Electric hybrid bus with charging system from Siemens presented in Hamburg

Frank Horch, Hamburg Minister of Transport, and Ulrike Riedel, board member of the Hamburger Hochbahn AG, presented the new electric hybrid bus for Hamburg's downtown district. The new Volvo bus features plug-in technology and is supplied with electrical power through a Siemens charging system. The fast charging stations are the latest development from Siemens for high-performance charging systems for electric buses. It is planned that the electric hybrid bus will run approximately seven kilometers on the Innovation Line 109 in Hamburg, Germany, between Alsterdorf and the newly built electric bus terminal as of December purely under electric propulsion and therefore without pollution.

In the picture (l-r): Håkan Agnevall, president Volvo Bus Corporation; Gertrud Sahler, Director General, German Federal Ministry of Environment; Ulrike Riedel, Member of the Executive Board at Hamburger Hochbahn; Frank Horch, Minister of Economy, Transport and Innovation of the state of Hamburg and Michael Westhagemann, Head of the Siemens office in Hamburg.
“Battery technology is becoming increasingly attractive for use in buses. The electric hybrid bus is an important further step for us on the way to procuring 100% electric buses. Hochbahn sees itself as industry's partner in gathering important experience in everyday service,” said Ulrike Riedel, vice president for operation and human resources at public transport operator Hamburger Hochbahn.

Håkan Agnevall, president of the Volvo Bus Corporation: “We are happy and very proud of our successful cooperation with Hochbahn and Siemens. The current high point of our collaboration is the new electric hybrid bus. Together with Hochbahn, we are pioneering green efficiency. Here in Hamburg today, we are continuing our green development path toward full electric mobility.”

“In contributing our innovative charging infrastructure for these new hybrid buses we are pleased to give e-mobility and forward-looking public transportation a strong boost in Hamburg”, said Andreas Laske, Project Manager for Siemens eBus Solutions.

The lithium-ion battery of the Volvo 7900 Electric Hybrid is charged via two charging rails on the roof and supplies the electric motor (150 kW) with electrical power. The bus runs under purely electric propulsion for circa seven kilometers. To enable this, fast charging stations have been set up next to the route. The power connection and converter are located in a transformer house next to the starting station and the ending station. A contact arm is fastened to a mast. If the bus is in the tolerance range of the contact system, it is enough to operate the locking brake and charging will start automatically. Charging is performed fully automatically and ends as soon as the charging is fully completed. The process also can be cut short by releasing the locking brake.

The fast charging stations in Hamburg are the latest development from Siemens for high-performance charging systems for electric buses. On the buses, it is only necessary to mount contact rails and a WiFi communication box. That saves space, weight, and costs on each bus. Communication between the bus and the charging station is established by WiFi. In this way, the bus is identified and the requirements of the battery management system are transmitted to the charging station. To make contact, the contact arm is lowered onto the charging contacts on the bus. The bus is electrically grounded before current starts to flow. The flow of current between the vehicle and the charging station is controlled continuously and matched to the individual charge state and battery type. The charging operation is completed in no more than six minutes. ᵃ

Photos are available at: www.siemens.com/press/eBus-Hamburg

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