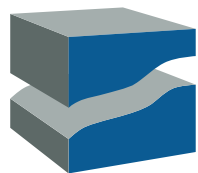




An Integrated Approach to passenger car related CO₂ emissions

**Presentation at ECCP Conference
24 October 2005**

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ACEA

EUROPEAN AUTOMOBILE
MANUFACTURERS ASSOCIATION



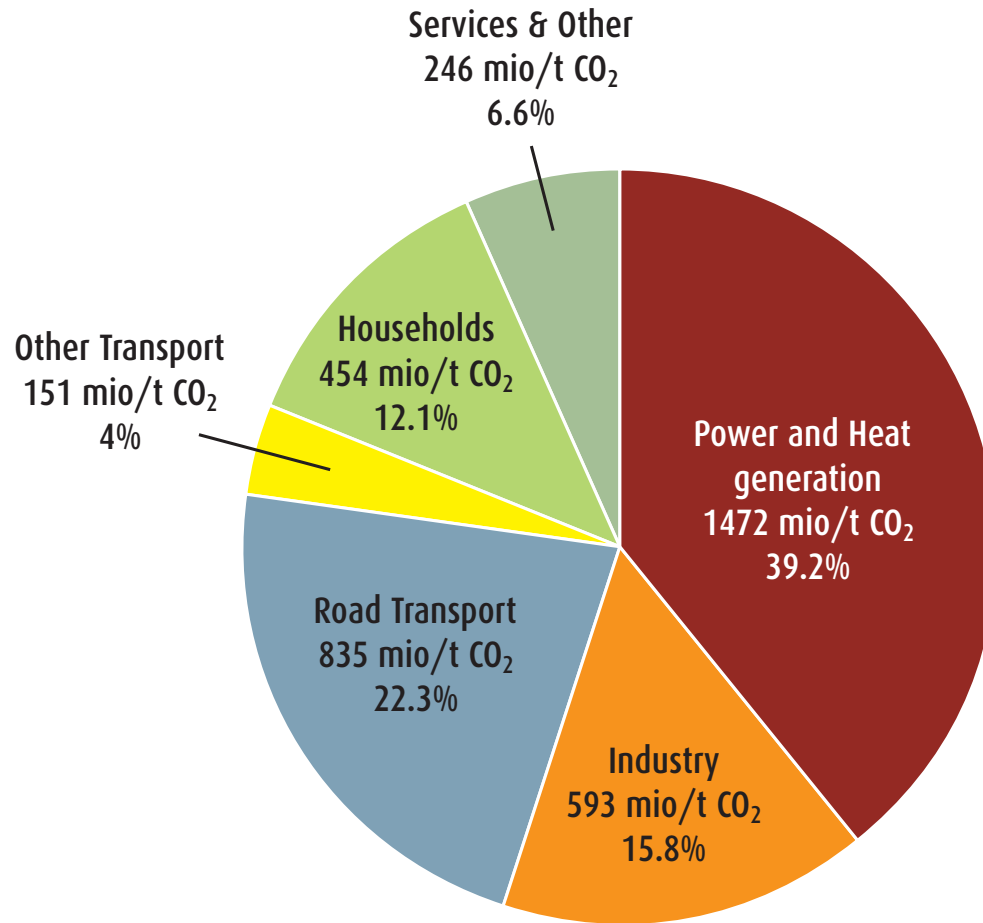
Content

- ① The CO₂ Challenge
- ② Current Political Measures
- ③ The CO₂ Emission Reduction Potential and Cost of 120 g/km Target for Vehicle Technology Only
- ④ An Integrated Approach to meet the CO₂ Challenge
- ⑤ Conclusion



The CO₂ Challenge

CO₂ emissions from energy (EU25, Mio. t CO₂)



SOURCE EU Commission, Energy and Transport

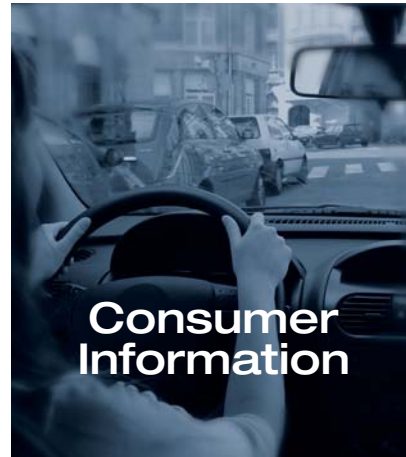
2

Current Political Measures



Car Industry Commitments

→ 140 g/km target for 2008/2009



Consumer Information

→ Fuel consumption and CO₂ emission labeling of cars



Fiscal Measures

→ Fuel taxation
→ Vehicle taxation



R&D support





→ 6th/7th Framework Programme

EU CO₂ Reduction Strategy for New Passengers Cars

2

Current Political Measures

Current indicative alternative fuel targets in the EU as percentage of transport fuel market

	2010	2015	2020
 <p>Biofuels <small>(Fame, Ethanol/ETBE, biogas, Synthetic Fuels from Biomass)</small></p>	5,75%	7%	8%
 <p>Natural Gas</p>	2%	5%	10%
 <p>Hydrogen</p>	—	2%	5%
 <p>Total</p>	7,75%	14%	23%

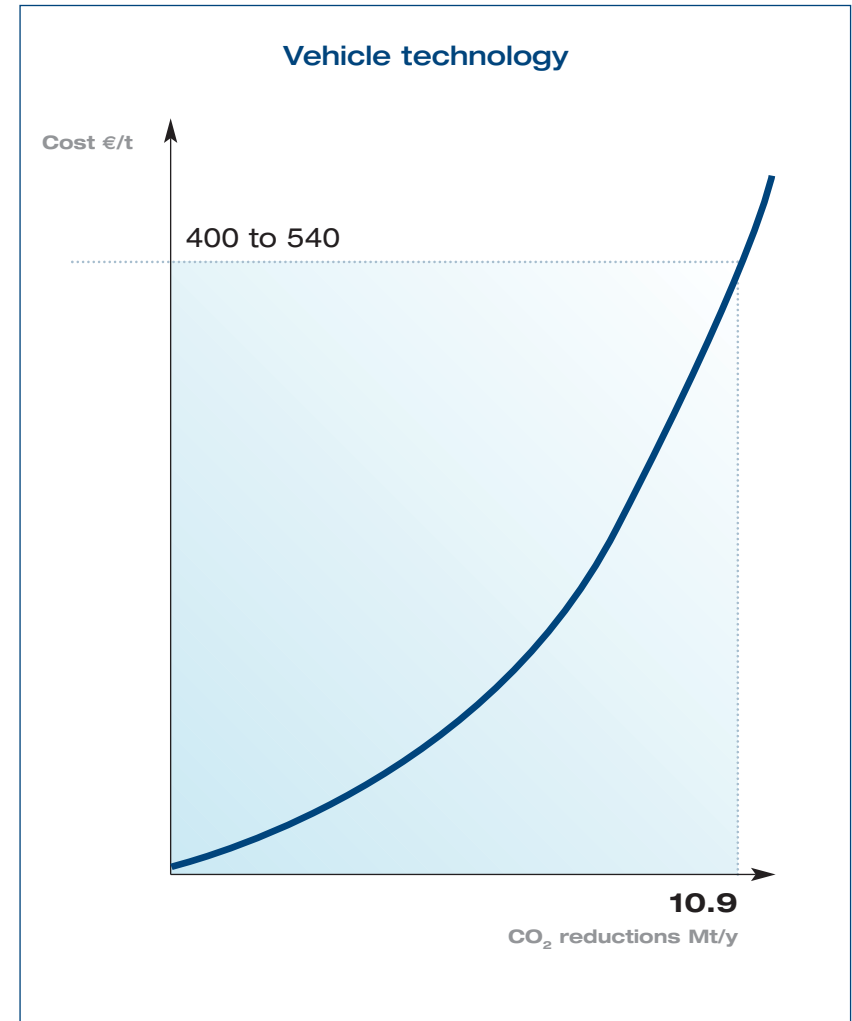
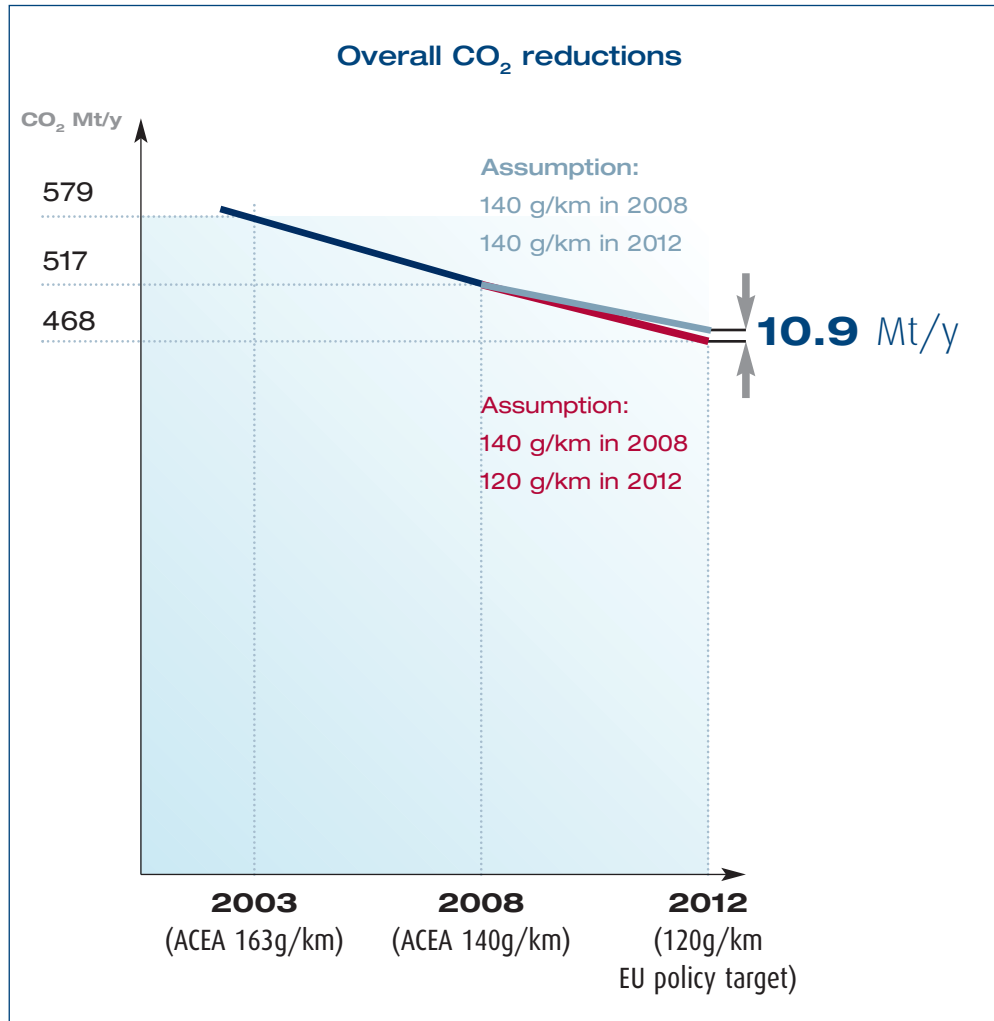
All figures based on energy content

SOURCE: Promotion of the use of biofuels and other renewable fuels for transport, Directive 2003/30/EC
Green paper on the security of energy supply

3

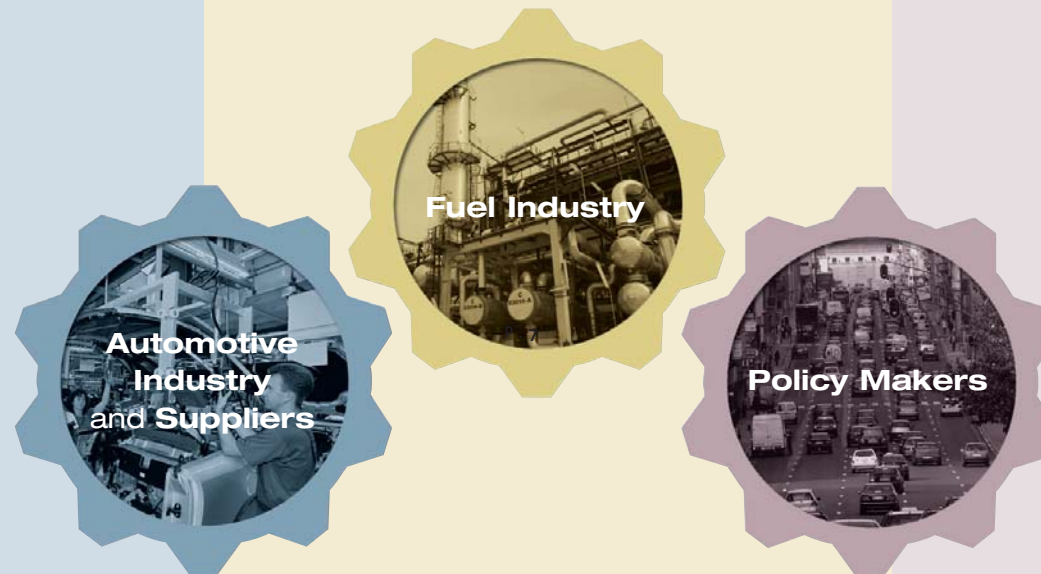
The CO₂ Emission Reduction Potential and Cost of 120 g/km Target for Vehicle Technology Only

Further technology measures have limited CO₂ impact at high cost



4 An Integrated Approach to meet the CO₂ Challenge

An Integrated Approach for reductions of car related CO₂ emissions will achieve more at lower costs

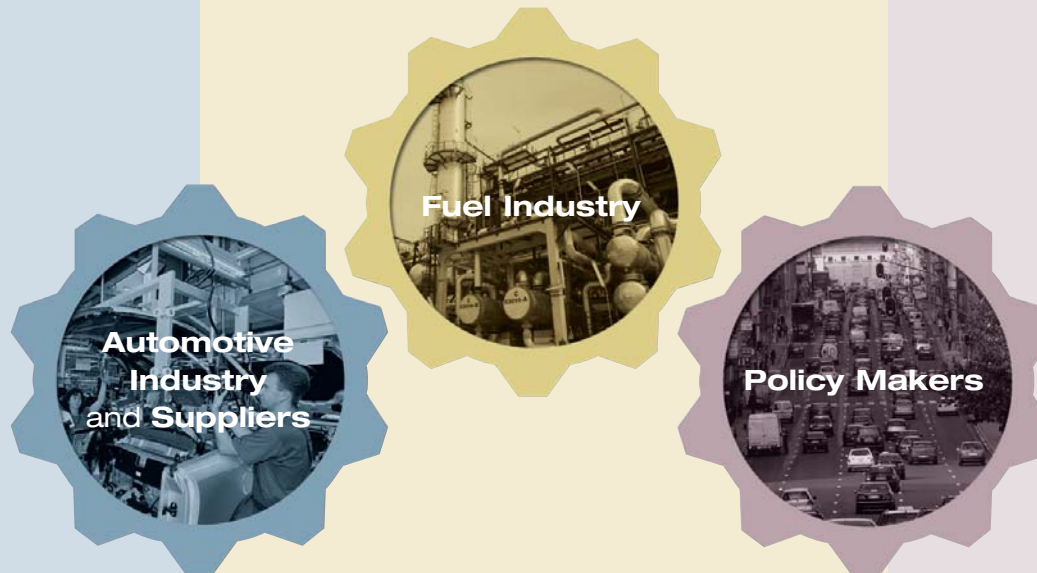


3-step approach

- 1: Identify potential activities to reduce CO₂ emissions with all stakeholders involved
- 2: Identify and compare the costs and CO₂ reduction potentials of these potential activities
- 3: Identify measures to promote the most cost-effective activities

4 An Integrated Approach to meet the CO₂ Challenge

Step 1: Identify activities to reduce CO₂ emissions with all stakeholders involved (EXAMPLES)



- ⚙ Further increase market penetration of CO₂ efficient technologies
- ⚙ Further increase market penetration of new technologies for alternative fuels
- ⚙ Support eco-driving activities
- ⚙ Consumer information

- ⚙ Further increase market penetration of alternative fuels
- ⚙ Support eco-driving activities

- ⚙ Improve road and traffic management infrastructure
- ⚙ R&D support for vehicle technologies and alternative fuels
- ⚙ Support eco-driving activities
- ⚙ Consumer information

4

Potential Activities of an Integrated Approach

AUTOMOTIVE INDUSTRY AND SUPPLIERS (1)

Further increase market penetration of CO₂ efficient technologies

Combustion efficiency

e.g. new combustion processes, DI technology, variable valve control, cylinder deactivation

Energy management

e.g. hybrid technologies

Rolling resistance

e.g. low friction tyres, brake drag reduction

Engine improvement

e.g. thermomanagement, reduced friction

Weight reduction

e.g. high strength steel, aluminium, magnesium, plastics, composite materials

Aerodynamics

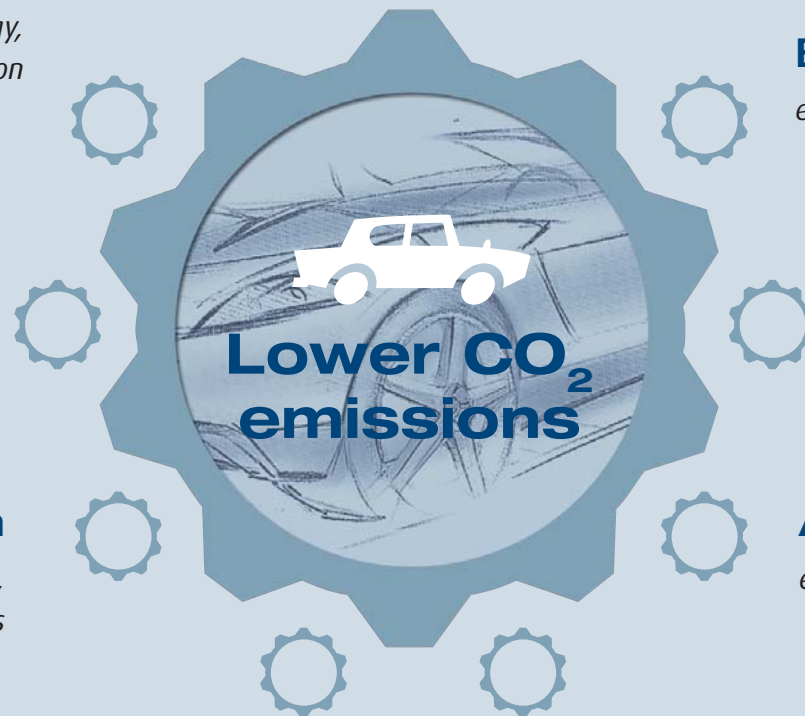
e.g. shape, airflow management

Drivers information devices

Gear shift indicators, fuel economy indicators

Improvement transmission

e.g. reduced friction, longer gear ratios



Further increase market penetration of technologies for alternative fuels

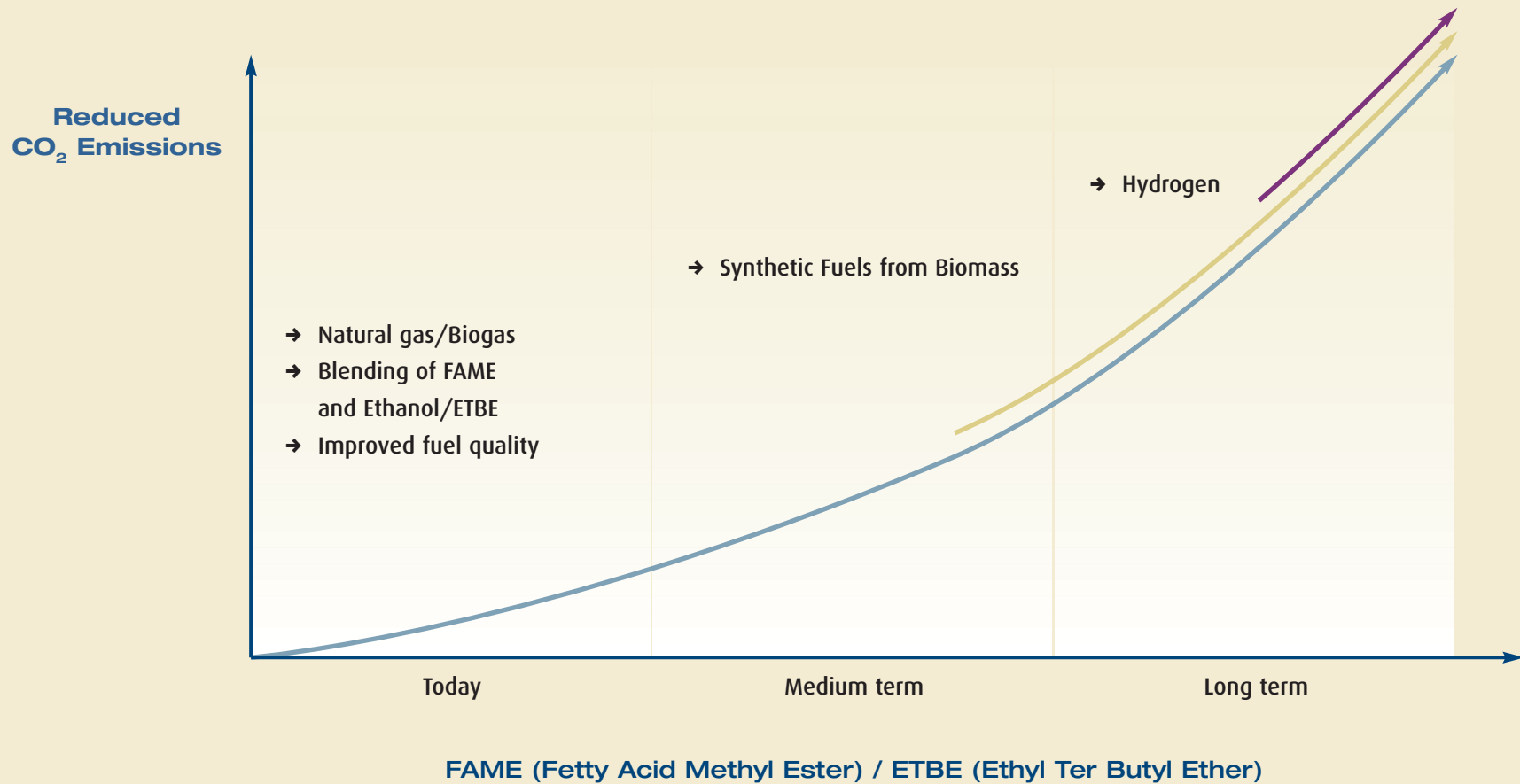


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Potential Activities of an Integrated Approach

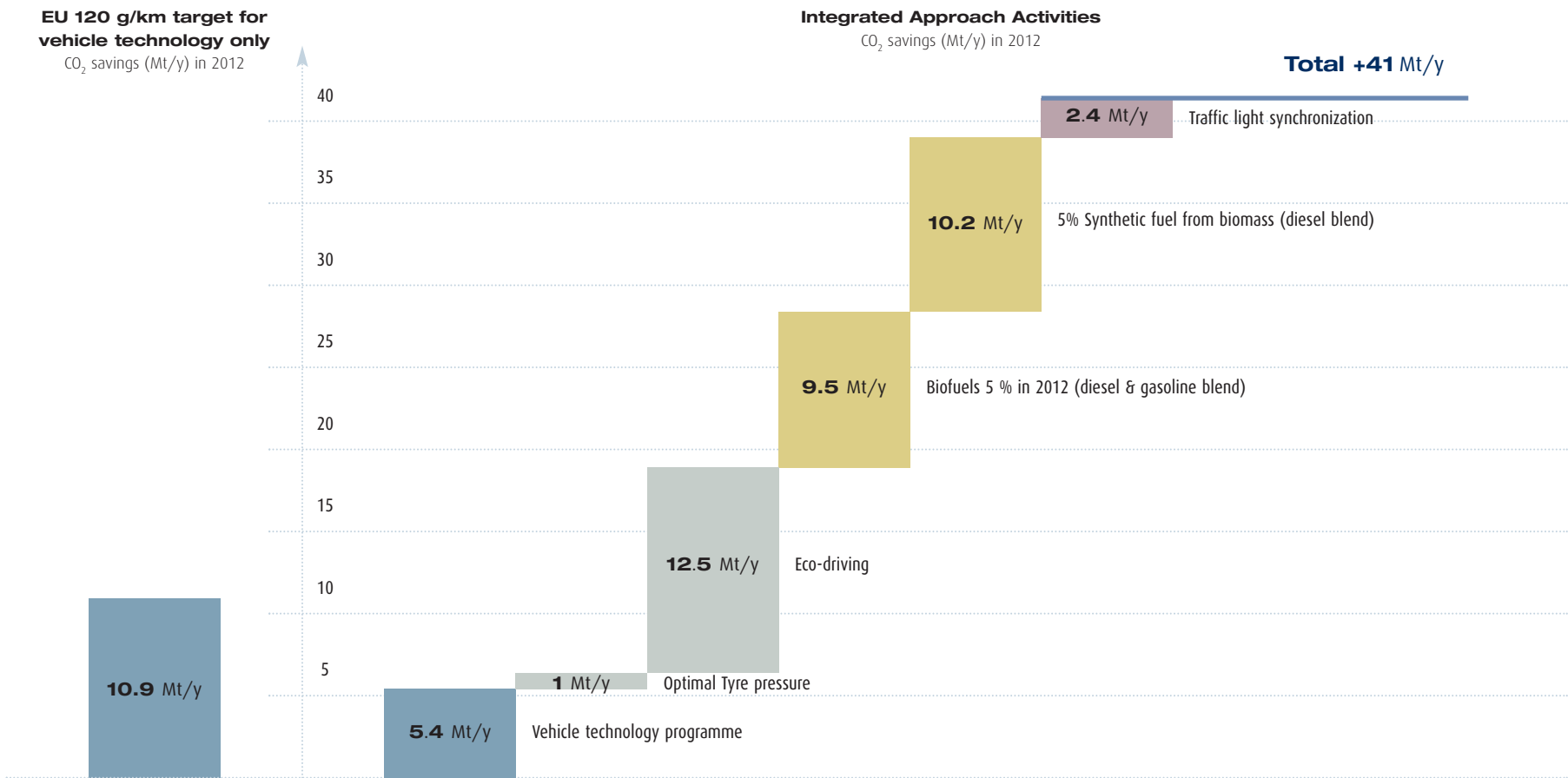
FUEL INDUSTRY (1)

Further increase market penetration of alternative fuels



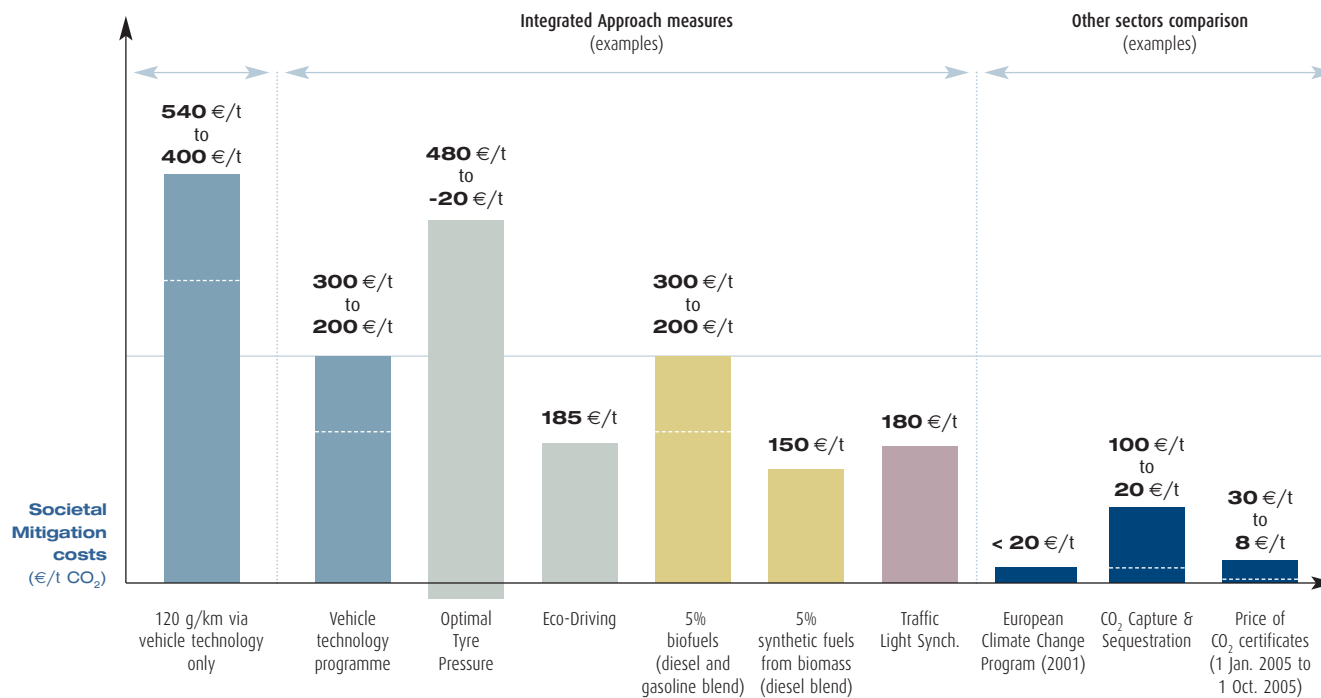
4 An Integrated Approach to meet the CO₂ Challenge

Step 2: Identify and compare the costs and CO₂ reduction potentials of potentials activities (data are indicative only)



4 An Integrated Approach to meet the CO₂ Challenge

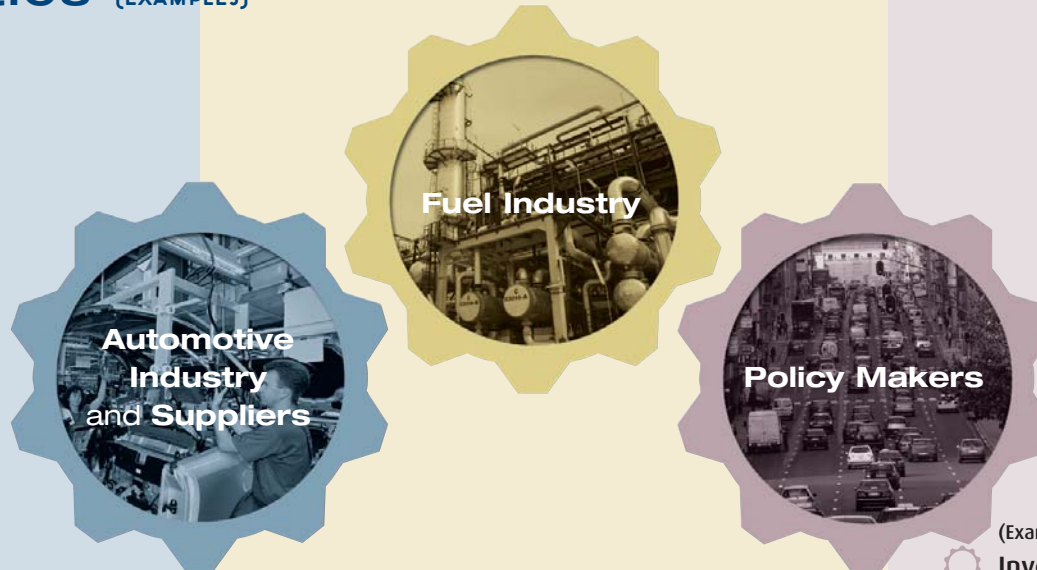
Step 2: Identify and compare the costs and CO₂ reduction potentials of potentials activities (data are indicative only)



- Integrated Approach enables inclusion of activities to reduce passenger car related CO₂ emissions with lower societal mitigation costs.
- In other sectors much lower societal mitigation costs.

4 An Integrated Approach to meet the CO₂ Challenge

Step 3: Identify measures to promote the most cost-effective activities (EXAMPLES)



(Examples of potential measures)

Implement voluntary initiatives

- vehicle technology initiatives:
 - further development and market penetration of CO₂ efficient conventional and alternative technologies
 - fitting of gear shift indicators and fuel economy indicators
 - improvement and increased fitting of low friction tyres
 - measure to optimise tyre pressure
- support common initiative to educate drivers on eco-driving

(Examples of potential measures)

Implement voluntary initiatives

- further increase market penetration of alternative fuels
- development and maintenance of appropriate tyre inflation infrastructure
- support common initiative to educate drivers on eco-driving

(Examples of potential measures)

- Investigate fuel price increases and fuel taxation impact on CO₂ emissions
- Shift basis of annual car taxation to CO₂
- Invest to improve road and traffic management infrastructure
- Support new technologies and new fuels
- Support initiatives on optimal tyre pressure
- Support eco-driving activities
- Support common initiative to educate drivers on eco-driving
- Ensure consistency of existing legislation
 - consider trade offs with other political aims

5

Conclusion

ACEA welcomes an Integrated Approach to reduce passenger car related CO₂ emissions and to enhance the energy security.

- It will deliver more CO₂ savings (up to 4 times) at lower cost (half the cost)
- It will draw-in various stakeholders into a joint endeavour, that will provide the best opportunity to achieve substantial CO₂ emission reductions and to save fossil resources in line with EU objectives today and in the future.
- It will protect the economic health and global competitiveness not only of the European automotive industry, but also of the EU economy.

ACEA thanks the Commission and other EU institutions to act as a promoter and mediator of the Integrated Approach.