

Project Information

Subject: Midi-bus with Fuel Cell Hybrid Drive

Applicant: Hydrogenics GmbH
Am Wiesenbusch 2
45966 Gladbeck

Project Schedule: 15.11.2004 – 30.06.2007

Project Partners: Köln Bonn Airport

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Project Description:

A very interesting application of the fuel cell is public transit, especially in densely-populated centers as Shuttle-transit. For these requirements a midi-bus with the specifications as shown in the sidebar could be selected. With the relatively low power demand of the bus and the hybridization with batteries, the fuel cell peak demand can be minimized, which keeps the system simple and price-effective. For this project, the „HyPM 10“ 10 kW fuel cell power module from Hydrogenics is being utilized.

In the framework of the project, a fuel cell hybrid drive system for a commercially available battery bus is being developed and tested. Resulting from the development of the drive train concept and the design of the integration in the vehicle, a drive system will first be tested in the laboratory and optimized. Next to the optimization of the controls also the acceptability of a NiCd battery to increase the efficiency of the system will be tested.

In parallel the installation of the complete system into the bus will be realized. Along the way, the street approval, from the concept phase to the acceptance tests, will play a central role. This is fundamental to the later marketing of the buses. In the frame of a connecting demonstration phase the bus will be demonstrated to a wide public audience. The project will be concluded by a long running testing phase of the bus under every day operation at the Köln Bonn Airport.

Length	6,00 m
Width	2,10 m
Configuration	Low Floor
Maximumspeed	35 km/h
Autonomy	9 h
Passengers Seating	8 – 12
Passengers Standing	10 – 20
Primary drive	Fuel Cell
Fuel	Hydrogen
Hydrogen storage	Compressed gas tanks
Power buffering	Batteries



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