

Brussels, 5th October 2020

The JIVE projects celebrate a milestone: over 200 fuel cell buses have been ordered!

The Joint Initiative for Hydrogen Vehicles across Europe project (JIVE & JIVE 2), co-financed by the Fuel Cells and Hydrogen Joint Undertaking (FCH JU), has today announced that over 200 hydrogen fuel cell buses have been ordered through the initiative. Furthermore, the first 50 buses are now in operation!

Eleven European cities and regions – Aberdeen (UK), Auxerre (FR), Barcelona (ES), Birmingham (UK), Emmen (NL), Groningen (NL), London (UK), South Holland (NL), South Tyrol (IT), Toulouse (FR), and Wiesbaden (DE) – will join locations already operating hydrogen-powered buses through JIVE by the end of 2021.

The first 50 buses operating in Cologne (DE), Pau (FR) and Wuppertal (DE) are already in regular service on some of the cities’ most demanding routes. Through the JIVE projects, German transport company Regionalverkehr Köln GmbH (RVK) operates the largest fleet of fuel cell buses in Europe to date: 35 buses. This will increase to 50 by the end of 2021.

The deployment of zero-emission vehicles, such as battery-electric and fuel cell buses, is contributing to the decarbonisation of public transport in Europe. Fuel cell buses offer a zero-emission solution on a wide range of routes thanks to their long-range and short refuelling time while providing the same operational flexibility as buses powered by fossil fuels.

The JIVE project is catalysing the development of Europe’s hydrogen bus sector and will help ensure that fuel cell buses can contribute to meeting the requirements of the Clean Vehicle Directive. According to UITP forecasts, a minimum of 22.5% of all new buses ordered next year across Europe will have to be zero-emission to comply with the legislation.

European industry players have also increasingly entered the fuel cell bus market through the JIVE projects. European bus manufacturers such as Caetano, Safra, Solaris, and Van Hool have shown their commitment to commercialising these vehicles.



The JIVE projects have additionally laid the foundations for further growth of the European fuel cell bus sector. Follow-up initiatives to introduce more vehicles in other parts of Europe are already being implemented: the H2Bus Europe initiative, for example, aims to deploy 600 buses in Denmark, Latvia, and the UK.

To share lessons learned to date with others looking to deploy fuel cell buses, the project partners have published a best practice report which is available on the [project website](#). In addition, the UITP Knowledge Brief “[Fuel Cell Buses: Best Practices and Commercialisation Approaches](#)” provides a Best Practice Case Study. The brief is [available in eight European languages](#).

Michael Dolman, Element Energy Associate Director, said, “JIVE is a strategically important project for Europe’s fuel cell bus market, and I’m delighted to see this important milestone achieved, especially in the context of challenges facing the public transport sector caused by the coronavirus. We’re observing a growing interest in the technology from a range of cities and bus operators across Europe and beyond, which suggests significant potential for further expansion through the 2020s. Element Energy is looking forward to continuing to support the consortium in the next phase of the programme, which will further demonstrate the role that hydrogen can play in facilitating the transition to zero-emission transport with a minimal compromise for fleet operators.”

Bart Biebuyck, Executive Director of the FCH JU, said, “In 2012, the FCH JU released a study on the path for commercialisation of fuel cell buses, forecasting that 300 to 400 ordered buses by 2020 would be the key threshold to trigger the market. This is exactly what the JIVE projects have achieved, by deploying bus fleets of up to 35 buses. The order of the 200th fuel cell bus is an important milestone for this clean technology for public transport. Many more orders for fuel cell buses will follow still this year, demonstrating its performance and cost benefits.”

About JIVE 1 and 2

The overall objective of the JIVE projects is to promote the commercialisation of fuel cell buses through the use of vehicles and infrastructure on a large-scale so that at the end of the project fuel cell buses are commercially viable for bus operators and can be incorporated into their fleets without subsidies.

Objectives of the JIVE and JIVE 2 projects:

- Achieve the deployment of nearly 300 fuel cell buses across Europe.
- Foster joint procurement processes, encourage manufacturers to develop and refine their fuel cell bus offers, allowing cities to access economies of scale.
- Validate large scale fleets of fuel cell buses in operation and encourage further uptake.
- Showcase fuel cell buses as an environmentally friendly option for public transport authorities, offering the same operational flexibility as diesel buses but without the harmful tailpipe emissions.

- Deploy largest hydrogen refuelling stations in Europe and operate them at near 100% reliability.
- Demonstrate routes to achieve low-cost renewable hydrogen.
- Share data and best practice to support the adoption of the technology and provide evidence of the suitability of fuel cell buses for a full roll-out.

The JIVE and JIVE2 projects have received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking under grant agreement No 735582 and 779563. This Joint Undertaking receives support from the European Union's Horizon 2020 research and innovation programme, Hydrogen Europe, and Hydrogen Europe Research.

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 activities in fuel cell and hydrogen energy technologies in Europe. It aims 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, Hydrogen Europe and N.ERGHY. More info: www.fch.europa.eu

About Element Energy

Element Energy is a leading low carbon energy consultancy working in a range of sectors including low carbon transport, low carbon buildings, renewable power generation, carbon capture and storage, energy networks, and energy storage. Element Energy is coordinating the JIVE project and has extensive expertise in the initiation and coordination of large-scale projects of this type. More info: www.element-energy.co.uk