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The Longest of Their Kind in the World

RVK GmbH, the Cologne-based regional traffic company, has turned the ignition keys in their first-ever hydrogen-powered hybrid-electric passenger busses to cover the North Rhine-Westphalian public transport network. The trendsetting fuelcell-based project has been realized in a bi-national cooperation with the support of German and Dutch partners.

Cologne / Hürth – On Friday, May 06 Harry K. Voigtsberger, Minister of Economy and Traffic in NRW, and Werner Stump, head of the Rhein-Erft district authority, jointly with RVK manager Eugen Puderbach and Günter Rosenke from the RVK supervisory board presented the first fuelcell-driven hybrid-electric busses in Hürth near Cologne. The busses are the first of their kind in the regular public transport network of North Rhine-Westphalia and will serve the Rhein-Erft district and the inner-city traffic of Hürth and Brühl.

A crucial step toward an emission-free traffic future

RVK manager Eugen Puderbach underlines that “the fuelcell-driven hybrid-electric busses are an excellent innovation for public transport and a trendsetting milestone for the RVK environmental protection concept of “Zero emission”. This new drive-train technology enables us to fulfil the requirements of our traffic future project already today.”

Baseline: hydrogen – the energy carrier of the public transport future

In the Hürth industrial district Chemiepark Knapsack hydrogen is produced as a by-product. To make beneficial use of this hydrogen is the second main motivation of the „HyCologne - Wasserstoff Region Rheinland e. V.“ initiative to actively support the bus project, beside the need for an emission-free mobility. In May 2010, the first hydrogen filling station was inaugurated in Hürth and is now available to supply the bus fleet by means of a 350 bar pressure system. The new station is an important link in the chain of hydrogen supply facilities forming the „hydrogen pipeline“ in NRW und the Benelux states.

German-Dutch development

The new fuelcell-based hybrid-electric busses are of the „Phileas“ type and have been built by the Dutch manufacturer Advanced Public Transport Systems (APTS), a subsidiary of the VDL group, and have a lot of German know-how integrated. So, Vossloh Kiepe GmbH from Düsseldorf supplies the serial hybrid technology and the battery offering a storage capacity of 26 kWh is from Hoppecke Batterien GmbH & Co. KG in Brilon (NRW). The fuelcell itself comes from Ballard Power Systems Inc., Canada. All in all, four busses have been built as prototypes, two of which are operated by RVK, the other two by the Amsterdam public transport company GVB.

The vehicles with their overall length of 18 metres are the longest fuelcell-driven articulated busses in the world. The fuelcell system supplies electric power equivalent to 150 kW. The busses are equipped with an innovative hybrid traction system delivered by Vossloh Kiepe. The adaptive energy management system controls the energy flows between the load-causing consumers and the dual energy storage system. The latter is a combination of double-layer capacitors and a battery.

Optimized international cooperation and knowledge transfer

HyCologne presents the hydrogen bus project in international initiatives such as the “Hydrogen Bus Alliance” and the CHIC project (“Clean Hydrogen in European Cities”). As busses like these have a strong potential to play an important role in a sustainable public transport concept, metropolitan agglomerations, cities, initiatives and profit-oriented organizations are committing themselves to work in joint commissions, boards and committees. An open and multi-directional exchange of information is the basic approach to reach the common aim of commercialization of this technology.

The phileas project was realized with financial resources of the European fund for local development and the German Federal Land North Rhine-Westphalia.

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More detailed information:

Operator of the H2 fuelcell busses: RVK Köln GmbH

www.rvk.de

project motion picture (in german):

<ftp://vip:gomex@194.162.85.10/rvk/>

„CHIC“- Clean Hydrogen in European Cities:

www.hycologne.de/chic-saubere-wasserstoff-busse-in-europaeischen-staedten.phtml

www.chic-project.eu

Hydrogen Bus Alliance:

www.hycologne.de/hydrogen-bus-alliance.phtml

www.hydrogenbusalliance.org

CHEMERGY:

www.hycologne.de/chemergy-chemie-und-energie.phtml