



Volvo Bus Corporation

Press Information

Volvo developing a plug-in hybrid bus

Volvo Buses is currently developing a plug-in hybrid bus that can drive long distances silently and exhaust-free on only electricity. Three buses will be tested in Gothenburg, Sweden, supported by the European Union.

Volvo currently has the world's most efficient hybrid solution for buses and trucks. Volvo Buses has sold more than 250 hybrid buses, which are reducing fuel consumption by up to 35% and thus also reducing energy consumption and carbon-dioxide emissions by an equal amount.

“Reducing the total global energy consumption is the most important measure today and in the future,” says Volvo Buses CEO Håkan Karlsson. “The bus is already today clearly the most energy-efficient vehicle for public transport and our hybrid bus will accentuate its position as the best environmental option.”

“But, we must continue to reduce energy consumption and for us in the bus industry, this involves finding solutions to increase electricity use.”

Supported by authorities including the Swedish Energy Agency, Volvo is developing a plug-in hybrid bus. It is essentially the same Volvo hybrid bus as today, where the brake energy is recycled and utilized by the electric motor. But, with a new type of battery and charging equipment it will also be possible to charge the battery via the electricity network.

The concept is based on placing battery charging stations at the end stations of the bus lines. By charging the battery there for five to ten minutes, it could significantly extend the time that the bus is able to operate only on electricity.

This could entail distances of up to ten kilometers, with the corresponding advantages in the form of silent traffic with no local emissions. It can be controlled so that the bus operates on electricity in densely populated areas or in particularly sensitive environmental areas, while the diesel engine can be used on other parts of the route.

This technology will generate considerable opportunities to significantly reduce energy consumption. The reason is that electric engines have very high efficiency.

“We expect to be able to reduce the energy consumption in a city bus by up to 65% compared with today’s diesel buses,” says Håkan Karlsson. “And, the plug-in hybrid bus will be able to reduce diesel consumption and thus carbon-dioxide emissions by more than 75%.”

Volvo Buses expects to have a prototype bus ready for testing in 2011. The next step will be taken in autumn 2012, when a field test will commence in Gothenburg using three chargeable hybrid buses. The buses will be put in service with passengers on Line 60.

The field test project will be implemented in cooperation with Business Region Göteborg, the Traffic Office in Gothenburg City, Västtrafik and Göteborgs Energi, which will be responsible for the charging stations. On Friday, the project was granted a subsidy of Euro 1,4 M from the EU’s program that supports environmental ventures, Life+.

“It is important to the environment that we are able to develop new energy-efficient solutions as rapidly as possible,” says Ulf Gustafsson, Head of Public Affairs at Volvo Buses. “We have the opportunity to succeed because we are capitalizing on the collective expertise of companies, organizations and authorities, and they are jointly investing the funds required.”

The field test will commence in autumn 2012, but Volvo Buses does not know yet when the company will be able to offer this bus in the market.

“It will take a few more years,” says Håkan Karlsson. “But, we are convinced that this is a key step on the path to more efficient public transport and an important step in the effort to reduce global energy consumption.”

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