MANNHEIM, GERMANY

PRIMOVE E-BUS

100% e-mobility on demanding city route



In Mannheim, Germany, the commercial operation of fully electric buses – charged and powered by *BOMBARDIER PRIMOVE* – proves the system's suitability for everyday passenger services, even on demanding bus routes.

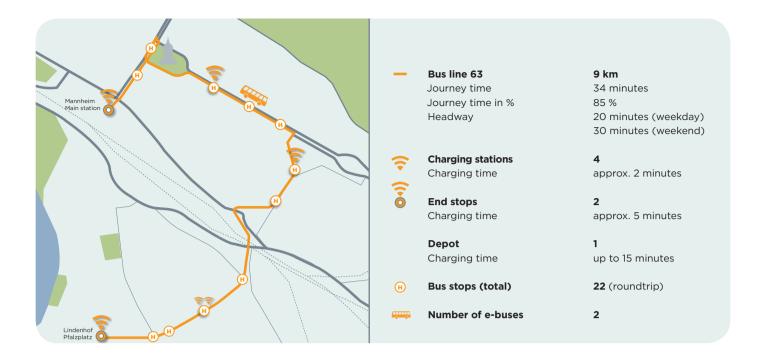
On Mannheim's inner-city bus route 63, two completely electrically powered and inductively charged buses allow passengers to enjoy a quiet and emission-free ride. Built by the Swiss manufacturer Carrosserie HESS AG, both e-buses are equipped with the full *PRIMOVE* package:

PRIMOVE wireless charging technology, high power PRIMOVE battery systems and the fully integrated PRIMOVE propulsion system. Mannheim also introduced an electric van equipped with the PRIMOVE wireless charging system as a service and delivery vehicle.

The *PRIMOVE* Mannheim project has been developed in close collaboration with local partners: regional transport operator Rhein-Neckar-Verkehr GmbH, the City of Mannheim and the Karlsruhe Institute of Technology. The project is funded by the German Federal Ministry of Transport and Digital Infrastructure.







Rising to the challenge

Operating in the heart of the city, bus line 63 has 22 stops along a 9-kilometre route. An average speed of 13.4 km/h and very short dwell times at both intermediate and end stops make this line particularly challenging. With its fast and efficient opportunity charging, the *PRIMOVE* system enables electric buses to easily serve such demanding routes. It strategically positions the charging stations in the depot and at selected bus stops along the line.

E-van to complement e-bus service

For the first time, a fully electric *PRIMOVE* equipped Mercedes Vito e-van is operating as a service and delivery vehicle. With a maximum range of 240 kilometres, it will easily drive its daily 80-kilometre service route. The e-van will be charged at the depot, on average for just 180 minutes.

Bombardier Transportation

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The PRIMOVE e-buses in facts

Bus Hess Swiss PRIMOVE 12.0 m
• Weight (empty): 12,000 kg

· Capacity: 36 seated, 44 standing

Charging PRIMOVE charging 200 system • Charging power: 200 kW

Efficiency: > 90 %
Grid connection: AC 400 V or DC 750 V

Battery PRIMOVE battery 60
system • Type: Li-ion
• Capacity: 60 kWh

• Voltage: 660 V

Propulsion system PRIMOVE propulsion 140
• Nominal power: 2 x 60 kW
• Peak power: 2 x 140 kW

 Auxiliary power supply: 24 V DC and 400 V AC

Approval TÜV SÜD certified

Co-funded by the German Federal Ministry of Transport and Digital Infrastructure



