



European FCH Joint Technology Initiative : European Perspectives for Hydrogen & FCVs Deployment

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Overview

- The European FCH JTI
- Program goal :

The Fuel Cells and Hydrogen Joint Undertaking (FCH JU) is a unique public private partnership supporting research, technological development and demonstration (RTD) activities in fuel cell and hydrogen energy technologies in Europe. Its aim is to accelerate the market introduction of these technologies, realising their potential as an instrument in achieving a carbon-lean energy system.

Overview

- **Timeframe:**

- Initial Operation of the FCH JTI covers 2008-2017. Extension beyond 2017 may be considered.

- **Partners:**

- 3 main stakeholders: EC, NEW-IG (Industry) & N-ERGHY (Research).
- **NEW-IG:** currently 53 members covering the whole spectrum of FC & H2 activities, i.e. Oil&Gas, Industrial Gas, OEMs, Energy providers, FC & components...
- **N-ERGHY:** currently 63 research organizations across the EU.
- EU Regions & MSs are associated (e.g., HyRaMP)

- **Funding:**

- EC funding level @ 450 M€ (2008-2013) to be matched by Industry
- Funding cover MAIP activities incl. 150 M€ (Transport/Infrastructure) + 50 M€ (H2 production & distribution)

FCH JTI Roadmap for Road Transportation

JTI H₂ & Fuel Cell Demonstration Projects for Road Vehicles (Proposal)

Phase I

Anticipated car numbers
 up to 25 vehicles per OEM
 up to 100 vehicles in total

Anticipated number of car demo sites
 More than 1 EU region

Anticipated bus numbers
 ca. 10-20 buses per OEM
 up to 100 buses in total

Anticipated number of bus demo sites
 3 EU regions

Constraints due to availability of vehicles, sites & funding

Phase II a

Anticipated car numbers
 up to 100 vehicles per OEM
 Ca. 500 vehicles in total

Anticipated number of car demo sites
 1 + x (up to 5) EU regions

Anticipated bus numbers:
 ca. 100 buses per OEM
 ca. 500 buses in total

Anticipated number of bus demo sites
 3 + x (up to 10) EU regions

Regions shall ensure sufficient technical infrastructure and provide additional public funding

Phase II b

Snapshot 2020:
 0.4 - 1.8 million vehicles

Phase II b shall show further progress towards Snapshot 2020



Important points

■ Progress

- AIP2008 and AIP2009 calls have allowed to define new Demo projects for H2 cars & buses (e.g., Project « H2Moves Scandinavia)

■ Challenges

- Delays experienced through project selection process,
- Funding rules to be improved to increase attractiveness,
- Limited # of vehicles / Need to consider EU wide roll-out plan (2015+)
- FCH JTI to ensure coordination of MS/Regional/Local Initiatives.

■ Showstoppers

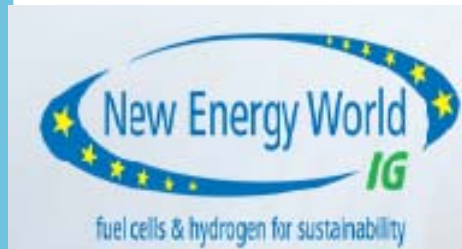
- Missing regulations for H2 distribution in some EU MSs might affect HRS siting schedule

More information



FCH JU official website:

<http://ec.europa.eu/research/fch>



European Industry Grouping for a FCH-JTI (NEW-IG):

<http://www.fchindustry-jti.eu>



New European Research Grouping on FCH (N.ERGHY):

<http://www.nerghy.eu>



Questions?

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BACK-UP INFORMATION

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Important or Novel Program Features

- Entry-Level Station Configurations & Strategies
- Government Incentives/Policies
- Reducing Risk to Station Owners
- Information and Education for Retailers & Customers



The German h₂_mobility Initiative : Perspectives for Hydrogen & FCVs Deployment across Germany

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Overview

- The German h2_mobility initiative
- Program goal :
 - A strong Partnership of Motivated Stakeholders
 - Germany as a Pilot Market for Europe
 - Additional Partners Welcome
 - Leading industrial companies to agree upon a built up plan for a nationwide infrastructure
 - Significant expansion of hydrogen fuelling stations network in key regions by the end of 2011
 - Important milestone on the way to emission-free mobility
 - Flanking Letter of Understanding on the Development and Market Introduction of Fuel Cell Vehicles

Common Commitment for Commercialization of Fuel Cell Vehicles until 2015

Letter of Understanding signed in Sept. 2009 for commercialization of fuel cell vehicles until 2015

- The Letter of Understanding was signed by all relevant automotive manufacturers, which are engaged in the development of fuel cell technology.
- From 2015 onwards a quite significant number of fuel cell vehicles could be commercialized. This number is aimed at a few hundred thousand vehicles over life cycle on a worldwide basis.
- In order to ensure a successful market introduction of fuel cell vehicles, this market has to be aligned with the build-up of the necessary hydrogen infrastructure by 2015.
- The network should be built-up from metropolitan areas via corridors into area-wide coverage.



Overview

- Timeframe:
 - Initiative is giving consideration to deployment activities over 2011 – 2017/2020.

MoU Group



Other Stakeholders in Germany

BMW Group

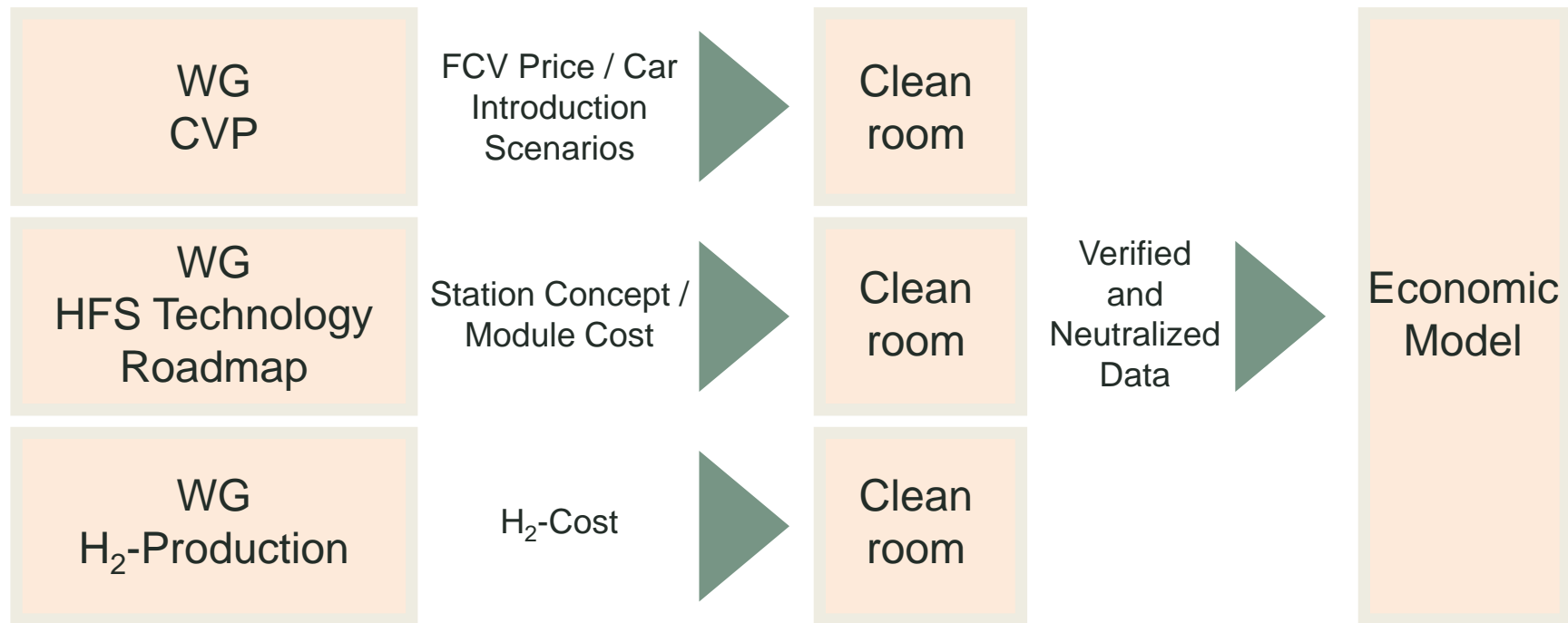


StatoilHydro

Important points

- Progress (1)

- 9 WGs set up to achieve Phase 1:
- CVP, Economic Modelling, H₂-Production & Supply, Future Consortium, Environment, HFS Technology Roadmap, Legislation, Incentives Schemes, Marketing & Communication



Organisation of the H₂-Mobility Consortium

- **Two successive Phases defined**

- **Phase 1: 2009 – 2011**

- Technico-economical evaluation of the feasibility to deploy a network of HFS alongside the expected deployment of FCVs in Germany by 2015 (2009 – 2010)
- Definition of the future Consortium Agreement Contract / Partners negotiation phase (2011)
- Deployment of new HFS supported by the German Administration (Konjunkturpaket II subsidy scheme)

- **Phase 2: 2011+**

- Implementation of the Business Plan defined in Phase 1 through the agreed definitive agreement between partners

Important points

■ Progress (2)

- **HFS Technology Roadmap WG** : definition of HRS capacities & structure. Modular approach for scaling-up network. CAPEX/OPEX evaluations in progress.
- **CVP WG** : Vehicle Scenarios definition in progress (Daimler coordination with OEMs).
- **Economic Modeling WG** : Economic Modeling Tool selected, Iterative process initiated, Assumption data definition in progress.

■ Challenges :

- Critical need of close inter WGs liaison/communication
- Tight Timeline for BC evaluation

■ Showstoppers :

- Lack of strong Political Support (Incentives schemes).



Questions?

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