



Hydrogen Europe: European Hydrogen & Fuel cell Project Database

Project NewBusFuel

New Bus ReFuelling for European Hydrogen Bus Depots

The overall aim of NewBusFuel is to resolve a significant knowledge gap around the technologies and engineering solutions required for the refuelling of a large number of buses at a single bus depot. Bus depot scale refuelling imposes significant new challenges which have not yet been tackled by the hydrogen refuelling sector:

- Scale – throughputs in excess of 2,000kg/day (compared to 100kg/day for current passenger car stations)
- Ultra-high reliability – to ensure close to 100% available supply for the public transport networks which will rely on hydrogen
- Short refuelling window – buses need to be refuelled in a short overnight window, leading to rapid H₂ throughput
- Footprint – needs to be reduced to fit within busy urban bus depots
- Volume of hydrogen storage – which can exceed 10 tonnes per depot and leads to new regulatory and safety constraints

A large and pan-European consortium will develop solutions to these challenges. The consortium involves 10 of Europe's leading hydrogen station providers. These partners will work with 12 bus operators in Europe, each of whom have demonstrated political support for the deployment of hydrogen bus fleets. In each location engineering studies will be produced, by collaborative design teams involving bus operators and industrial HRS experts, each defining the optimal design, hydrogen supply route, commercial arrangements and the practicalities for a hydrogen station capable of providing fuel to a fleet of fuel cell buses (75-260 buses). Public reports will be prepared based on an analysis across the studies, with an aim to provide design guidelines to bus operators considering deploying hydrogen buses, as well as to demonstrate the range of depot fuelling solutions which exist (and their economics) to a wider audience. These results will be disseminated widely to provide confidence to the whole bus sector that this potential barrier to commercialisation of hydrogen bus technology has been overcome.

Project Information

Type of project : Research

Timing : 01/06/2015 > 31/03/2017

Project website: <http://www.newbusfuel.eu>

Project Budget : 2.471.144 €

Funding

European Union through FCH JU: Grant agreement 671426 - [CORDIS link](#)

Project partners

Coordinator :

ELEMENT ENERGY LIMITED

Partners :[Abengoa Innovación](#)[NewBusFuel](#)[EVOBUS GMBH](#)[Nel Hydrogen](#)[HYDROGENICS GMBH](#)[Linde](#)[McPhy Energy Deutschland GmbH](#)[Siemens](#)[Vattenfall GmbH](#)

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Sub project(s)

Sub project 1

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Sub project categories

Research

Project Id: 1054

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