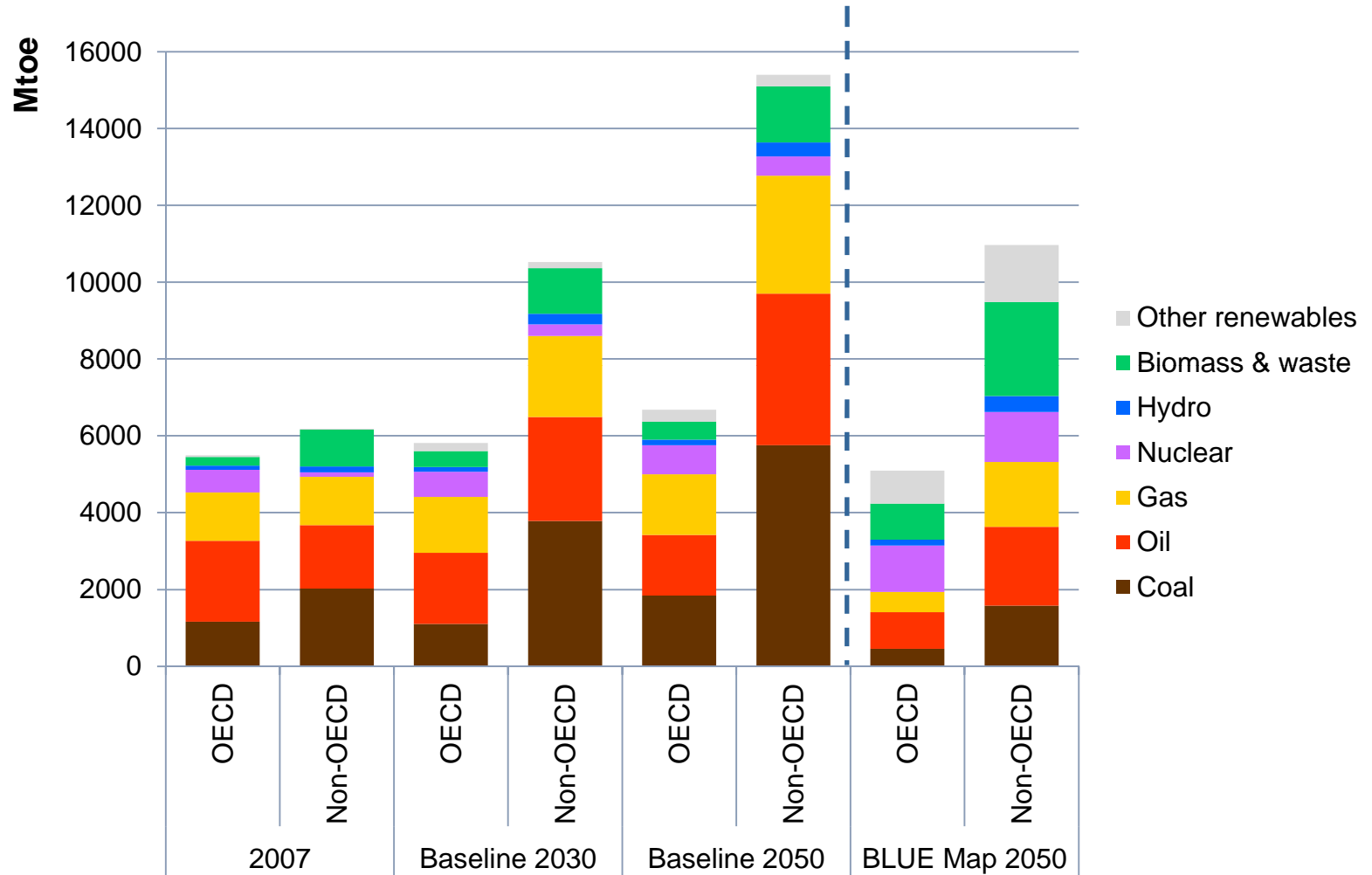


# Achieving clean energy economies through accelerated international action

**Nobuo Tanaka**  
**Executive Director**

*Clean Energy Ministerial*  
*Washington DC*  
*19 July 2010*

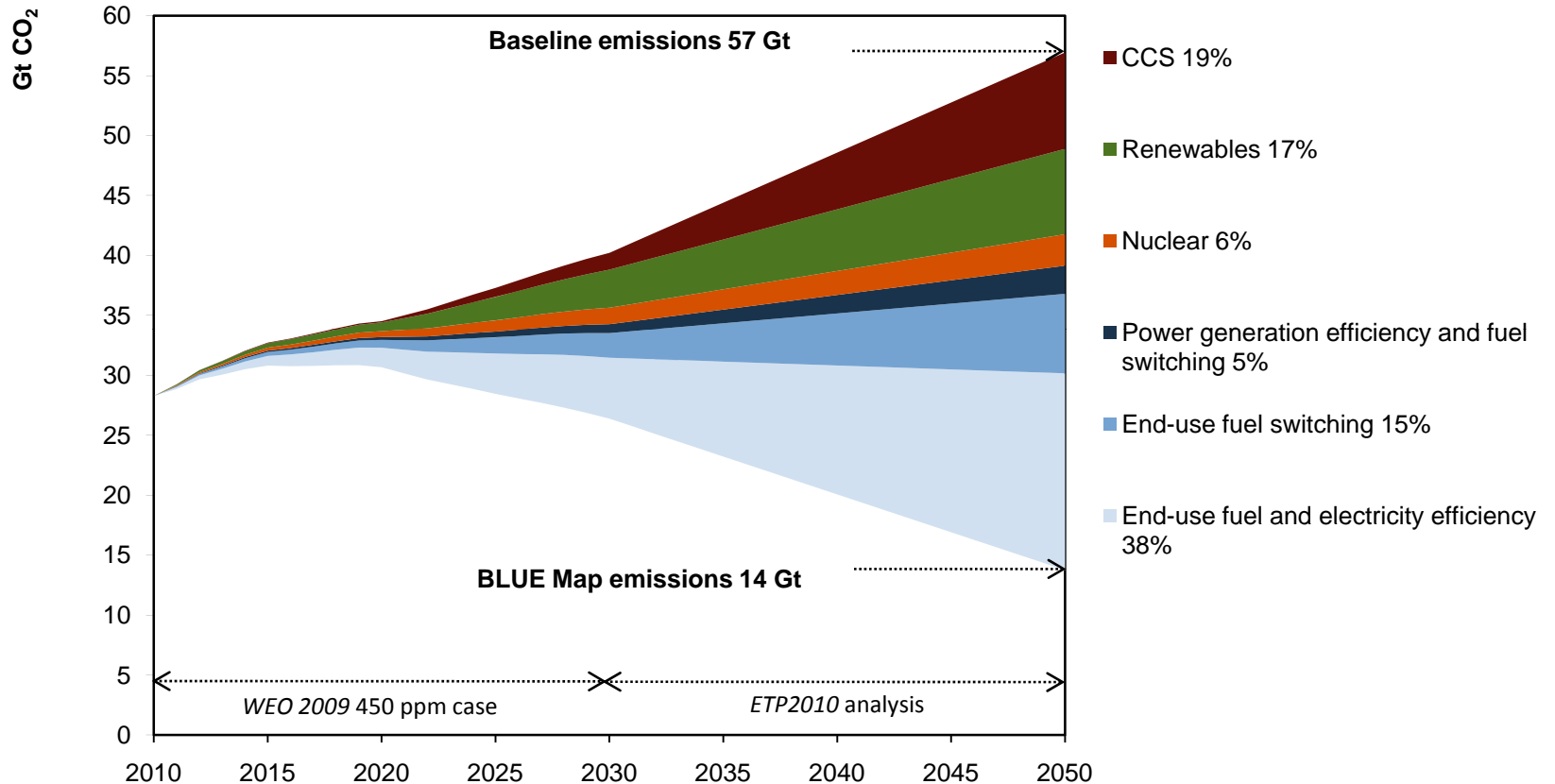
# World total primary energy supply



*Major Economies are projected to account for 70% of growth in energy demand and CO2 emissions between now and 2030*

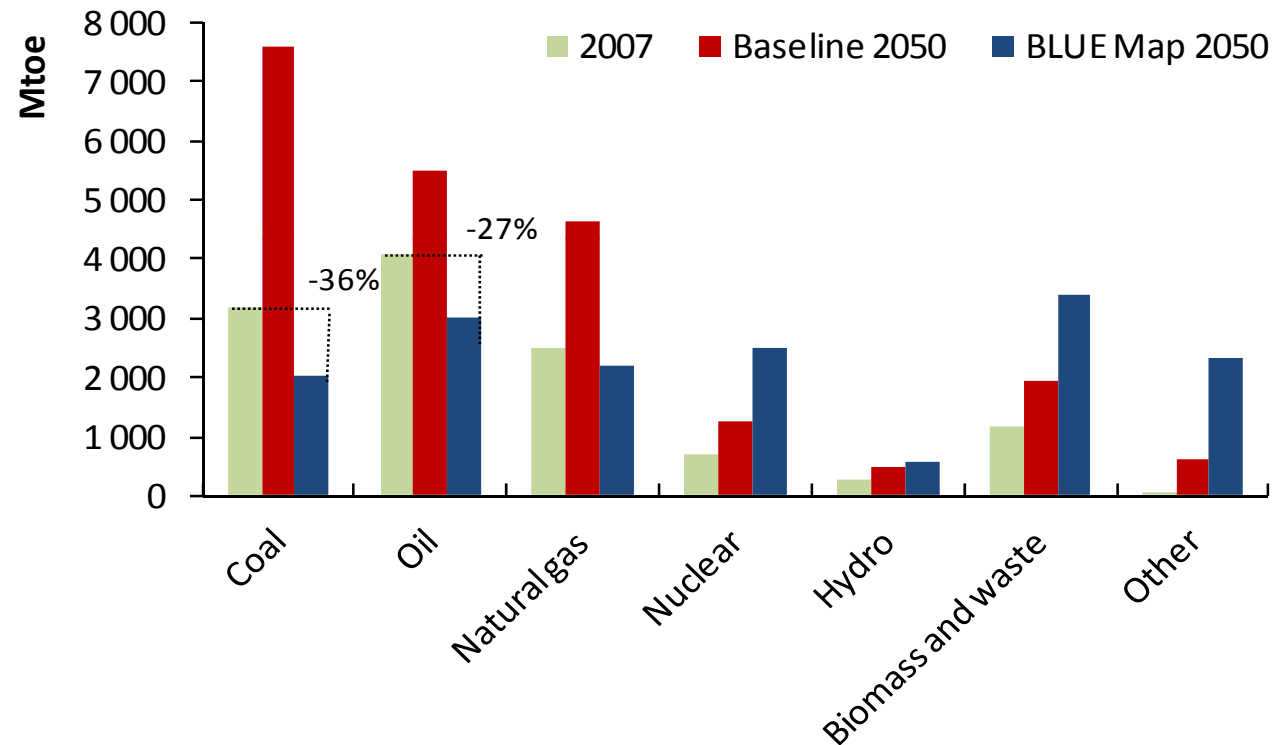


# A portfolio of technologies is needed to achieve a global energy revolution



*Efficiency provides 58% of the reductions, but CCS, renewables and nuclear needed in the power sector*

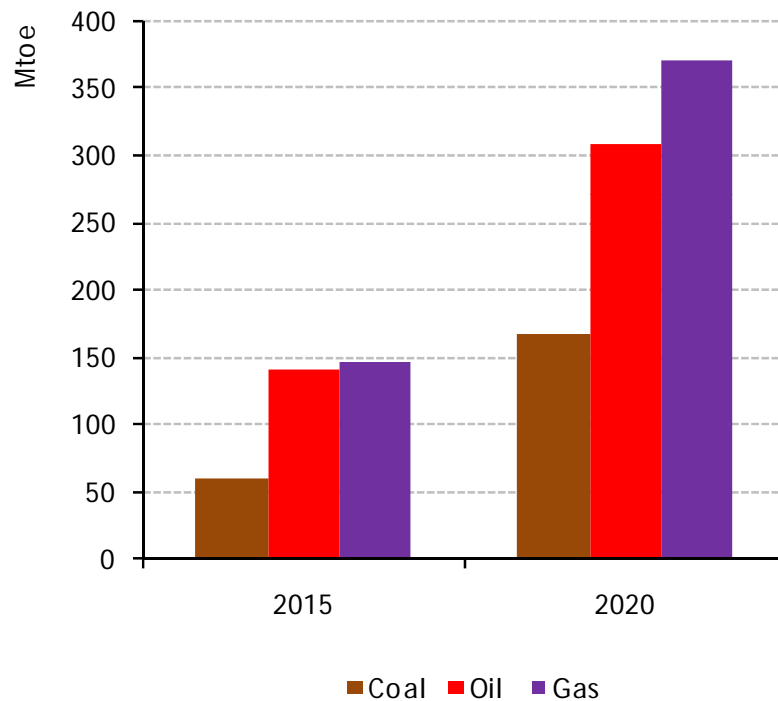
## Primary energy demand by fuel and by scenario



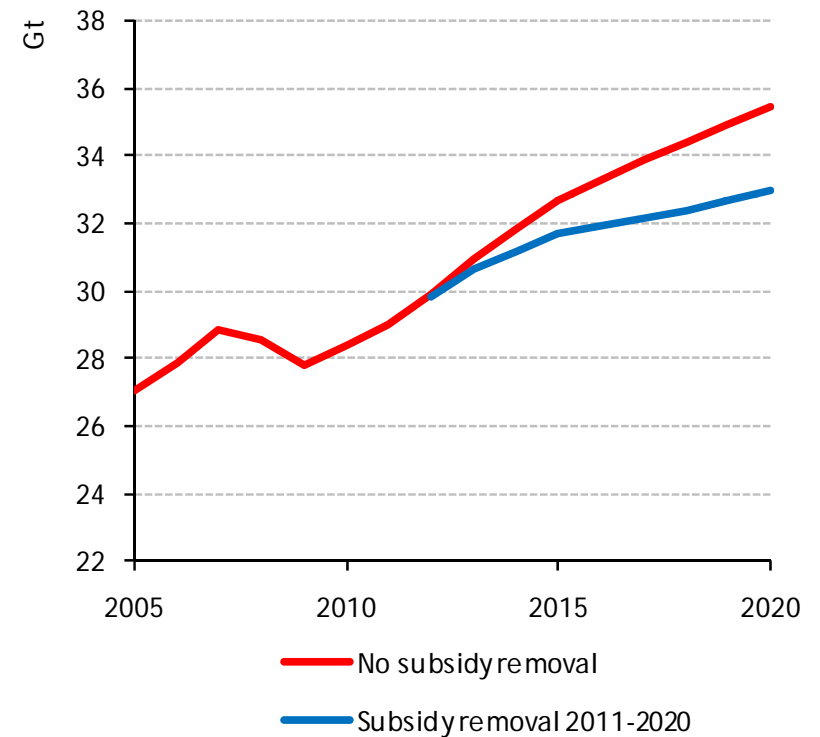
*By 2050, coal, oil and gas demand are all lower than today under the BLUE Map scenario.*

# Impact of fossil fuel subsidy phase out, 2011-2020

Global fossil fuel savings



Global energy-related CO<sub>2</sub> emissions



*Compared with a baseline of no removal, global phase out of fossil fuel consumption subsidies could reduce energy demand by 5.8% (6.5 mb/d oil savings) and energy-related CO<sub>2</sub> emissions by 2.4 Gt in 2020.*



# Transforming markets for clean energy products

- **Many successful national case studies for clean energy market transformation**
  - **CFLs, energy-efficient motors, solar PV, fuel-efficient vehicles**
- **More can be achieved through international collaboration**
  - **Harmonised test protocols and standards for EE products**
  - **Common EE incentives for appliance manufacturers**
  - **Similar solar PV incentives programmes**
  - **Coordinated electric vehicle pilot efforts**



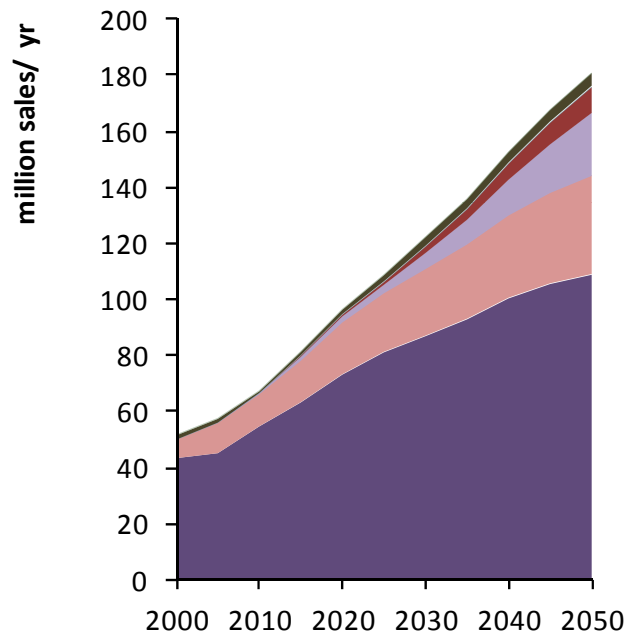
## **Global cooperation can transform end-use electrical equipment markets**

**Action needed to accelerate market transformation on:**

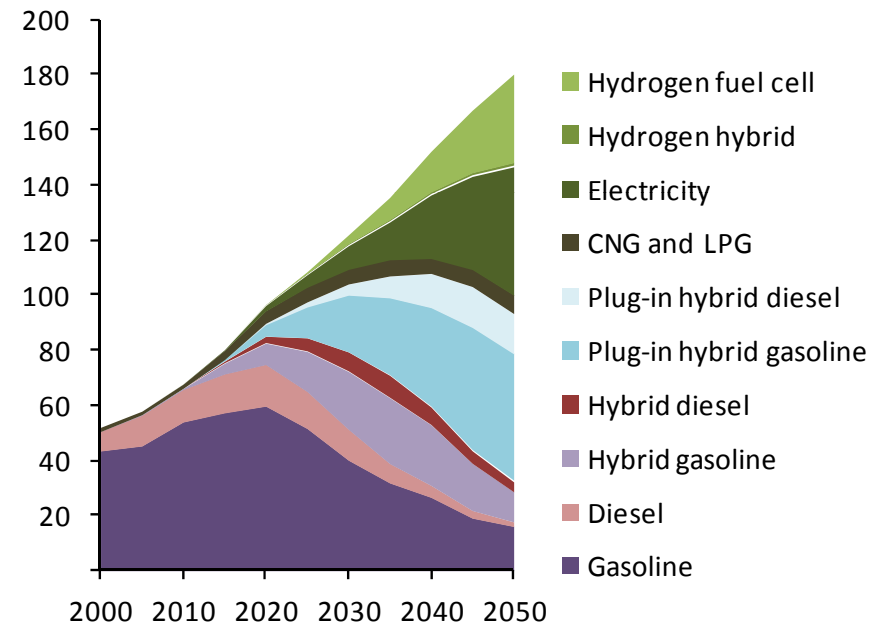
- 1. Refrigerator and freezers**
- 2. Domestic lighting**
- 3. Televisions**
- 4. Air conditioners**
- 5. Electric motors**
- 6. Network standby power**

# Evolution of light-duty vehicle sales by technology

## Baseline scenario



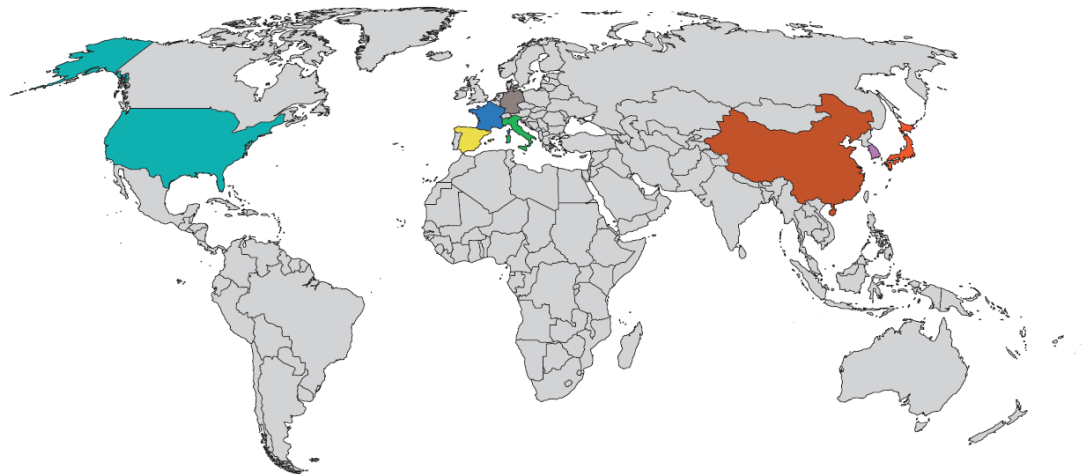
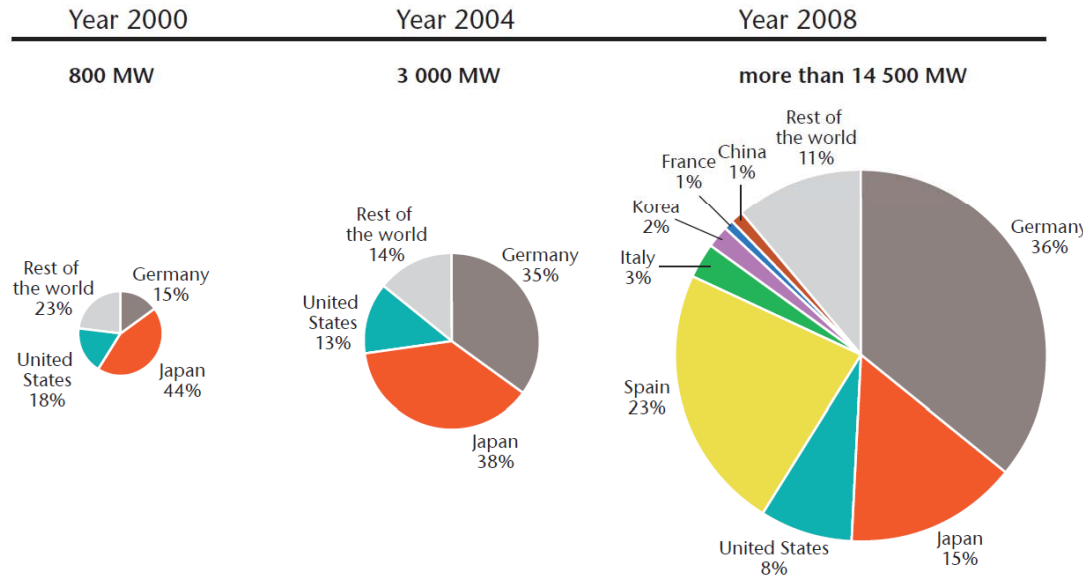
## BLUE Map scenario



*In the BLUE Map scenario advanced technologies, such as plug-in hybrid, all-electric and fuel-cell vehicles, dominate sales after 2030.*



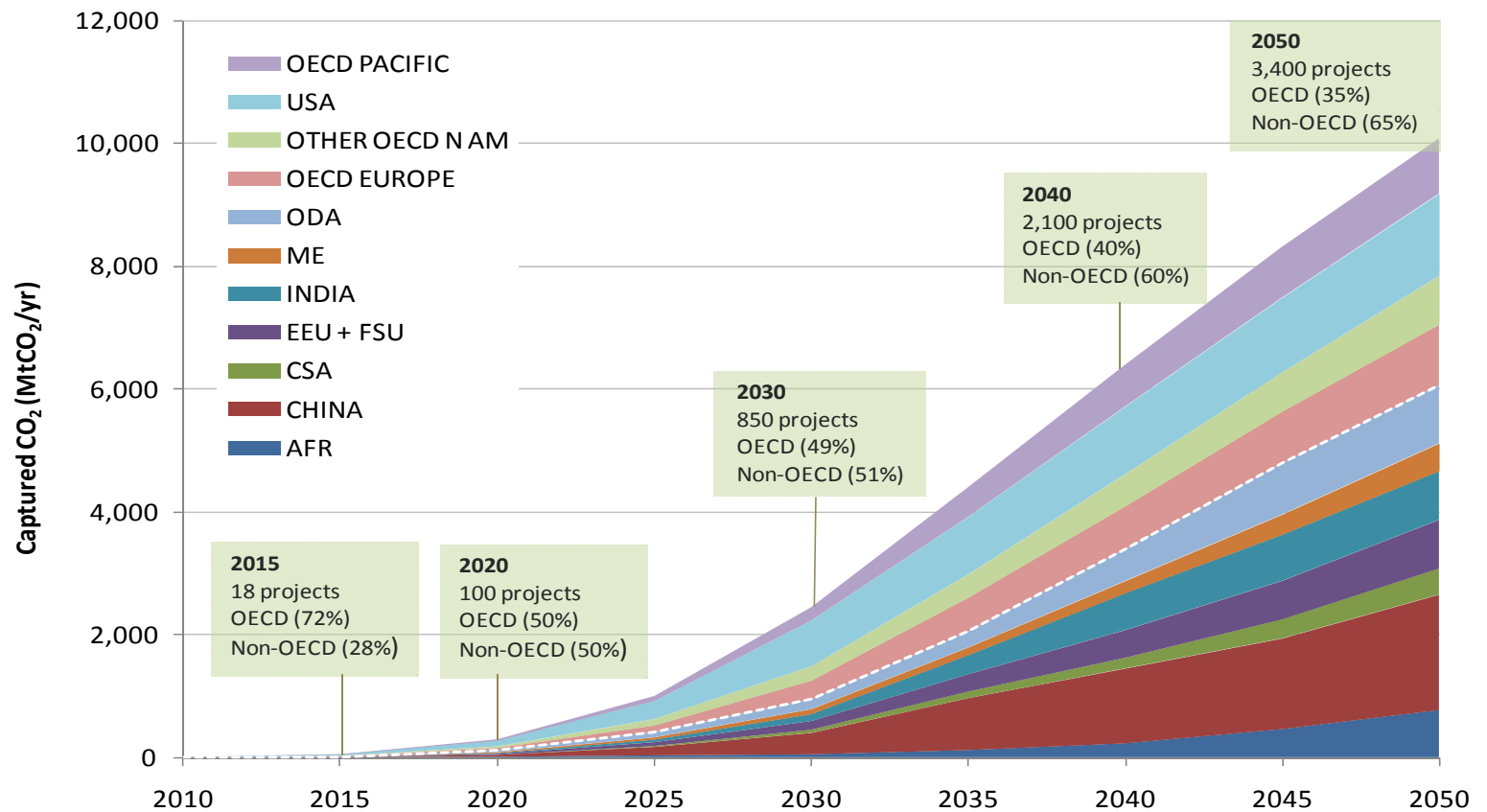
# PV markets rapidly expanding



**Over 7 GW of new additions in 2009**  
**Up to 22 GW of cumulative installed capacity**

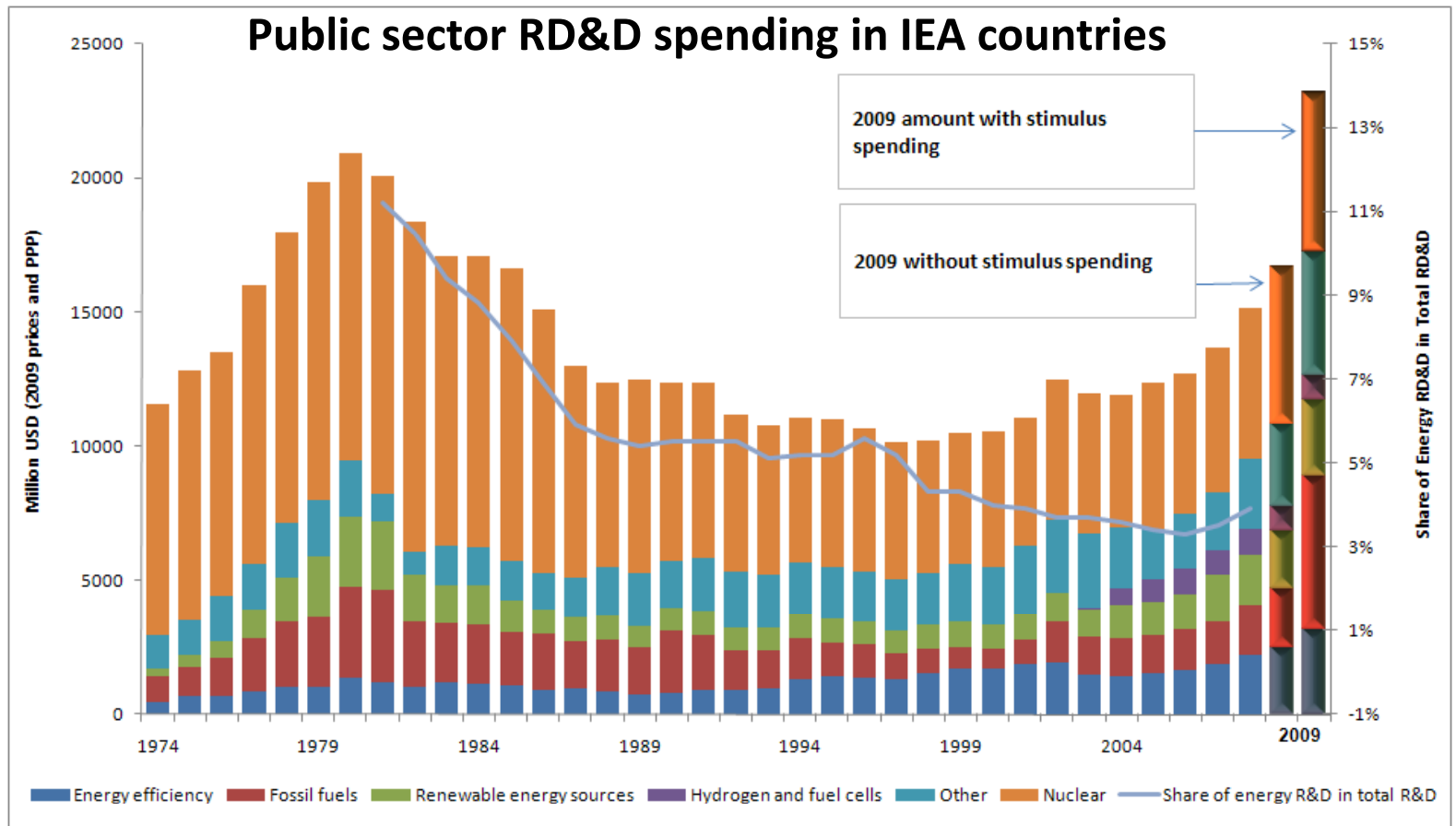


# Decarbonising the Power sector: CCS is one part of story alongside nuclear and renewables





# Public clean energy RD&D: Post-stimulus strategies needed



*Stimulus packages are a one-time funding increase;  
how to achieve sustained higher levels of investment?*



# Incentivising Investment

- Public spending is one proven way to accelerate economic growth and energy technology innovation
- Need to leverage new private investment by providing long-term, stable standards and incentives
- More of these types of strategic approaches are needed:
  - **India's National Clean Energy Fund** for research and innovation, financed by a levy on coal
  - **Korea's "Green New Deal" strategy**, which funds 17 new growth engines and supports RD&D
  - The **US Advanced Research Projects Agency – Energy**, helps high risk, high return technologies bridge the valley of death
  - The **UK's Green Investment Bank with \$3B** in initial funds for large-scale clean energy demonstration projects
  - **China's 2009 investment in electricity grid development** in 2009 was its highest ever, and plans to invest **\$44B in advanced vehicles** over the next 5 years

# The first green shoots ...much more needs to be done of an energy technology revolution...

