Energy Efficiency: Past Performance and Future Potential

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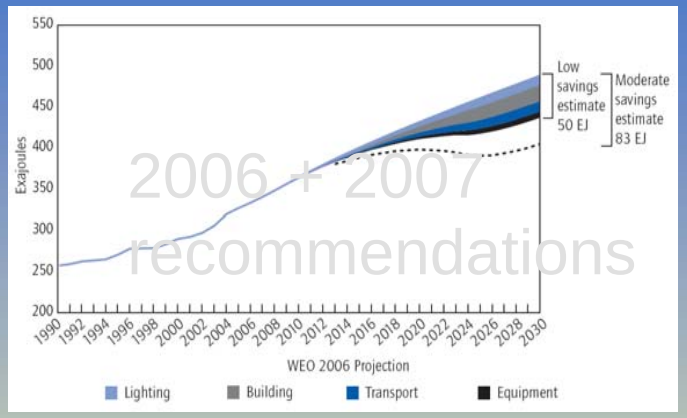
Energy efficiency: IEA recommendations to G8

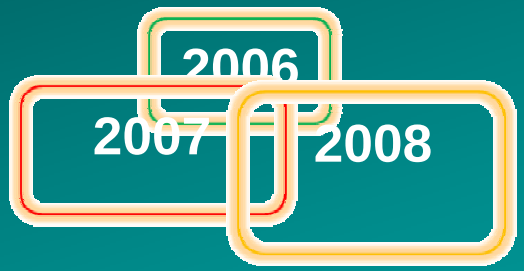


16 New recommendations for 2008 (Hokkaido):

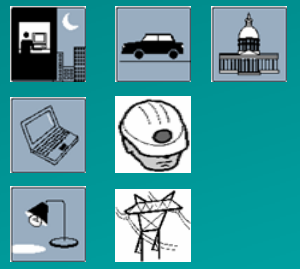
- 12 new fields of action
  - buildings; appliances; lighting; transport; industry; power sector; cross-sectoral
- 4 elaborate earlier measures

5.7 billion tons of CO_2 saved in 2030

Consolidated recommendations

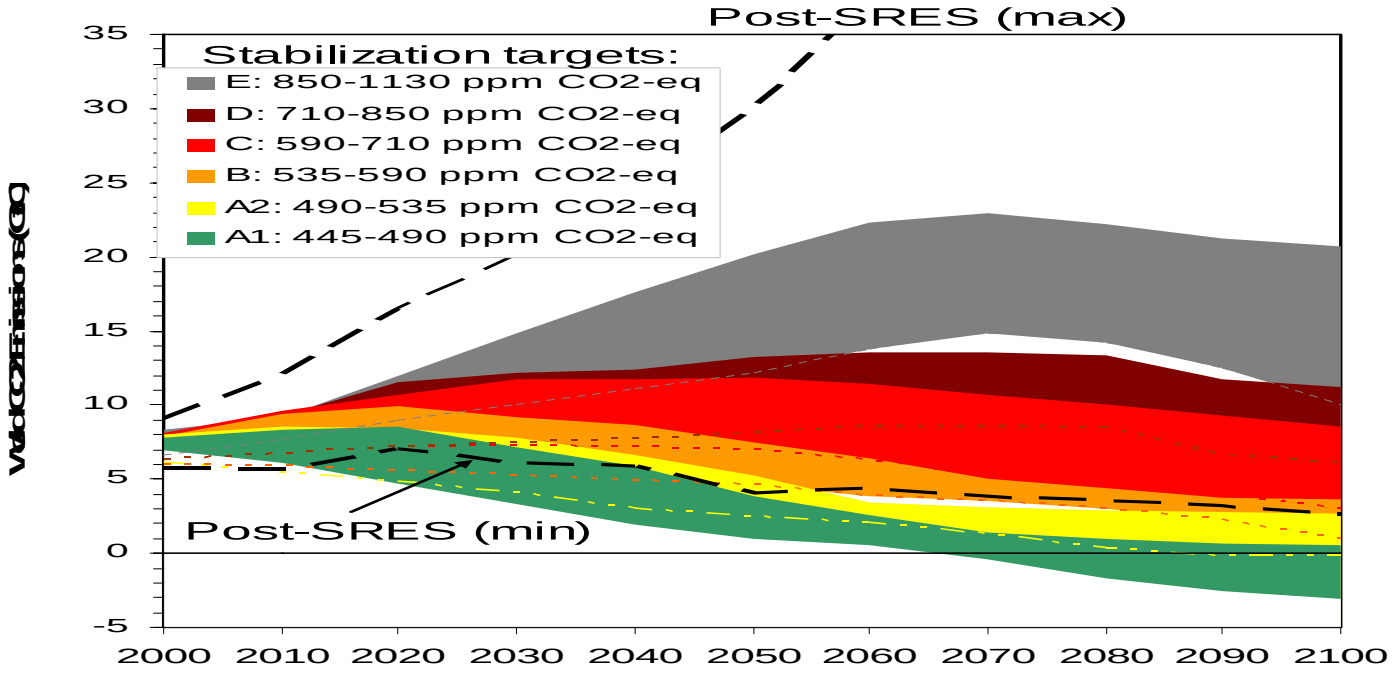


- 7 priority areas
- 25 fields of action



Stabilisation of GHG concentrations (radiative forcing) in the atmosphere and emission reductions

- The lower the stabilisation level the earlier global CO2 emissions have to peak



Multigas and CO2 only studies combined

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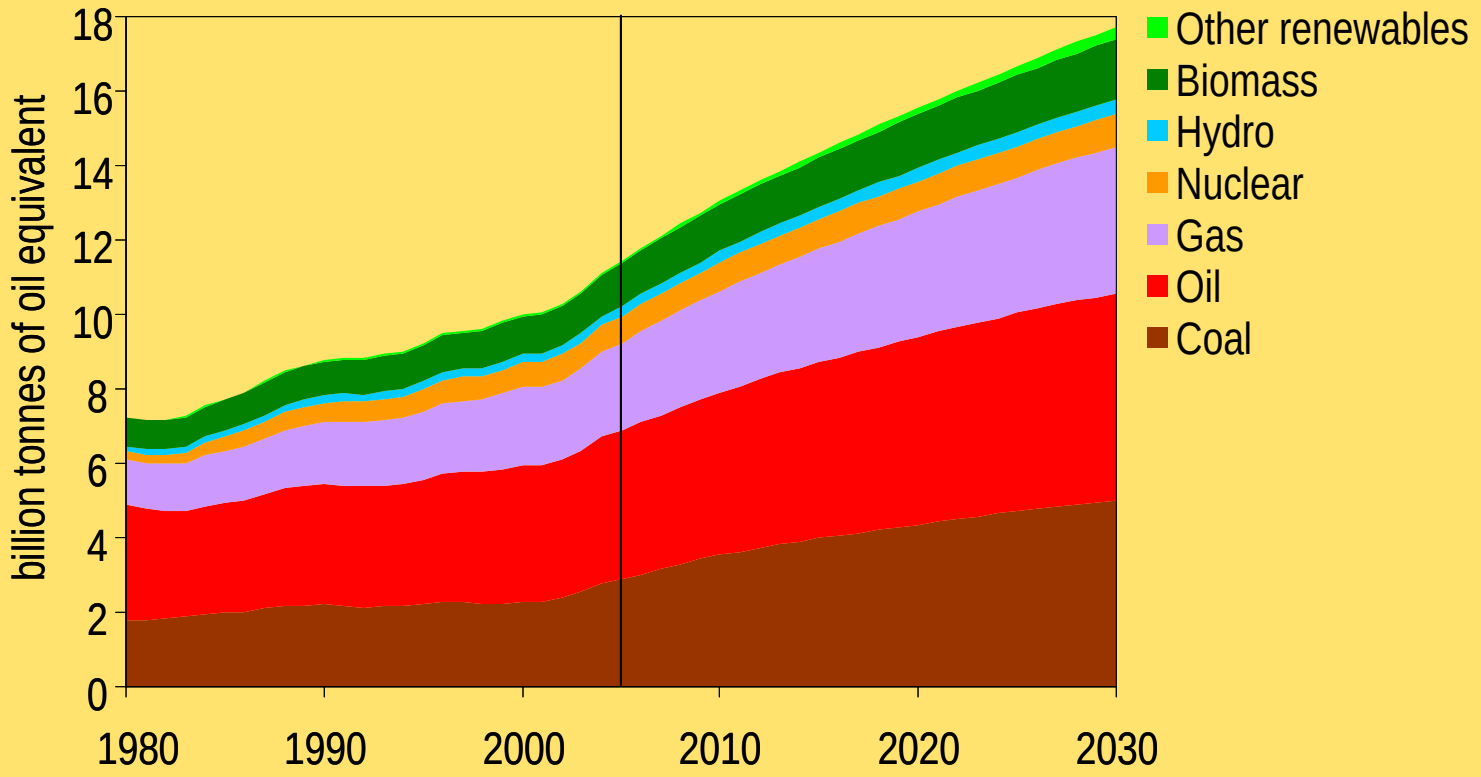
WORLD ENERGY OUTLOOK 2007

China and India Insights

Reference Scenario:

World Primary Energy Demand



Global demand grows by more than half over the next quarter of a century, with coal use rising most in absolute terms

INTERNATIONAL ENERGY AGENCY

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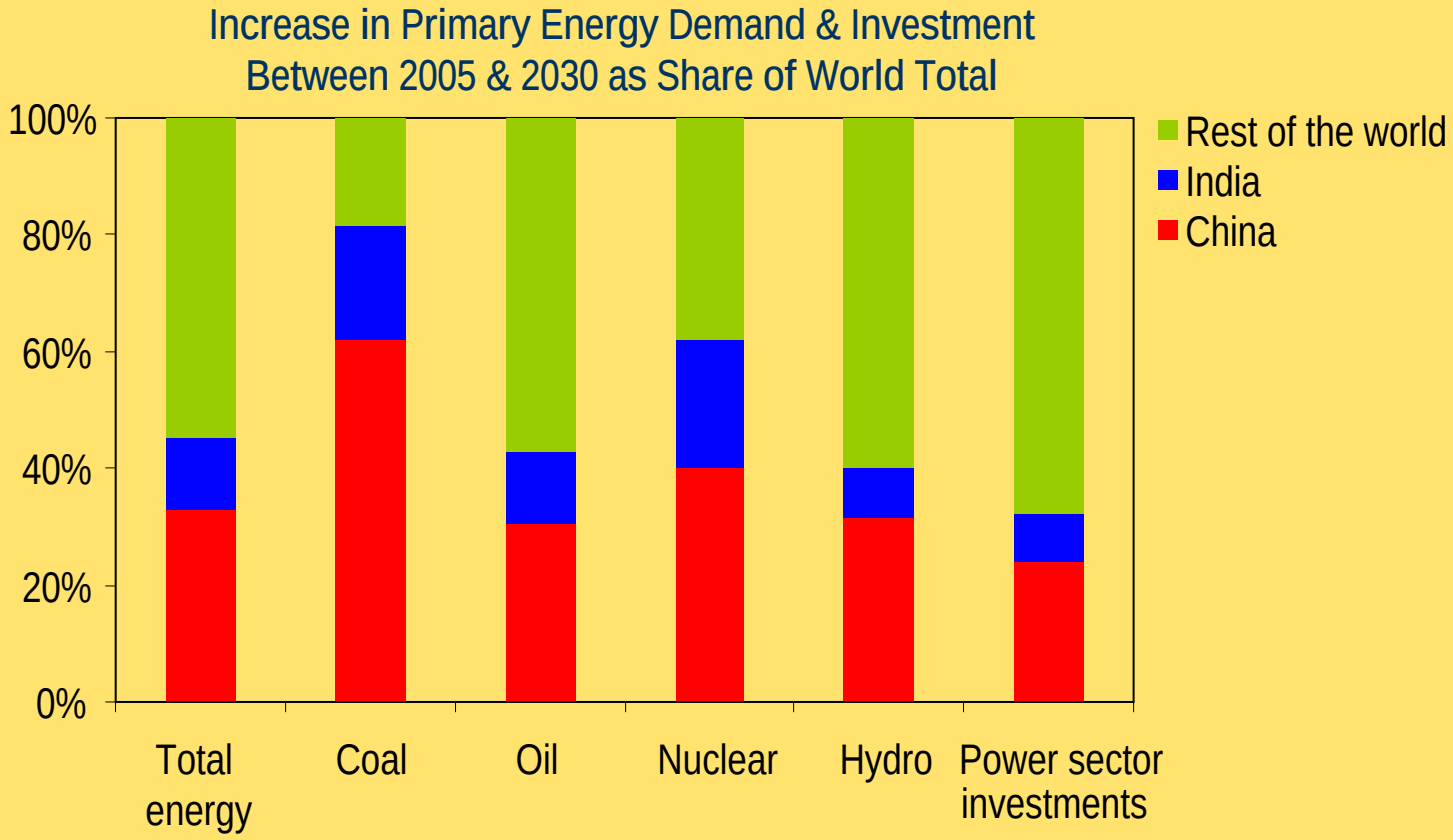
Reference Scenario:

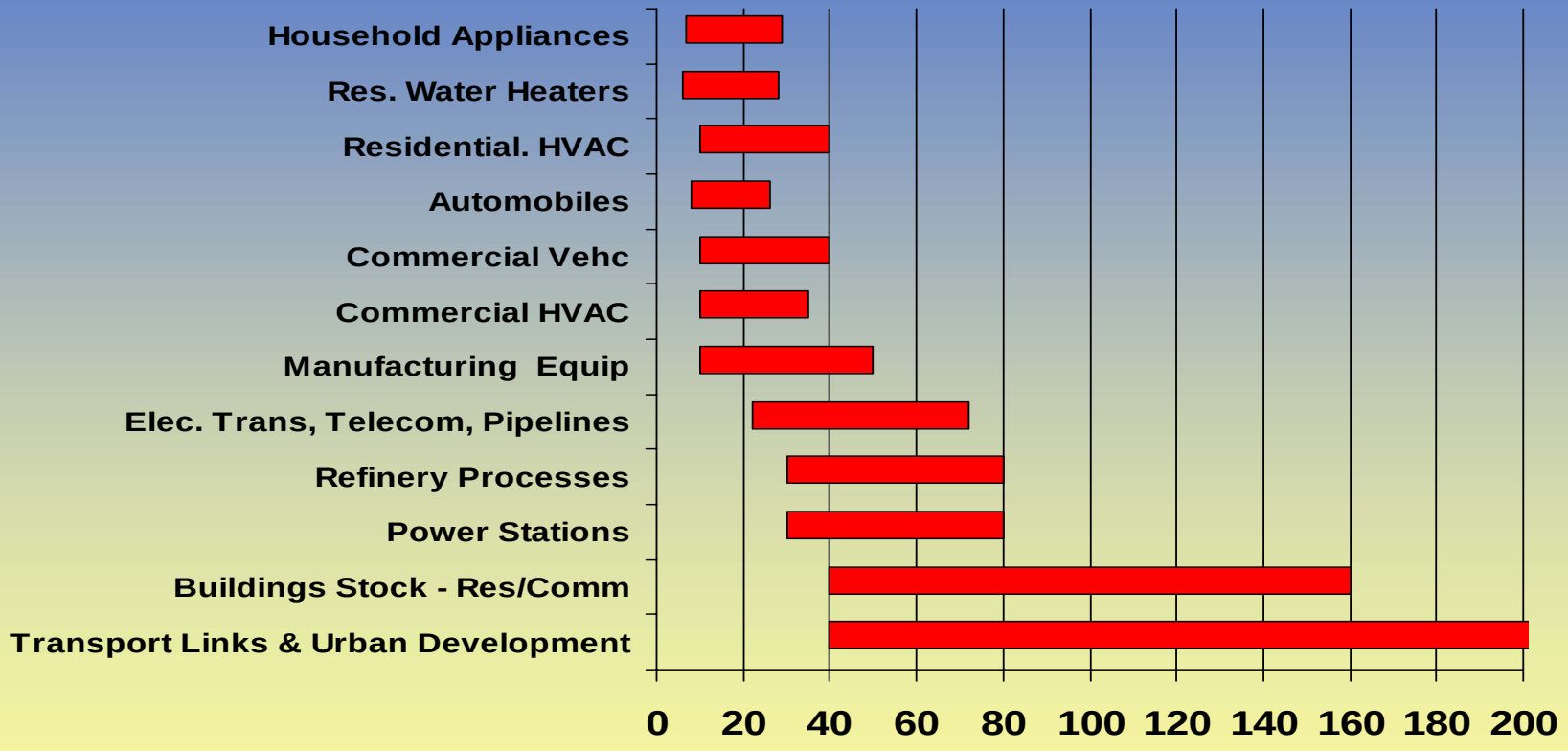
The Emerging Giants of World Energy



China & India will contribute more than 40% of the increase in global energy demand to 2030 on current trends

Mitigation Policy & Technology

Capital Stock Turnover Rates

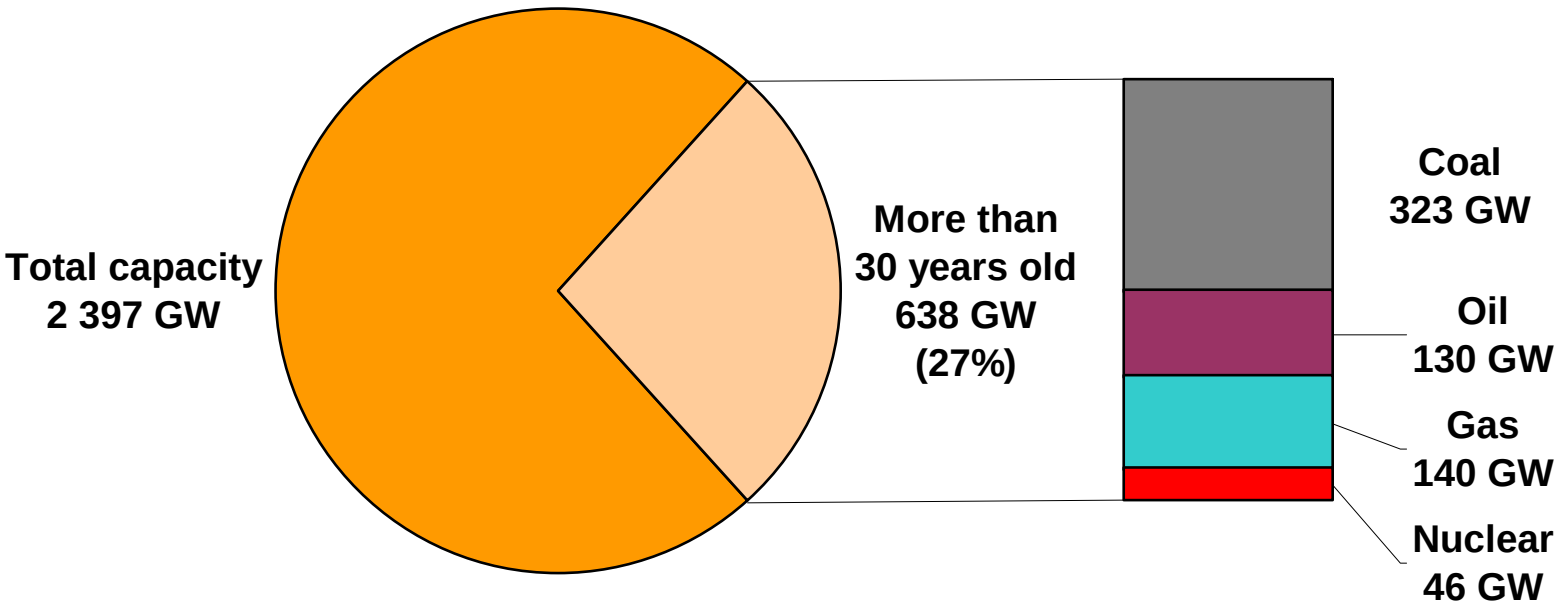


Source: Adapted from PNL/U of Maryland

Tackling Investment Challenges in Power Generation

In IEA Countries

Power plants are ageing



- **Age of existing plants, technological development, tighter environmental controls, and nuclear phase out policies drives the need for replacements**

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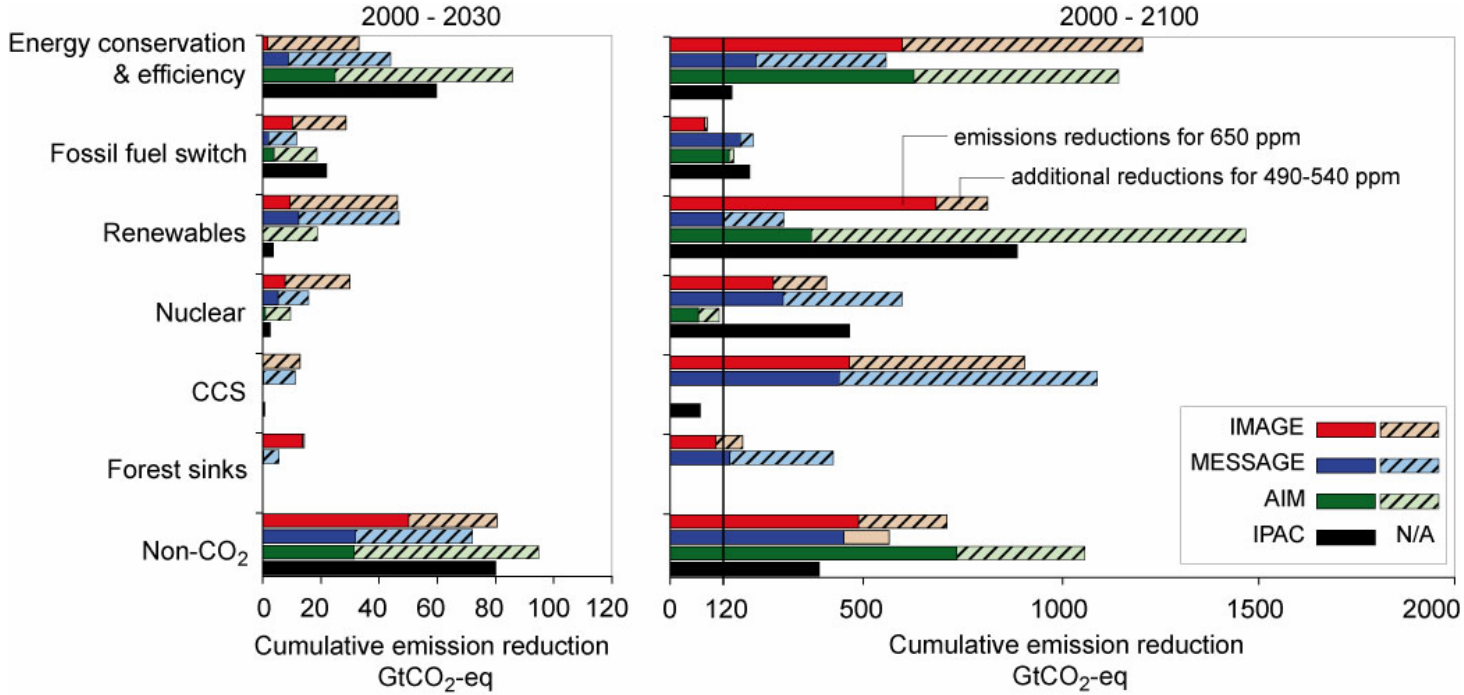
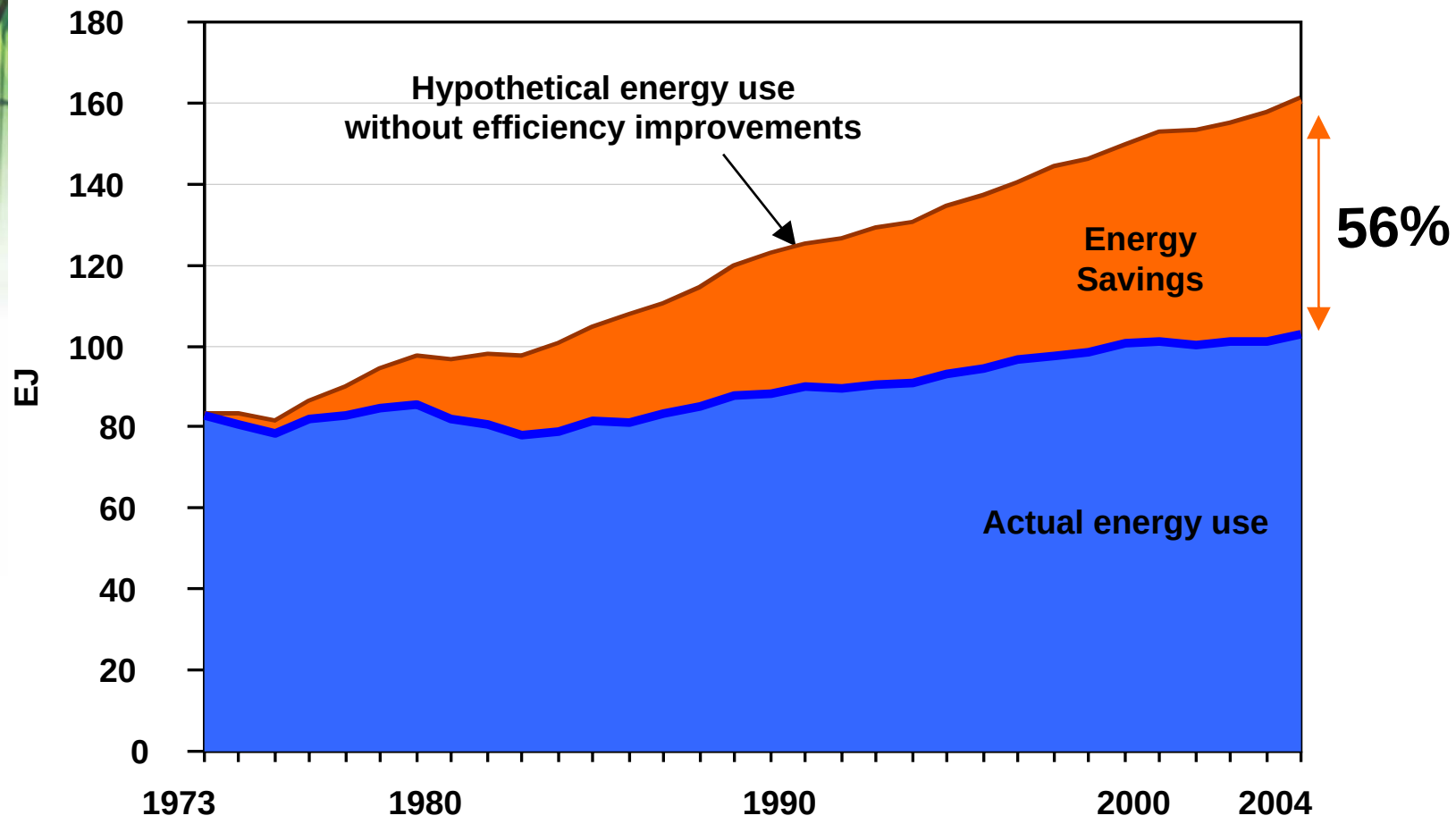
Technology

- **The range of stabilization levels can be achieved by**
  - **deployment of a portfolio of technologies that are currently available and**
  - **those that are expected to be commercialised in coming decades.**
- **This assumes that appropriate and effective incentives are in place for development, acquisition, deployment and diffusion of technologies and for addressing related barriers**



Energy efficiency - first fuel



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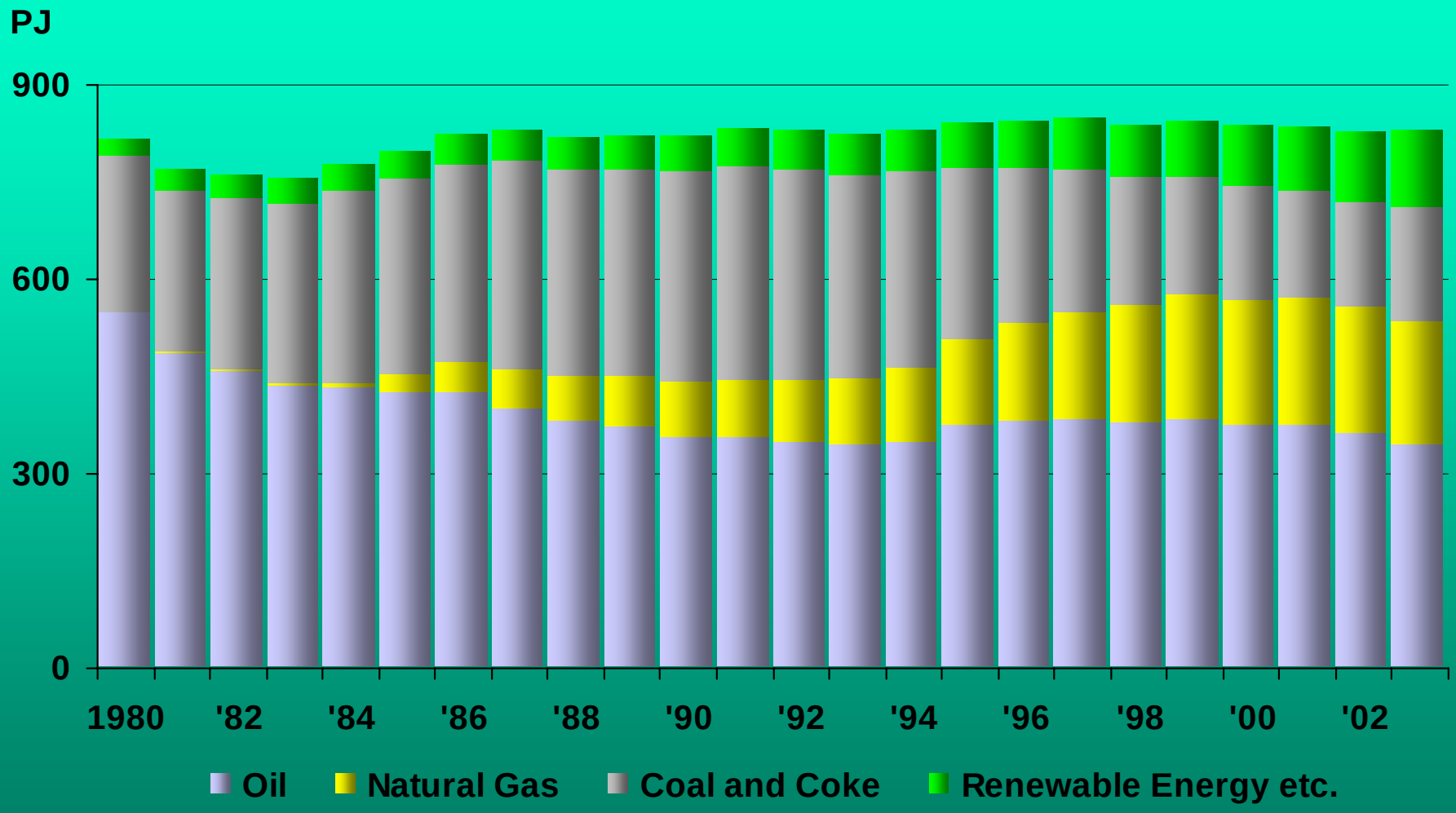
In support of the
G8 Plan of Action

Denmark: gross energy demand by fuel



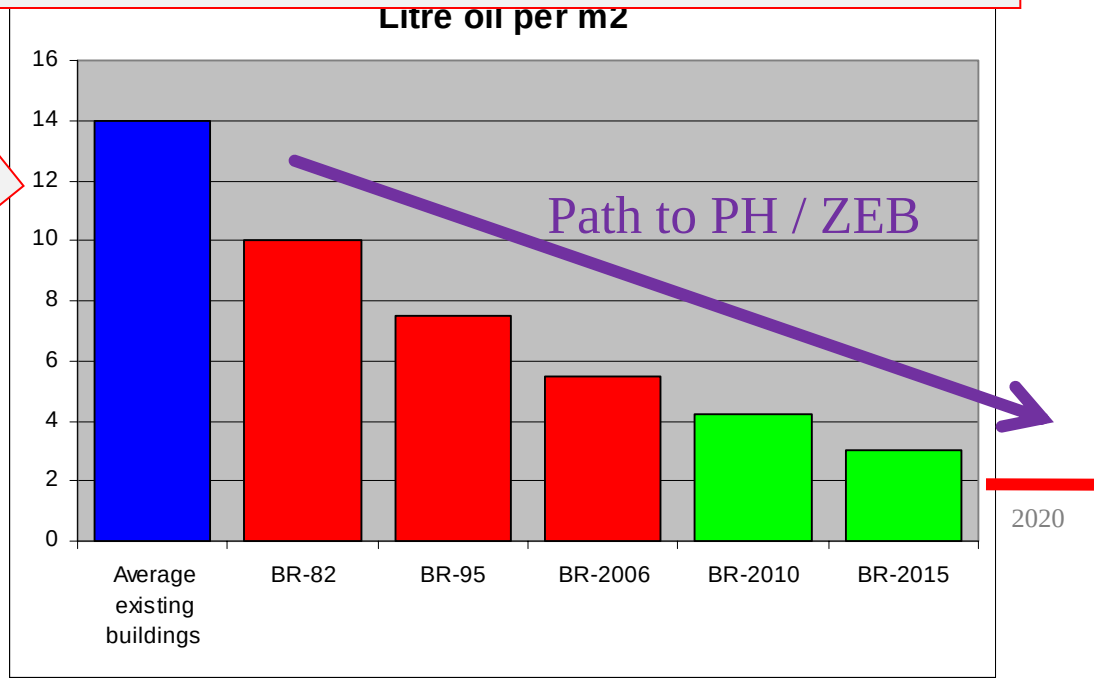
Example
Building codes in Denmark

- Long tradition with bu… cod… re… … for … try.

France, UK and others countries are on the same path !

- New decision for 2020 (less than 2 litre or just above 15 kWh/year/m²

Approved by parliament 2008



Source: Danish Energy Authority Renato Ezban, Workshop on compliance Paris Mach 2008