International Transport Forum

Joint Transport Research Centre

OECD

GHG Emission Reduction in the Transport Sector – Key Strategies

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Meeting on Global Environment and Energy in Transport

Hakodate, Hokkaido, Japan

17-18 June 2009

Outline

- Context
- 4 Strategies to Guide Transport GHG Reduction
- 6 Key Messages Related to Road Transport

Three principal climate change-related challenges for transport

i.Contributing to ambitious GHG emission reduction goals;

ii.transitioning to less carbon-intensive energy sources; and

iii.substantial investments in order to adapt infrastructure and facilities to climate change.

What does the future hold?

Carbon constraints, increased energy costs and more energy price volatility.

Four *Strategies* for achieving GHG abatement in transport:

- Do no harm
- Cost effectiveness
- Innovation
- Address uncertainty

Four *Strategies* for achieving GHG abatement in transport:

- Do no harm

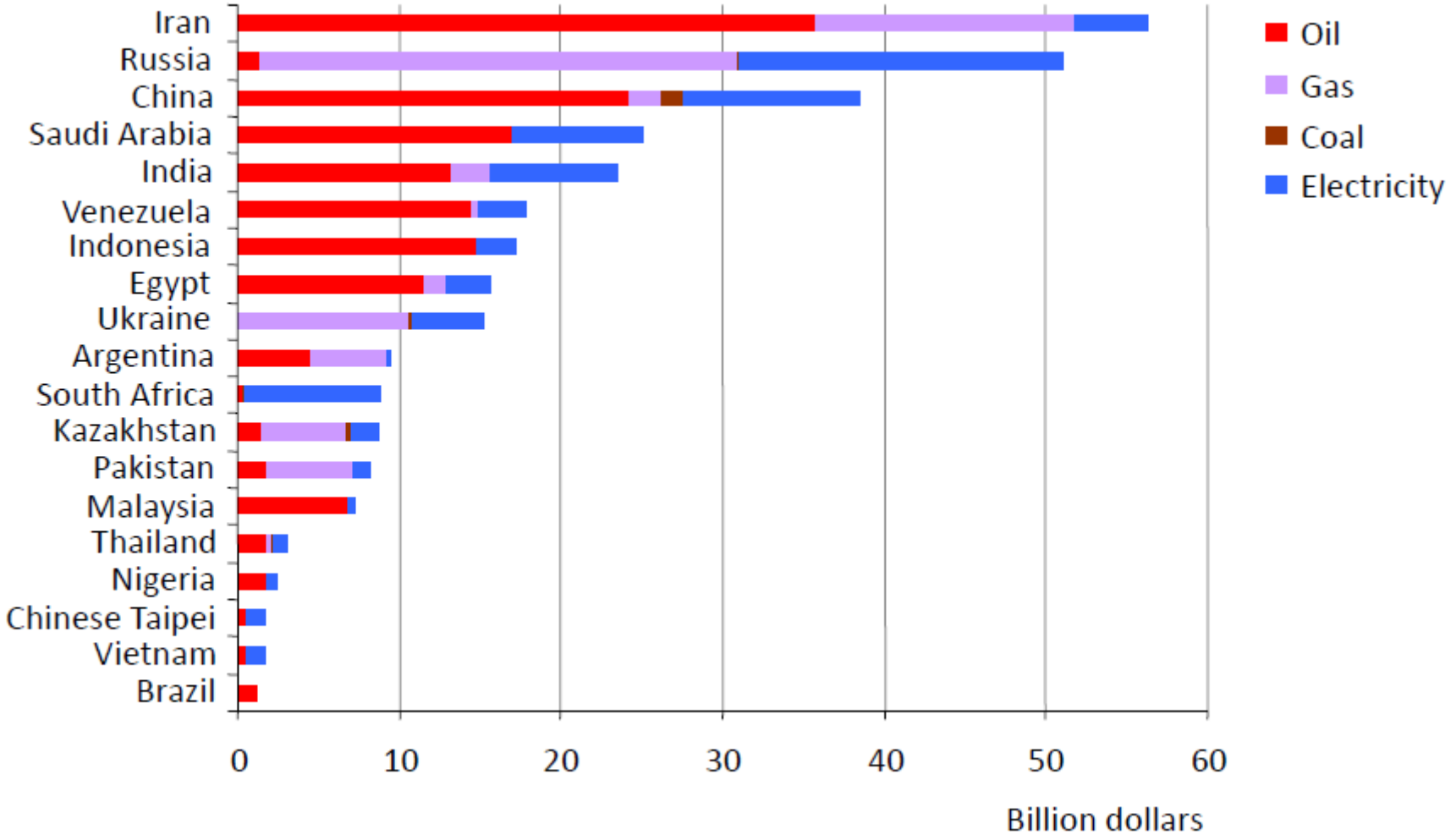
Ensure that policies are aligned with overall climate protection goals and that trade-offs between policy goals are evaluated and addressed transparently.

- Cost effectiveness:
- Innovation:
- Address uncertainty

Key Message #1

Re-examine and remove climate-unfriendly subsidies and policy biases.

Energy subsidies in non-OECD countries, 2007



Four *Strategies* for achieving GHG abatement in transport:

- Do no harm
- Cost effectiveness:

Equalise marginal abatement costs across all emission sources in order to fully exploit *existing* opportunities for low-cost GHG emission reduction.

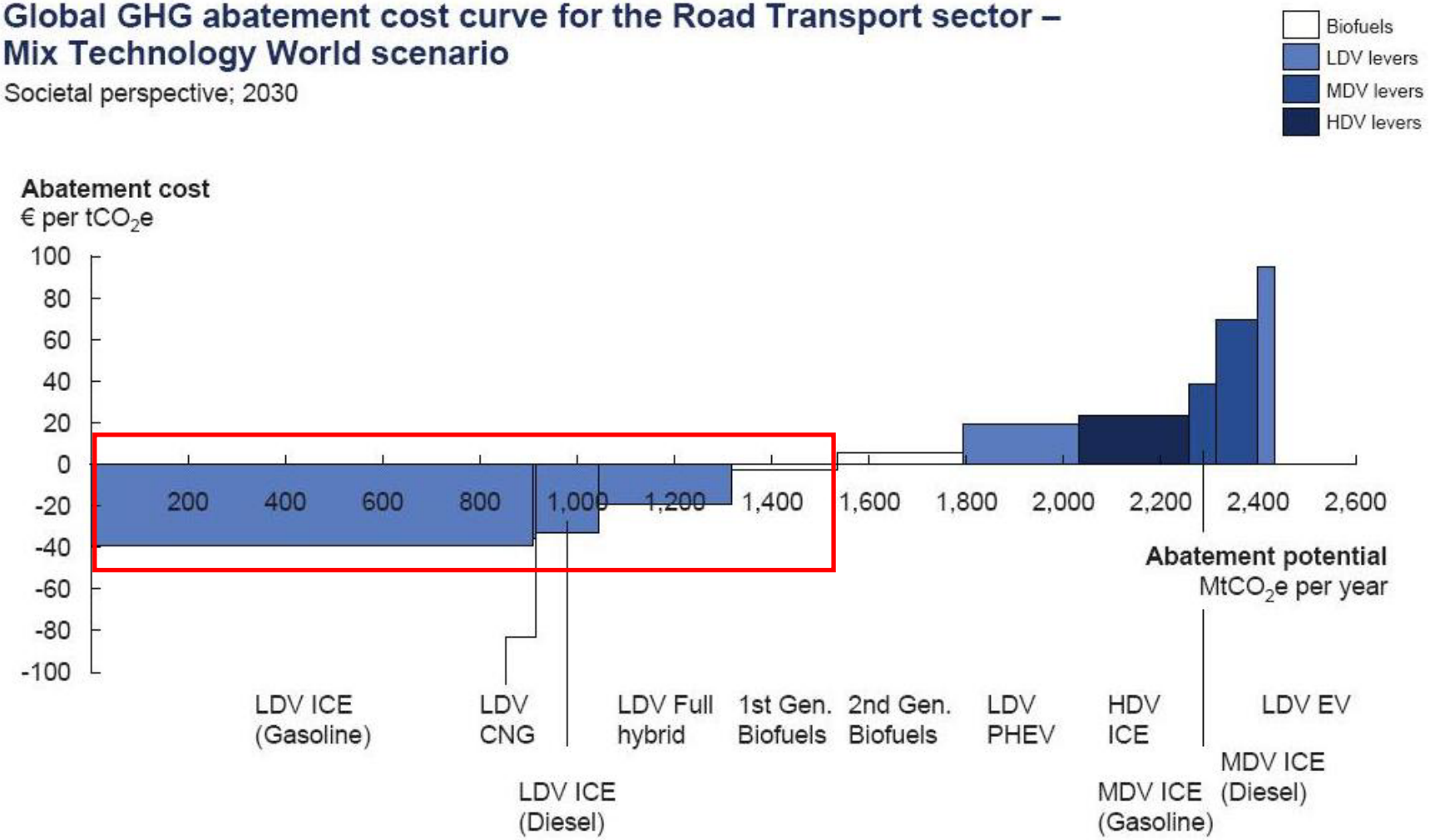
- Innovation:
- Address uncertainty

Key Message #2

Many technology-related GHG reduction measures in the transport sector are relatively low cost or may even save money over time but the absolute contribution of low-cost CO2 abatement from transport will likely be less than that of other sectors.

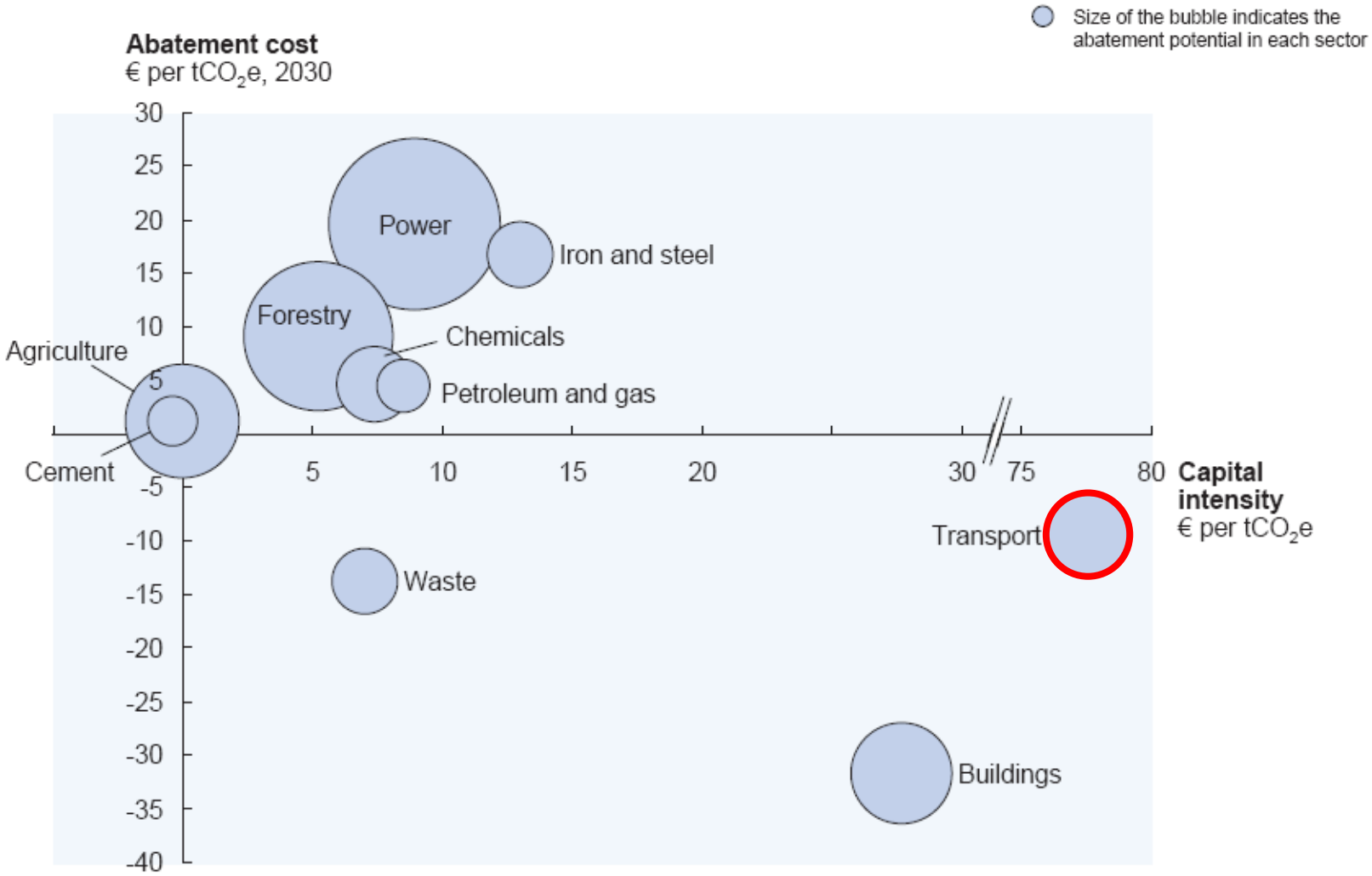
Global GHG abatement cost curve for the Road Transport sector – Mix Technology World scenario

Societal perspective; 2030



Note: The curve presents an estimate of the maximum potential of all technical GHG abatement measures below €100 per tCO_2e in a penetration scenario if each lever was pursued aggressively. It is not a forecast of what role different abatement measures and technologies will play.
Source: Global GHG Abatement Cost Curve v2.0

Capital intensity and abatement cost



Source: Global GHG Abatement Cost Curve v2.0

Cost-effectiveness: Caveats

- Observational bias (technology bias)
- Co-benefits
- Sequencing of policy

Key Message #3

Fuel efficiency standards are essential to encourage consumers to make fuel economy investments. Long term fuel economy standards would create the stability car manufacturers need to invest in new technologies.

Standards can also apply to imported used cars

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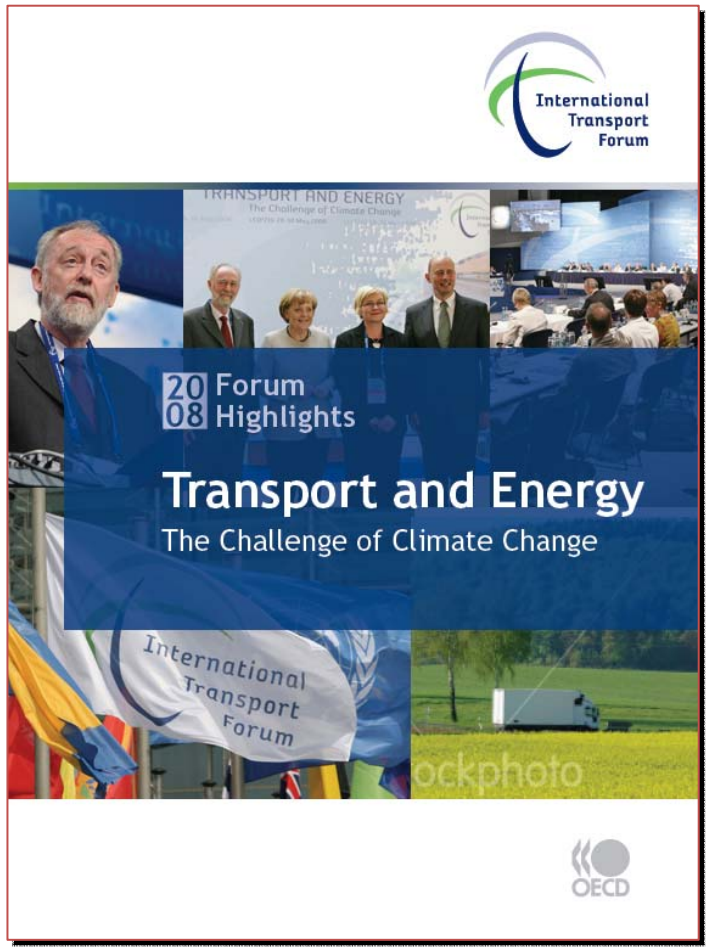


50BY50

GLOBAL FUEL ECONOMY INITIATIVE

www.50by50campaign.org

FIA Foundation for the Automobile and Society

International Transport Forum

UNEP

Global Fuel Economy Initiative

Initial targets:

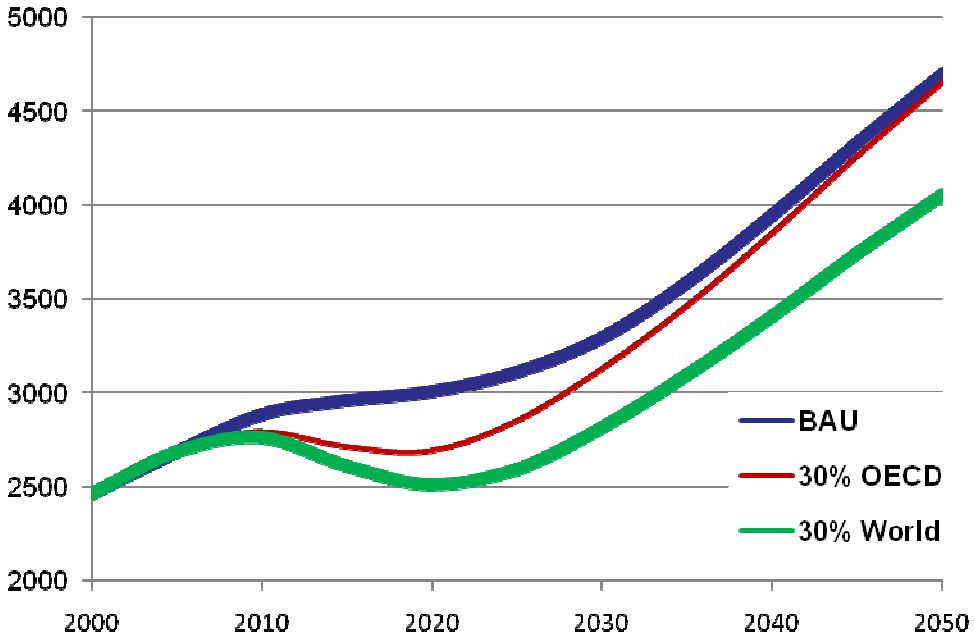
50% by 2050 for the world car fleet – hence 50by50

50% by 2030 for new cars worldwide
30% by 2020 for new cars in OECD countries

Light Duty Vehicle CO2 Emissions

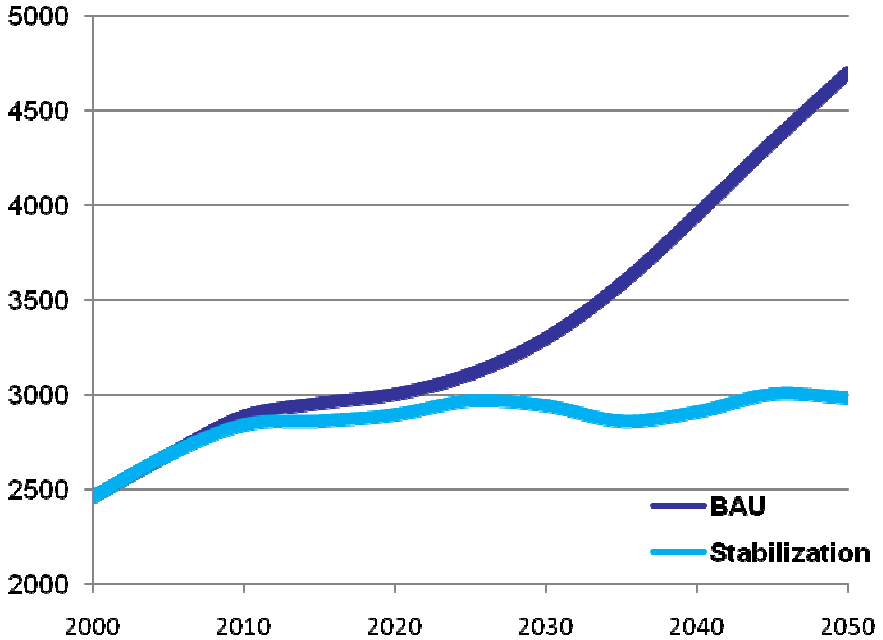
30% fuel economy increase in a decade

Emerging economies are important



50% fuel economy increase to 2050

Could stabilise emissions



Source: IEA / JTRC

Reality Check:

- Transport CO2 reduction policies will have to account for the *impact of improved fuel efficiency on travel costs* and *the impact of travel costs on travel demand.*

Key Message #4

Demand management is essential and cost-effective when accounting for reduced congestion, pollution and increased safety.

Mobility management initiatives, land-use planning and promotion of high quality public transport can all help to reduce GHG emissions and at the same time deliver synergies and co-benefits related to congestion mitigation as well as air pollution and safety improvements.

Key Message #5

Avoiding future transport GHG emissions and curbing future transport GHG intensity without compromising development is a key challenge for emerging economies.

"Business as Usual" will not lead to reduced emissions or emission intensity and has the potential to significantly erode development potential in a high energy cost future.

Avoid-Shift-Improve will be less expensive and more effective than Improve-Shift-Avoid in developing countries.

Four *strategies* for achieving GHG abatement in transport:

- Do no harm
- Cost effectiveness:
- Innovation:

Foster an efficient level of innovation and diffusion of GHG emissions-reducing *policies* and technologies in order to lower future marginal abatement costs.

- Address uncertainty

Key Message #6

Fuel carbon standards and transparent biofuel sustainability criteria are essential in ensuring that shifting away from oil to alternative fuel sources results in less, not more, lifecycle CO2 emissions.

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Cope effectively with risks and uncertainties, i.e. the instrument should be responsive to risks and uncertainties surrounding both climate change and abatement costs.

Thank You

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ITF welcomes the opportunity to strengthen cooperation with non-Members in gathering, sharing and assessing transport GHG reduction policies and best practices