

Energy Efficiency Roundtable

The IEA's 25 Energy Efficiency Policy Recommendations

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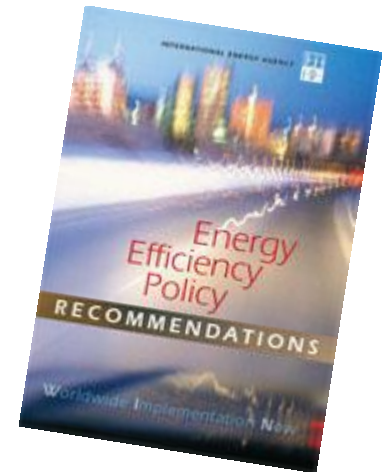
International Energy Agency



International
Energy Agency

The IEA's 25 energy efficiency policy recommendations

- Developed through dialogue with political leaders
- Launched at the 2008 Hokkaido G8 meeting
- Grounded in the IEA's work on climate change and energy efficiency
- A flexible vehicle for policy dissemination
 - A clear package for decision makers
 - Strong 'brand' and awareness
 - Strong IEA country buy-in
 - Conductive to tracking progress
- Recently updated to reflect implementation progress and new opportunities



More about the recommendations

- Endorsed by G8 Leaders:
 - *“we will maximize implementation of the IEA 25 recommendations on energy efficiency.”*
- Selected based on:
 - Potential for large, low-cost energy savings
 - Ability to overcome market imperfections or barriers
 - Ability to address gaps in existing policy
 - Potential political support
- Broadly applicable (developed and developing economies alike)

25 Energy Efficiency Policy Recommendations Across 7 Priority Areas

Cross sectoral

1. Energy efficiency data collection and indicators
2. Strategies and action plans;
3. Competitive energy markets with appropriate regulation;
4. Private investment in energy efficiency
5. Monitoring, enforcement and evaluation of policies and measures.

Buildings

6. Mandatory building energy codes and minimum energy performance requirements;
7. Aiming for net zero energy consumption in buildings;
8. Improving the energy efficiency of existing buildings;
9. Building energy labels or certificates;
10. Improved energy performance of building components and systems.

3. Appliances and Equipment

11. Mandatory MEPS and labels for appliances and equipment;
12. Test standards and measurement protocols for appliances and equipment
13. Market transformation policies for appliances and equipment

Lighting

14. Phase-out of inefficient lighting products and systems;
15. Energy efficient lighting systems

Transport

16. Mandatory vehicle fuel efficiency standards;
17. Measure to improve vehicle fuel efficiency;
18. Fuel-efficient non-engine components
19. Improved vehicle operational efficiency through Eco-driving and other measures .
20. Transport system efficiency

Industry

21. Energy Management in industry;
22. High efficiency industrial equipment and systems;
23. Energy efficiency services for small and medium enterprises;
24. Complementary policies to support industrial energy efficiency

Utilities and end-use

25. Energy Utilities and end-use energy efficiency.

Cross-sectoral

- 1** Data collection and indicators
- 2** Strategies and action plans
- 3** Competitive energy markets, with appropriate regulation
- 4** Private investment in energy efficiency
- 5** Monitoring, enforcement and evaluation

Cross-sectoral

Appliances and equipment

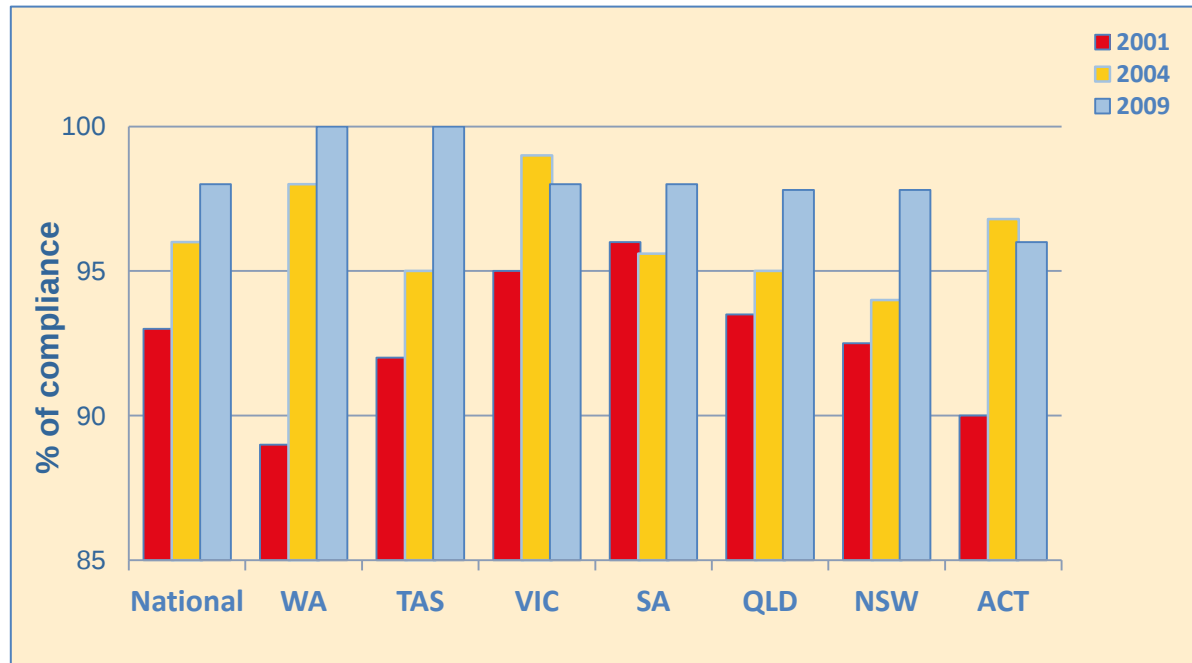
Lighting

Transport

Industry

Energy utilities

Monitoring, Verification and Enforcement



MVE activities ensure the integrity of energy requirements by minimizing non-compliance.

Buildings

- 6** Mandatory building codes and MEPS
- 7** Net-zero energy consumption in buildings
- 8** Improved energy efficiency in existing buildings
- 9** Building energy labels or certificates
- 10** Energy performance of building components and systems

Buildings

Lighting

Transport

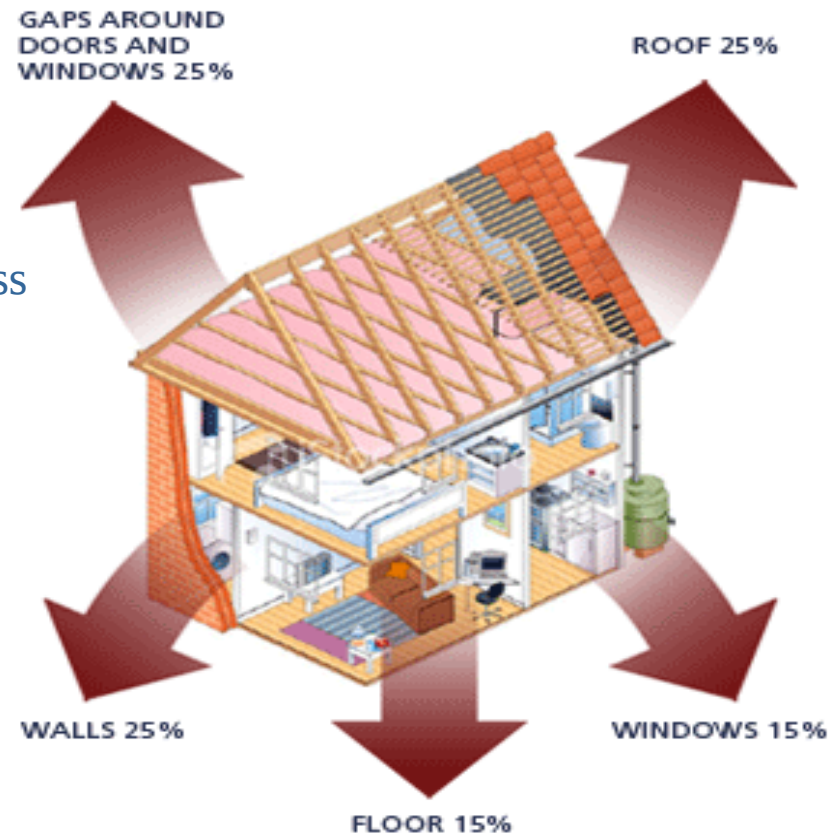
Industry

**Energy
utilities**

**Cross-
sectoral**

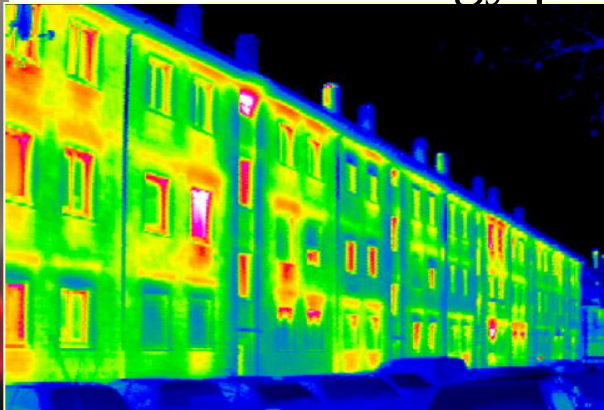
6. Mandatory Building Codes and MEPs

- Lower the U-Values
(Measurement of the rate of heat loss through a material)
- Minimum Energy requirements (Standards)
- Air tightness



8. Improved energy efficiency in existing buildings

- Building Codes (France)
- Mandatory Energy Performance Certificates (the EU)
- Financial mechanisms
- Awareness programs
- Public procurement (the EU)
- Minimum energy performance requirements ???

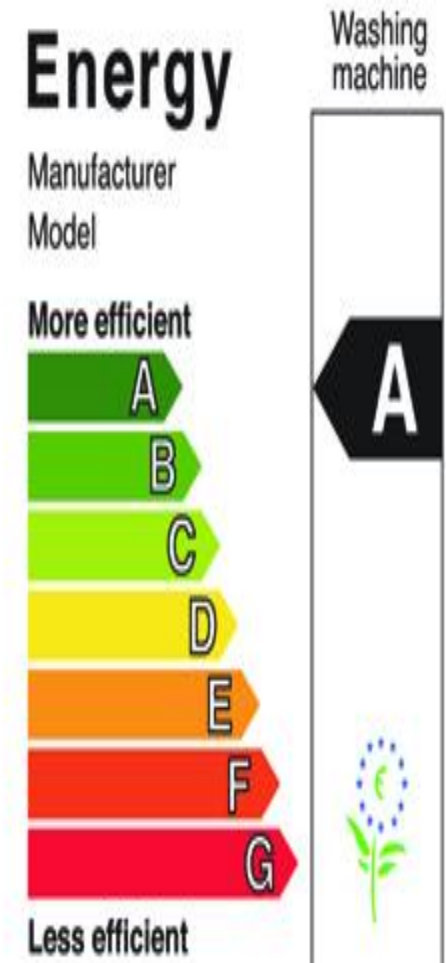


Appliances and equipment

- 11** Mandatory MEPS and labels
- 12** Test standards and measurement protocols
- 13** Market transformation policies

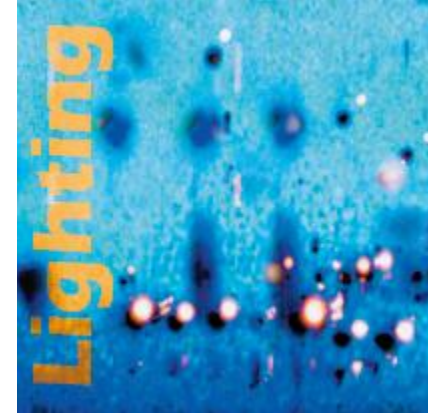
11. Mandatory Energy Performance Requirements or Labels

- Energy performance requirements (Standards) and Labels – a proven cost-effective policy tool
- Cornerstone:
 - mandatory regulations
 - S & L combination
- Must regularly update requirements in line with international best practices



Lighting

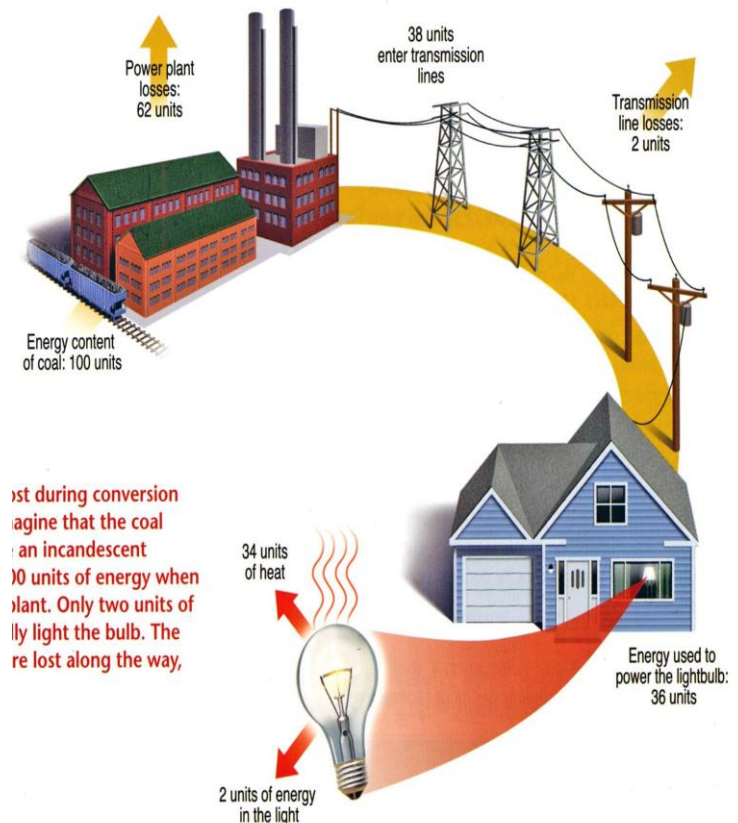
- 14** Phase-out of inefficient lighting products
- 15** Energy-efficient lighting systems



14. Phase out of inefficient lighting systems

- CFLs use $\frac{1}{4}$ the electricity of incandescent lamps for the same amount of light.
- Since 2007, all IEA countries and many others are in the process of phasing-out incandescent lamps.
- Global savings potential of 5.5% of all electricity & 500Mt CO₂ is currently half way towards being achieved.

Overall efficiency of an incandescent lamp = 2%

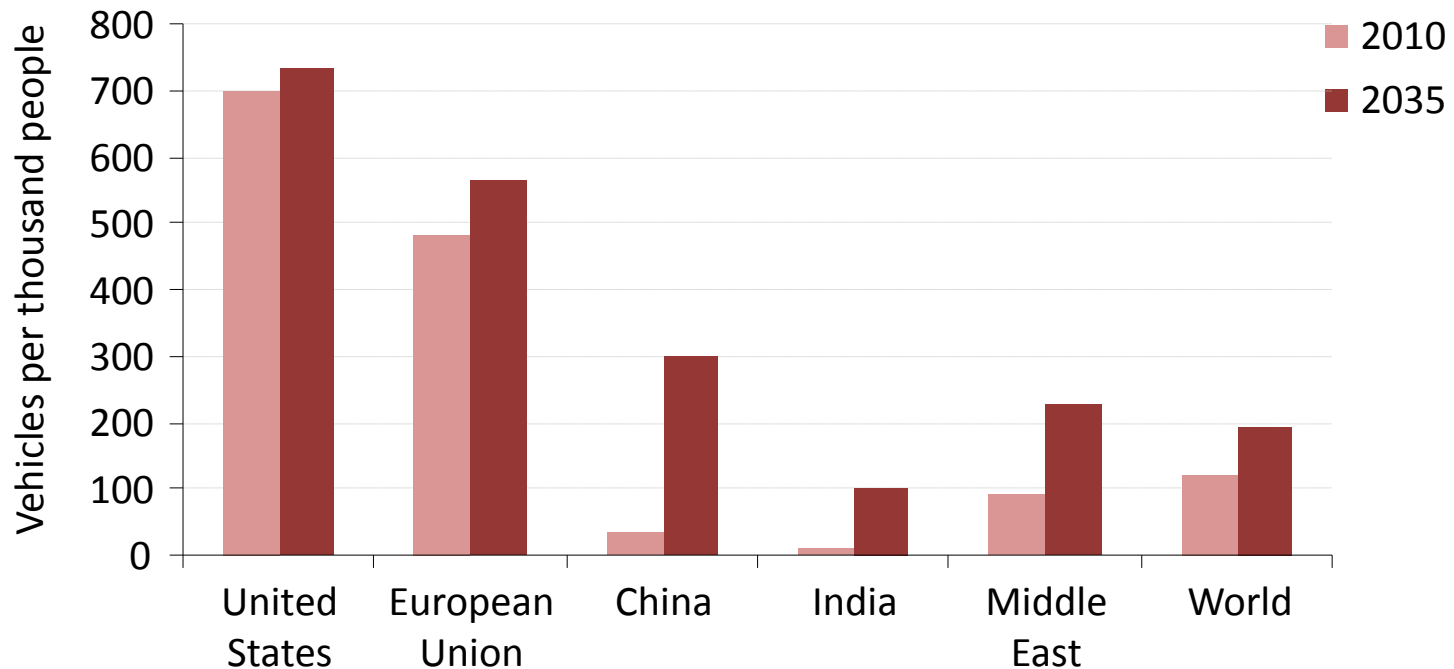


Transport

- 16** Mandatory vehicle fuel-efficiency standards
- 17** Measures to improve vehicle fuel efficiency
- 18** Fuel-efficient non-engine components
- 19** Eco-driving
- 20** Transport system efficiency

Car ownership will soar in non-OECD countries

PLDV ownership in selected markets in the New Policies Scenario



Starting from a very low base, car ownership in non-OECD countries is set to grow considerably, driven by China. The extent of growth will determine future oil demand.

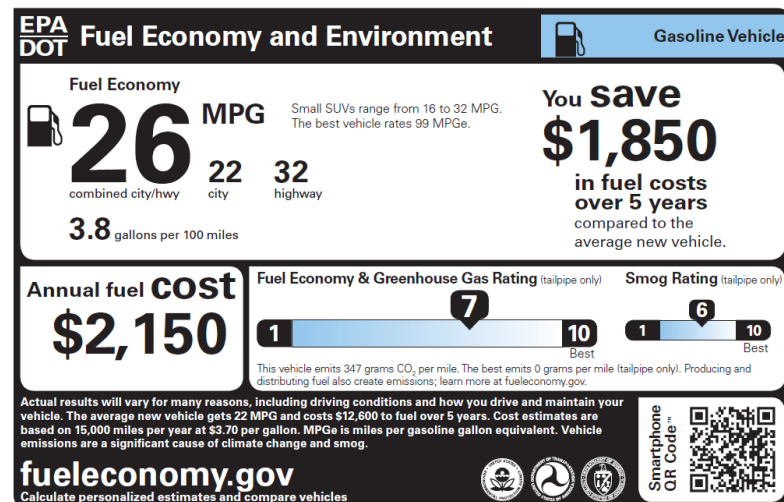
16. Mandatory Fuel Efficiency Standards for Light and Heavy-duty Vehicles



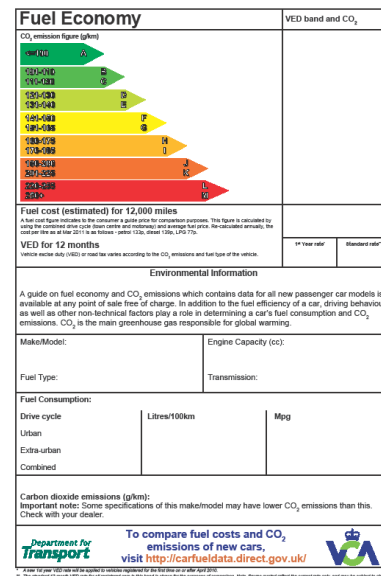
- Introduce and strengthen Fuel Economy standards for vehicles
- Harmonise vehicle fuel efficiency test methods across countries

17. Encourage demand for fuel efficient vehicles

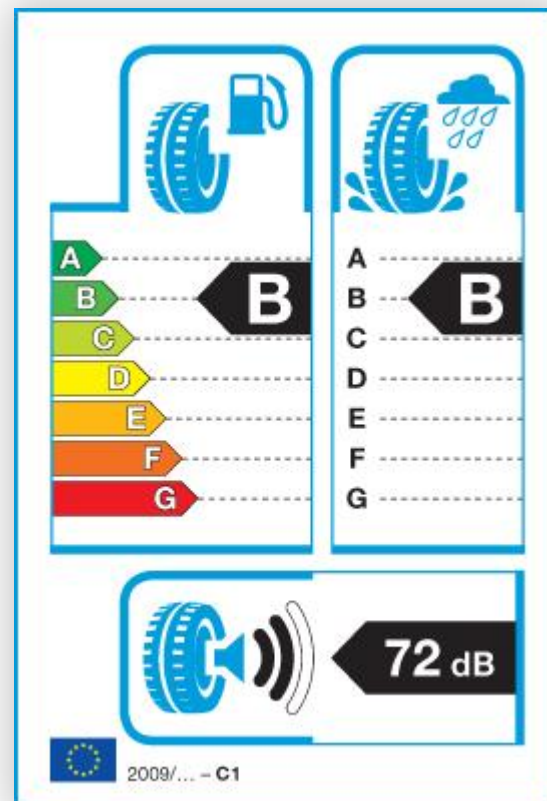
- Vehicle fuel economy labels
- Progressive vehicle taxes (engine size or fuel economy)
- Infrastructure and incentives for low CO₂-emitting vehicles (electric and CNG vehicles)



Source:
US DoE



18. Fuel-efficient non-engine components



Fuel efficient tyres can reduce a motor vehicle's fuel consumption by as much as 5%.

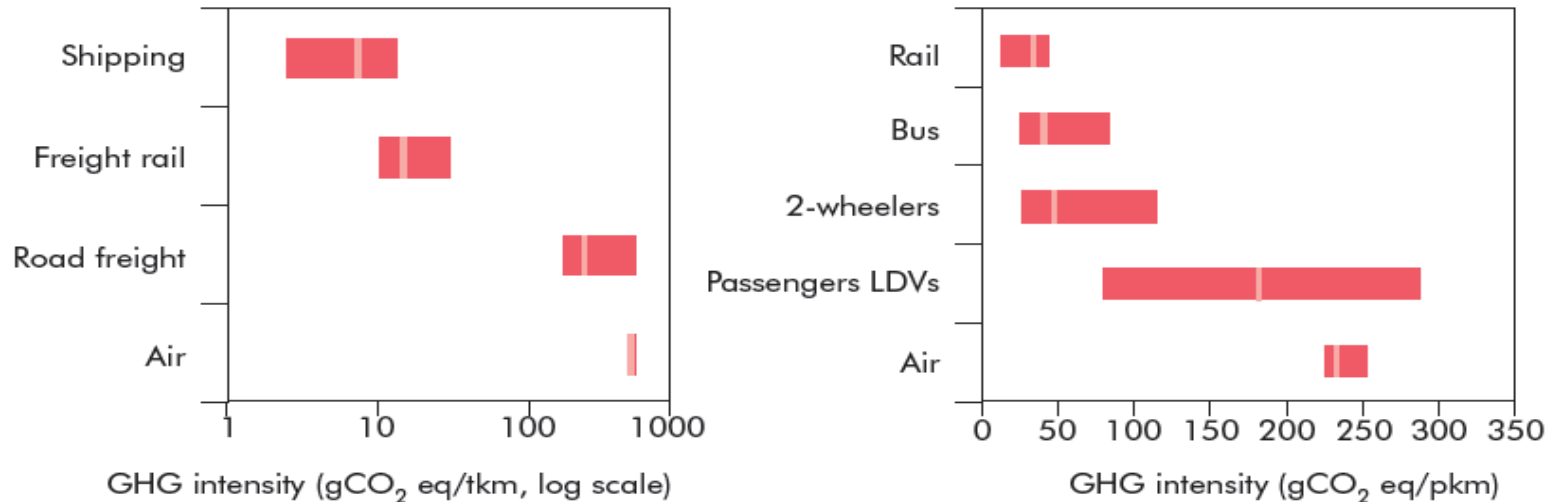
19. Eco-driving



Eco-driving has the potential to reduce fuel consumption by around 10%.

20. Improve transport system efficiency

Figure 1.6 ► GHG efficiency of different modes, freight and passenger, 2005



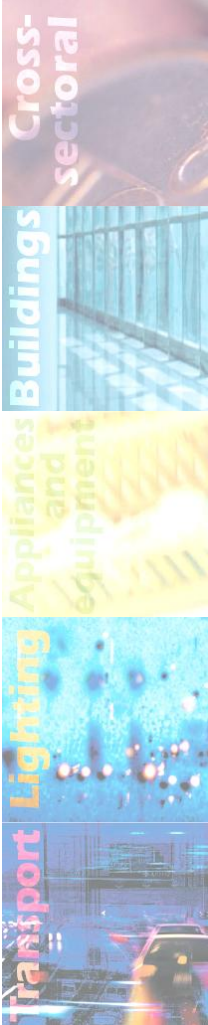
Note: The clear line indicates world average, the bar representing MoMo regions' discrepancy.

Sources: IEA Mobility Model database; Buhaug (2008).

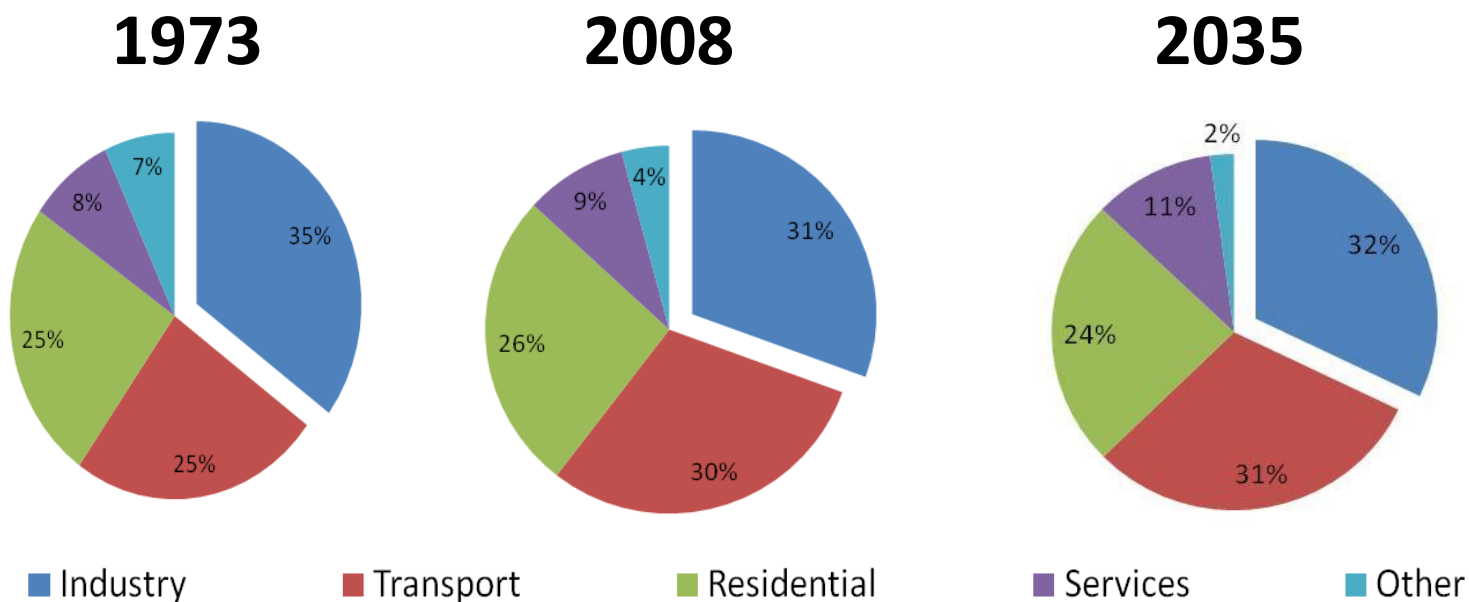


Industry

- 21** Energy management
- 22** High-efficiency industrial equipment and systems
- 23** Energy efficiency services for SMEs
- 24** Complementary policies to support industrial energy efficiency



The industrial sector accounts for a third global total final consumption. This share has remained quite stable.



Industry will continue to be the largest energy consuming sector

21. Energy management in industry

- **Role of energy management systems**
 - **Enable continuous energy performance improvement**
- **Role of energy management programmes**
 - **Overcome barriers and provide guidance and support for the implementation process**



ISO 50001 has now established international standards for energy management

23. Energy efficiency services for small and medium-sized enterprises (SMEs)

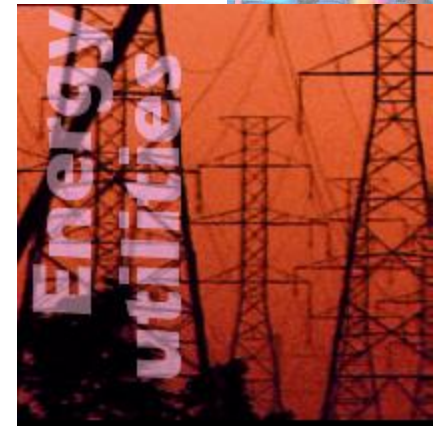
1. Capacity and audits
2. Information and tools
3. Access to finance



Not all countries are supporting SMEs in implementing energy efficiency actions. A holistic/package approach is needed.

Energy utilities

25 Utility end-use energy efficiency schemes



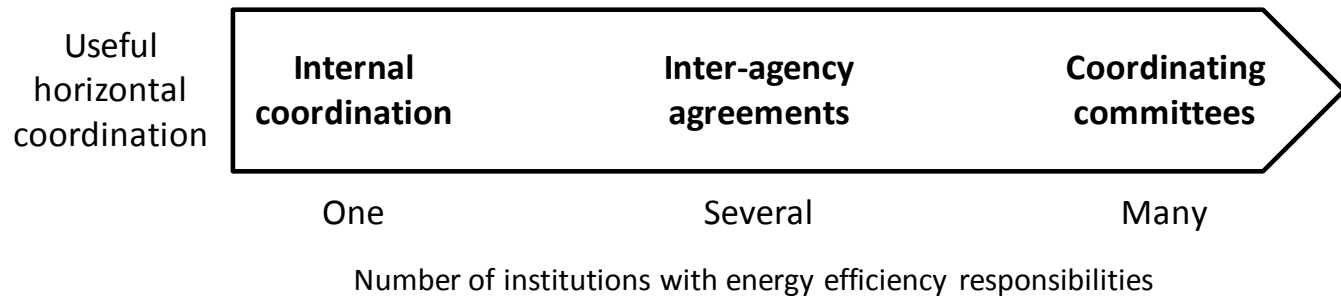
IEA's energy efficiency policy recommendations for energy utilities

- **Provide a level playing field for energy efficiency and energy supply options in resource procurement and wholesale markets;**
- **Oblige energy providers to deliver cost-effective energy efficiency to end-users;**
- **Require energy customers be provided with cost-reflective pricing and other information they need to manage their energy use; and**
- **Consider utilizing revenues from end-use energy consumption to fund energy efficiency**

Coordination Mechanisms

■ Intra-Governmental (Horizontal)

Cooperation among national government ministries and agencies



■ Inter-Governmental (Vertical)

Cooperation across levels of government, including national, regional and local government entities

