

HYLIGHTS

Hydrogen for Transport in Europe

www.HyLights.eu

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H2moves.eu Communication Report 2007

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Authors: Volker Blandow



A Coordination Action to Prepare European and Fuel Cell Demonstration Projects on Transport
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The European Commission is supporting the Coordination Action “HyLights” and the Integrated Project “Roads2HyCom” in the field of Hydrogen and Fuel Cells. The two projects support the Commission in the monitoring and coordination of ongoing activities of the HFP, and provide input to the HFP for the planning and preparation of future research and demonstration activities within an integrated EU strategy.

The two projects are complementary and are working in close coordination. HyLights focuses on the preparation of the large scale demonstration for transport applications, while Roads2Hycom focuses on identifying opportunities for research activities relative to the needs of industrial stakeholders and Hydrogen Communities that could contribute to the early adoption of hydrogen as a universal energy vector.

Further information on the projects and their partners is available on the project websites www.roads2hy.com and www.hylights.eu.

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Disclaimer

This document is the result of a collaborative work between “HyLights” Industry and Institute partners. The results of the research were subsequently elaborated and presented in a coherent manner, which involved extensive stakeholder consultation in locations around the world as well as feedback from the “HyLights” Industry Partners.

The ideas presented in this document were reviewed by certain "HyLights" project partners to ensure broad general agreement with its principal findings and perspectives. However, while a commendable level of consensus has been achieved, this does not mean that every consulted stakeholder or "HyLights" Industry Partner necessarily endorses or agrees with every finding in the document. The producer of this document is the sole responsible for its content and recommendations.

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1 Background

Although the European initiative on hydrogen for transport – H2moves.eu – is an integral part of the HyLights project its goals and target audiences need to be considered as complementary to the general scope of the HyLights project. H2moves.eu deals with dissemination, information and facilitation of stakeholder groups and intends to become a coherent communication tool for the program body of later large scale demonstration activities on hydrogen for transport. For the duration of the HyLights project (until December 2008), however, H2moves.eu will be governed by the steering group of the HyLights consortium comprising 17 industry and 4 institute partners.

By initiating H2moves.eu the HyLights consortium and the European Commission intend to provide easy access to European demonstration activities. The internet platform and all complementary activities should be understood as an "living" gate to information about demonstration activities initially prioritising hydrogen for transport in Europe. Although it is obvious, that the activities co-funded by the European Commission are the nucleus of the initiative, all further highly committed activities in the field in Europe are invited to take part in the initiative and to become part of the "Project Family" on hydrogen for transport in Europe. This might apply to projects with national or regional funding or support.

In this regard H2moves.eu aims to provide information about all ongoing activities in the field of hydrogen for transport in Europe from a superior perspective. In this respect it is complementary to the communication carried out by the European Hydrogen and Fuel Cell Technology Platform which covers more strategic and political aspects as well as up to date information towards active stakeholders.

H2moves.eu provides transparency on and access to concrete demonstration projects on hydrogen for transport. H2moves.eu explains ongoing activities at a very basic level, very glossy and very pictorial and provides a map where those projects are located. In addition to that it also provides an overview on active European regions and their specific programmes on an introductory level. These maps should enable stakeholders to easily obtain an overview on the general landscape and the location of active groups and regions.

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This approach supports the stakeholders and decision makers in Europe but also provides a complete overall picture for other parts of the world like Asia and the Americas. Thus an attractive design and a well balanced content supports to display the competitiveness of the European industry and the coherent approach resulting from the public private partnerships between national governments, the European Commission and the European industry.

Next to the glossy appearance H2moves.eu also aims to provide relevant services towards the EC funded demo projects and in a wider context also towards the Project Family (including nationally funded projects) and the European regions. The essential asset from these “service” activities is the provision of opportunities for the various groups to meet and to exchange views, approaches and experiences. By doing so H2moves.eu facilitates an information flow and provides guidance and assistance on cross cutting issues from a very neutral position. These activities can be initiated on request by the demo projects, by industry groups or by the European Commission. This might happen on expert level focusing on specific technical issues also inviting external experts or with a broader scope e.g. to explain national programmes towards European regions.

2 Scope of work and decision processes

Scope of work

Three major tasks have been identified for H2moves.eu by a specific task force of HyLights partners on 15 November 2006:

- communication,
- facilitation and
- support.

The communication task covers all information and dissemination activities about “hydrogen for transport” towards specific target groups. The facilitation task is to support and to offer services to ongoing and emerging demonstration projects within the genuine scope of H2moves.eu. This task is directly targeted towards the various partners of the demonstration projects. The third task is to provide support and assistance to coming or planned demonstration projects and towards the European regions. This also includes fostering the information flow towards and between the regions as well as increasing the visibility of the regional activities.

The Hylights Steering Group together with the Task Force H2moves.eu has discussed and agreed on some minimum criteria for demonstration activities that need to be met to become part of the “Project Family”. Essential is any kind of public involvement. Be it through public bodies, regional initiatives, municipalities or other coordinating bodies like institutes or universities with public support. The public involvement may develop over time by providing funds, by offering scientific monitoring or by including projects within a public initiative or programme.

It is also equally necessary that the topic “hydrogen for transport” is prominently represented thus the projects can contribute to the primary ideas of sharing experiences, learning from each other and to initiate joint activities.

Decision processes

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For the duration of the “HyLights” project its Steering Group decides on the acceptance of new Project Family participants as well as on concrete activities under the label of H2moves.eu. The Hylights Steering Group comprises representatives from the automotive industry, the energy industry, utilities, technical gases industry and from the institutes. This guarantees a good balance between the industry groups and their specific communication needs. Thus H2moves.eu communication is supported by the complete industry group still keeping to the original project goals of the European Commission.

To ease decision processes on a day to day basis a specific H2moves.eu Task Force - with committed volunteers from industry – was formed when HyLights was kicked-off. In the SG meeting on 27 February it has been consolidated with the HyLights Steering Group. The Steering Group will specifically decide on design aspects, identify communication needs and approve communication activities concerning contents.

In the long term this effort also needs to be seen in the light of the coming large scale demonstration projects and the possible Joint Technology Initiative (JTI) on hydrogen and fuel cells. The structure of the JTI will basically also reflect a public private partnership just like the one in the HyLights project. Thus the communication needs and requirements will be very similar and always needs to serve both, industry and public bodies.

By drawing from the HyLights experience the building blocks of H2moves.eu created initially can be implemented in the communication strategy of the JTI for the transport sector. The logo and the branding will be well established after three years of Hylights and the further use will be a valuable contribution towards continuity. Furthermore, it will be an excellent starting point for further extensions to build-on, e.g. for stationary or portable applications or for a transfer to regional activities. All the more as the core industry group of HyLights will also become active in the JTI but will be complemented by further stakeholders.

In this respect it needs to be clearly understood that H2moves.eu only aims to communicate about projects in the field of hydrogen for transport from a superior angle and answering the question “what is going on in the field of hydrogen and fuel cell demonstration activities for transport in Europe”. This is not in danger to be in conflict with any other strategic or political communication, i.e. as carried out by the Hydrogen and Fuel Cell Technology Platform and later on possibly continued by the JTI.

H2moves.eu addresses specific issues in a transparent way, glossily but comprehensively depicting the European landscape.

3 The task “Communication”

The primary assignment of the H2moves.eu communication task is to provide an overview and simple access to information about ongoing demonstration projects on hydrogen for transport in Europe. In addition to establishing a simple link to the individual project websites H2moves.eu also offers a general overview and an illustrated basic introduction on entering a project. This helps to provide a comparable and consistent basic introduction to each project stressing coherence and complementary aspects as well as common goals. For the provision of further details and technical information the reader is provided with the respective project link(s).

The target groups for the H2moves.eu communication task have been identified by the HyLights consortium:

- politics at different levels in the European Commission, at national parliaments or at regional authorities,
- stakeholder groups from industry,
- associations and local initiatives,
- typical multipliers like press and media,
- stakeholder groups outside of Europe and
- all interested parties seeking for information on European activities in the field of hydrogen for transport.

To complement the information service links to similar activities outside of Europe e.g. in Japan or in the USA will be incorporated on the website. The general public is not directly addressed with specific events or promotional activities. This has been decided on the basis of HyLights’s limited budget. However, the pictorial nature of the information provided can also attract the interested public. Finally, it was decided to anchor the branding “H2moves.eu” at high level in future European strategic activities such as the JTI to continue the work started by HyLights for the sake of continuity in preparing and accompanying a coherent European demonstration program on hydrogen and fuel cells for transport..

As the slogan “H2moves.eu” already contains a web address it is obvious that the internet presentation will be the anchor of the activity. The typical advantages of an internet presentation perfectly match with the needs of the very dynamic nature of demonstration activities for new technologies. This is especially true for the current landscape of hydrogen demonstration projects in Europe where activities are mostly project based and therefore have a limited lifetime and changing players. This is in contrast to the situation in Japan and the USA where demo activities are part of longer-term political programs. There the projects are larger and are more focused on few regions. Therefore in both cases adapted promotional activities must secure visibility of all highly committed activities contributing no matter of the actual size of the project.

To support and to enforce the promotion of the website, hence also the idea of the “Project Family”, additional actions have been identified and prepared by H2moves.eu. Above all, the project family is presented at typical and relevant stakeholder events such as the major hydrogen conferences and trade fairs for hydrogen and fuel cells.

H2moves.eu therefore has developed a concept by which the European “Project Family” (consisting of EC funded projects and projects with national funding) jointly exhibit their projects side by side in a poster gallery. This gallery is displayed by a H2moves.eu booths at relevant events. The exhibitions should be considered as an opportunity for the projects. The EC funded projects are not obliged to participate. Participation is decided on a case to case basis. An individual decision is required, also as each project needs to share the exhibition fees. However, the impact and the promotional effect that can be achieved through a joint presentation positively contribute to the visibility of both the nationally and EC funded projects. The exhibition visitor gets an impression and overview of all European demonstration activities at a glance.

To support the impact of the joint exhibits and to establish and to link the corporate design of H2moves.eu to the “Project Family”, additional promotional material has been developed. A leaflet with a poster inside provides essential and compact information on all European demo projects at a glance. Two roll-up banners provide an “optical frame” for the poster gallery attracting the H2moves.eu brand.

In addition a number of supportive promotional items have been developed or will be printed in the course of 2007. The items are solely directed at the

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promotion of the “H2moves.eu” logo and simply intend to draw attention to the coherence of the European demo project family on hydrogen for transport and provide relevant facts and links. Data cards with hydrogen specific parameters have been printed in 6 languages. Almost 10,000 copies have been distributed already throughout 2006. Another very popular item provided by H2moves.eu are paper cut models of the HyFLEET:CUTE buses. These models have been distributed at events and are also available for download on the website. Some bus operators such as BVG Berlin will print the paper crafts in some 10,000 copies for public distribution and with the H2moves.eu logo on them.

3.1 Progress and next steps

3.1.1 Events

In the first project period H2moves.eu has been present at two major hydrogen events:

- The annual event of the European Hydrogen and Fuel Cells Technology Platform (HFP), Brussels, October 2006,
- NHA 2007, annual conference of the National Hydrogen Association in San Antonio, Texas. March 2007.

For the second project period (July 2007 - December 2008) the following events have been decided on by the HyLights Steering Group:

- BVG/CEP Berlin, public day – 26 Aug 2007
- f-cell 2006, Stuttgart, 24-25 Sep 2007
- World Hydrogen Technologies Convention (WHTC), Italy, 4-7 Nov 2007
- Clean Vehicles – Hydrogen Sweden, Stockholm, 7-9 Nov 2007 (still pending)
- hydrogen.tech 2007 Conference - 200 Years of Hydrogen Vehicles, Munich, 4-5 Dec 2007

(Two events which H2moves.eu had prepared for were cancelled in 2007: The HyFleet:CUTE workshop for new Member States in Prague and the European Hydrogen Energy Conference EHEC 2007).

Outlook 2008:

- 4th German Hydrogen Congress 2008, Essen, 20-21 February 2008
- NHA annual conference, Sacramento, 30 March to 3 April, 2008
- Hanover Fair, Hanover 21-25 April 2008
- 17th WHEC, Brisbane 15-19 Jun 2008
- H2Expo, Hamburg, 22-23 Oct 2008 (to be decided in 2008)

3.1.2 Promotional items

The following progress has been achieved so far (see annex for images):

- development of slogan and logo,
- hydrogen data cards available in 6 languages (30,000 copies),
- launch of the H2moves.eu internet platform,
- collection of poster gallery,
- H2moves.eu leaflet/poster on European demonstration projects (3000 copies),
- two roll-up banner for events / promotional activities and
- paper models of HyFLEET:Cute buses for download (12 different designs (Buses from DaimlerChrysler and MAN)).

Next steps:

- extension of the website towards displaying regional activities and initiatives,
- printing of a sticker for cars (e.g. for the H2 vehicles in the projects),
- design of a metal pin with the H2moves.eu logo and
- extension and fostering relations to similar activities in the USA and Japan.

4 The task “Facilitation”

The European Commission has realised that the information exchange between the independently operating demonstration activities needed improvement. Due to a lack of topical meetings on a regular basis with experts from the various projects also real cooperation between the projects has been limited. In order to meet this demand and to facilitate and to foster the “project family” idea a third task of H2moves.eu has been defined. This task comprises the invitation of experts from the projects and external experts to topical workshops on cross cutting issues or on issues of specific interest. Examples are common appearance at exhibitions or trade fairs as well as workshops on regulatory issues, questions on infrastructure or dissemination issues. Each topical workshop aims at the identification of best practices, at the avoidance of a duplication of work, the use of benefits from “lessons learned” and to pave the way towards successful and efficient demonstration activities.

4.1 Progress so far:

- H2moves.eu has become a general contact point for the projects (support on promotion of events or linking between projects on specific tasks such as dissemination or presence at conferences)
- Establishment of family nucleus (EC projects and national demo-projects plus some active regions)
- Family extranet
- Workshop on dissemination (Berlin, April 2006)
- Workshop on vehicle approval (Munich, May 2007)

Next steps:

- 2nd dissemination workshop (Fall 2007)
- MAF workshop (Summer 2008)
- Project management / legal aspects workshop
- Workshop on financing and legal/management aspects

- Further workshops upon request by the “Project Family”

5 The task “Support”

At present the European landscape of demonstration projects on hydrogen for transport is characterised by many incoherent activities. Projects funded by the European Commission coexist with projects funded by national governments and by regional authorities or initiatives. Therefore lack of information flow and cooperation between projects funded by the European Commission is also missing for the naturally much more scattered activities and regionally or nationally funded projects or initiatives.

The aim of H2moves.eu is to offer services also to this group of actors by providing an overview on active and committed regions, by inviting regions to workshops and by providing a platform for information exchange. Networking and advice are provided to add new partners, to refer to existing expertise and to identify areas for cooperation. Both tasks – facilitation and support – are aiming to strengthen the “Project Family” idea and to increase the impact of each single demonstration activity by providing transparent information.

5.1 Progress so far:

- Development of rules for participation,
- first demonstration projects/programs are included in the “Project Family” (the EC funded projects HyFLEET:CUTE, ZeroRegio, HyChain, ZEMSHIPS, CEP, The London Transport Partnership, HyNor and the Scandinavian Hydrogen HyWay Partnership (SHHP)),
- organisation of the 2nd regions workshop together with R2H on behalf of the European Commission (Brussels, 4 and 6 October 2006), in which a lack of information on the hydrogen & fuel cell related strategies by the EC and on industrial strategies are identified as missing,
- first contacts with further potential regions established on request by the regions and
- regions workshop organised by HyLights specifically to offer a platform for an information exchange between industry and the regions (Berlin, 15 May 2007)

Next steps:

- Involvement of further selected regions,
- region specific extension of the website and
- information and expectation management towards European regions.

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6 Annex

6.1 H2moves.eu logo



Image 1: The H2moves.eu logo

The logo sends the following key messages to the viewer:

- “hydrogen moves YOU”
- “hydrogen moves EU”
- “hydrogen for transport”

It also contains the website address www.H2moves.eu.

6.2 H2moves.eu website



Image 2: H2moves.eu website (overview and project descriptions incl. contact details)

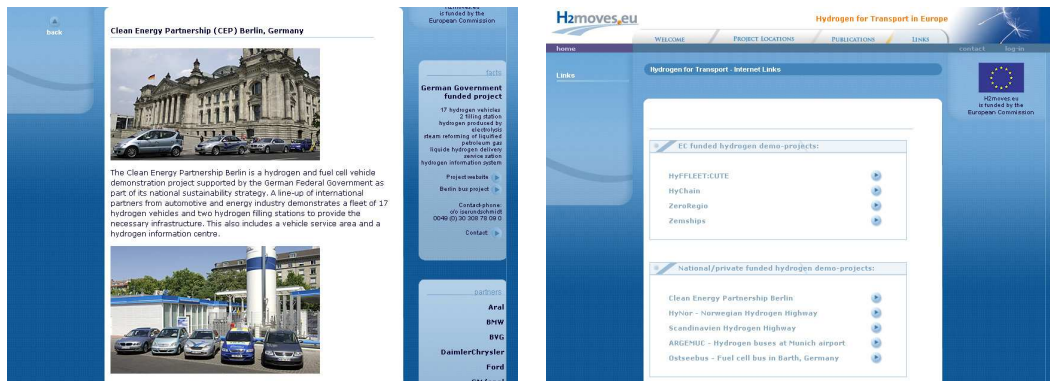


Image 3: H2moves.eu website – (national projects and link list to all European activities)

6.3 Hydrogen data-cards

Sicherheitsaspekte / safety aspects

Wasserstoff ist / hydrogen is:

- nicht detonativ im Freien / not detonative at open air
- nicht zerfallsfähig / not decomposing
- nicht selbstentzündlich / not autoigniting
- nicht oxidierend, nicht brandfördernd / not oxidizing
- nicht giftig / not toxic
- nicht korrosiv / not corrosive
- nicht radioaktiv / not radioactive
- nicht überleuchtend / not badly smelling
- nicht ansteckend / not contagious
- nicht wassergefährdend / not endangering water
- nicht fruchtschädigend / not damaging the fetus (teratogenic)
- nicht krebserzeugend / not causing cancer (carcinogenic)

Wasserstoff ist leichter als Luft und entweicht schnell nach oben.
Hydrogen is lighter than air and vanishes rapidly upwards.

Wasserstoff hat einen hohen Diffusionskoeffizienten (vier Mal größer als Methan) und verdunstet sich rasch in Luft. Hydrogen has a high diffusion coefficient (four times that of methane) and dilutes rapidly in air.

Wasserstoff hat deutlich engere Detonations- als Explosionsgrenzen – bei früher Zündung brennt es, bevor die Detonationsgrenzen erreicht werden. Hydrogen has significantly narrower detonation limits in air than explosion limits – when ignited early, it burns before detonation limits are reached.

Wasserstoff brennt mit unsichtbarer Flamme, die sehr wenig Wärme abstrahlt. Hydrogen burns with an invisible flame with very little heat radiated from the flame.

Wasserstoff ist farb- und geruchlos. Hydrogen is colorless and odorless.



H2moves.eu is part of the HyLights project which is funded by the European Commission under the Sixth Framework Programme.
www.H2moves.eu

Links to European Hydrogen Projects:

www.HFPEurope.org	www.roads2hy.com
www.zeroregio.de	www.hyapproval.org
www.hychain.org	www.fuelcelleurope.org
www.hyways.de	www.hysave.org
www.global-hydrogen-bus-platform.com	

Hydrogen links:

www.infotools.HFPEurope.org	www.h2euro.org
www.HyWeb.de	www.fuelcelleurope.org
www.H2mobility.org	www.dvw-info.de
www.H2Stations.org	

Links to the European Commission

www.ec.europa.eu
www.ec.europa.eu/transport/
www.ec.europa.eu/research/

Data card compiled by:
 Ludwig-Bolkow-Systemtechnik GmbH - www.lbst.de
 Daimlerstr. 15 - 85521 Ottobrunn - Germany - phone +49 89 608 110 0





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Image 4: H2moves.eu hydrogen data cards (available in French, Italian, Dutch, Spanish, German, Norwegian- English on all cards)

6.5 Paper models of HyFLEET:CUTE buses (12 designs for the fuel cell and internal combustion hydrogen engine buses in all CUTE cities and HyFLEET:CUTE available)

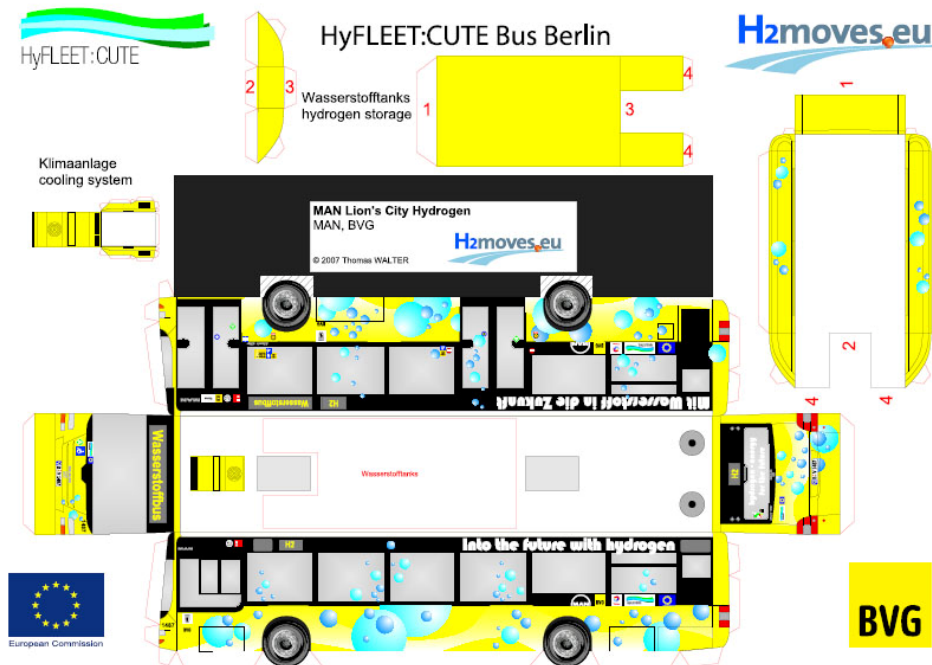


Image 7: The Berlin bus

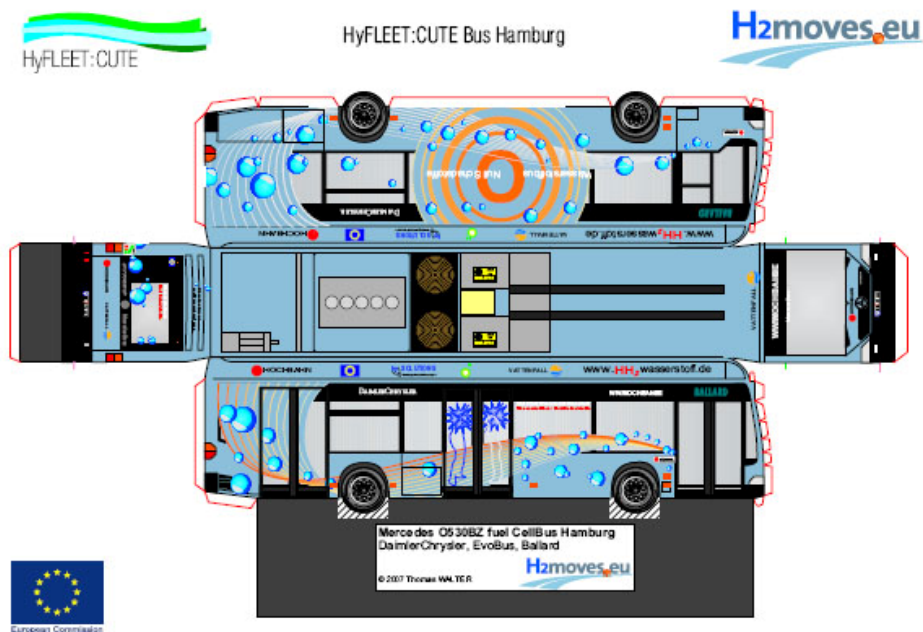


Image 8: The Hamburg bus

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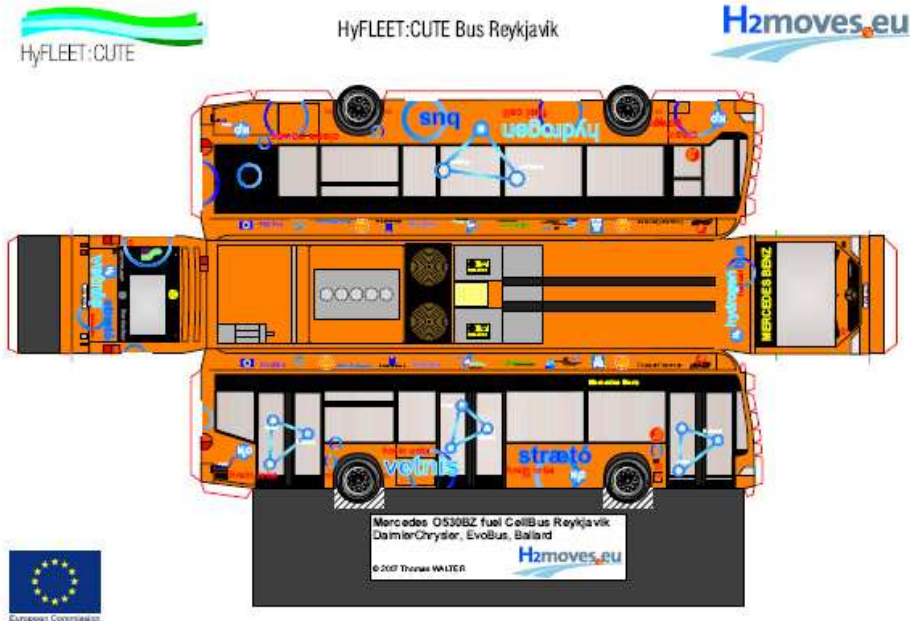


Image 9: The Reykjavik bus

6.6 The H2moves.eu roll-up banners



Image 10: Two roll-up banner, one for vehicles, one for infrastructure, can be erected and are self-supported (height 220 cm)

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6.7 Joint “Project Family” booth at the HFP-GA 2006

Image 11: H2moves.eu project poster gallery and the booth at the HFP-GA 2006 in Brussels.



Image 12: H2moves.eu project poster gallery and the booth at the HFP-GA 2006 in Brussels.



Image 13: Commissioner JANEZ POTOČNIK visits the booth



Image 14: Introduction of schoolchildren to the world of hydrogen and fuel cells

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6.8 Joint booth at the NHA annual conference in San Antonio, March 2007

Image 15: The H2moves booth in a typical U.S. layout



Image 16: A lot of material from European projects is provided (incl. some 100 bus models)



Image 17: Contacts have been of good quality (90% experts in the field, half a day was foreseen for the general public with more frequent but less relevant contacts). The general knowledge about European activities in the field is very low.