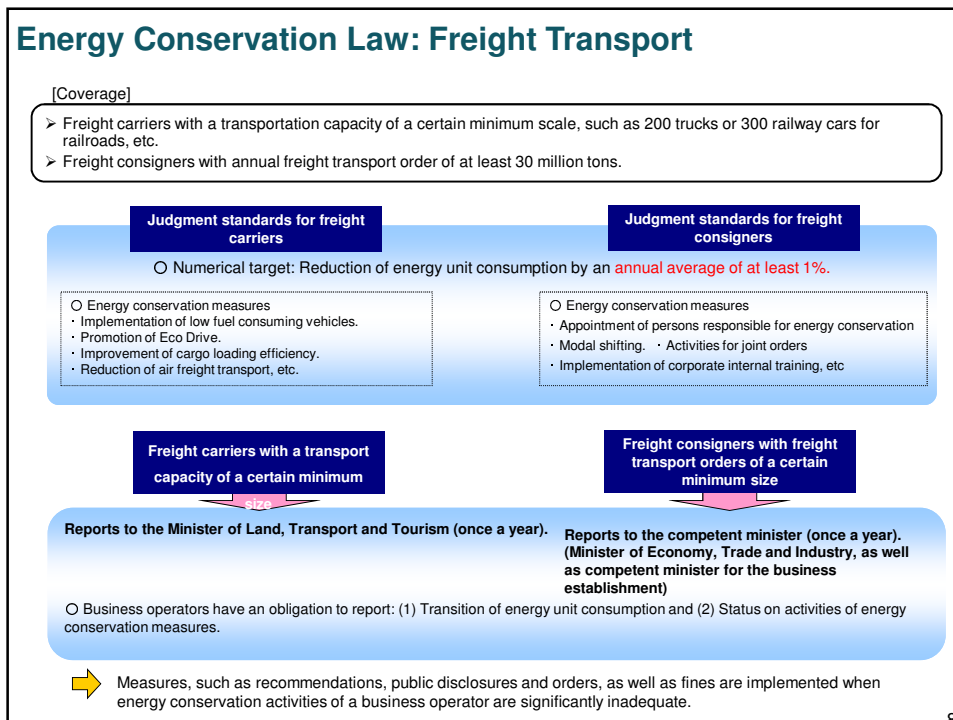
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### Improvement in Energy Efficiency by Top Runner Program

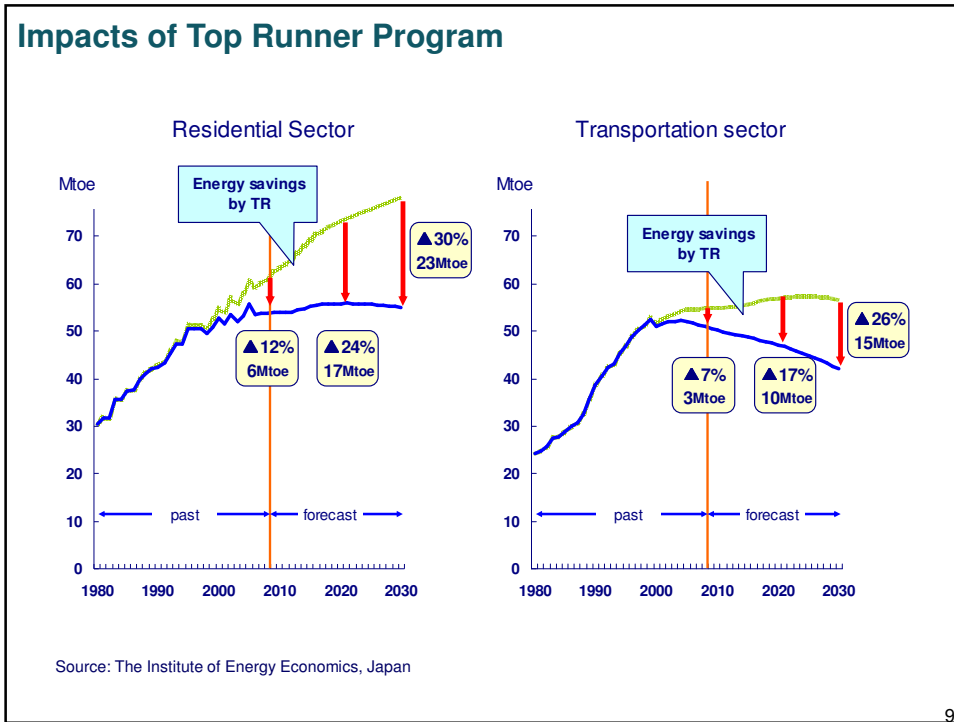
Item	Improvement in energy efficiency (achieved)	Improvement in energy efficiency (forecast)
TV set (CRT)	25.7% (1997=>2003)	16.4%
VCR	73.6% (1997=>2003)	58.7%
Room air conditioner	67.8% (1997=>2004)	66.1%
Refrigerator	55.2% (1998=>2004)	30.5%
Freezer	29.6% (1998=>2004)	22.9%
Light duty vehicle (gasoline)	22.8% (1995=>2005)	22.8% (1995=>2010)
Freight vehicle (diesel)	21.7% (1995=>2005)	6.5%
Vending machine	37.3% (2000=>2005)	33.9%
Fluorescent lamp	35.7% (1997=>2005)	16.6%
Copy machine	72.5% (1997=>2006)	30.8%
Computer	80.8% (2001=>2007)	69.2%
Magnetic disc	85.7% (2001=>2007)	71.4%
Washlet	14.6% (2000=>2006)	10.0%

Source: "Top-Runner Standards, March 2010", METI

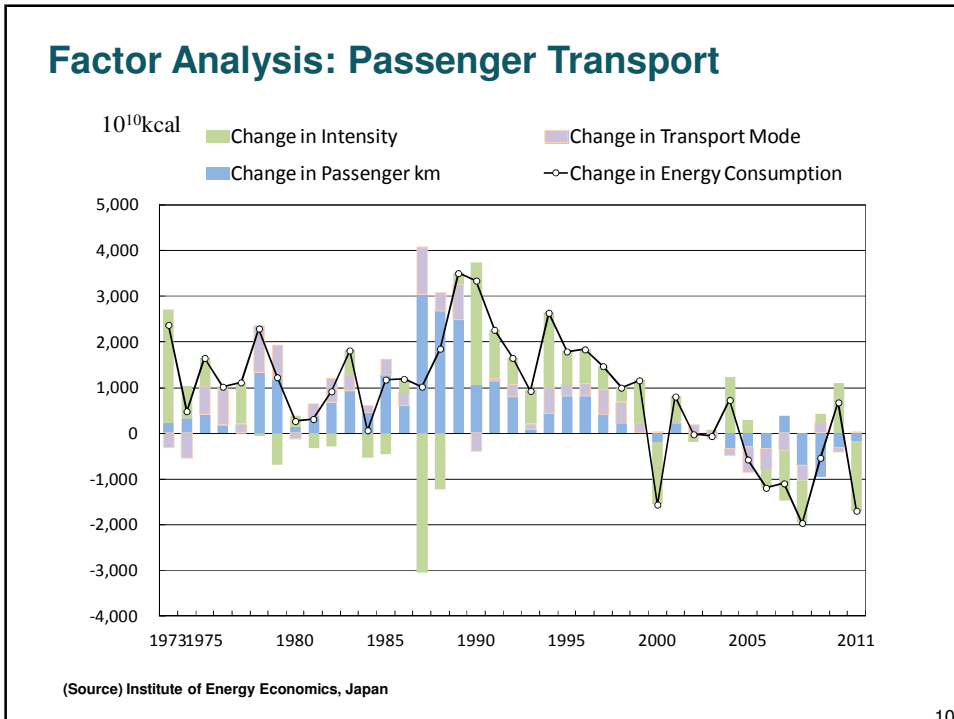
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8

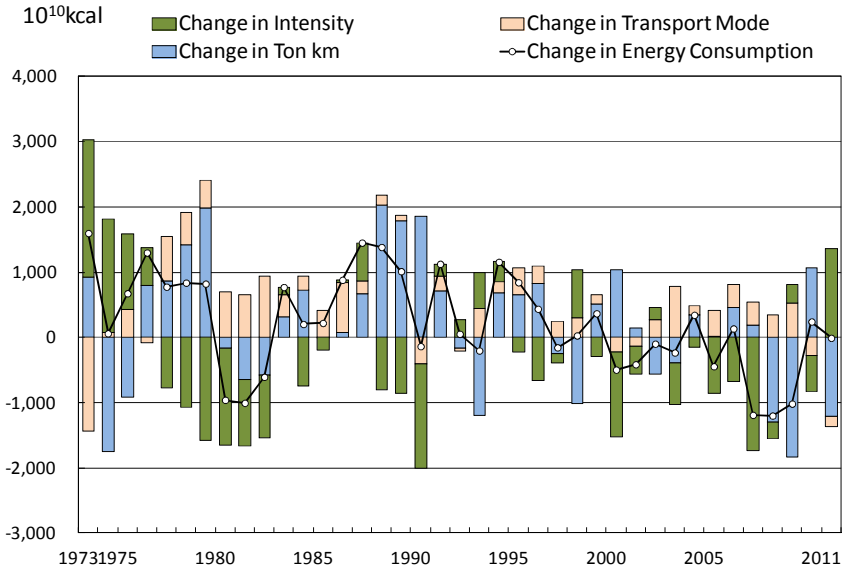


9



10

### Factor Analysis: Freight Transport



(Source) Institute of Energy Economics, Japan