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Our Global Road Transport Priority: Reducing CO₂ Emissions Through an Integrated Approach

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OUR SHARED GOAL

Sustainable Mobility

- Delivering safe, energy-efficient products that meet customers' needs.
- Using the earth's resources responsibly, minimizing environmental impacts, relying on renewable energy and responding to differing community needs for transportation.
- Fulfilling our fundamental role in driving world economies.

Our Starting Point for Discussions

- Energy and transportation face growing global demand.
- Mobility is linked with economic growth.
- Mobility needs vary, but consumers everywhere seek affordable transportation and need to be engaged.
- There is no single solution, so automakers are developing diverse technologies that run on diverse fuels.
- Industry needs consistent, long-range regulations.
- Ambitious results are only possible with a partnership of many contributors, both countries and sectors.



A Framework for Success

- 1. Technology neutral, performance-based policies.
- 2. A range of low-carbon fuels and their infrastructure.
- 3. Transparent costs of carbonreduction measures, with predictable price signals and incentives.

- 4. Consistency and adequate lead-time.
- 5. Share best practices and innovative measures.
- 6. ITSs as a means to an energyefficient road transport sector
- 7. An Integrated Approach for auto technology, fuels, infrastructure and roadways, and consumers.

The Integrated Approach

Automakers: Produce innovative, energyefficient vehicles that run on alternative fuels and meet consumers needs.

Energy Providers: Offer more low-carbon fuels in more places.

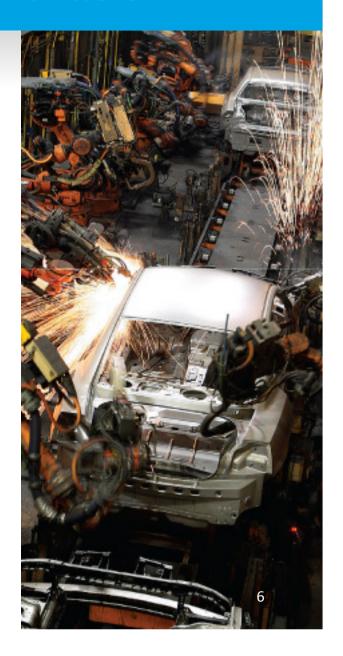
Consumers: Buy new auto technologies and low-carbon fuels in large numbers, as well as practice "green driving."

Infrastructure Planners: Provide roads and traffic management systems for facilitating safe, efficient vehicle travel.



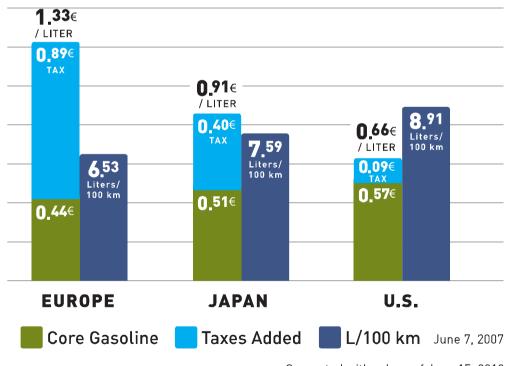
The Role of Automakers: Innovation

- Since no one can predict the future, automakers are developing diverse technologies that run on a range of alternative fuels.
- Emission-free journeys are a powerful longterm vision, and advanced technology will move us closer.
- Still, we must acknowledge that continued improvements to gasoline and diesel engines will pay a significant role in future mobility.



CASE STUDY: The Integrated Approach

Energy prices and taxes drive consumer buying decisions, which affect carbon emissions.





Percentage of fuel price made up by taxes

EUROPE U.S. **15**%

Converted with values of June 15, 2010

Concrete Data on Carbon Reduction

In June 2010, OICA released "Sustainable Mobility, CO_2 in the Road Transport Sector, the Integrated Approach."

This report:

- Reviews policies around the world.
- Highlights best practices.
- Documents carbon reduction benefits through case studies.



Roadway Policies Reduce CO₂

- Roadway policies bring immediate results, reducing CO₂ from all cars on the road today—not just new cars.
- Infrastructure improvements can include new roads, bypasses that route traffic around congested urban centers, added traffic lanes and more.
- Intelligent Transportation Systems include timed traffic lights, electronic tolling systems and navigational aids that help drivers find the most efficient route.



CASE STUDIES: Infrastructure and Roads

Japan:

- Elevating 150 downtown Tokyo railway crossings reduced CO₂ emissions by 800,000 tons/year.
- Completion of Tokyo's three major ring roads reduced CO_2 emissions by 700,000 tons/year.
- Even small savings added up. Eliminating 10 railroad crossings in Sendai City cut CO₂ by 500 tons/year, while adding a right turn lane in Joetsu City reduced CO₂ by 230 tons/year.

CASE STUDIES: Infrastructure and Roads

South Korea:

• Electronic toll collection systems in Seoul reduced CO_2 emissions by 100,000 tons over 10 years.

United States:

• With even "modest improvements" to just 230 severe "bottlenecks," a recent survey estimated 150+ billion liters of fuel would be saved over 20 years.

Germany:

 Comparisons of travel in Stuttgart under best and worst traffic conditions demonstrated that CO₂ was reduced by 25% without major congestion.

CASE STUDIES: EcoDriving



Worldwide:

• The International Energy Agency and International Transport Forum reported that Ecodriving can reduce CO_2 emissions by up to 50%, depending on the individual driver.

Italy:

• "eco:Drive" software was applied to 33,000 autos, eliminating 3,000 tons of CO₂ emissions over one year.

Switzerland:

36,000+ people trained in Ecodriving reduced 46,000 tons of CO₂ emissions in 2007.

CASE STUDIES: Consumer Programs

France:

 A Paris car-sharing plan involving 1,500 subscribers and 50 vehicles saved 1,290 tons of CO₂ a year.

United States:

 A 2009 fleet renewal program reduced fuel use by 34% and reduced CO₂ by 320,000 tons/year.

Austria:

 Fleet renewal was estimated to save 34,000 tons of CO₂/year.

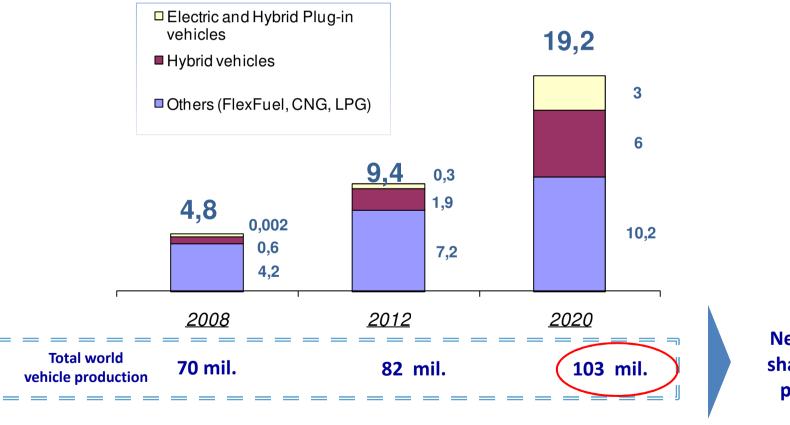


Learn more by visiting

www.OICA.net

Environmental challenge: alternative fuelled powertrains

Alternative fuelled powertrains penetration - 2020 forecasts (million units)



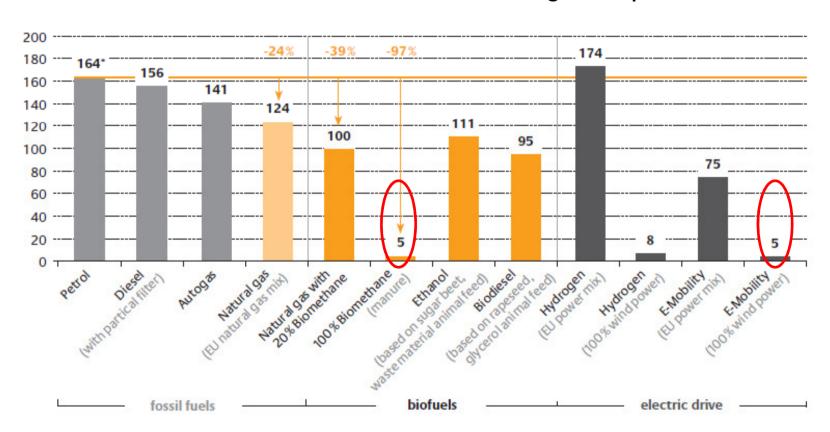
Nearly 19%of share on total production

Source: ANFIA processing on 2010 Bosch data

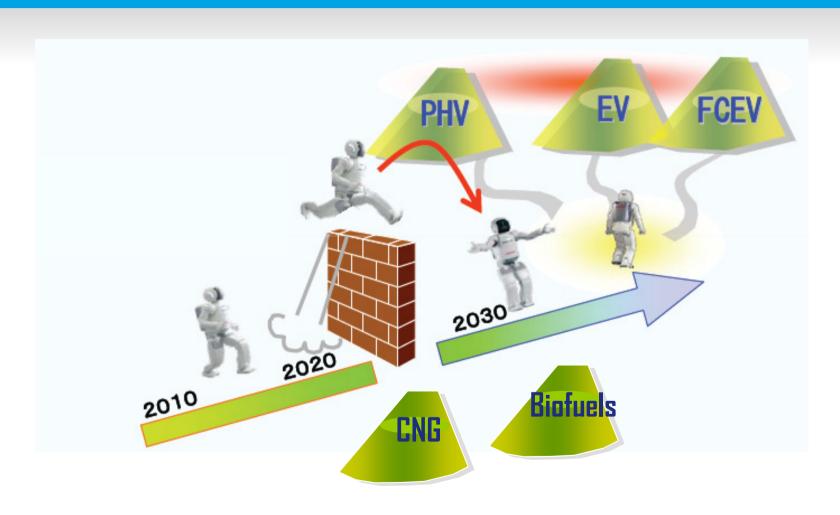
Environmental challenge: a glance to the future

A study of Deutsch Energy Institute compares different fuels CO2 emissions levels according to Well to Wheel approach.

WTW Greenhouse Gases emissions in g CO2 eq. / km

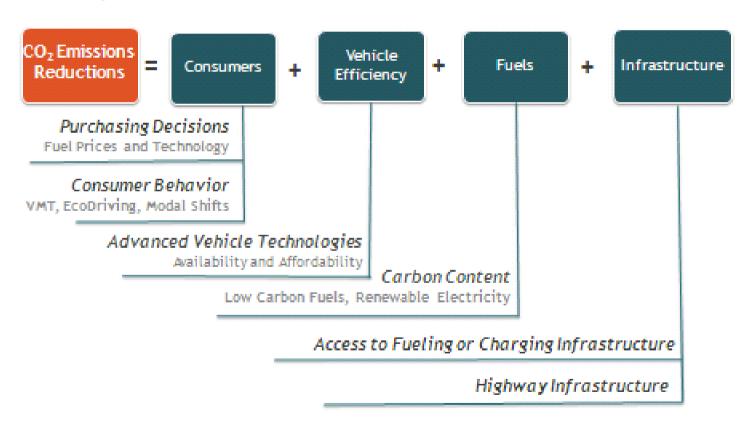


Environmental challenge: fill the gap to the future of mobility



Conclusions: LDV Sector Carbon Reductions are the Product of an Integrated Approach

Our Equation to Achieve Our Shared Goals:



Conclusions: the Integrated Approach - Next Steps

Broad measures involving all stakeholders can magnify the transport sector's CO₂ reductions.

- Government can help create the right conditions with consistent, long-term, harmonized policies.
- Government can incentivize consumer adoption of low-carbon autos and fuels.
- Government plays a critical role in the energy infrastructure.
- Automakers look forward to working together.

