

The experience of a national research
PPP in Europe

DutchHy



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Board member of JTI New IG and DutchHy

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Members of the national HFC Coalition



Amsterdam



Rotterdam



Arnhem



Shell Hydrogen



Linde



Air Products



Hygear



ECN



Nedstack



HyTruck



APTS



PlugPower



Bredenoord



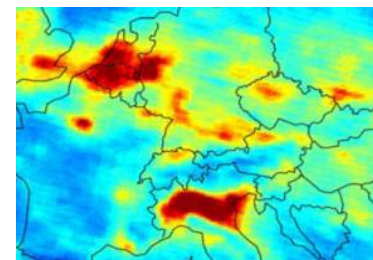
Hydrogen & Fuel Cells=

An energy system witch will contribute to all 2020 targets!

Hydrogen and fuel cells will reduce:

- CO₂ emissions
- energy consumption
- emissions of fine dust, NoX, CO
- energy dependency

in the transport sector

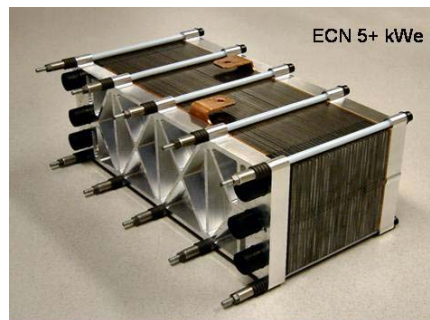


DutchHy

- To formulate projects by the coalition members
- Connect these projects with JTI, Interreg and local funds
- Project leader to support and control the projects
- Board selected by the coalition members
- Pin point funds for selected projects



The coalitions brings politic making, industry and consumers together



The problems they meet will be solved once!



Vision and ambition

- An important role for H₂&FC as the technology for transport
 - 50% of all transport movements in 2050, possibly combination with plug in hybrid technologies
 - H₂ can be produced from anything:
 - From fossil like NG, Coal or Oil combined with CCS
 - From sun, wind and bio mass

HFC will bring a clean energy efficient transport system

To achieve this we need large scale demonstrations!
This is the main reason for existence of DutchHy



The coalition will connect demand and supply



The coalition will avoid duplications, and will spend the public money more efficient



Rather 1 big demo than 10 small demo's



Most important issues of the HFC coalition

- To stimulate the take off of HFC applications, with focus on transport
- Make use of own strength and own products
- Scaling up of HFC city bus applications in the regions like Arnhem, in close connection with the other European city bus projects, in order to reduce the time to market
- Commercialization plan of HFC city busses



import



Made in NL



Up scaling



Other examples

- City distribution



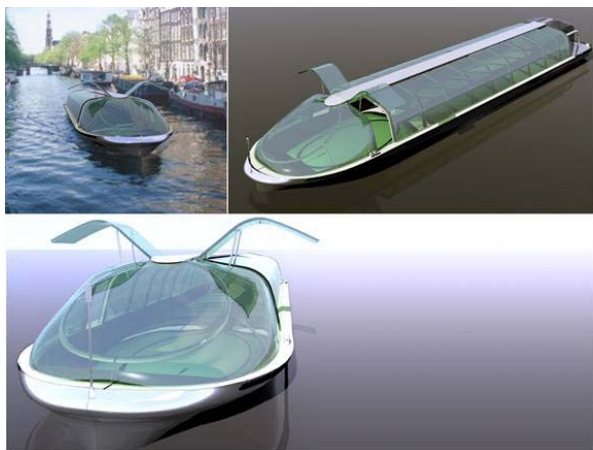
HyTruck nr.1

Fleet



More examples

- Transport niches

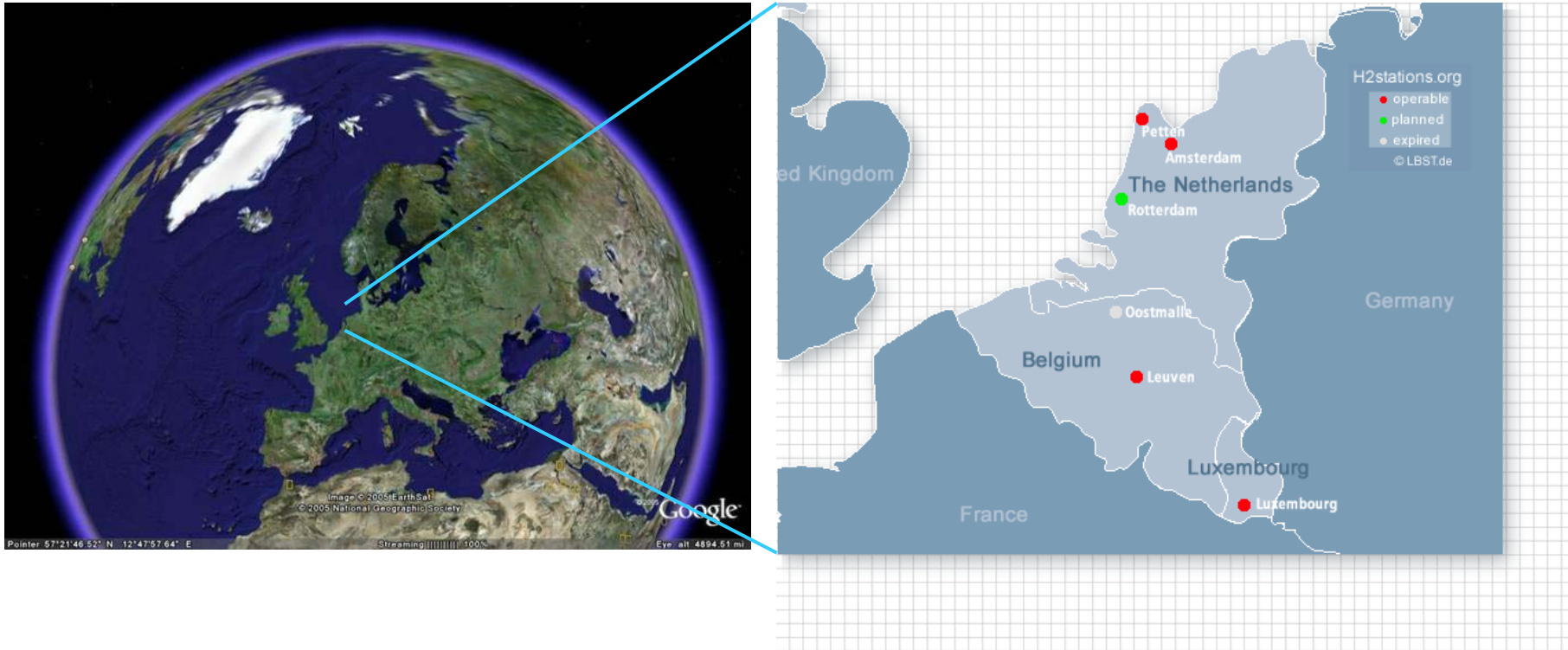


Core element of the HFC program

- Hydrogen production, transport and infrastructure
- Focused on reduction of GHG emissions
 - First city bus demo's with local and central H2 production technologies
 - Large scale H2 production with CCS
 - Testing the use of byproduct H2 from the industry



The HFC puts the Netherlands on the EU map



The Netherlands is an excellent partner to join large scale EU demonstration projects



JTI New IG

The European brother of DutchHY

- 470M€ te besteden waarvan ca 40% voor R&D
- Call 1 December 2008 28M €
- Call 2 December 2009 70M €
- Call 3 June 2010 100M €

Subjects:

- Transport and int
- H₂ production
- Stationairy applic
- Early Markets lik



New members are welcome



Political arguments

**H2&FC = sunny side of the economical
and the energy crunch!**

Because it will generate:

- Sustainable employment
- The energy transition



Q & A

Thank you

Jan Piet van der Meer
Board member of JTI New IG and DutchHy

