Sustainable Marine And Road Transport, H₂ in Iceland

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Icelandic New Energy
Outcome from former projects

- All participants in the Hydrogen Bus Project were pleased with the outcomes of the project and its impacts in the Icelandic society in the form of support and broad interest.
- Therefore it was considered time to launch the next step in the three step plan to test hydrogen in Iceland. Former participants are still working with us.
- The FC hydrogen buses were according to demonstration plans parked in January ’07, in perfect order but insurance and financial support had run out. Bus operators will have the opportunity to buy up to date fc-buses soonish!
- The buses were dismantled and integrated into other buses as spare parts, the fuel cells sold as educational equipment and one bus given to a transport museum.
The key demonstration projects of Icelandic New Energy

Driving Demonstrations

2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

ECTOS

CUTE

DEMO

NAVIGEN-meeting

FC-SHIP

New H Ship

SMART-H₂ boat/cars
SMART-\(H_2\) Goals

Sustainable Marine & Road Transport - \(H_2\) in Iceland

– 20-30 hydrogen cars on the street before the end of 2009
– Various forms of drive trains, fuel cell vehicles, cars with internal combustion engines, retrofitted technology, hybrids, battery powered vehicles etc.
– Auxilliary power unit on a 150 pers tour bout.
  • Icelandic design of a 10 kW fuel cell and battery (hybrid system that can boost power when needed) instead of diesil engine
– Production and distribution system for hydrogen tested for personal cars and boat services.
SMART-H\textsubscript{2} research

• The research will focus in on a number of aspects:
  – *Technological performance* – data collected on filling, maintenance etc
  – *Economic aspects* – costs during the life cycle
  – *Social impacts*, - such as changed transport patterns, fuel security
  – *WtW within the Icelandic boarders* - from measured data

• Foreseen outcomes
  – There is interest in broadening the research view to more than hydrogen, and analyse the various fuel options in a comparative way

• The results should feed into governmental decision making
SMART-H$_2$
Examples of cars

• DaimlerChrysler
  – A – class with Fuel Cell
  – Range: 200 km on filling

• Toyota Prius, a hybrid car
  – retrofitted for burning hydrogen
  – Range: 160km on each filling
SMART-H₂

Budget

- The project budget is about 530-700 mi Ikr or 9 – 13 miUS$
- VistOrka provides 225 milljónir (32-42%)
- Research funding and cooperation will be sought in Iceland and on the international arena.
- The partners take on the role of testing, leasing, providing technology and classification as well as research and data collection.
- These are:
Glimps of the future

Hydrogen