



Press information

Volvo Buses and ABB in electro mobility cooperation:

Delivery of complete electrified bus solutions to cities

Volvo Buses and ABB have signed a partnership agreement regarding automatic e-bus chargers for electric-hybrid and full-electric Volvo buses. The cooperation enables the companies to deliver complete electrified bus solutions to cities.

Under the global partnership agreement, Volvo Buses will supply electric-hybrid buses and full-electric buses. ABB will supply standard-based fast-charging solutions for the electric vehicles.

“We are delighted to enter into partnership with ABB. Together, we have a complete and competitive offer for cities around the world that want to switch to a sustainable public transport system,” said Håkan Agnevall, President Volvo Buses.

“Electric-hybrid buses and full electric buses are tomorrow’s solution for urban public transport. Volvo will team up with a few global actors in this field, and ABB is one of them.”

“We are very pleased to partner with a global transportation industry leader which shares our vision of e-mobility in line with ABB’s commitment of power and productivity for a better world,” said Pekka Tiitinen, head of ABB’s Discrete Automation and Motion division. “Urbanization is at a historic high and is stretching the transport infrastructure of cities around the world. Our collaboration will help to support sustainable and cost-efficient transportation solutions to meet rising commuter demand.”

The partnership involves working towards a standardization of automatic e-bus fast charging on the market. This can include the communications protocol between infrastructure charging solution and e-bus, electrical interface, and specification of the automatic connection system (ACS). The ACS is located on the roof of the bus and connects the bus with the fast charger at selected charging stops.

The first joint project will be the implementation of Volvo Electric Hybrids and automatic e-bus chargers in the Luxembourg public transport system. Potentially 12



Volvo Electric Hybrid buses operated by Sales-Lentz will be running on existing public bus lines in Luxembourg as of 2015.

Sales-Lentz has a history of being an early adopter and was the first European operator running Volvo Hybrids already in 2009. This project is another strong example of a public & private partnership between Sales-Lentz, the ministries of Luxembourg and Volvo Buses. The project is integrated into Luxembourg's Mobility Network (LMN), a network that links different mobility projects in the Grand Duchy to exploit synergies and develop common visions for the mobility of the future.

The Volvo Electric Hybrid, which reduces energy consumption by 60% compared with a conventional diesel bus, will be officially launched at the IAA exhibition in Hannover in Germany in September. Volvo's first full electric buses will be launched in June 2015 within the ElectriCity project in Gothenburg, Sweden.

Volvo Buses launched its first hybrid bus in 2009 and has delivered nearly 1,600 hybrids to 21 countries. The company is a leader in electro mobility.

As a leader in power and automation technologies, ABB plays a vital role in the development of sustainable modes of transport by providing efficient charging infrastructure solutions for electric vehicles. ABB technologies ensure intelligent infrastructure networks with an industry leading uptime while maintaining good power quality in the grid. As the market leader in fast charging solutions, ABB delivered over 1,500 DC fast-charging systems for passenger vehicles worldwide since 2010, and rolled out charging networks for automotive, utility, government and retail customers including nation-wide networks in the Netherlands, Estonia, Denmark.

Facts Volvo's electric hybrid bus

- The bus is equipped with an electric motor that is powered by lithium batteries. It also has a small diesel engine.
- The bus is charged quickly at charging stations via an overhead power connection.
- The bus can be driven about seven kilometres on electricity alone, covering the distance silently and entirely without exhaust emissions.
- 75% fuel saving
- 60% energy reduction
- 75% CO₂ reduction
- Recharging 6 minutes at end stations



Facts Volvo's full electric bus

- Electrical drive 100 % of the route, silent and emission-free
- Enables indoor bus stops
- 80 % energy reduction
- No local exhaust emissions
- 99 % CO₂ reduction
- Recharging 6 min at end stations

Facts ABB off-board automatic e-bus fast chargers

- Standards-based charger using the proven and safe CCS (EN61851-23) protocol
- On-route and depot charging solutions
- Flexibility in connecting to different electricity-grid situations
- Remote management and service solutions together with high quality hardware provides industry leading uptime
- ABB connected services offer flexibility to connect to added-value systems, easy upgrading & cost efficiency
- Configurations with several power levels up to 300 kW are available depending on the bus and location
- Includes an Automatic Connection System to seamlessly connect to the roof of the Volvo bus without the need for driver intervention

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Volvo Buses is one of the world's leading bus manufacturers, with a strong focus on vehicles and systems for long-term sustainable public transport. The product range includes complete transport solutions, city buses, intercity buses and tourist coaches, as well as services in financing, vehicle service, vehicle diagnostics and traffic information. Volvo Buses is part of Volvo Group, one of the world's leading manufacturers of trucks, buses and construction machines as well as drive systems for marine and industrial applications. Volvo Group also provides complete financing solutions. For more information visit <http://www.volvobuses.com>