

Press Release

Launch of European Collaborative project to deliver zero emission fuel cell buses across Europe:

[Attached photo: Launch event speakers FCH JU Executive Director - Bart Biebuyck, local host: RVK's Chairman of the Supervisory Board and District Administrator, Mr. Rosenke, European Commission DG MOVE Policy Officer, Jose Fernandez-Garcia, and INEA Senior Project Manager - Stefano Campagnolo, joined by JIVE and MEHRLIN project partners in front of RVK hydrogen fuel cell bus]

START

Köln, Germany was today [25th January 2017] the setting for the formal launch of a €125M collaborative project set to deploy 144 hydrogen fuel cell buses (JIVE project) and seven large hydrogen refuelling stations (MEHRLIN project) across Europe.

These projects represent a step change for the hydrogen bus sector, moving from a technology demonstration stage to a day to day offering for zero emission public transport. These hydrogen fuel cell buses will offer the same operational flexibility compared to the incumbent diesel buses, without any harmful exhaust fumes. As such they represent a solution to the twin problems of air pollution and greenhouse gas emissions from public transport in our cities.

The scale of deployment envisaged here will allow European bus manufacturers to develop their production capabilities and achieve the economies of scale which are needed to allow fuel cell buses to compete with other zero emission modes of public transport. Likewise, the project will show how hydrogen refuelling stations with large daily demands can be commercially viable, providing valuable operational feedback to station operators and equipment manufacturers, whilst demonstrating the reliability and availability required for public transport operations.

The JIVE project, supported by a €32M grant from the Fuel Cells and Hydrogen Joint Undertaking (FCH JU), a public-private partnership aiming at accelerating commercialisation of fuel cells and hydrogen technologies, has been developed and will be coordinated by Element Energy and is based on a partnership of public transport providers who will work together to procure the buses and refuelling stations from European suppliers. Buses will be deployed in five European countries in the following cities and regions: Region Köln, Wuppertal and Rhein-Main in Germany, London, Birmingham, Dundee and Aberdeen in the United Kingdom, South Tyrol in Italy, Riga in Latvia and Slagelse in Denmark.

The JIVE deployment partners will be supported by data analysis and consulting organisations (led by Thinkstep and PLANET) to ensure that the performance of the buses is monitored and can be rigorously compared against the incumbent diesel buses and other zero emission alternatives. Communication will be led by Hydrogen Europe, working with UITP (International Association of Public Transport) will ensure that these lessons are spread across Europe's bus operator community. The full list of the 22 JIVE partners is provided below.

The MEHRLIN project, supported by a €5.5M grant from the European Commission's Connecting Europe Facility (Transport) programme managed by the Innovation and Networks Executive Agency, aims to demonstrate a new demand-led commercial model for the deployment of hydrogen refuelling stations. The project, coordinated by Element Energy, involves a study of the real-life operation of large-scale hydrogen stations in seven different locations; with stations in Germany (Hürth, Wermelskirchen [Cologne Region] and Wuppertal), Italy (Bruneck/Brunico), the Netherlands (Oude Tongue – South Rotterdam), and the UK (London and Birmingham). All of the stations are situated on Europe's TEN-T core network corridors. The studies will be focusing on the financing of stations (bankability) and on technical, environmental, economic and regulatory performances of hydrogen refuelling stations. Dissemination events will be organised in the countries where stations are located.

FCH JU Executive Director - Bart Biebuyck, local host: RVK's Chairman of the Supervisory Board and District Administrator, Mr. Rosenke, European Commission DG MOVE Policy Officer, Jose Fernandez-Garcia, and INEA Senior Project Manager - Stefano Campagnolo, all met in Köln, joined by the project partners, to welcome the launch of the JIVE and MEHRLIN projects, which together provide the funding underpinning this step-change deployment project.

Ben Madden, Director of Element Energy – “We are delighted to have helped start this project which has the potential to transform the hydrogen fuel cell bus sector. Previous projects have proved that hydrogen fuel cell bus technology is technically ready and able to meet the needs of public transport operators on all routes. This project delivers a step-change in scale which allows manufacturers to start to deliver vehicles at a commercially plausible price. Its success will kick start the commercial roll-out of hydrogen fuel cell buses to assist in improving air quality and reducing greenhouse gases from our public transport systems”

Bart Biebuyck, FCH JU Executive Director - “Project JIVE is now the fifth project related to deployment of fuel cell buses supported by the FCH JU and its launch marks a significant turning point in the decarbonisation of public transport. The FCH JU is proud of such a far-reaching project seeing the daylight, which aims at unlocking the economies of scale required for commercialisation. Fuel cell buses offer great advantages as they can cut emissions and noise pollution, while providing good quality public transport. Bringing these benefits directly to citizens' day-to-day lives is one of the priorities of the FCH JU and project JIVE clearly is a stepping stone in this process. “

Richard Ferrer, INEA Senior Project Manager – “INEA is very proud to bring support to such an innovative project. It is emblematic of what needs to be done to accelerate decarbonisation of transport, in particular in urban areas. It is the result of strong combined efforts from local, national and European stakeholders, both public and private, to reach a massive implementation phase which I am confident will be a successful test bed supporting low emission mobility in Europe”

Background information:

About the MEHRLIN project:

The MEHRLIN project (Models for Economic Hydrogen Refuelling Infrastructure) is co-funded by the European Commission's Connecting Europe Facility (€5.5M) and will deploy seven hydrogen refuelling stations serving bus fleets in cities across Europe, in the UK, the Netherlands, Italy and Germany. The project will run until December 2020 and the support is managed by the Innovation and Networks Executive Agency.

The Action consists of a study with a real-life trial of large hydrogen stations in 7 different locations: with stations in Germany (Hürth, Wermelskirchen [Cologne Region] and Wuppertal) Italy (Bruneck/Brunico), the Netherlands (Oude Tongue – South Rotterdam), and the UK (London and Birmingham). All of the stations are situated on the TEN-T core network corridors, including the North Sea - Mediterranean, North Sea - Baltic, Rhine- Alpine and Scandinavian-Mediterranean Corridors.

By building and operating these stations, the MEHRLIN project will not only contribute to the expansion of the hydrogen refuelling station network in Europe, but will allow a test, under real conditions, of the technical and economic performance of refuelling stations under high load and daily utilisation. Using this evidence, MEHRLIN will undertake an assessment of the financing case for HRS using a demand-led business model to further boost the deployment of hydrogen as alternative fuel in the EU. This business model will be defined through study and seminars to be carried out jointly with key finance providers. In addition, MEHRLIN will demonstrate the environmental and economic performance of the stations and the viability of the business model. Each station operator, while primarily serving bus fleets deployed through the JIVE project (or in the case of Oude-Tonge the 3motion project), will work to identify additional demand for hydrogen and potential new users will be identified at each station. Despite the focus on buses, the hydrogen refuelling stations will be progressively capable of refuelling other kinds of vehicle.

The partners in the MEHRLIN project are: , Element Energy Ltd (project coordinator), AWG Abfallwirtschaftsgesellschaft mbH, Wuppertal, Institute for Innovative Technologies Bozen Consortium Limited, ITM Power PLC, London Bus Services Ltd, Regionalverkehr Köln GmbH, , Stadtwerke Bruneck – Azienda Pubbliservizi Brunico, Stadtwerke Hürth AöR, Stedin Diensten B.V.

About the JIVE project:

The JIVE project (Joint Initiative for hydrogen Vehicles across Europe) is a Fuel Cell and Hydrogen Joint Undertaking (FCH JU) grant funded (€32M) project deploying 144 zero emission hydrogen buses across five member states. The project will run for six years from January 2017.

The overall objective of JIVE is to advance the commercialisation of hydrogen fuel cell buses through large-scale deployment of vehicles and infrastructure so that by the end of the project (early 2020s) hydrogen fuel cell buses are commercially viable for bus operators to include in their fleets without subsidy and that local and national Governments feel empowered to regulate for zero emission propulsion for their public transport systems.

JIVE will introduce new fleets of fuel cell buses into urban and regional bus operations at a scale never before attempted. This will be made possible by multiple cities and regions collaborating in joint procurement processes, allowing large orders to be placed with single bus suppliers. The procurement activities are organised into three clusters and by clustering geographically, it is possible to provide common specifications for the buses, which is essential to unlock the economies of scale.

The regions and cities involved are Region of Köln, Wuppertal and Rhein-Main in Germany, London, Birmingham, Dundee and Aberdeen in the United Kingdom, South Tyrol in Italy, Riga in Latvia and Slagelse in Denmark. The project consortium is made up of a total of 22 project partners from seven member states involved in the deployment of buses, monitoring and analysing the data produced by the buses, trade/sector associations and also observer cities – overseeing the project in readiness for their own future deployments. The partners are: Element Energy Ltd, Aberdeen City Council, Birmingham City Council, Dundee City Council, EE Energy Engineers GmbH, Energy Universe Europe ApS, Fondazione Bruno Kessler, HyCologne – Wasserstoff Region Rheinland e.V., Hydrogen Europe BE, hySOLUTIONS GmbH, London Bus Services Ltd, West Midlands Travel Ltd, PLANET Planungsgruppe Energie und Technik GbR, RebelGroup, Rigas Satiksme Sia, Regionalverkehr Köln GmbH, Suedtiroler Transport Strukturen AG, ThinkStep AG, Trentino Trasporti S.p.A., Union Internationale des Transports Public, Verkehrs-Verbund Mainz-Wiesbaden GmbH and WSW mobil GmbH

About CEF / INEA:

The Connecting Europe Facility (CEF) is a key EU funding instrument to promote growth, jobs and competitiveness through targeted infrastructure investment at European level. It supports the development of high performing, sustainable and efficiently interconnected trans-European networks in the fields of transport, energy and digital services. CEF investments fill the missing links in Europe's energy, transport and digital backbone.

Since January 2014, the Innovation and Networks Executive Agency (INEA), established by the European Commission, is managing the technical and financial implementation of parts of the CEF and Horizon 2020 programmes, worth a combined €34.1 billion during the 2014 to 2020 time period.

Website: <https://ec.europa.eu/inea/en/connecting-europe-facility>

About the FCH JU:

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.



Fuel cells, as an efficient conversion technology, and hydrogen, as a clean energy carrier, have a great potential to help fight carbon dioxide emissions, to reduce dependence on hydrocarbons and to contribute to economic growth. The objective of the FCH JU is to bring these benefits to Europeans through a concentrated effort from all sectors.

The three members of the FCH JU are the European Commission, fuel cell and hydrogen industries represented by Hydrogen Europe and the research community represented by the Research Grouping N.ERGHY.

Website: <http://www.fch.europa.eu/>

About Element Energy:

Element Energy Limited is a leading low carbon energy consultancy, with expertise in the initiation of large scale projects of this type. Element Energy Ltd are the co-ordinating partner for the JIVE and MEHRLIN projects.

Website: <http://www.element-energy.co.uk>

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