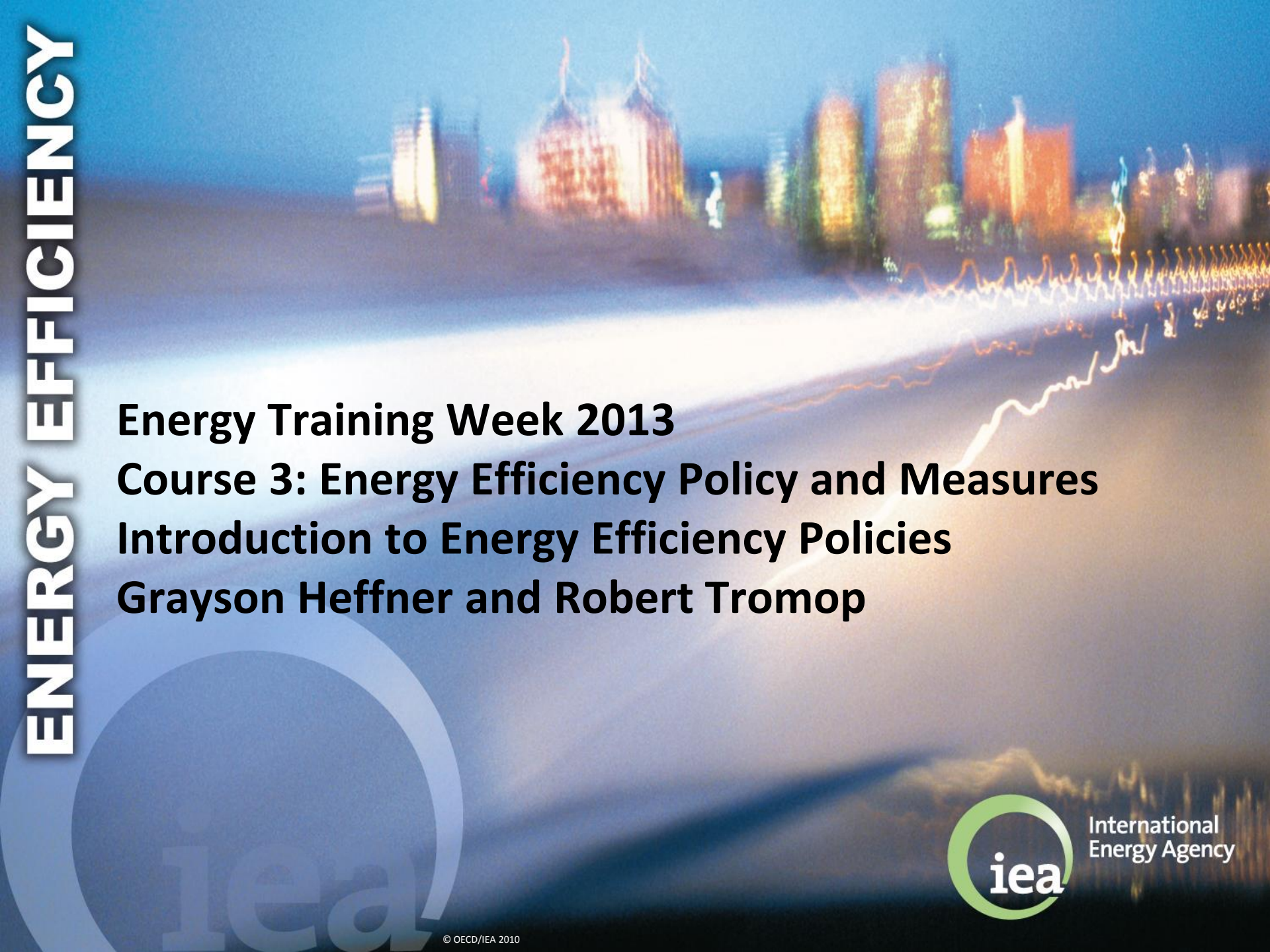

Energy Training Week 2013
Course 3: Energy Efficiency Policy and Measures
Introduction to Energy Efficiency Policies

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International Energy Agency

Topics

- The big picture – what is energy efficiency and why is it important?
- What benefits can governments expect from implementing energy efficiency policies?
- Why do governments need to get involved?
- How do governments go about formulating efficiency policies?
- Discussion

What is Energy Efficiency?

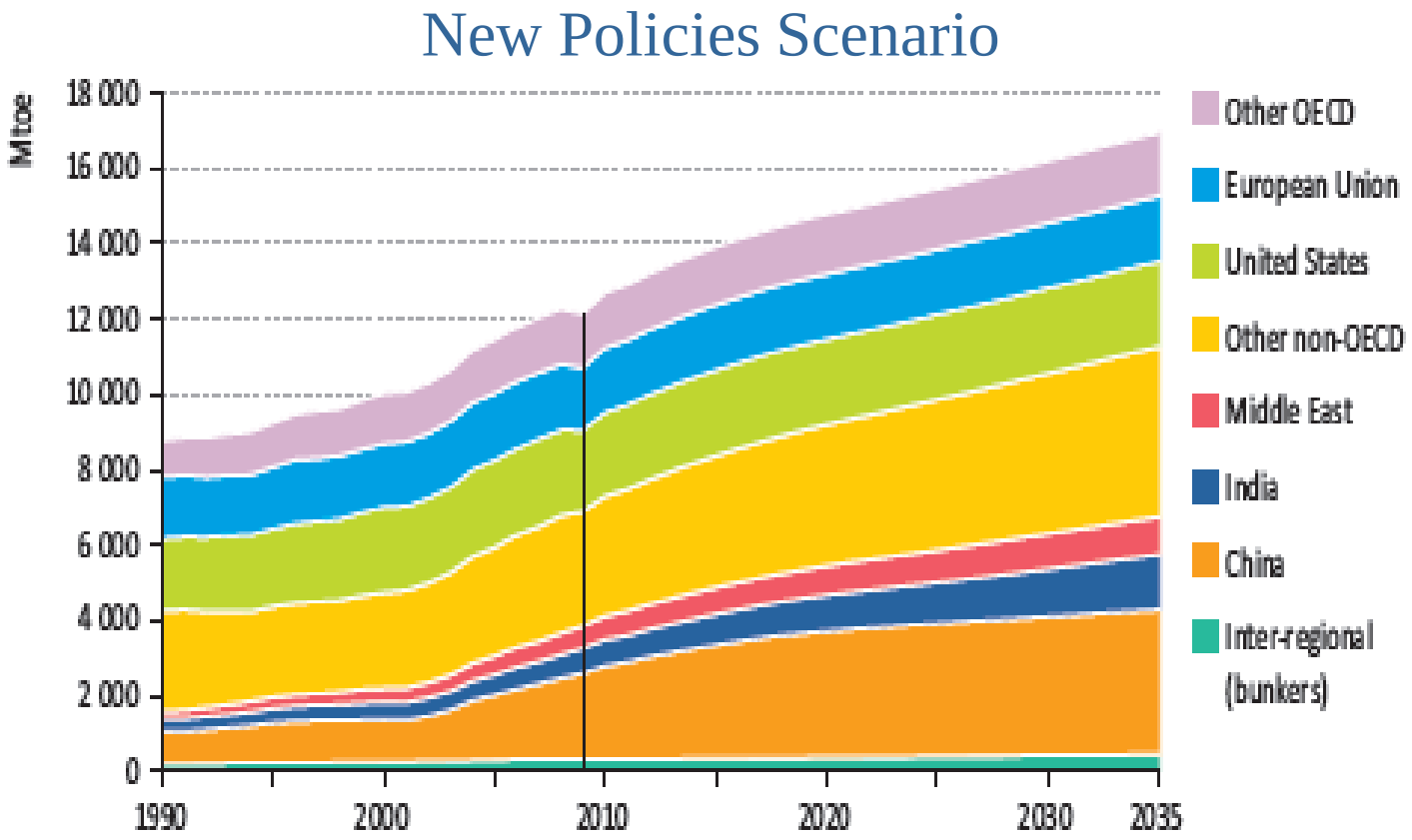
- Energy efficiency is economic efficiency. It means delivering the same services – light, transportation, pumping – with the same or less energy.

- CFLs – the energy efficiency icon. 80% energy savings plus 10 times the appliance life!

Why is energy efficiency important?

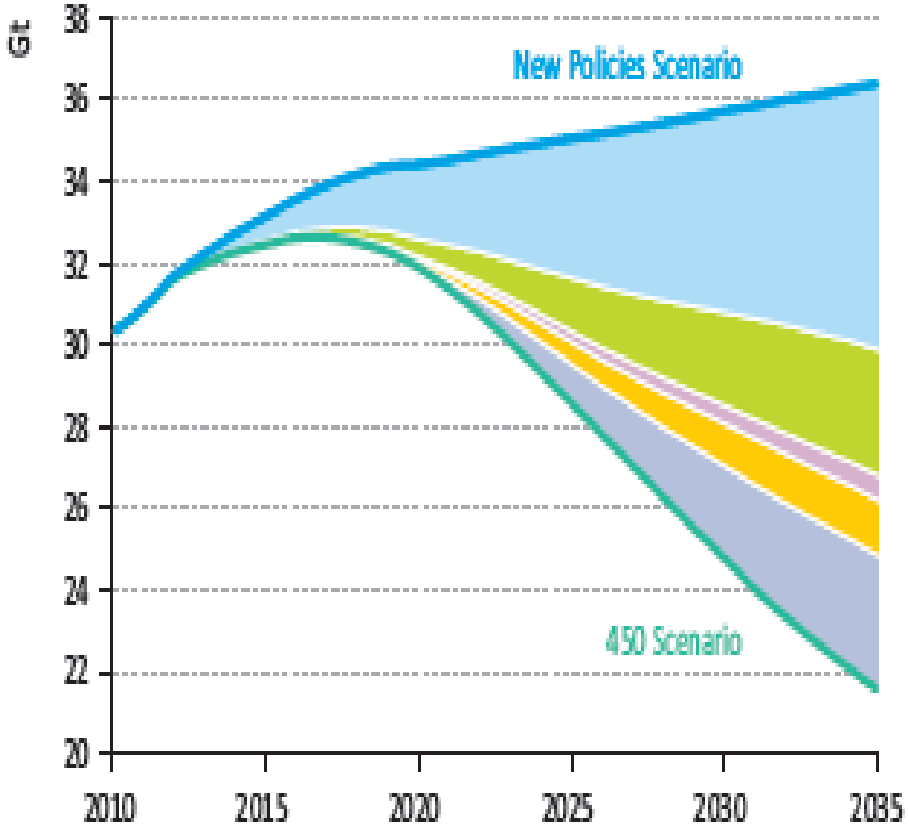
- Contributes to energy security in both energy-importing and energy-exporting countries
- The fifth fuel in any resource portfolio
- A central part of any climate change policy
- Provides additional non-energy benefits for the economy and society

Energy efficiency helps control demand growth, especially in non-OECD countries



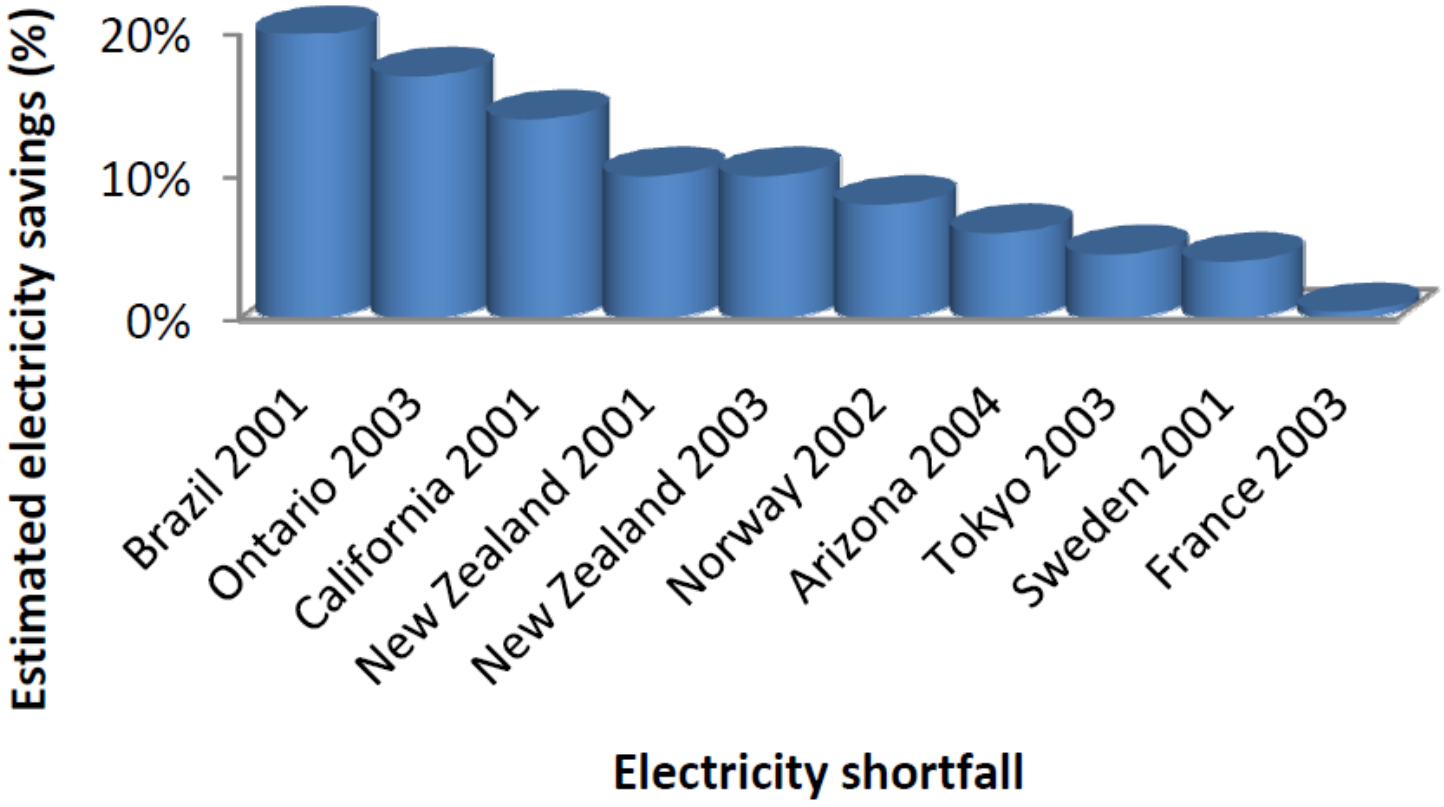
China, India, the Middle East and other non-OECD countries account for virtually all (over 90%) of the demand growth to 2035

Energy efficiency is an essential climate change policy



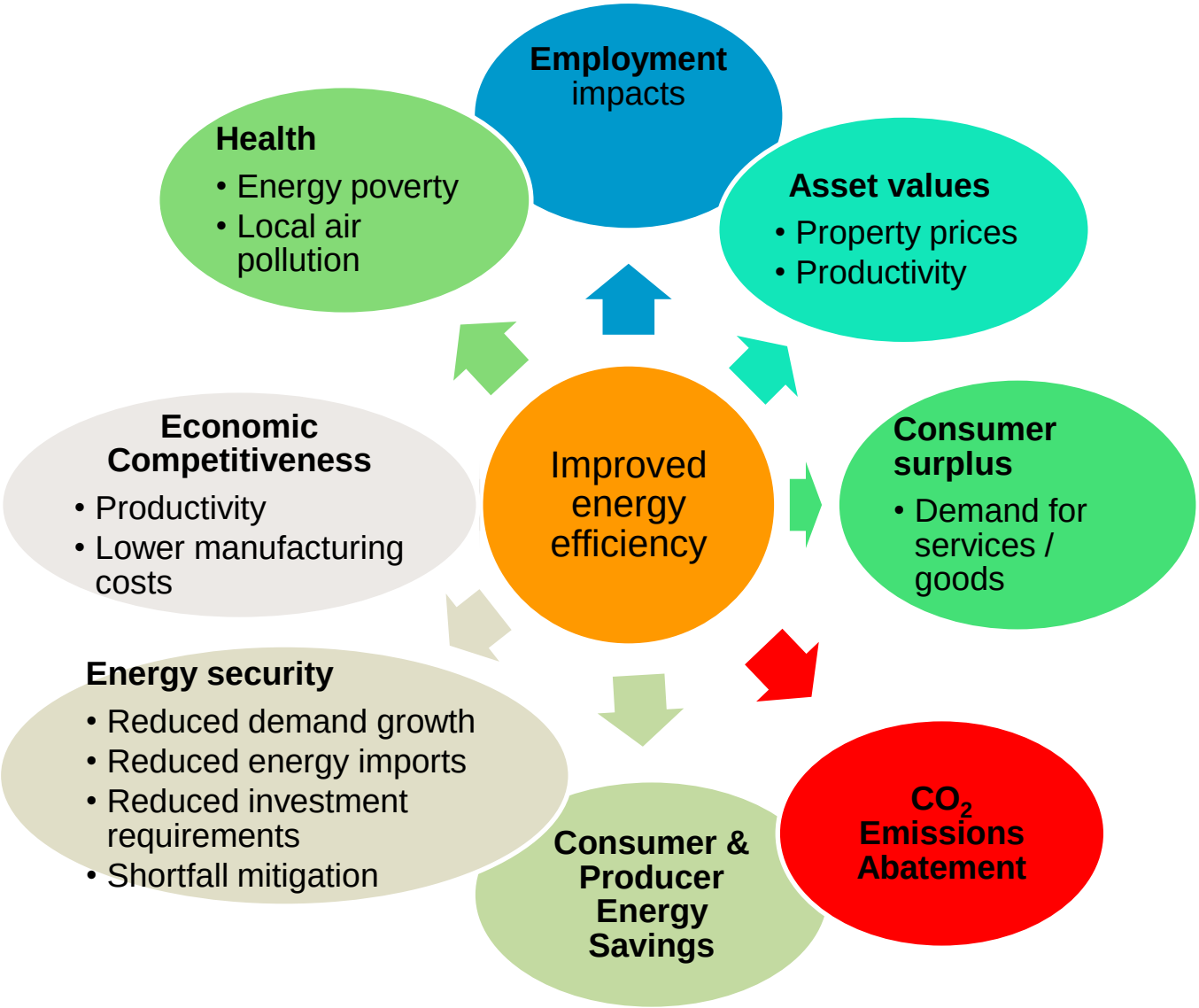
	Abatement	
	2020	2035
Efficiency	72%	44%
Renewables	17%	21%
Biofuels	2%	4%
Nuclear	5%	9%
CCS	3%	22%
Total (Gt CO_2)	2.5	14.8

The value of energy efficiency is most evident when savings are needed in a hurry



Source: IEA (2005) *Saving Electricity in a Hurry*, OECD/IEA, Paris

Energy efficiency also delivers social and economic benefits

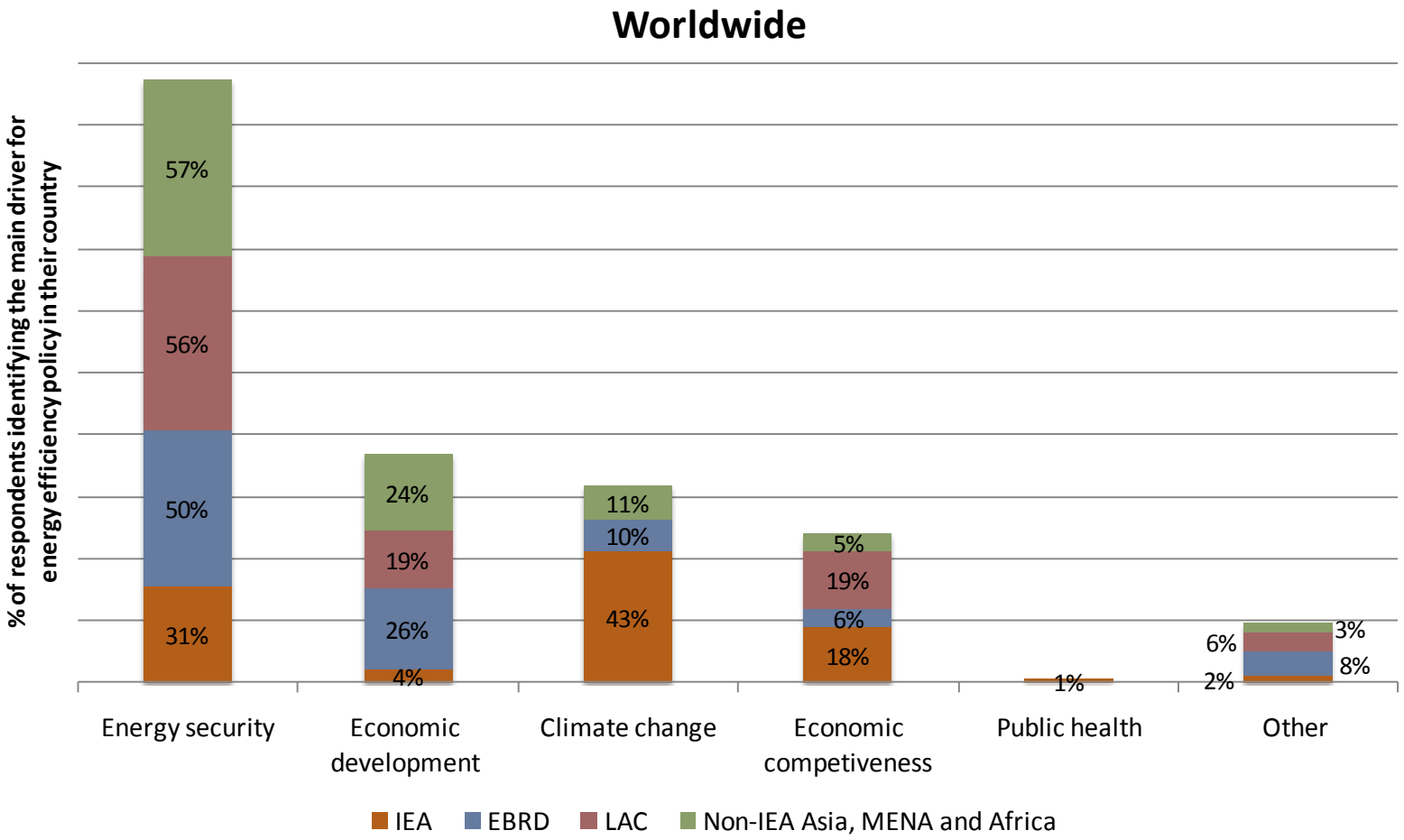


Non-energy benefits of transportation efficiency improvements

Why do governments develop policies to encourage energy efficiency?

- Consumers and asset owners often face barriers to implementing energy efficiency
- Governments can intervene to correct these barriers
- Types of barriers:
  - *Market Barriers*
  - *Financial Barriers*
  - *Information and awareness barriers*
  - *Regulatory and Institutional Barriers*
  - *Technical Barriers*

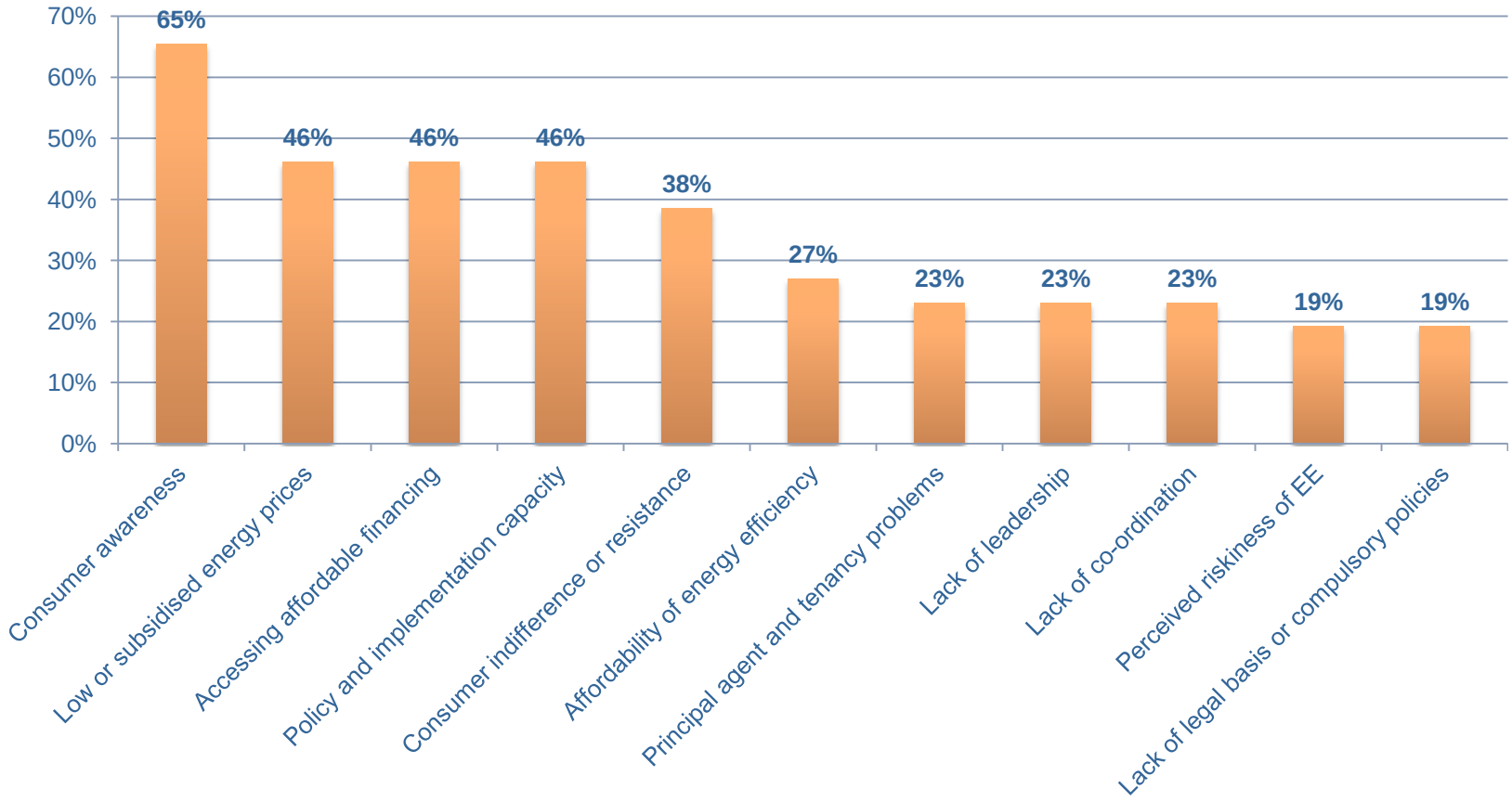
What drives energy efficiency policy? IEA Survey Results



Common barriers

Barrier	Examples
Market	• Market and price distortions that prevent customers from appraising the true value of energy efficiency. • The principal agent or split incentives problem, in which the investor does not reap the rewards of improved efficiency • Transaction costs (project development costs are high relative to potential energy savings).
Financial	• Lack of understanding of EE investments, or aversion to perceived risk on the part of financial institutions.
Information and awareness	• Lack of sufficient information to make rational consumption and investment decisions.
Regulatory and institutional	• Energy tariffs discouraging EE investment • Incentive structures that discourage investment in cost-effective energy efficiency. • Institutional bias towards supply-side investments.
Technical	• Lack of affordable or suitable EE technologies • Insufficient local capacities for identifying, developing, implementing and maintaining EE investments.

Major barriers facing energy efficiency - IEA survey results



End-user awareness, low energy prices, financing, and implementation capacity are commonly cited

Questions to consider when formulating energy efficiency policies

- Will it work?
- How much will it cost?
- Who will pay?
- How long will it take?
- Will there be unintended impacts or interference with other policies?
- Does the capacity exist to implement?

Types of policies

- **Information and education:** Advice/aid in implementation; labelling; professional training and qualification
- **Economic instruments:** fiscal incentives; market-based instruments; direct investment
- **Regulatory instruments:** codes & standards; auditing; monitoring; obligations schemes
- **Research, Development &Deployment (RD&D)**
- **Voluntary approaches:** public/private sector agreements; public voluntary schemes
- **Policy support measures:** strategic planning

Develop policies - choosing policies to overcome barriers

Barrier	Policy
Limited Information	Pilot Programs Awareness Campaigns
Perceived Risk	Market transformation Public Sector Procurement Fiscal policies
Customer Awareness	School curricula
Price or market distortion	Minimum Efficiency Efficiency Stds
Technology Availability	Industry formation Utility Programs
Transaction Costs	Audit requirements Audit grants
Access to financing	Revolving funds

25 Energy Efficiency Recommendations across 7 Sectors

Worldwide **I**mplementation **N**ow

Cross-sectoral 

Buildings 

Appliances and equipment 

Lighting 

Transport 

Industry 

Energy utilities 

International Energy Agency

Energy Efficiency

Policies and Measures Databases

www.iea.org/textbase/pm/index.html

Provides free, up-to-date data on national policy packages and latest policy developments in renewable energy, EE and climate change worldwide.

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- **In collaboration with Clean Energy Solutions Centre, UNEP Risoe Centre and European Commission**

Discussion

- What are the energy efficiency policy drivers in your country?
- What are the biggest barriers to saving energy?
- What type of energy efficiency policies are most “popular” in Central America?
- What non-energy benefits might help mobilize support for energy efficiency policies?