

TES Transport Energy Strategy



Preliminary result:

Hydrogen plays the major role as new additional vehicle fuel



Growing Hydrogen Vehicle Fleets between Now and 2010



Legal Situation in Europe

Sound Level **Emissions** **Fuel tanks/rear protective device** Rear registration plate space Steering effort Door latches and hinges Audible Warning

Rear visibility

Masses and dimensions Safety glass Tyres Couplings **Frontal impact** **side impact**

Braking

Parking lamps

Suppression (radio)

Seat belts

Diesel smoke

Forward vision

Interior fittings

Identification of controls

Anti theft and immobiliser

Defrost/demist

Protective steering

Wash/wipe

Seat strength

Heating systems

Exterior projections

Wheel guards

Speedometer and reverse gear

Head restraints

Plates (statutory)

Fuel consumption

Seat belt anchorages

Engine power

Installation of lighting and
Light signalling device

Diesel emissions

Reversing lamps

Reflex reflectors Position lamps Direction indicators Rear registration plate lamps Head lamps Front fog lamps Towing hooks Rear fog lamps



US Requirements for Hydrogen



Two Drafts for ECE Regulations

LH₂ Vehicle

PROPOSAL FOR A NEW DRAFT REGULATION

UNIFORM PROVISIONS CONCERNING THE APPROVAL OF:

- I. SPECIFIC COMPONENTS OF MOTOR VEHICLES USING LIQUID HYDROGEN;**
- II. VEHICLES WITH REGARD TO THE INSTALLATION OF SPECIFIC COMPONENTS FOR THE USE OF LIQUID HYDROGEN**

CGH₂ Vehicle

PROPOSAL FOR A NEW DRAFT REGULATION

UNIFORM PROVISIONS CONCERNING THE APPROVAL OF:

- I. SPECIFIC COMPONENTS OF MOTOR VEHICLES USING COMPRESSED GASEOUS HYDROGEN;**
- II. VEHICLES WITH REGARD TO THE INSTALLATION OF SPECIFIC COMPONENTS FOR THE USE OF COMPRESSED GASEOUS HYDROGEN**



EIHP2 - Key Project Parameters

Objective: Initiate and provide inputs for regulations on an EU and global level for the approval of hydrogen fuelled road vehicles, hydrogen refuelling infrastructure and the relevant interfaces.

Project Duration: 36 Months [01FEB2001 - 31JAN2004]

Project Budget: 4.935 MEuro

EU Funding: 50%

Partners:

B	Vandenborre Technologies
D	BMW, DC, Ford, FZK, LBST, Messer, Opel
ES	INTA
F	Air Liquide SA, Commissariat à l'Énergie Atomique
GB	Air Products, BP, Shell
GR	NCSRDemokritos
NL	EC-Joint Research Centre
N	Det Norske Veritas, Norsk Hydro ASA, Raufoss ASA
S	Volvo

Work Packages:

WP1 Overall Coordination	WP2 Refuelling Station	WP3 Refuelling Interface	WP4 Vehicles	WP5 Safety	WP6 Links "EU- USA", Cluster Activities
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Work Package 4 “Vehicles”

- **Validation of EIHP1 drafts**
- **Requirements for periodical inspection**
- **Global Technical Regulation**
- **Identification of deficits in rules and regulations**



What We Ask For



A legal framework must lead to planning reliability for car manufacturers and industries as soon as possible

