



European
Commission

Clean Power for Transport initiative

*An EU sustainable alternative fuels
strategy including the appropriate
infrastructure*

Main problems to fix

Energy supply at risk:

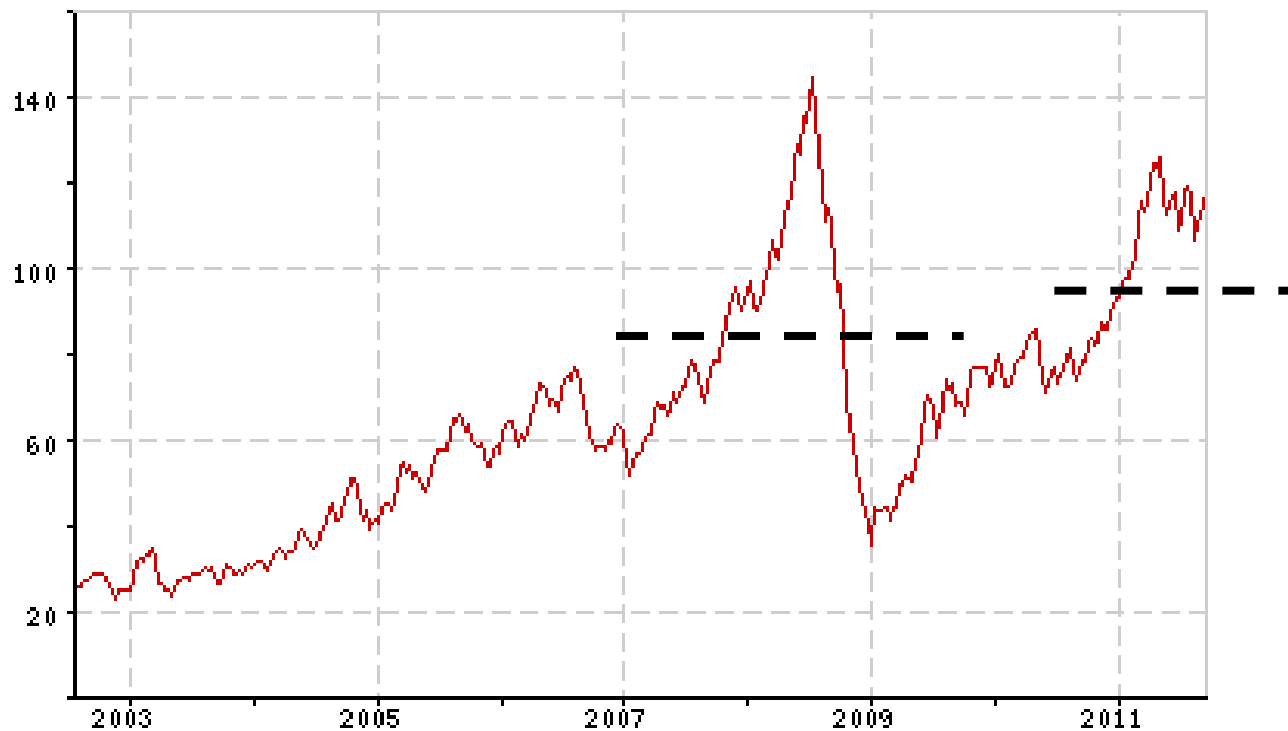
Transport - largest oil consumer: 55% and rising
Oil counts for 94% of transport fuels, 84% imported
New oil reserves expensive

High oil import bill:

Up to € 1 billion per day in 2011
Trade balance deficit: ~ 2.5 % of GDP
7% of household expenditure



Oil price (\$/bl)



Speculative bubble 2007-2008: Cost for EU transport = **90 b€**
North-Africa unrest 2010-2011: Cost for EU transport = **40 b€**

Sustainable transport

CO2 emissions from transport:

30% of total CO2 emissions from the EU economy in 2009

Increased by 34% between 1990 and 2009

GHG emissions reduction from transport of 60% by 2050

- Large-scale deployment of low-CO₂ alternative fuels can contribute significantly
- Alternative fuels, together with increased transport efficiency, are indispensable

Clean fuels are also beneficial in urban areas



Competitiveness / Growth and jobs

Risk for the EU industry:

Loss of world leadership

- Market opportunities for **European industry** – support for innovative sectors where EU companies are leading
- If the **EU** acts as a **first-mover**, global competitiveness of EU vehicles, vessels and relevant infrastructures industries will be enhanced
- **Employment creation** in a wide range of sectors in the EU (construction, manufacturing, electricity, ICT technology and applications, advanced materials)



What is the current situation?

Important efforts to promote alternative fuels by some Member States and industry,

but:

Different technological choices lead to:

- **Isolated** national/regional markets
- **Fragmentation** of the internal market for alternative fuels
- Technology "border lines", which **inhibit mobility** with alternative fuels across Europe



Closure of the Missing Link



What is the EC response?

The Clean Power for Transport Package will contribute to:

- Build a competitive, resource efficient and sustainable transport system in the EU
- Establish a long term fuel strategy
- Remove technical and regulatory barriers across the EU
- Facilitate the development of a single market for alternative fuel infrastructure and alternative fuel vehicles and vessels



Clean Power for Transport initiative

- **Communication “A European alternative fuels strategy”**
- **A proposal for a Directive on the deployment of alternative fuels infrastructure**
Focusing on the "missing link" - infrastructure and standards
- **Staff Working Document on Actions towards a comprehensive framework on LNG for shipping**

The Communication

- a comprehensive alternative fuels strategy for the **long-term substitution of oil** as the primary energy source for transport
- a framework to **guide investments** and **technological development**
- Single-fuel solution is not possible => ***a package of alternative fuels***
- **Priority actions**
 - For infrastructure with common standards
 - For technology development
 - For consumer acceptance

WE CONTINUE ON ALL FRONTS!

TEN-T and R&D projects

- Horizon2020
- European Green Vehicles Initiative
- Smart Cities initiative
- LNG projects

Etc.



A legislative proposal for infrastructure build-up, with common standards

- **Obligation of means** (national policy frameworks + EC assessment and recommendations)
- **Obligation of results** (minimum infrastructure)
 - **Conservative approach; no disproportionate targets**

=> would help MS to reach their projections
- A proposal developed in **close consultation with MS and industry**
- **A network approach/creation of economies of scale**
- Unlock private investment = **a pro-growth initiative**
- **Flexibility = Full freedom** given to **MS for implementation**
- **EU support** offered

The proposed Directive creates:

**the conditions to establish
a single market and economies of scale**

=> Confidence for investors & consumers

Stable framework including minimum infrastructure

- Investments encouraged

EU common standards

- Interoperability

Consumer information

- Fuel / vehicle compatibility

Costs of electric recharging points

Private = $\sum \text{€}520 * (90\% \text{ total number in MS})$

= $520\text{€} * 7.2 \text{ M} = \mathbf{3.7 \text{ bn €}}$

Public = $\sum \text{€}5,280 * (10\% \text{ total number in MS})$

= $5,280\text{€} * 800,000 = \mathbf{4.2 \text{ bn €}}$

Total number of recharging points = 8 M

Number of recharging points in each MS are calculated as:

$\frac{\text{Car stock (MS}_i\text{)}}{\text{Car stock (EU)}}$	*	$\frac{\text{Share of urban population (MS}_i\text{)}}{\text{Share of urban population (EU)}}$	*	EV stock (EU) * 2	=	$\text{Number of charging points needed in MS}_i$
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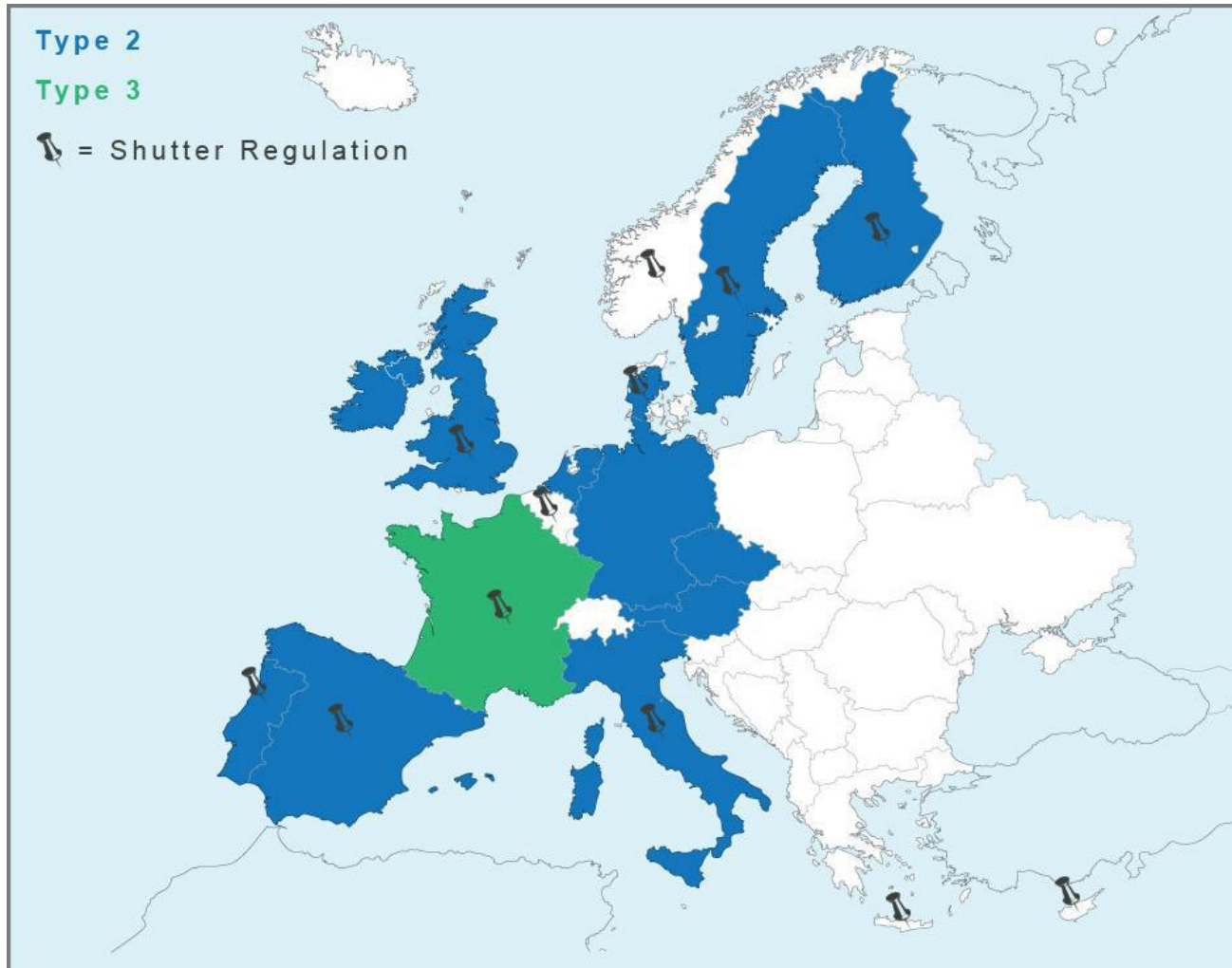


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Minimum number of electric vehicle recharging points in each Member State

Member State	Number of recharging points (in thousands)	Number of publicly accessible recharging points (in thousands)
BE	207	21
BG	69	7
CZ	129	13
DK	54	5
DE	1503	150
EE	12	1
IE	22	2
EL	128	13
ES	824	82
FR	969	97
IT	1255	125
CY	20	2
LV	17	2
LT	41	4
LU	14	1
HU	68	7
MT	10	1
NL	321	32
AT	116	12
PL	460	46
PT	123	12
RO	101	10
SI	26	3
SK	36	4
FI	71	7
SE	145	14
UK	1221	122
HR	38	4

Existing standards for slow charge



Competing standards

Type 2



Chademo



Type 3



COMBO Type 2



Common standards: conclusions

Type 2 standards is the only one interoperable plug for slow and fast charge stations

Compatible with national safety requirements (shutters)

Supported by ACEA , Eurelectric and CLEPA – Position paper adopted by all in May 2012

- Decision on a single connector is needed
- Type 2/Type 2 Combo to be used in the EU as a standard for AC/DC charging both on the vehicle and public charging
- Type 2/Type 2 Combo can be used both on vehicle and public infrastructure side and is ready for all kinds of charging and **ensure interoperability EU-wide**

Help the developments in internal market & negotiations with third countries to achieve common or compatible standards – still pending under TEC

Thank you for your attention!