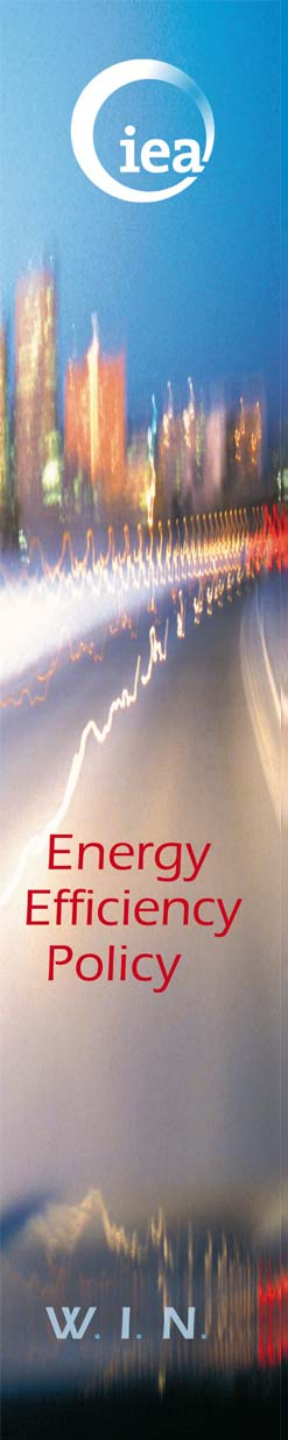


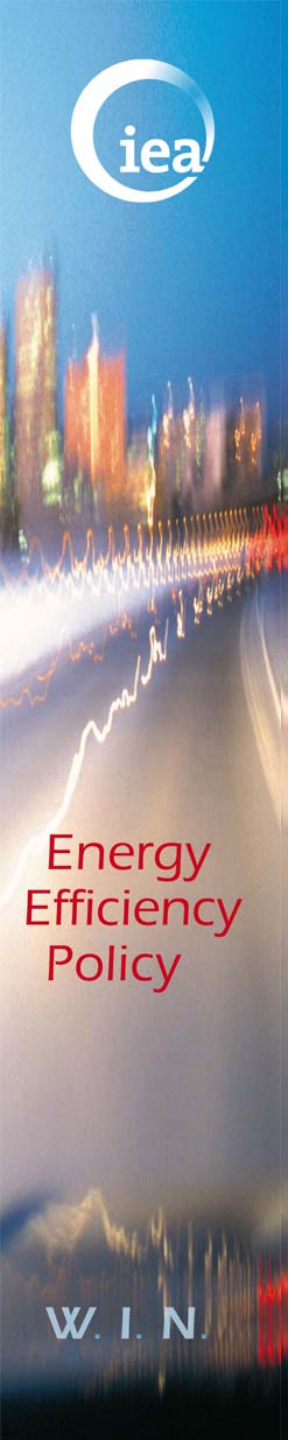
Energy Efficiency
The quiet giant

Ambassador Richard H. Jones

Deputy Executive Director

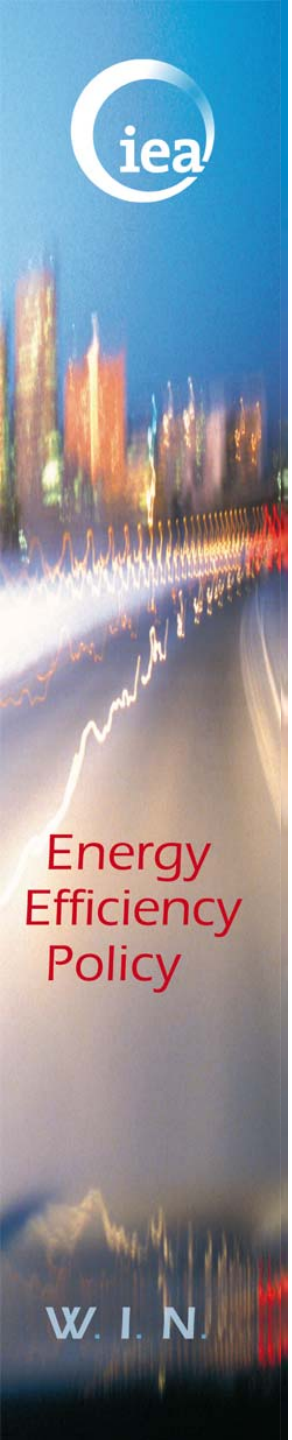
International Energy Agency

Eilat-Eilot
International Renewable Energy Conference & Exhibition
February 16-18, 2010
Herods & Dan Hotel, Eilat, Israel



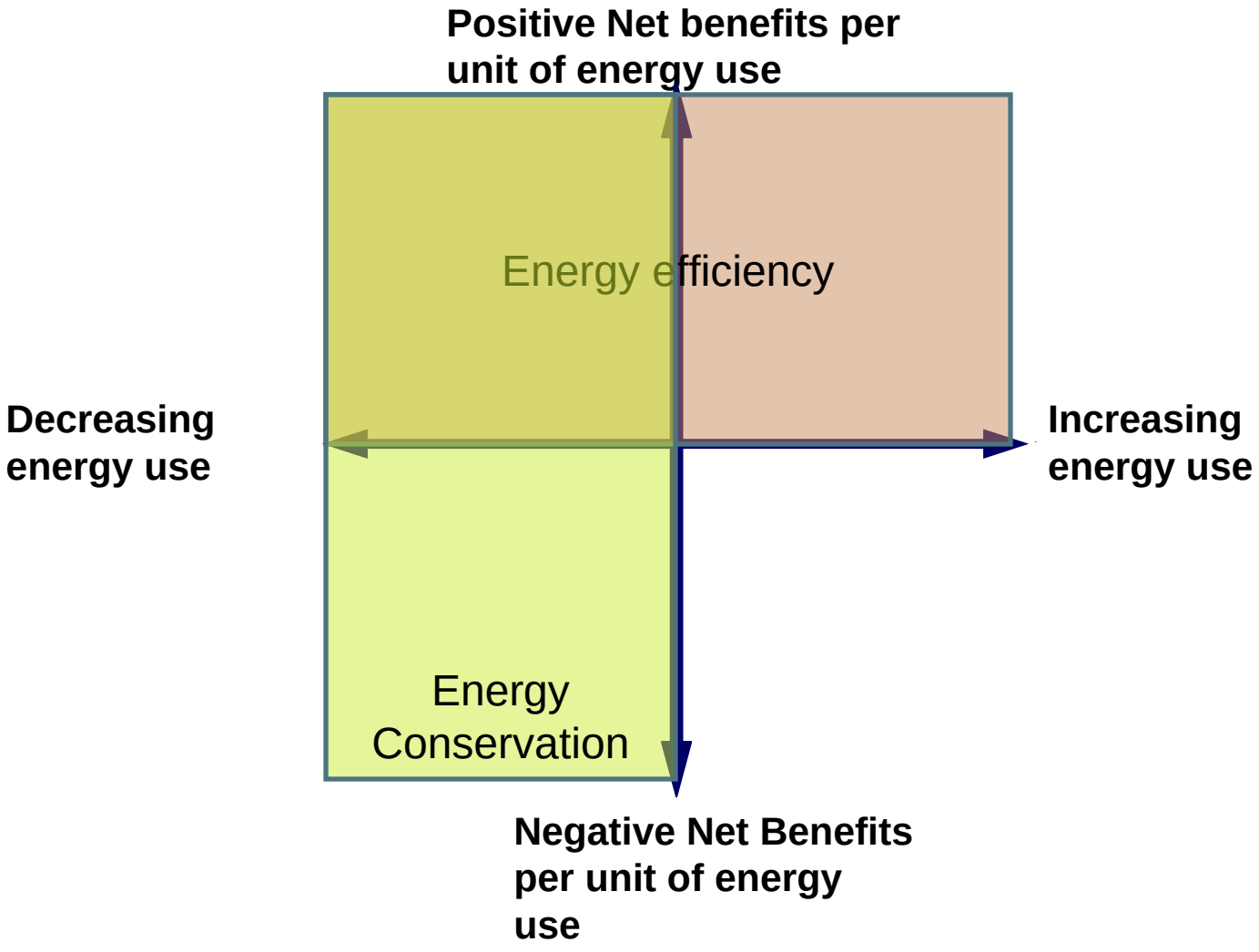
Overview

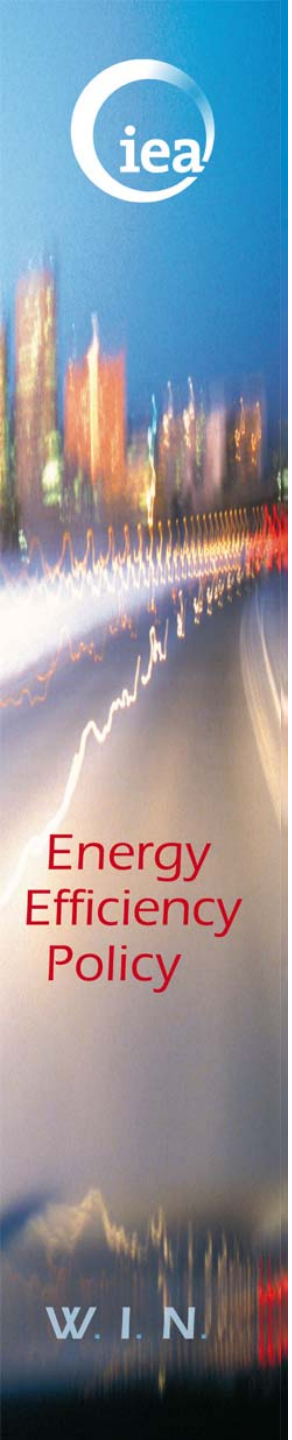
- Why is energy efficiency important for Israel?
- How big is the cost-effective energy efficiency potential in Israel?
- How to capture this potential?
  - IEA energy efficiency recommendations
- Energy efficiency policy in Israel - potential and challenges
- Looking forward



1. Why is energy efficiency important for Israel?

What is Energy Efficiency?

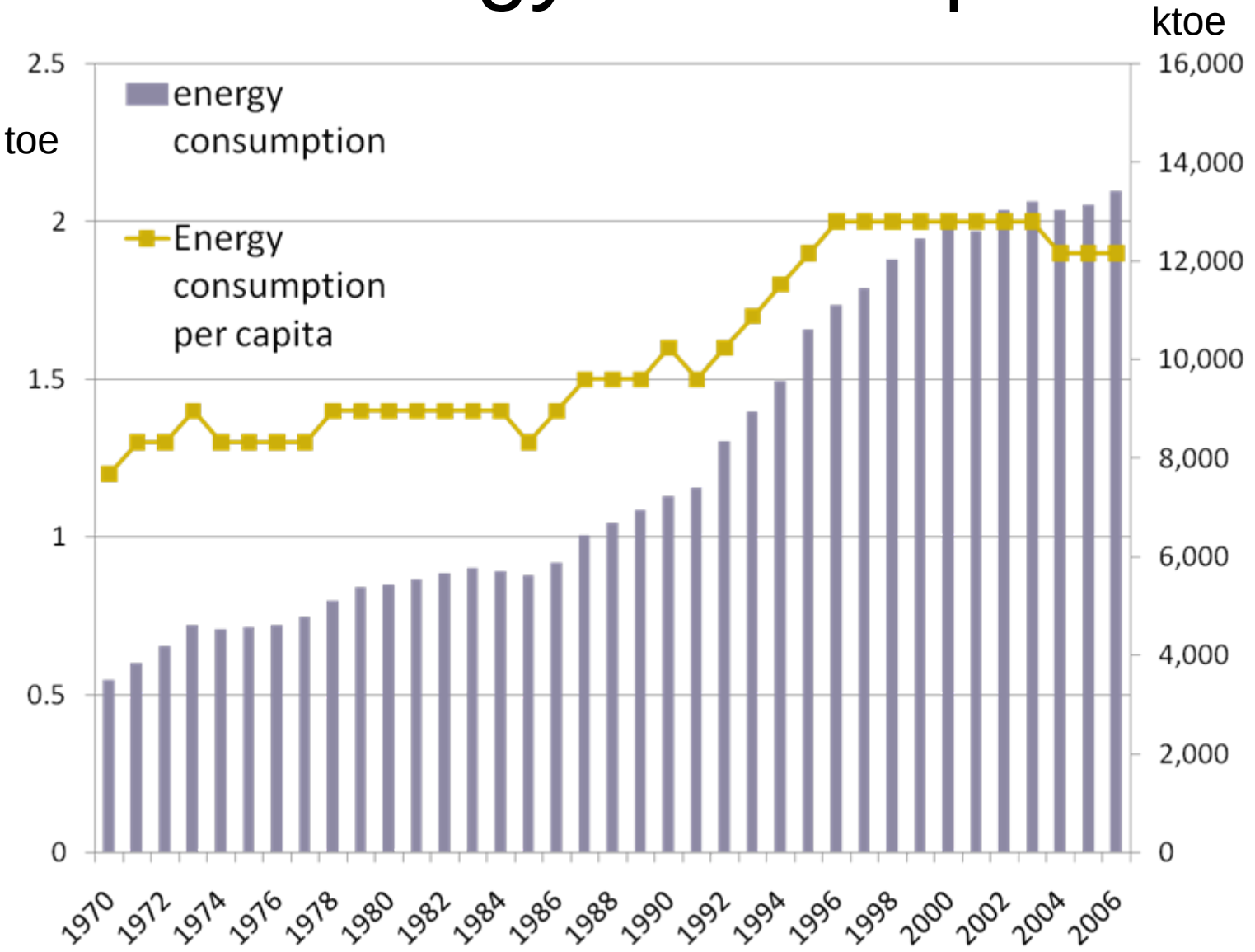




Three key benefits of energy efficiency

- **Improve energy security** by reducing the reliance on foreign energy imports
- **Improve economic prosperity** by reducing the amount of energy used per unit of GDP
- **Reduce greenhouse gas emissions** by reducing overall energy consumption

Israeli energy consumption



Central Bureau of Statistics, 2010

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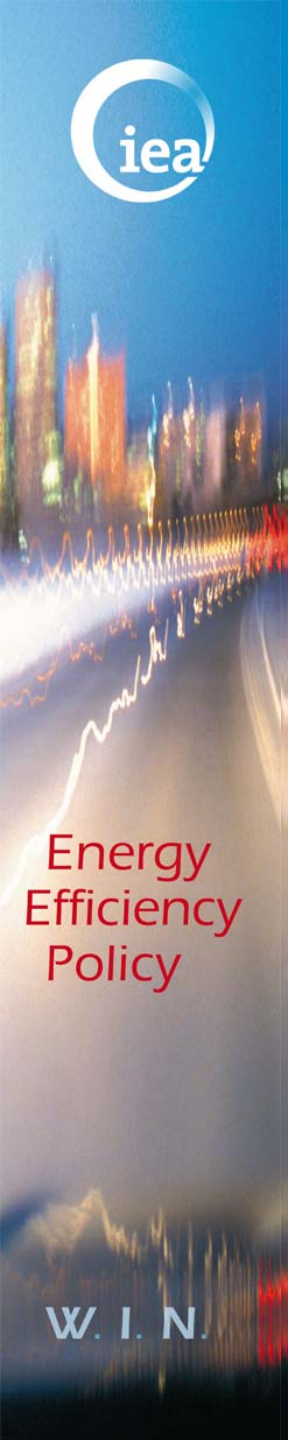
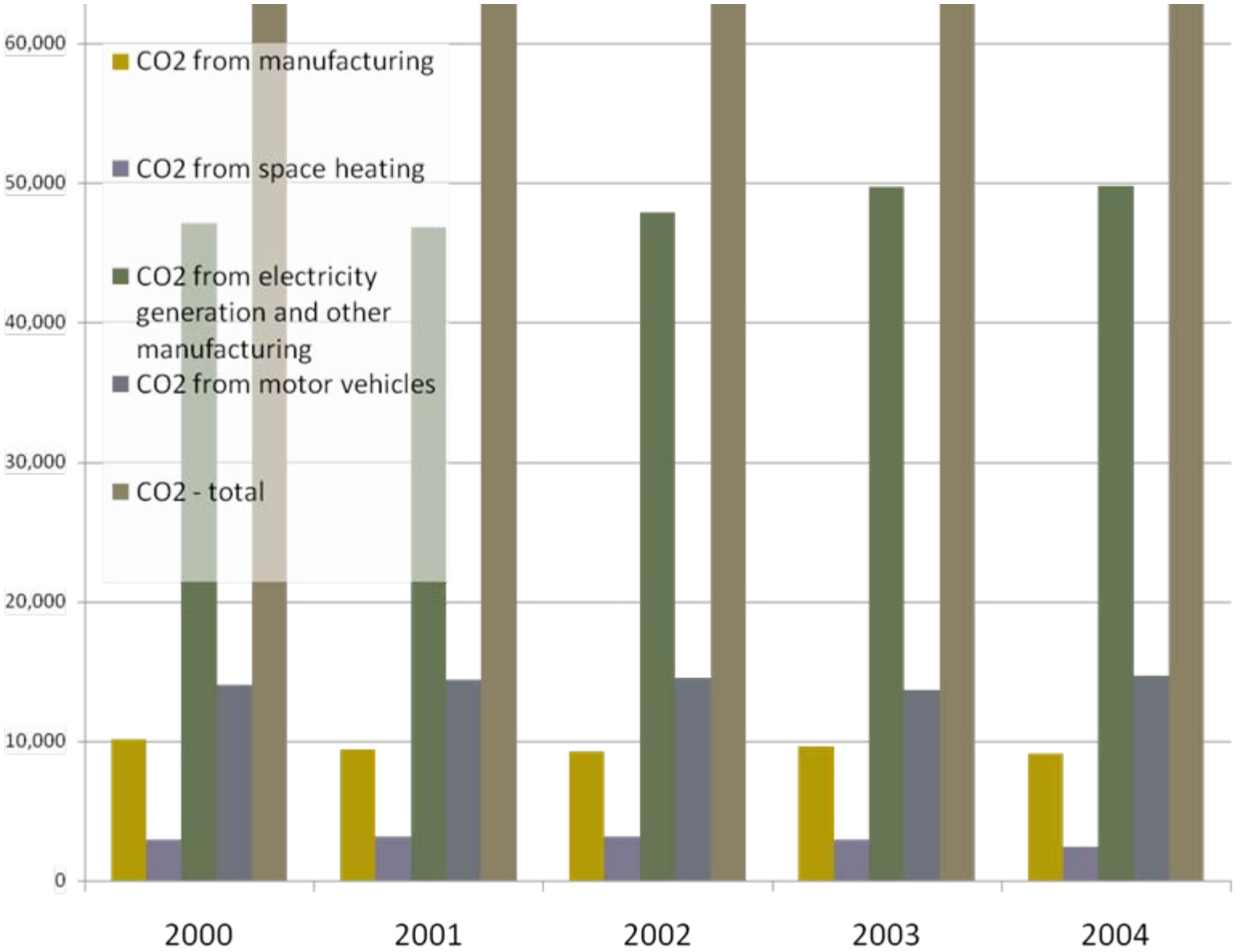
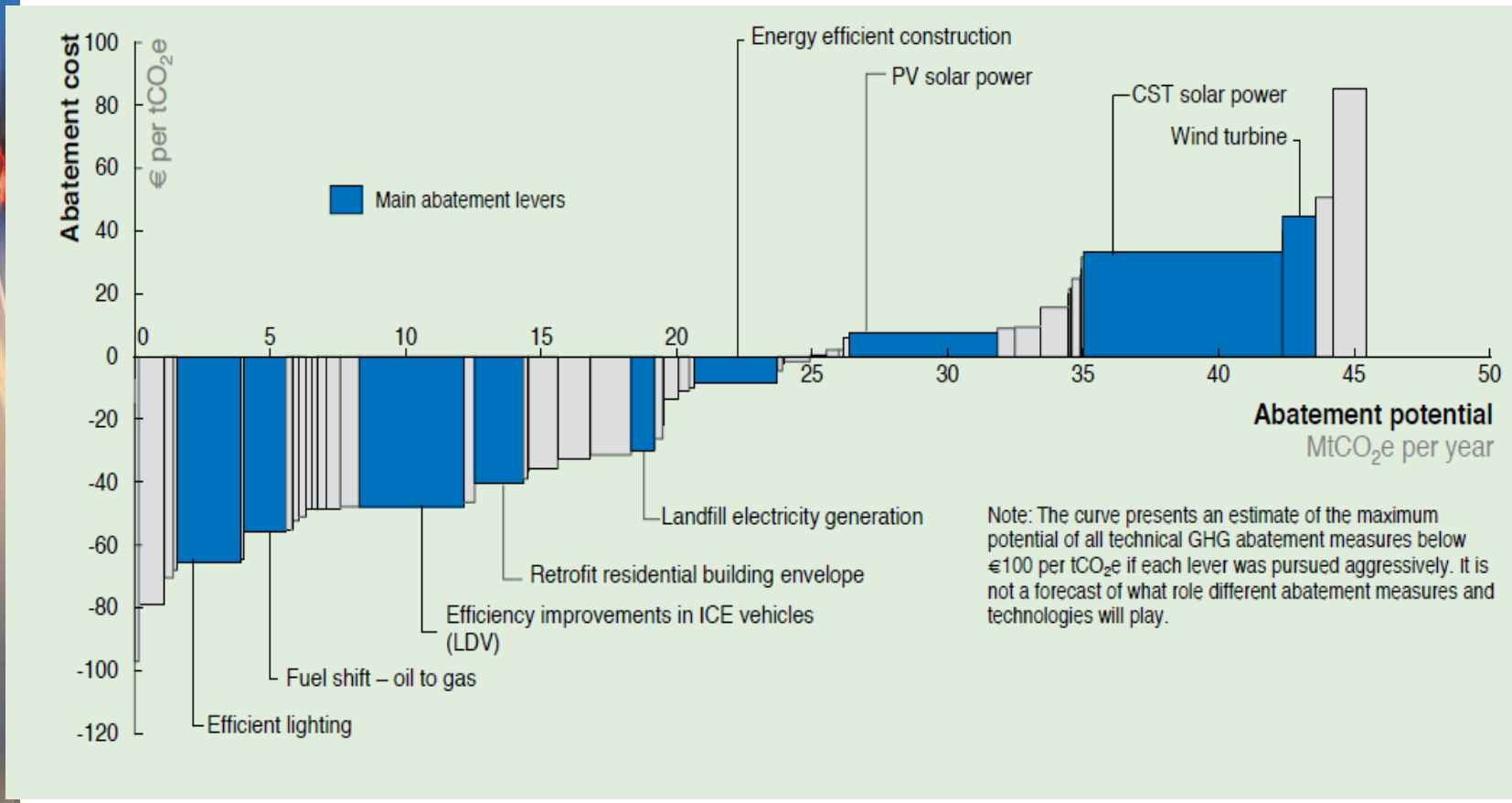


CO2 emissions from Israel



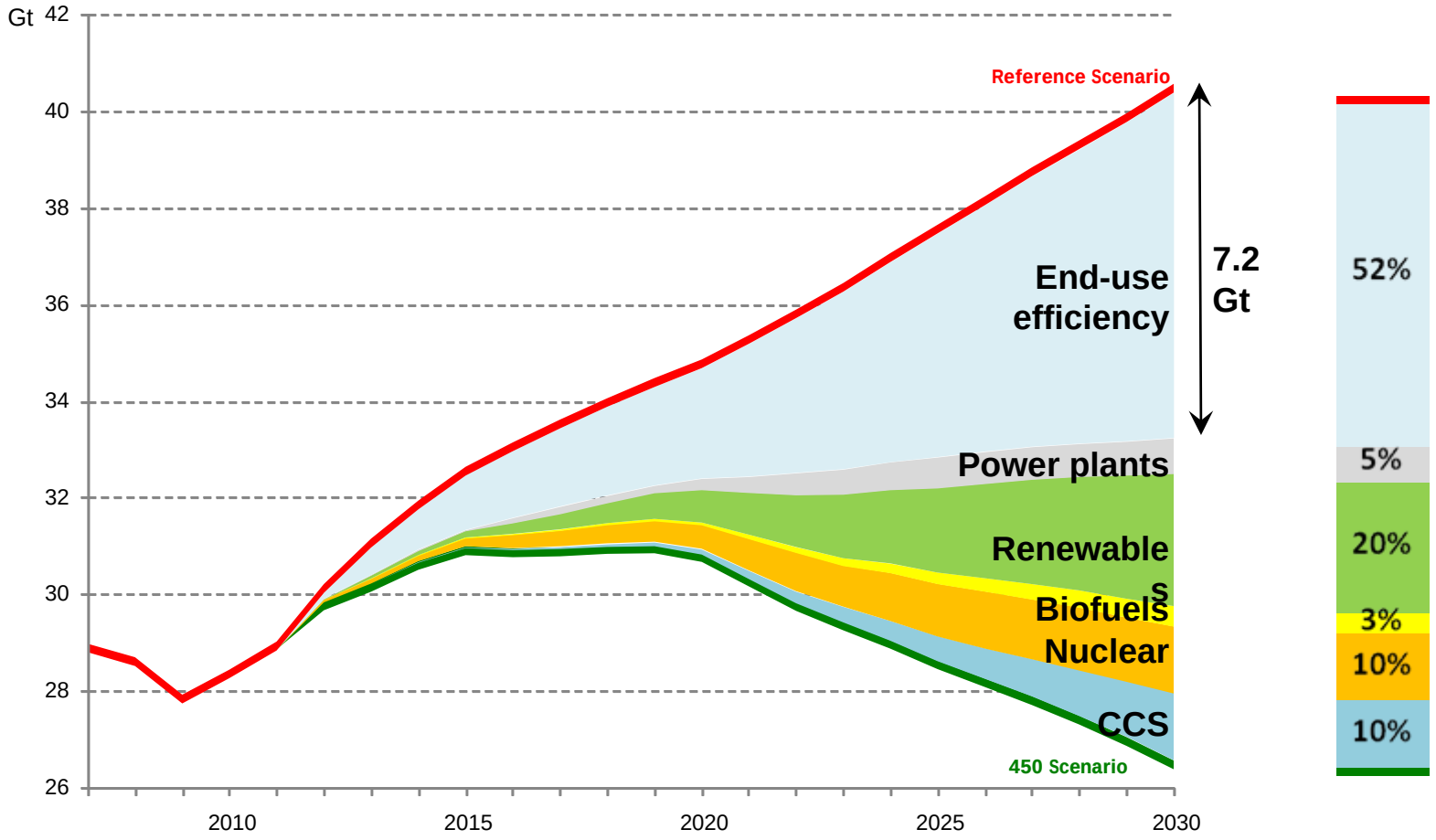
CBS, 2010

2. How big is Israel's energy efficiency potential?

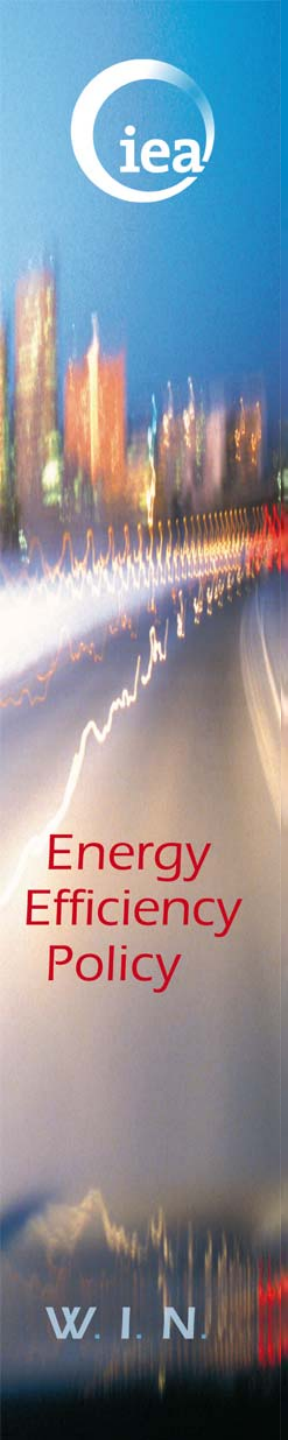


Source: McKinsey and Co. 2009

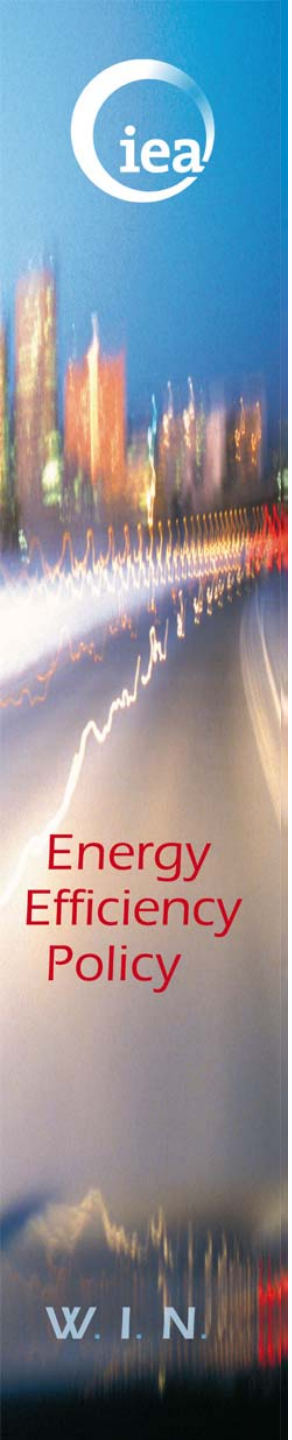
World Energy Outlook 2009
450 Scenario



52% of the required cuts in GHG emissions to achieve the 450 scenario is estimated to come from energy efficiency savings by 2030 (WEO 2009)



3. How to capture the energy efficiency potential?

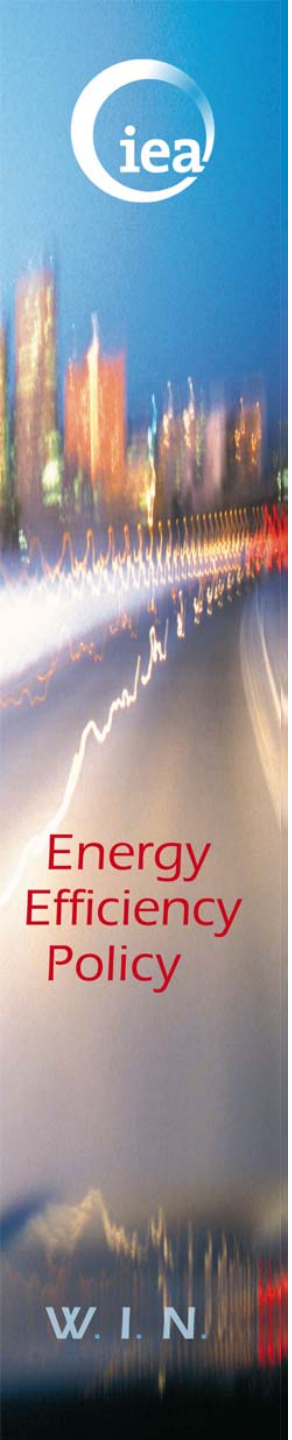


The IEA 25 Energy Efficiency Recommendations

Seven areas – cross-sectoral, buildings, appliances and equipment, lighting, transport, industry, and energy utilities.

Each recommendation:

- Delivers significant energy savings at low cost
- Addresses market imperfections and policy gaps
- Has a high degree of political support



25 energy efficiency policy recommendations across 7 priority areas

1. Across sectors

1.1 Measures for increasing investment in energy efficiency;
1.2 National energy efficiency strategies and goals;
1.3 Compliance, monitoring, enforcement and evaluation of energy efficiency measures;
1.4 Energy efficiency indicators;
1.5 Monitoring and reporting progress with the IEA energy efficiency recommendations themselves.

2. Buildings

2.1 Building codes for new buildings;
2.2 Passive Energy Houses and Zero Energy Buildings;
2.3 Policy packages to promote energy efficiency in existing buildings;
2.4 Building certification schemes;
2.5 Energy efficiency improvements in glazed areas.

3. Appliances

3.1 Mandatory energy performance requirements or labels;
3.2 Low-power modes, including standby power, for electronic and networked equipment;
3.3 Televisions and “set-top” boxes;
3.4 Energy performance test standards and measurement protocols.

4. Lighting

4.1 Best practice lighting and the phase-out of incandescent bulbs;
4.2 Ensuring least-cost lighting in non-residential buildings and the phase-out of inefficient fuel-based lighting.

5. Transport

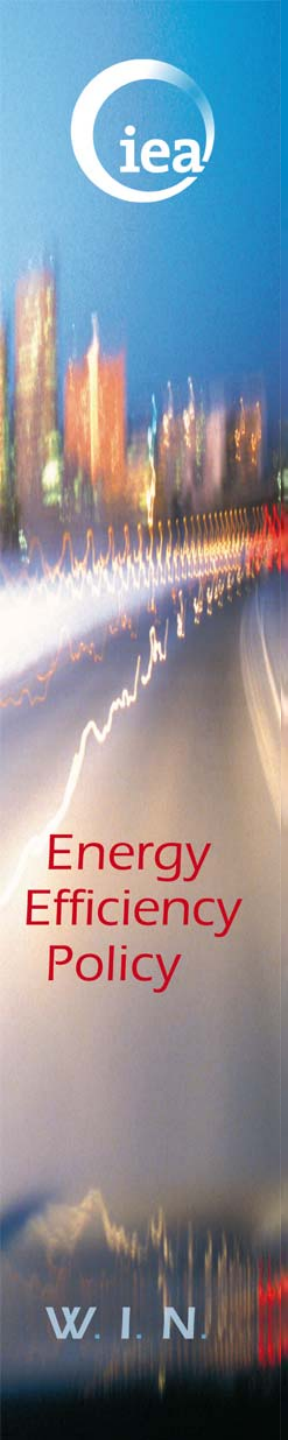
5.1 Fuel-efficient tyres;
5.2 Mandatory fuel efficiency standards for light-duty vehicles;
5.3 Fuel economy of heavy-duty vehicles;
5.4 Eco-driving.

6. Industry

6.1 Collection of high quality energy efficiency data for industry;
6.2 Energy performance of electric motors;
6.3 Assistance in developing energy management capability;
6.4 Policy packages to promote energy efficiency in small and medium-sized enterprises.

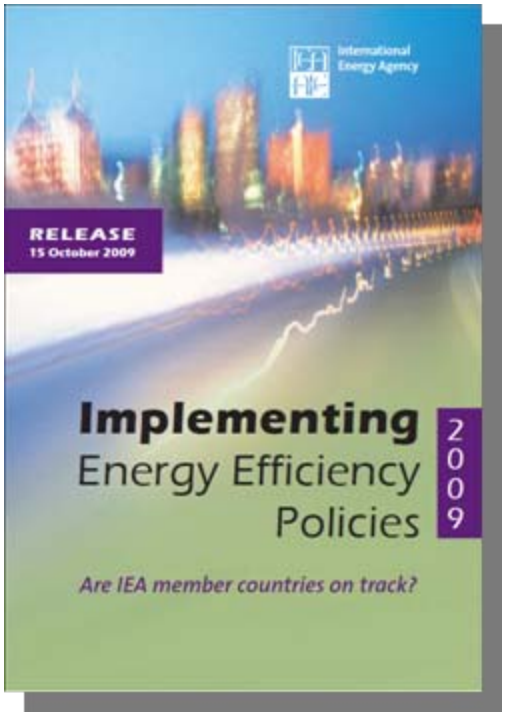
7. Utilities

7.1 Utility end-use energy efficiency schemes.



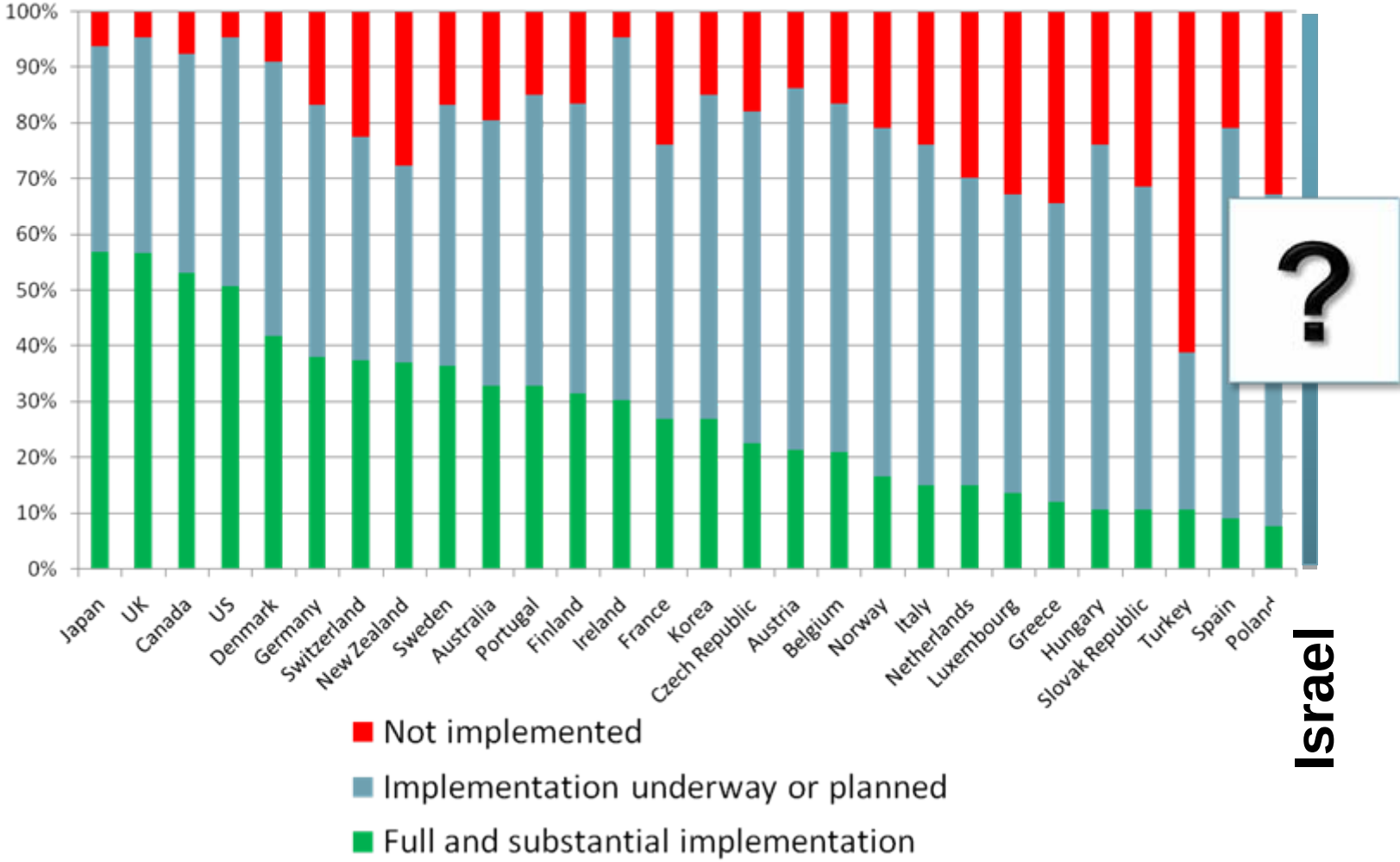
Implementing energy efficiency policies: are IEA member countries on track?

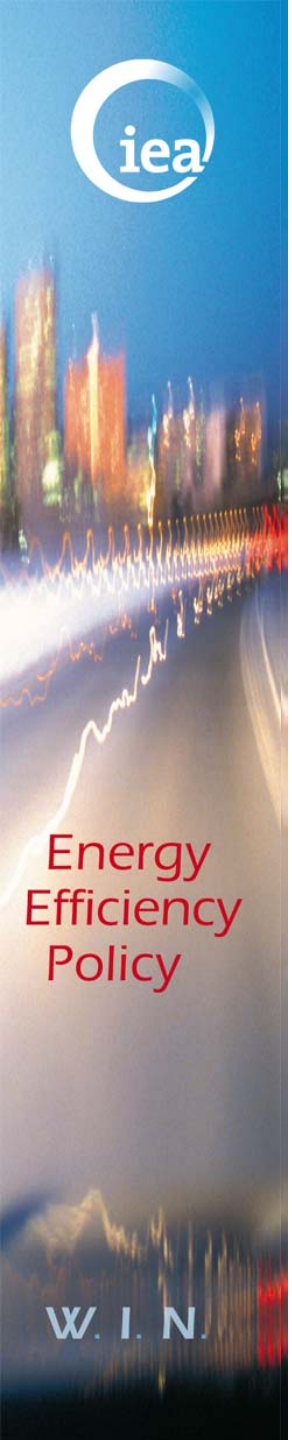
- Evaluation of each IEA member country on a scale ranging from fully implemented to not implemented



- Fully implemented
- Substantial implementation
- Implementation underway
- Plan to implement
- Not implemented
- Non applicable

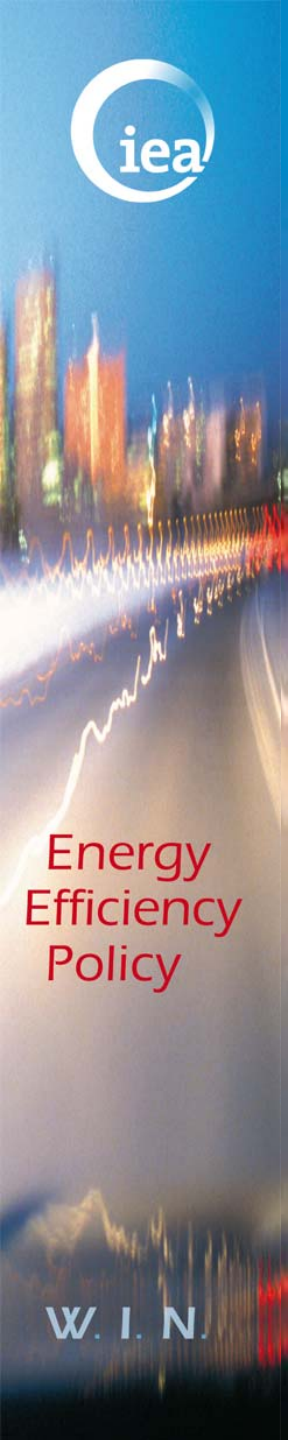
How does implementation compare across countries – all recommendations?





A few other IEA activities in energy efficiency

- Policy pathways project
- Hosting of IPEEC secretariat
- Projects on energy efficiency governance, market-based instruments, transport



Next steps: Policy Pathways for Energy Efficiency

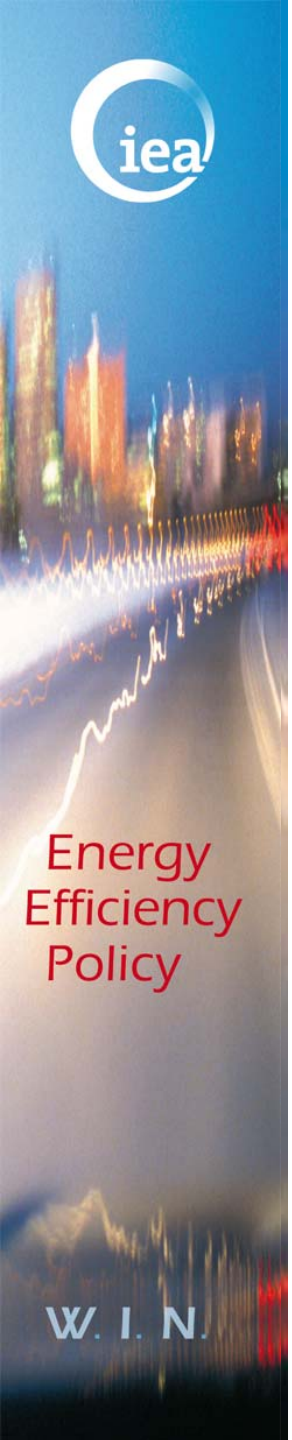
Objective is to identify, analyse and communicate to all governments innovative policy pathways (steps and milestones) for improving energy efficiency

Initial focus:

1. Case study Pathways
   - share best-practices for implementation of a specific EE policy

In the future, possibly:

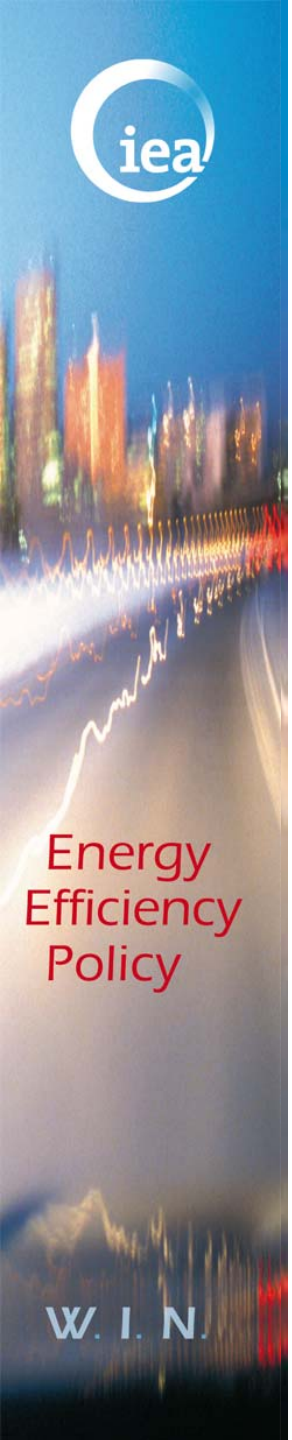
2. Cluster Pathways
   - Pathways for clusters of countries at similar stages of development and EE policy implementation
3. Country Pathways
   - detailed, tailored sector pathways for selected governments



IPEEC initiative

Joint Statement of the London Ministerial Meeting

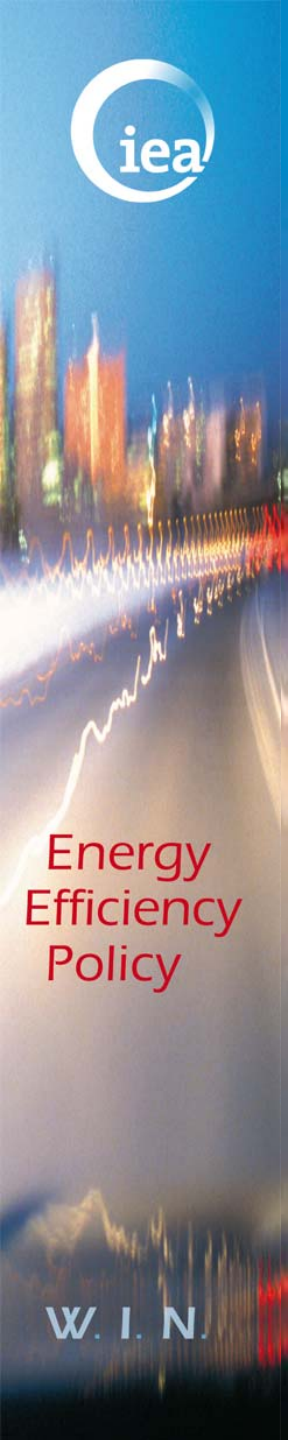
- IPEEC was launched at the 2009 G8 Energy Ministers Meeting in Rome; it will serve as a high-level forum for facilitating broad actions that yield high energy efficiency gains.
- IEA will host the IPEEC secretariat so that IPEEC can make use of IEA expertise.
- IPEEC meetings commenced in the fall of 2009; staff members are now being recruited.
- Proposed Work Programme
  - Cataloguing Multilateral Energy Efficiency Initiatives and National Action Plans
  - Sustainable Buildings Network (SBN)
  - Global Energy Efficiency Action Initiative (GEEAI)
  - Energy Management Action Network (EMAK)
  - Assessment of Energy Efficiency Financing Mechanism (EEFAN)
  - Improving Methods for Measuring and Verifying Energy Efficiency Impacts
  - Super-Efficient Equipment Appliance and Deployment (SEAD)



4. Energy Efficiency in Israel – potential and challenges (1)

Steps taken…

- Energy Master Plan – estimates potential for at least 20-35% energy savings
- 2008 government decision - 20% reduction in energy demand through improved energy efficiency by 2020
- 10 % share of renewable energy sources in electricity generation.
- Introduction of EU bio-fuels standards
- Labelling schemes for certain domestic appliances



Energy Efficiency in Israel – potential and challenges (2)

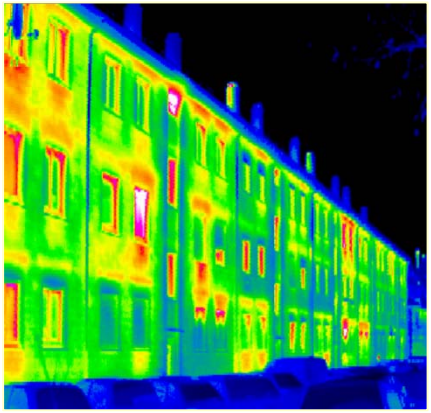
There are two primary barriers remaining…

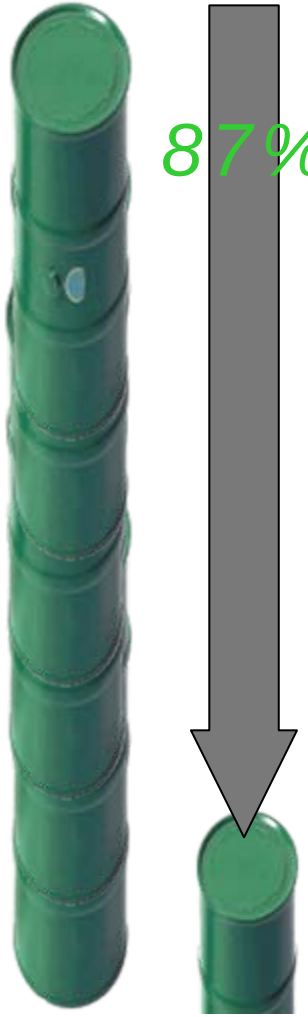
- Financing hurdles and rapid payback requirements – significant upfront investment
- Agency issues - many opportunities with net economic benefits but the consumer or company reaping the benefits of lower energy bills is not actually making the upfront

McKinsey and Co. 2009

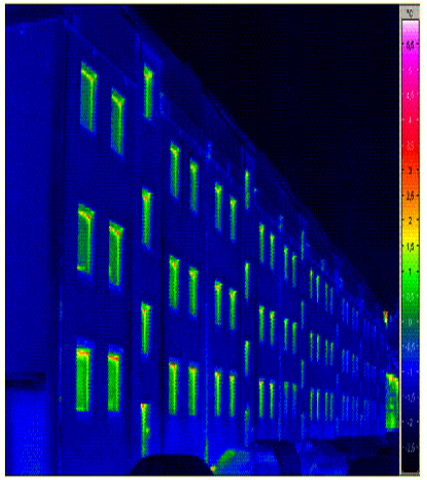
Package for existing buildings

Frankfurt Refurbishment using Passive House Technology





87%



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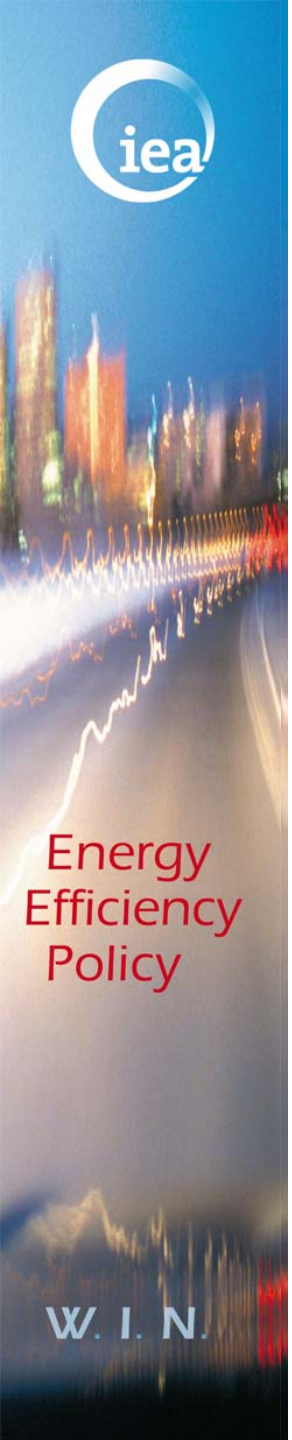

5. Conclusion

- Energy efficiency is least cost way to achieve environmental, economic and energy security goals for our sustainable future
- Energy efficiency is critical for Israel's sustainable energy future
- Significant effort still needed to achieve its full potential
- The IEA can help!

Window of opportunity for action on energy efficiency now

Energy Efficiency Policy

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Thank you