

Policy Analysis.

Session 1. Update on key Energy Efficiency Activities and Indicators from Secretariat.

IEA Energy Efficiency Indicators Workshop 6-7 June 2012

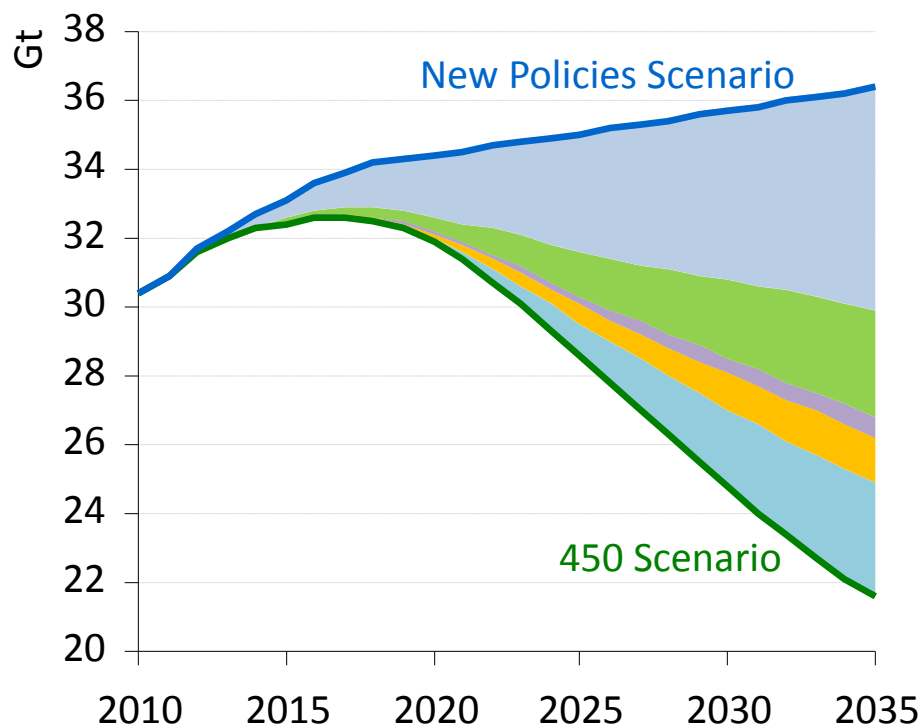
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International
Energy Agency

Efficiency gains can contribute most to emissions reductions

World energy-related CO₂ emissions abatement in the 450 Scenario relative to the New Policies Scenario



	Abatement	
	2020	2035
Efficiency	72%	44%
Renewables	17%	21%
Biofuels	2%	4%
Nuclear	5%	9%
CCS	3%	22%
Total (Gt CO₂)	2.5	14.8

Energy efficiency measures – driven by strong policy action across all sectors – account for 50% of the cumulative CO₂ abatement over the Outlook period

1. Policies are key to change....

Cross-sectoral



Buildings



Appliances and
equipment



Lighting



Transport



Industry



Energy utilities



25

Energy Efficiency Recommendations across 7 Sectors



Worldwide Implementation Now

IEA 25 Energy Efficiency Policy

Recommendations **82EJ/yr worth 1USD Tn**

1. Across sectors

- 1.1 Energy efficiency data collection and indicators;
- 1.2 Strategies and action plans;
- 1.3 Competitive energy markets, with appropriate regulation;
- 1.4 Private investment in energy efficiency;
- 1.5 Monitoring, enforcement and evaluation of policies and measures.

2. Buildings

- 2.1 Mandatory building energy codes and minimum energy performance requirements
- 2.2 Aiming for net zero energy consumption buildings
- 2.3 Improving energy efficiency of existing buildings
- 2.4 Building energy labels and certificates
- 2.5 Energy performance of buildings components and systems.

3. Appliances

- 3.1 Mandatory energy performance standards and labels for appliances and equipment;
- 3.2 Test standards and measurement protocols for appliances and equipment;
- 3.3 Market transformation policies for appliances and equipment.

4. Lighting

- 4.1 Phase-out of inefficient lighting products and systems;
- 4.2 Energy-efficient lighting systems.

5. Transport

- 5.1 Mandatory vehicle fuel efficiency standards;
- 5.2 Measures to improve vehicle fuel efficiency;
- 5.3 fuel-efficient non-engine components;
- 5.4 Improving operational efficiency through eco-driving and other measures;
- 5.5 Improve transport system efficiency.

6. Industry

- 6.1 Energy management in industry;
- 6.2 High-efficiency industrial equipment and systems;
- 6.3 Energy efficiency services for small and medium-sized enterprises;
- 6.4 Complementary policies to support industrial energy efficiency.

7. Energy utilities

- 7.1 Energy utilities and end-use energy efficiency.

2. WEO and Energy Efficiency

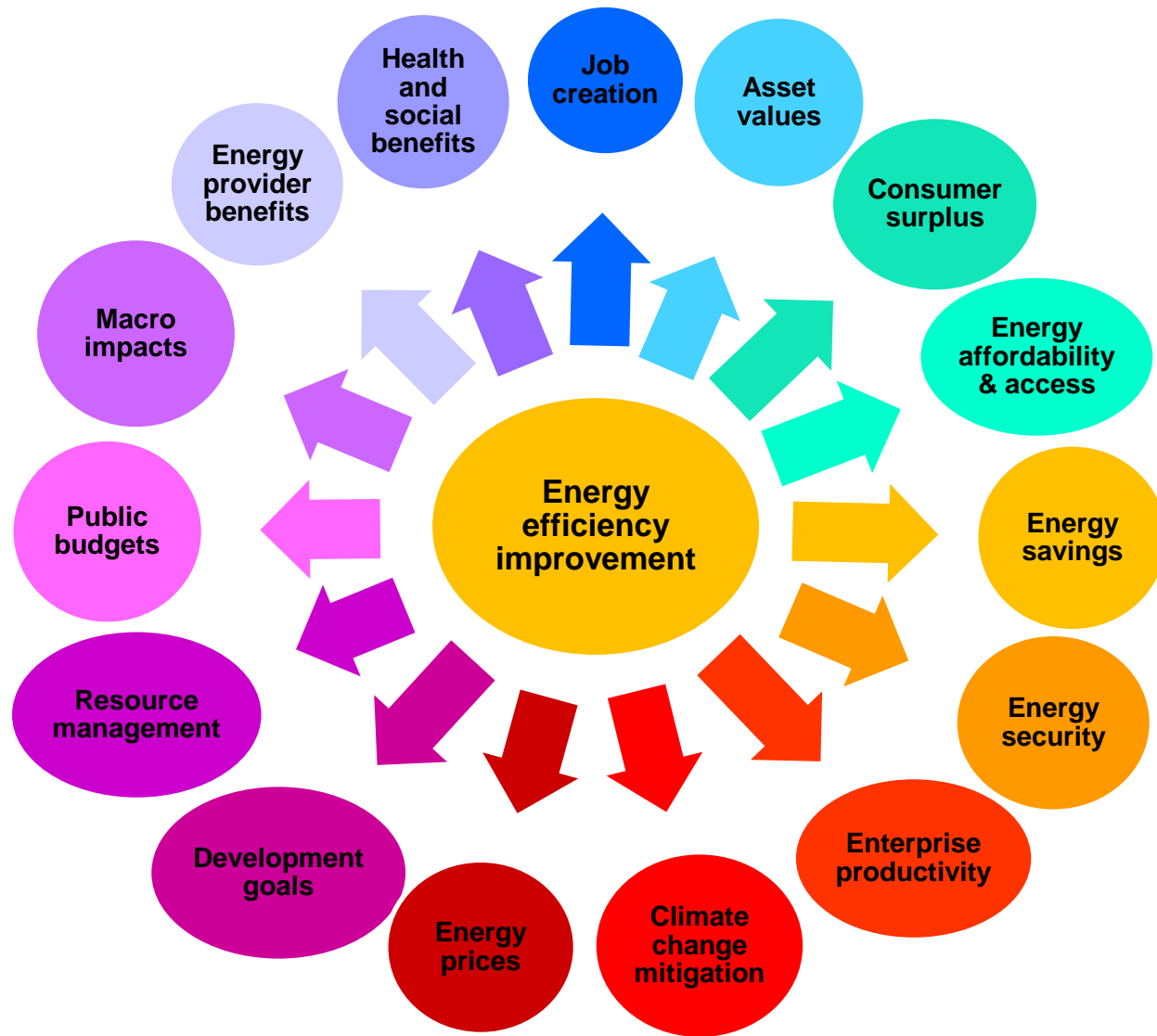
- **Energy efficiency is crucial to increase energy security and to mitigate climate change, but global energy intensity has been deteriorating**
 - *Why? How to unlock the potentials?*
- **Quantitative country by country and sector by sector analysis, covering:**
 - *Technical and economic potentials*
 - *Investment and financing needs*
 - *Macroeconomic benefits on growth, consumers spending*
 - *Market Barriers & the role of policies*
- **A dedicated scenario exploring the costs and benefits of increasing energy efficiency deployment**
 - *Detailed analysis of implications for the economy, energy security, energy access and environmental implications*

3. Multiple Benefits of EE

- We need to develop better understanding of outcome benefits of EE to;
 - Engage policy decision makers
 - Clarify what EE delivers
 - Clarify perceptions; rebound...
 - Evolve EE beyond a technical paradigm

“health and well-being, energy affordability for low-income households, macroeconomic benefits and improvements to the public budget, increased energy security, avoided energy infrastructure investment, employment, industrial productivity benefits, asset values, and increased consumer surplus. These benefits have largely been left out of cost/benefit analyses to date because they are more difficult to quantify and monetise. It is important to be able to put a value on all costs and benefits of energy efficiency in policy evaluation”

2. Multiple benefits of energy efficiency



Multiple Benefits Project

Goals

- Systematically review the relationship between energy efficiency policies and the wider economic, environmental and social benefits.
- Provide estimates of multiple benefits of energy efficiency policy
- Clarify the nature of rebound for use in policy evaluation.
- Identify successful long-term strategies for energy efficiency policy to maximise energy efficiency benefits.

Multiple benefits = all outcomes associated with energy efficiency improvements (energy and non-energy)