Press Release
MAN Truck & Bus

Background information on the press release MAN and ABB E-mobility rev up for the next phase of electromobility in long-haul trucking

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Megawatt charging with ABB E-mobility

For a long time, electric mobility was considered uneconomical in long-distance heavy goods transport. The charging capacities were too low, the batteries too heavy. In the 2010s, the maximum available charging capacity was still 50 kilowatts. In the meantime, it has increased more than sevenfold. Megawatt charging will open up new possibilities for sustainable mobility from 2025.

For megawatt charging, we are working on a wide range of different aspects - from the power unit to the plug. According to forecasts, the average annual growth rate for electric trucks between 2020 and 2026 is around 73.65 percent. Medium-duty electric trucks are expected to account for over 93 percent of the global electric commercial vehicle fleet. Megawatt charging could also significantly increase the share of heavy e-vehicles.

The technology will not only be used in heavy-duty long-distance transport in the future. Megawatt charging is also the central interface for global harmonisation in the marine sector or in aviation. ABB is cooperating here, for example, with Lilium, a manufacturer of air taxis.

Germany sets standards through close cooperation

Currently, the most important cooperation in the field of long-distance transport for heavy-duty trucks is the high-performance charging project, or HoLa for short. Here, more than 20 partners from science and industry, including MAN and ABB, are working on the development of uniform standards. HoLa is funded by the federal government and is the world's first project in the field of megawatt charging. Two high-performance charging points with megawatt charging systems (MCS) are being built at each of four locations along the A2 motorway. The project is intended to be the basis for a nationwide expansion. Initially, CCS (Combined Charging System) charging points for trucks will be planned and built to the fullest extent of the

specification limits, followed later by two MCS charging points each. The locations will not only serve as test areas for the emerging technology. Electric trucks are also integrated into logistics processes at an early stage and user experience is gathered.

According to estimates by ACEA, as the number of electric trucks increases, 10,000 to 15,000 public charging points will be needed across Europe by 2025, along with those for intermediate charging at unloading points with higher charging capacity. By 2030, there must already be 40,000 to 50,000 to enable the electrification of road freight transport.

MAN Truck & Bus pushes the drive turnaround in road freight transport

MAN is clearly focusing on battery-electric drives for CO2-neutral road haulage in heavy commercial vehicles as well. As early as February 2022, MAN presented to the public a near-production prototype of the new generation of electric trucks, which will make their market debut from 2024 and will also be designed in particular for long-distance transport applications. In addition to emission-free drives, MAN is also developing far-reaching solutions for electromobility. The essential prerequisite for the widespread use of electromobility in road haulage is digital solutions and application-oriented charging offers in conjunction with comprehensive advice. Only in this way can transport companies be supported on their way to the drive revolution.

Drive system transformation in the commercial vehicle sector requires a holistic perspective and experience

For a successful fleet conversion from diesel to BEV, a holistic analysis of customer needs is necessary long before the purchase of an electric truck. In addition to advice on electric trucks, MAN's 360° consulting programme also includes consideration of customer-specific operating conditions such as operating phases including cost optimisation, route analysis, fleet optimisation and, building on this, the necessary advice on the charging infrastructure. MAN's know-how is based on many years of practical experience. In 2018, the commercial vehicle manufacturer launched a three-year practical pilot project with nine Austrian customers using an electric version of the MAN TGM. Since the end of 2019, a first small series of the fully electric 26-tonne distribution truck has been delivered to European transport companies, which have since proven themselves in tough everyday transport operations from Norway to Spain. MAN is using this experience not

only in the further development of series technology, but also in future services relating to electromobility and the associated consulting services for customers.

MAN electric trucks: Concept with ranges for all applications

MAN is integrating its profound practical expertise with the eTGM directly into the development of the electric truck series portfolio, which will start in 2024. Different applications - supermarket delivery, waste disposal, transport of building materials or long-distance transport - require specific ranges. To meet these, MAN's new eTruck generation will be available both with high-power charging up to 350 kW at market launch and with the future megawatt charging technology and the associated shorter charging times. ABB e-Mobility plans to launch the megawatt charging technology within the next three years. This will make it possible to cover daily ranges of between 600 and 800 kilometers without any problems, especially in long-distance transport, with intelligent use of break times for intermediate charging.

MAN's own competence in battery production

Suitable vehicle batteries are also a central building block on the way to emission-free drives. Here, MAN has already begun to build up its own expertise in the assembly of battery packs in spring 2021. The nucleus for this is the eMobility Technical Centre at MAN's Nuremberg site, where the first battery packs for e-vehicle testing and internal tests are being created in individual production. The clear goal is to increase the depth of added value with in-house production of the battery packs, both for the upcoming series of electric trucks and for electric buses. In addition to the battery-electric drive, MAN in Nuremberg is continuing to research and develop hydrogen drive as a supplementary alternative for special applications. In the "Bavarian Fleet" project, MAN trucks with fuel cell drive are to go into test operation in 2024 at five companies from the logistics and retail sectors to prove their suitability for practical use. It is clear: MAN is accelerating the pace of the transition to fossil-free forms of propulsion and is getting ready for the emission-free future of freight transport and passenger traffic.

You can find more information on electromobility at MAN in the MAN Newsroom and under #Electromobility.

About MAN Truck & Bus

MAN Truck & Bus is one of Europe's leading commercial vehicle manufacturers and providers of transport solutions with annual sales of almost 11 billion euros (2021). The product portfolio includes vans, trucks, buses, diesel and gas engines as well as services related to passenger transport and goods transport. Electric drive is already an integral part of the series production range of MAN buses and vans, and a comprehensive portfolio of series production electric trucks will be available from 2024. The change to CO2-free driving, together with digitalisation and automation in road haulage, is a key pillar of the NewMAN strategy for the future, with which the company is transforming itself from a commercial vehicle manufacturer to a provider of intelligent and sustainable transport solutions by 2030. MAN Truck & Bus is a company of the TRATON GROUP and employs more than 34,000 people worldwide. www.mantruckandbus.com

About ABB

ABB has been active in the electric mobility market since 2010 and to date has sold more than 680,000 charging stations in over 85 markets, including more than 30,000 DC fast charging stations and 650,000 AC charging stations.

ABB (ABBN: SIX Swiss Ex) is a leading technology company energetically driving the transformation of society and industry worldwide towards a more productive and sustainable future. By combining its portfolio in electrification, robotics, automation and motion with software, ABB defines the boundaries of what is technologically possible, enabling new levels of excellence. ABB has a successful history spanning more than 130 years. The company's success is based on the talent of its approximately 105,000 employees in more than 100 countries. www.abb.com