



# **Transport, Energy and Environment: Where are We Going and How do We Change it?**

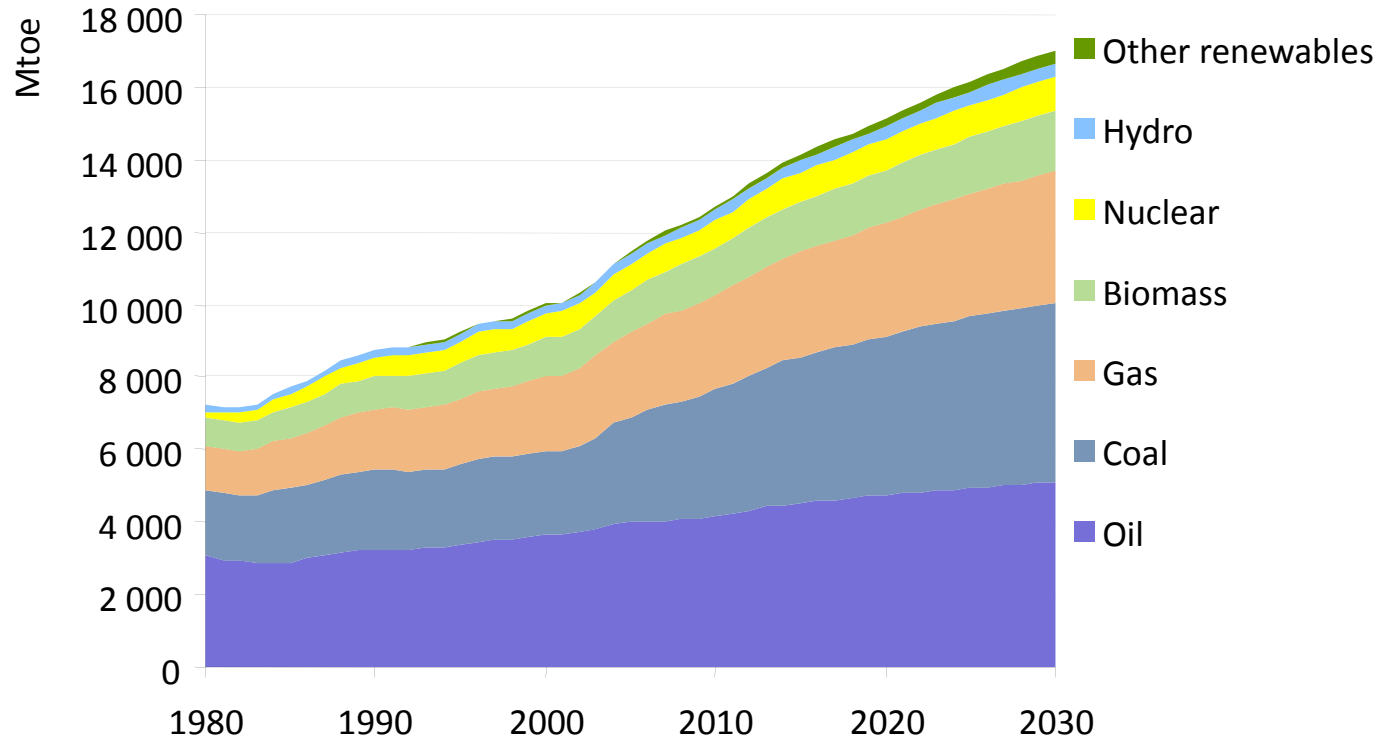
**Nobuo Tanaka  
Executive Director  
International Energy Agency**

**The Ministerial Conference on Global Environment and Energy in Transport  
January 14-16, 2009**

**Tokyo, Japan**



# World primary energy demand in the Reference Scenario: this is unsustainable!

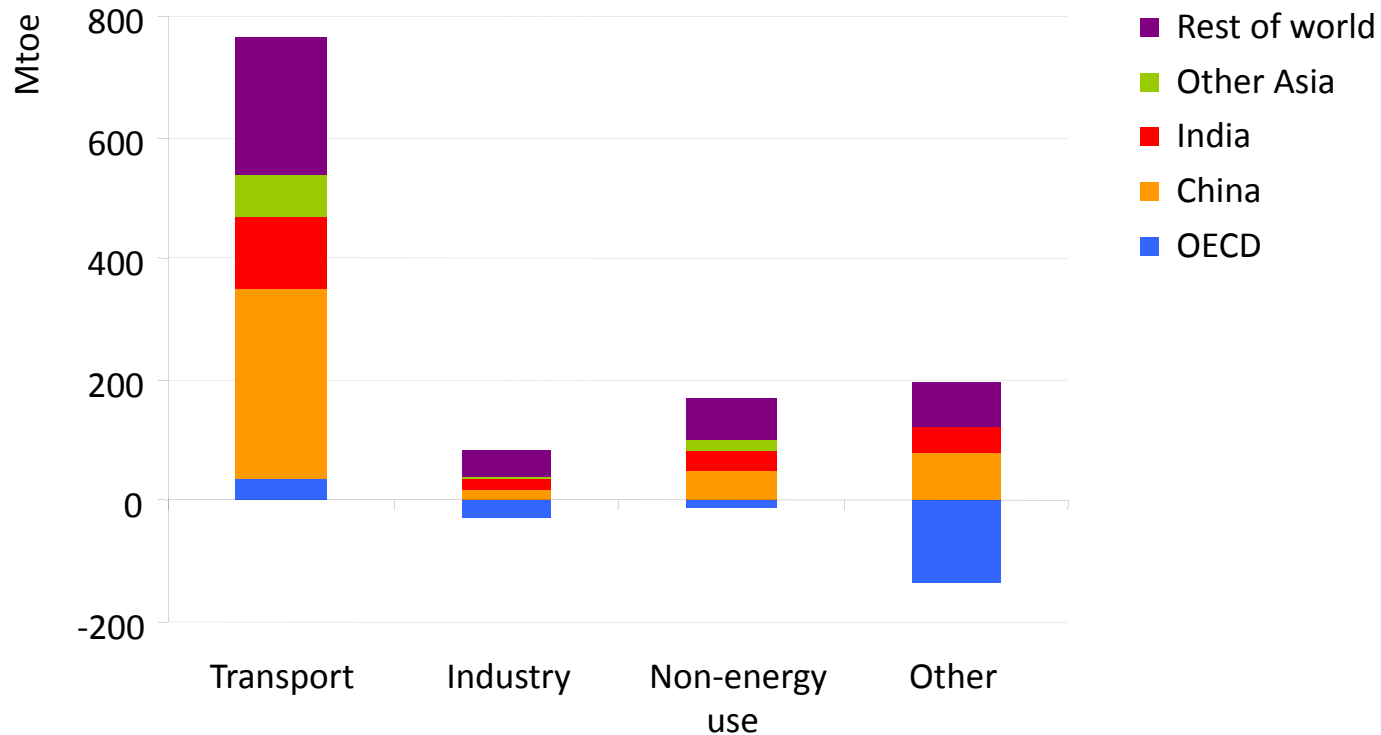


*World energy demand expands by 45% between now and 2030 – an average rate of increase of 1.6% per year – with coal accounting for more than a third of the overall rise*

Slide 2



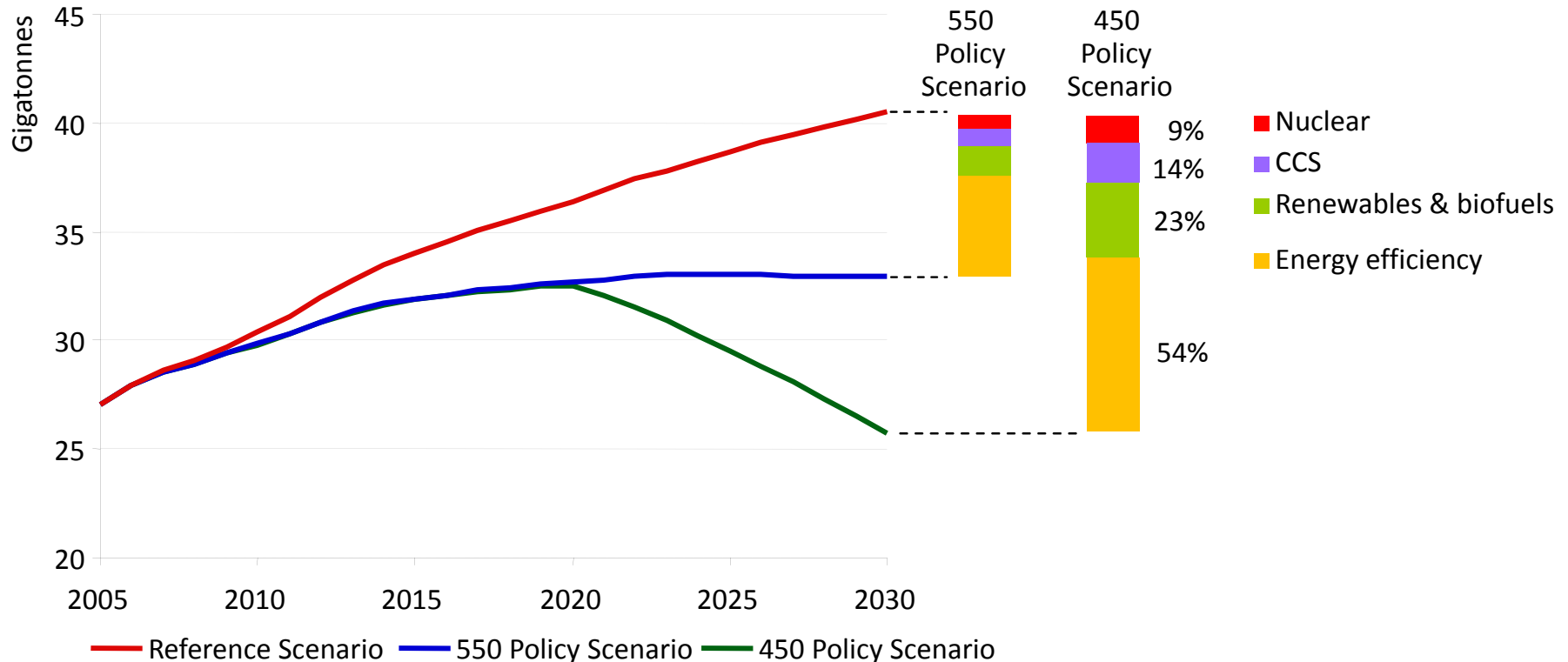
# WEO 2008 Reference Scenario: Incremental oil demand, 2006-2030



*Around three-quarters of the projected increase in oil demand comes from transportation*



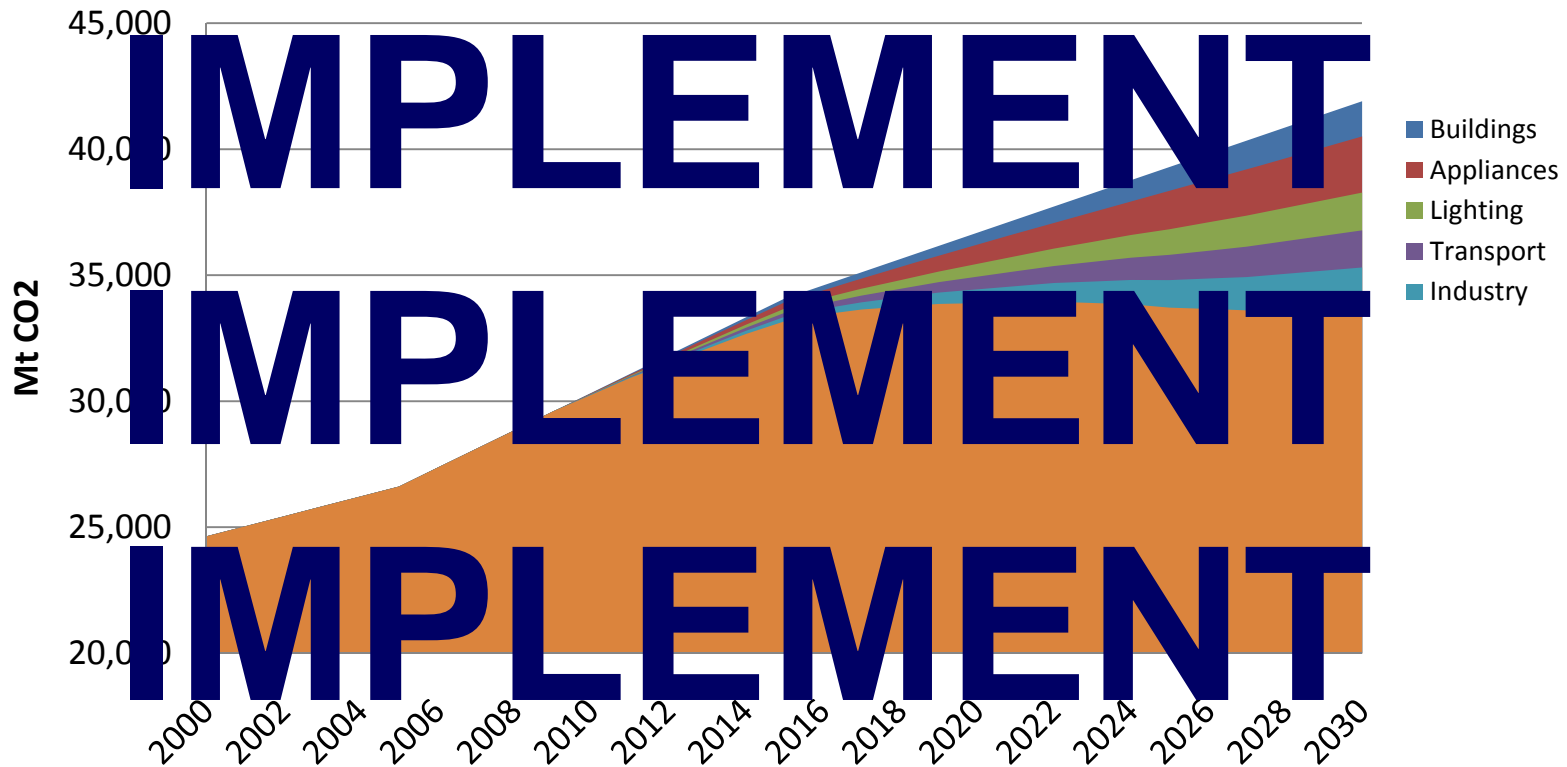
# Reductions in energy-related CO<sub>2</sub> emissions in the climate-policy scenarios



*While technological progress is needed to achieve some emissions reductions, efficiency gains and deployment of existing low-carbon energy accounts for most of the savings*



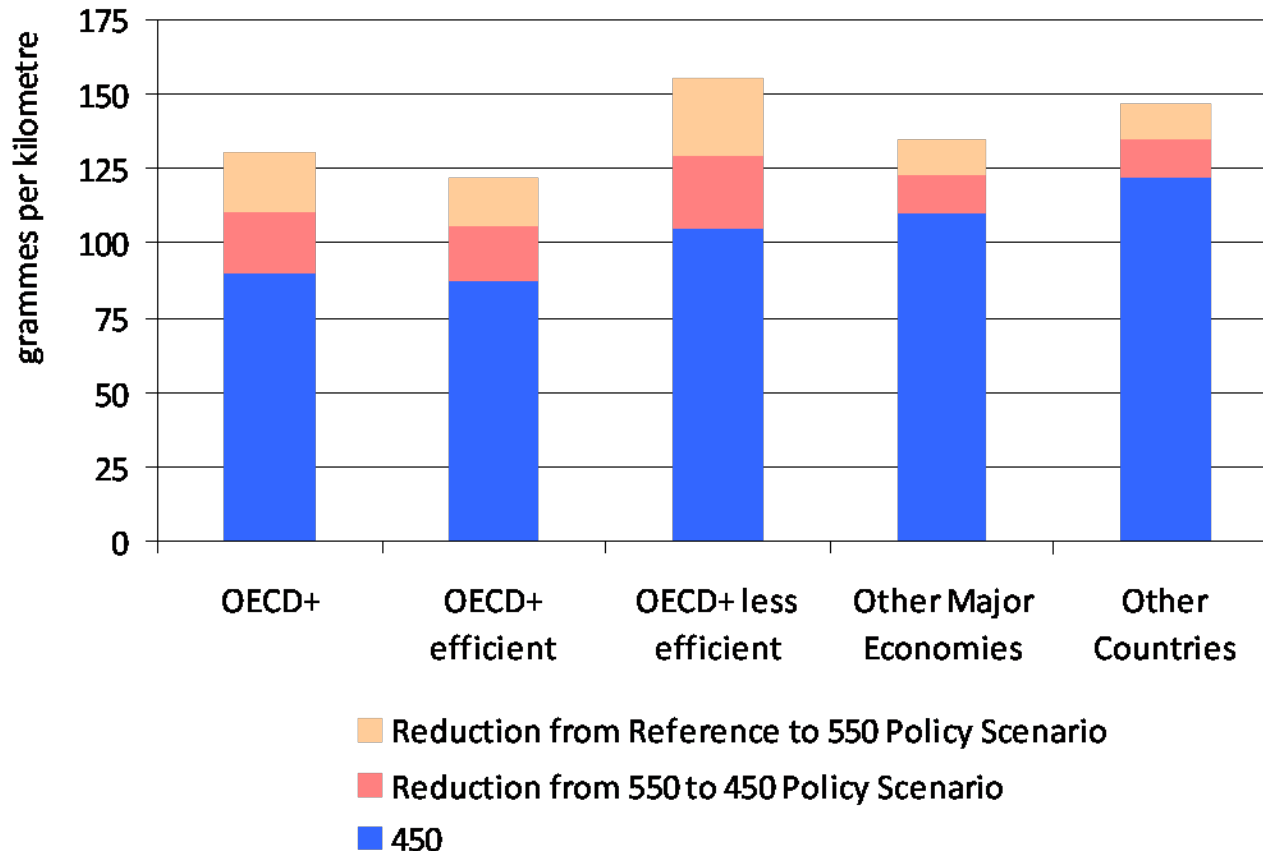
# IEA 25 energy efficiency policy recommendations across 7 priority areas



*Global implementation of recommendations could save around 8.2 GtCO<sub>2</sub>/yr by 2030; this is equivalent to 20% of the WEO's global reference scenario energy related CO<sub>2</sub> emissions in 2030*



# 450 Policy Scenario: CO<sub>2</sub> intensity improvement by region from sectoral agreements for LDVs in 2030

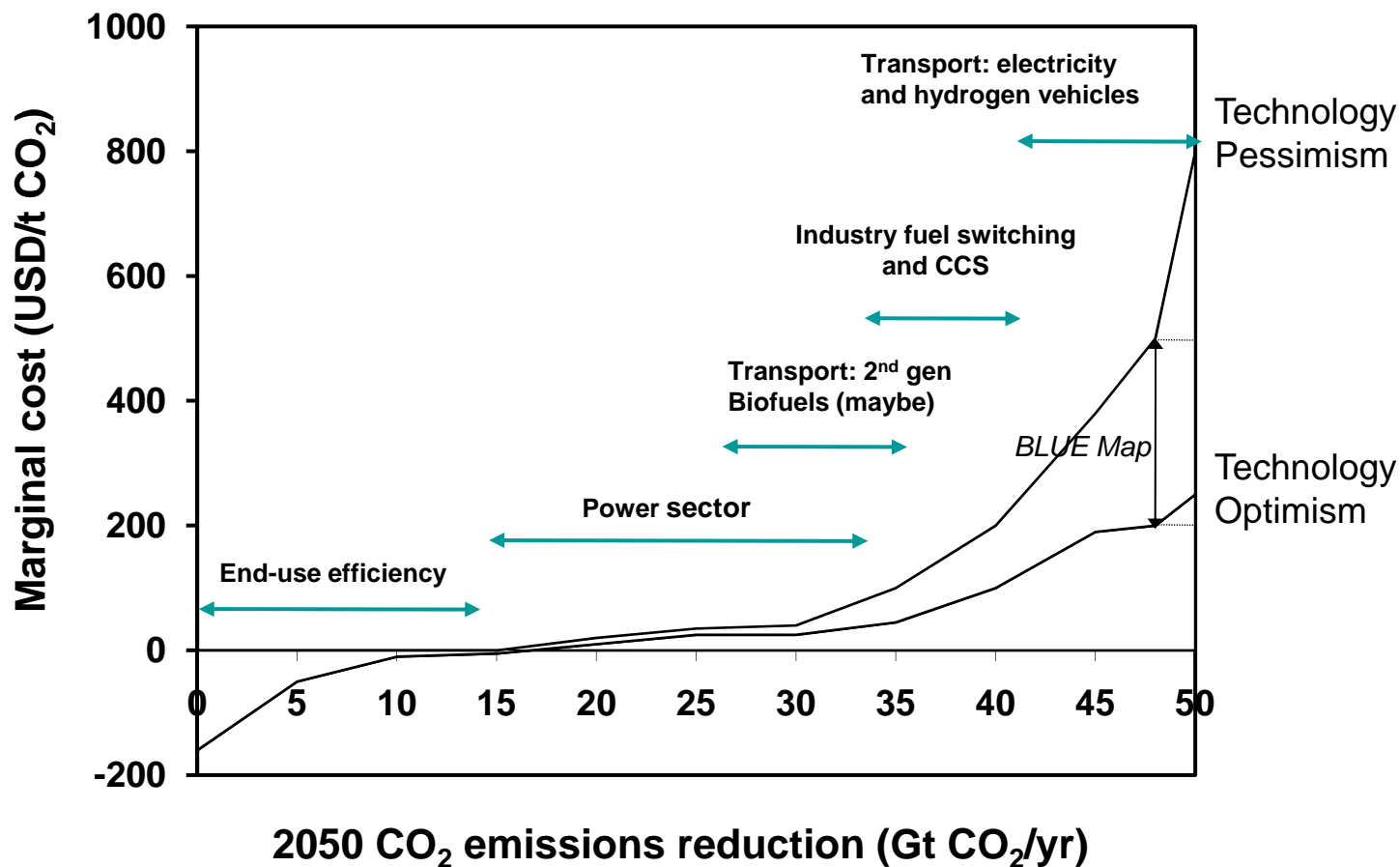


*Adoption of stronger sectoral agreements in the transport sector in the 450 Policy Scenario sees a 25% improvement in average fuel economy by 2030*

Slide 6



# ETP BLUE Map - A New Energy Revolution ?



*To bring emissions back to current levels by 2050 options with a cost up to USD 50/t are needed. Reducing emissions by 50% would require options with a cost up to USD 200/t, possibly even up to USD 500/t CO<sub>2</sub>*

Slide 7



## Low Cost Transport Option: Efficient LDVs

- **New LDVs can become 50% more efficient by 2030**
  - ◆ **In some countries, progress toward this 50% target has already begun**
    - This is, very roughly, moving from 8 L/100 km to 4. EU and Japan are already well below 8.
    - Some individual vehicles, like Prius are there already
  - ◆ **Involves maximum use of available technology, including hybrids**
  - ◆ **Important to constrain increases in vehicle size, weight and power**
  - ◆ **Plug-in hybrids and electric vehicles may play a significant role if battery costs come down further**



# **Global Fuel Economy Initiative**

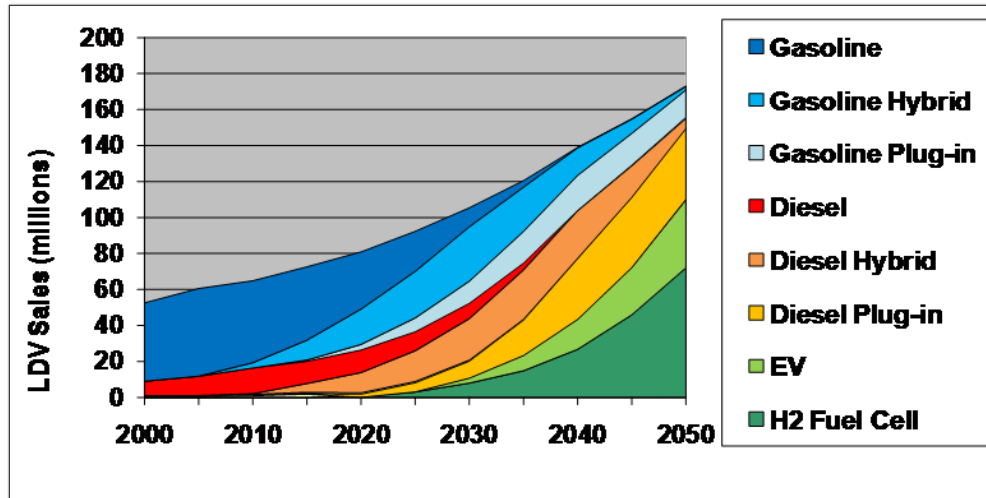
## **IEA, ITF, UNEP, FIA Foundation**

- **IEA and its partners are soon launching a “Global Fuel Economy Initiative: Making cars 50% more fuel efficient by 2050 worldwide”**
- **This initiative will feature four key elements:**
  - ◆ **Data development and analysis of fuel economy potentials by country, region**
  - ◆ **Support for national and regional policy-making efforts**
  - ◆ **Outreach to stakeholders (e.g. vehicle manufacturers)**
  - ◆ **Information campaigns around the world to educate consumers, stakeholders**

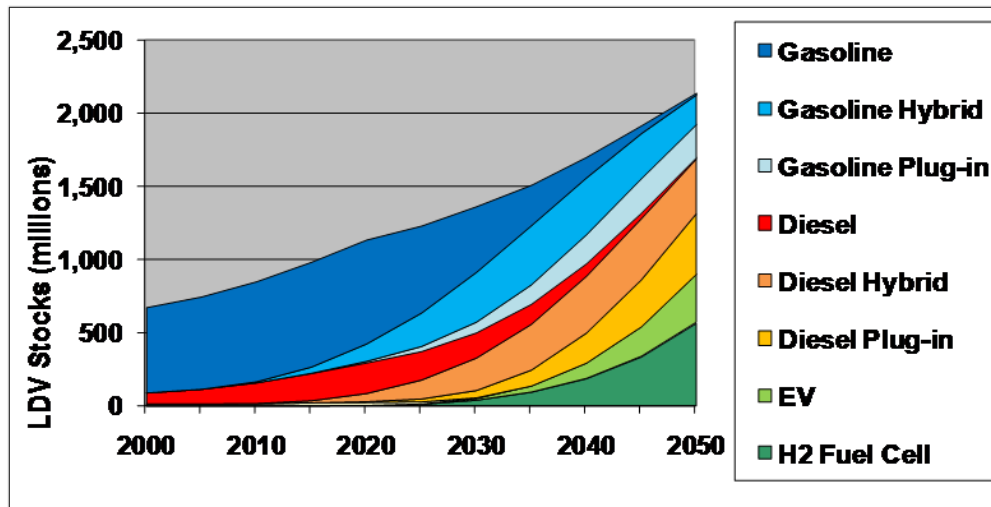
# How transport can achieve deep CO2 emissions reductions?



Global Sales



Global Stocks



*As in ETP BLUE MAP, new technology vehicles will need to achieve rapid market penetration*



# Conclusions

- Without policy interventions oil use in many countries will increase significantly by 2050
- It appears reasonable to target a 50% reduction in vehicle energy intensity, on average around the world by 2050
  - ◆ However we need better data on baseline values and current trends in individual countries
- We need to identify information gaps, the optimal forms of policy, the role for different actors
- Economic stimulus packages that promote energy efficient and advanced technology provide an excellent opportunity to see greener, more sustainable growth in energy sector