



NEFTON: MAN conducts research in joint project for battery-electric freight transport of the future

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Last year saw the launch of NEFTON, a research project funded by the Federal Ministry of Economics and Climate Protection. Together with AVL, PEA, the Technical University of Munich, the Technical University of Deggendorf and the Forschungsstelle für Energiewirtschaft e.V. (Research Centre for Energy Economics), MAN Truck & Bus wants to analyse the system consisting of a fully electric truck, charging station and grid connection and design it for various applications in long-distance transport. The central goal of NEFTON is the demonstration of the Megawatt Charging System (MCS) in the MAN eTruck. Now the project has been extended: To a charging power in the range of 3 megawatts. This is intended to test the newly specified MCS charging standard at an early stage.

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- **Six partners from industry and research want to create a holistic cost-benefit analysis**
- **Consortium develops technology prototypes and bidirectional charging pole in the megawatt range along technical and specific customer requirements**
- **Results to enable comparison with other technologies and concrete recommendations for action**

"In order to be able to map the increasing mileage in freight transport and at the same time realise the planned reduction in emissions in transport, we at MAN Truck & Bus are clearly focusing on battery-electric drive. NEFTON is taking us significant steps forward on the way to the megawatt charging infrastructure and maximum charging power required for this," says Dr Frederik Zohm, Executive Board Member for Research and Development at MAN Truck & Bus.

MAN Truck & Bus is one of Europe's leading commercial vehicle manufacturers and transport solution providers, with an annual revenue of just under 11 billion euros (2021). The company's product portfolio includes vans, trucks, buses/coaches and diesel and gas engines along with services related to passenger and cargo transport. MAN Truck & Bus is a company of TRATON GROUP and employs more than 34,000 people worldwide.

Press Release
MAN Truck & Bus



MAN Truck & Bus has joined forces with five partners from industry and science in the NEFTON (Commercial Vehicle Electrification for Transport Sector Optimised Grid Connection) research project. On board are AVL, a supplier of drive systems, PEA, an expert in power electronics, the Technical University of Deggendorf, the Technical University of Munich (TUM) and the Forschungsstelle für Energiewirtschaft e.V. (FfE). The Federal Ministry for Economic Affairs and Climate Protection is funding the project, which started in 2021.

The common goal of the project partners is to conduct holistic research into the operation of heavy goods transport based on a battery-electric truck as a solution to current and future challenges by 2024. The entire system - consisting of battery-electric truck, charging station and its network connection - is to be designed for various applications in long-distance transport. The central technical key to this is the Megawatt Charging System (MCS) with a charging capacity in the megawatt range.

The entire impact chain of the megawatt charging system will be examined for feasibility, economic efficiency and sustainability, starting with the requirements definition of commercial vehicle operators, resulting electric vehicle concepts and (fast) charging infrastructure concepts. In line with this, a highly efficient charging station in the megawatt range is being developed, which also allows bidirectional charging for a possible integration of the truck as a storage unit into the power grid.

The MCS standard is to be further researched with an extension of the project. Charging currents of 3,000A will be tested, allowing an electric truck to be fully charged in 15 minutes. For this purpose, the Technical University of Munich, together with MAN Truck & Bus and the Technical University of Deggendorf, is developing new concepts with charging capacities in the range of 3 megawatts, which will also be tested on test rigs of the new project partner Fraunhofer ISE.