

UNECE – Political Segment

“Sustainable transport and innovative approaches”

Future Choices and Challenges

www.bmvi.de/mobility-and-fuels-strategy



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Post 2015

2015 – key year for
sustainable development and climate policy !?

2015:

- ▶ **Post-Rio Prozess:**
 - aim: Global sustainability objectives post 2015

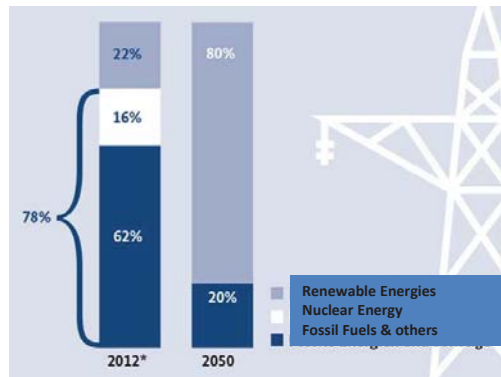
- ▶ **Post Millennium process (MDG-process):**
 - expiry of the Millennium development goals
 - aim: New global objectives

- ▶ **UN Climate Conference, Paris/France (COP 21)**
 - aim: New climate agreement

The broader picture

The German „Energiewende“

Transforming the Energy System

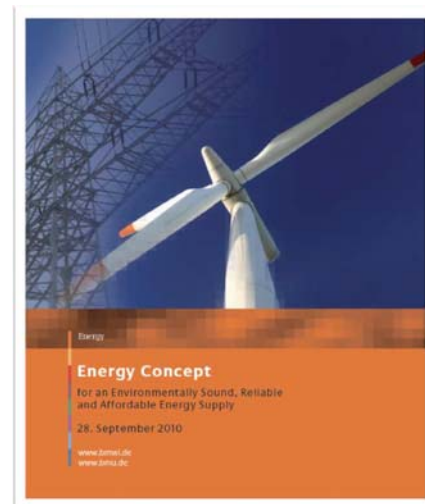


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Climate and Energy Targets

- Climate-damaging GHG emissions are to be reduced by 40% by 2020, 55% by 2030, 70% by 2040 and by 80 to 95% by 2050, compared to reference year 1990.
- Primary energy consumption is to fall by 20% by 2020 and by 50% by 2050.
- Energy productivity is to rise by 2.1% per year compared to final energy consumption.
- Electricity consumption is to fall by 10% by 2020 and by 25% by 2050, compared to 2008.
- Compared to 2008, heat demand in buildings is to be reduced by 20% by 2020, while primary energy demand is to fall by 80% by 2050.
- Renewable energies are to achieve an 18% share of gross final energy consumption by 2020, a 30% share by 2030, 45% by 2040 and 60% by 2050.
- By 2020 renewables are to have a share of at least 35% in gross electricity consumption, a 50% share by 2030, 65% by 2040 and 80% by 2050.
- **In the transport sector, final energy consumption is to fall by about 10 % by 2020 and by about 40 % by 2050, the baseline in this case being 2005 -> Fuel Strategy!**

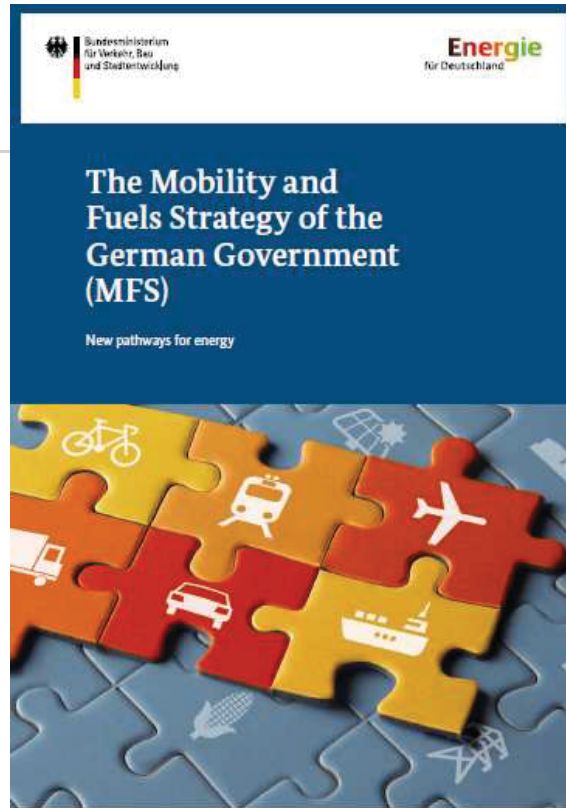


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New Pathways for the Energy Supply for Future Transport

- in the lead: Ministry of transport / BMVI
- project of the coalition treaty 2009
- part of the energy concept of the German government



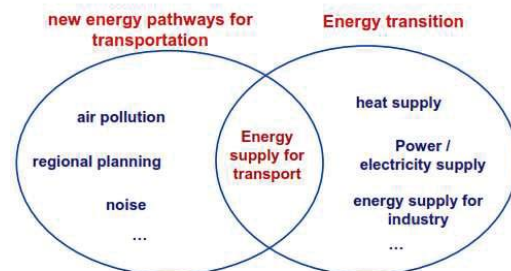
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Overall political approach

Transformation of the energy supply for transport

- ➔ Use less energy: modal shift / public transport / intelligent networks....etc.
- ➔ Use cleaner fuels: NG and sustainable biofuels
- ➔ Use new energy carriers: renewables, electricity & hydrogen
- ➔ New technologies will be key: EV's with batteries and fuel cells



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Key Findings – which fuel is moving us tomorrow?

Connecting separate energy systems

- ♦ Achieve climate goals together: politics, business, science and society
- ♦ Linking energy systems gets more important - transport as "vehicle" for multifunctional energy storage solutions (batteries & H2)

Perspectives : transport modes

- ♦ Development / launch of new vehicles technologies and future fuels complex and more challenging
- ♦ The EU fleet CO2 target values: driver for efficiency and innovation => further development to meet energy targets
- ♦ Electric vehicles (battery, fuel cell) will play crucial role
- ♦ Trucks and air transport particularly in focus => no "fundamental" short term technology solutions foreseeable

Perspectives: „energy carriers / fuels“

- ♦ Diversifying the energy base in traffic
- ♦ Use of renewable energies in the electricity, the heat and transport sectors - transport claims its share!
- ♦ Liquid fuels remain important (trucks, aviation, shipping)
- ♦ In the transport sector, too, gaseous fuels will gain importance - CNG & LNG & Hydrogen
- ♦ Sustainable use of bioenergy in transport – challenges: capacities are limited ; demand is also increasing in other sectors ; uncertain perspectives in Europe (iluc discussion / "food-and-fuel"-discussion).

MFS as „learning strategy“ – instrument of action for the transformation of energy in transport

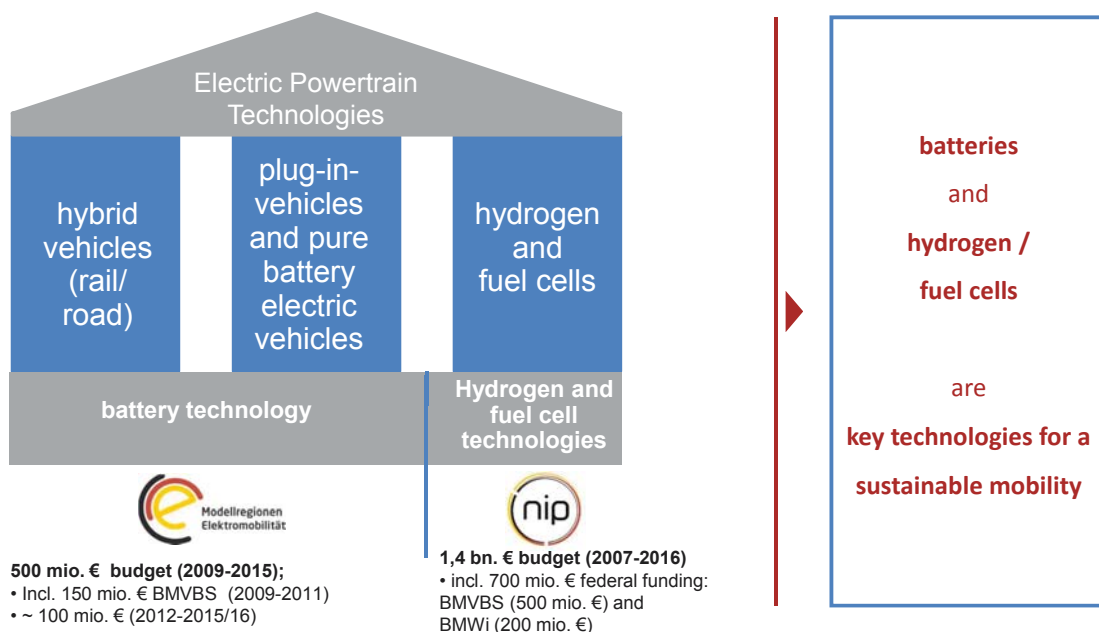
- ♦ Further develop of *reliable* goals, regulatory frameworks and step sequences/roadmaps for market introduction
- ♦ Infrastructure for alternative "fuels": solve "chicken and egg" problem - development needs determination, a clear commitment, time and money
- ♦ Ensure competitiveness: products and services for the international market.

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Market Preparation for Electric-Mobility

Three pillars of electrifying the powertrain



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CPT-Directive contains specific infrastructure requirements for different “fuel options”:

- electricity
- hydrogen
- Methane (LNG and CNG, for roads and waterways)
 - No binding infrastructure requirements (“where” / “numbers”); Member States define infrastructure roll-out in *National Infrastructure Plans*
 - Binding technical standards for all alternative fuels infrastructures – aim: EU-wide harmonization

National Implementation: Development of a national framework for the different fuel options (electricity, H2, CNG, LNG)

- Clarification of minimum requirements: minimal infrastructure requirements (standard equipment per fuel option)
- Explore operator models and set up by the state required canon of rules ("non-discriminatory access")
- Capital deployment (public funding ? / private capital)
- EU support to integrate, organize cooperation with neighboring MS
- Availability of EU-Funds (e.g.. Ten-T) for infrastructure deployment!?

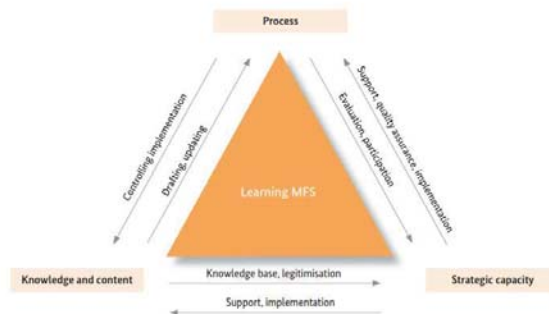
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Conclusion

- Moving away from oil – „no-regrets-option“ for Europe!
- Transforming the energy sector - including transportation! Closer alignment of the general **energy and the transport systems** needed.
- **“Energiewende”**: push for **“new” efficiency technologies, competitiveness, growth and jobs.**
- Implementation of a comprehensive, future oriented, sustainable fuel strategy (national & Europe) as “learning strategy” / step-by-step approach.

The elements of the MFS as a “learning strategy”



- Technology is ready (batteries / fuel cells / hydrogen / LNG) ! Challenge: market activation of new transport technologies / implementation of roadmaps, the right timing? choice of suitable instruments? role of public / private stakeholders? sharing risks?
- **“Clean Power For Transport” directive – Europe`s way forward to alternative fuels and innovative drivetrains!**
- International Collaboration: a global technology approach is needed (incl. infrastructure built-up).

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**Thank you very much
for your attention!**

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