

FOR IMMEDIATE RELEASE

Fuel cell electric buses: already cleaning transport

Brussels, 30 November 2015. As the COP21 starts, CHIC (Clean Hydrogen in European Cities), a flagship zero emission bus project saves over four million litres of fuel and demonstrates that the fuel cell bus technology is ready to underpin the decarbonisation of our urban centres.

As the post-Kyoto United Nations negotiations begin in Paris, transport emissions cannot be ignored. They account for one quarter of all CO₂ emissions in Europe, while urban mobility represents 40% of all CO₂ emissions of road transport. Innovative public transport solutions such as fuel cell electric buses can play a key part in curbing emissions. Although fuel cell buses may sound like science fiction, the technology is already a reality: In the CHIC project, 56 fuel cell buses have been operated in eight cities – Aarau (CH), Bozen (IT), London (UK), Milan (IT) and Oslo (NO), Cologne (DE), Hamburg (DE) and Whistler (CA) – emitting nothing but water vapour at the tailpipe. Key milestones on fuel cell buses' contribution to fight climate change include:

- 🚌 Over 6,000 tonnes of greenhouses gases saved, which amount to the annual fuel consumption of 91 diesel buses
- 🚌 Over 4 million litres of diesel avoided so far

The project will run until the end of 2016. The city partners are currently planning for the expansion of their use of the technology. Meanwhile, other bus trials have started and a major European programme is underway, with the aim to deploy hundreds of buses by 2020. This next wave of the roll-out will significantly reduce the bus costs and ensure the technology is commercially ready to begin the process of phasing-out carbon emissions from road transport. The programme is a joint initiative by European's Fuel Cell and Hydrogen funding body FCH JU, bus operators, public authorities and industry players from the bus and fuel supply industry.

Kerstin K. Müller, Daimler Buses - EvoBus GmbH, coordinator of the CHIC project: *"We are very proud of the achievements of CHIC. The project has proven that fuel cell buses are far from being a research project and are nearly ready for commercialisation. A figure I like to mention is the sum of 400 000 hours of operation of the fuel cell system up to now...which is equivalent to 46 years of operation!"*

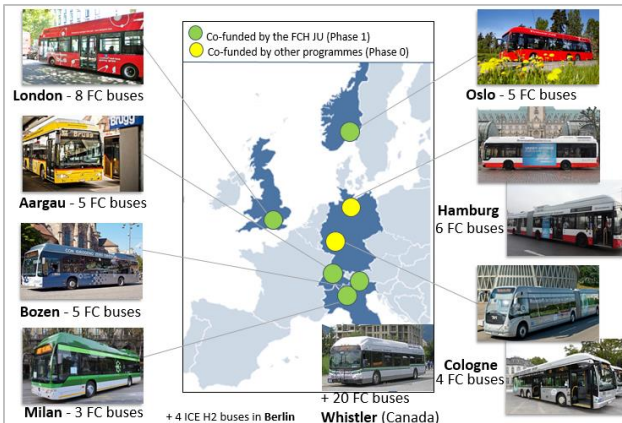
Matthew Pencharz, London Deputy Mayor for Environment and Energy: *"In London we've prioritised transforming our buses into one of the cleanest and greenest fleets in the world. The hydrogen RV1 buses are proving hugely popular with commuters and drivers alike and are crucial as part of our wider work to reduce emissions and improve air quality across the capital"*

Mayor of Hamburg Olaf Scholz: *"Hamburg aims to reduce air pollutants and noise by using low emission and emission-free buses. For this reason, the innovation line 109 has been inaugurated to test all relevant innovative technologies like fuel cell, hydrogen and electric drive trains. From the year 2020, Hamburg transport companies are allowed to acquire solely emission-free buses for public transport."*

For further information: www.chic-project.eu, @CHICproject; email h2businfo@chic-project.eu or Sabrina.skiker@element-energy.co.uk

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NOTES TO EDITORS



About CHIC

The CHIC project started in 2010 and will run through to December 2016. CHIC involves 23 partners from 8 countries. In total, 56 fuel cell electric buses have been operated within the project in daily service: The FCH JU has co-funded 26 buses and their infrastructure in Aargau (CH), Bozen (IT), London (UK), Milan (IT) and Oslo (NO). Cologne and Hamburg (DE) operate an additional fleet of 10 buses through separately funded programs. In addition, 20 buses were deployed in Whistler (Canada). On top of the 56 fuel cell

buses, 4 hydrogen internal combustion engine (ICE) buses operated in Berlin until 2014.

CHIC partners



About fuel cell electric buses and their commercialisation

- Fuel cell buses are a type of electric bus; they use electric motors rather than traditional engines for propulsion. The buses use hydrogen as a fuel; a fuel cell is used to transform hydrogen into electricity, which powers the electric motor
- Additional EU-funded fuel cell bus projects have started since the inception of CHIC: [High V.LO-City](#), [HyTransit](#) and [3Emotion](#)
- The FCH JU has released a study in September 2015 which highlights the commercialisation pathways of fuel cell buses ([Fuel Cell Electric Buses – Potential for sustainable Public Transport in Europe](#))

CO₂ savings calculations

The CO₂ calculation is done on a Well-to-Wheel basis; it includes the bus and hydrogen production, the fuel supply, the operation, maintenance and end-of-life of the bus and the infrastructure.

To draw the comparison with the annual consumption of diesel buses, the following figures were used: average consumption: 45.2 l/100 km (CHIC average); average annual mileage of an urban bus in the EU28: 44,700 kms (source: TRACCS)

About the Fuel Cell and Hydrogen Joint Undertaking – FCH JU

The Fuel Cells and Hydrogen Joint Undertaking (FCH JU) is a public private partnership supporting research, technological development and demonstration activities in fuel cell and hydrogen energy technologies across Europe. The partnership is formed by the European Commission (DG Research & Innovation), industry (represented by Hydrogen Europe) and research (represented by N.ERGHY). More information at www.fch.europa.eu