

BERLIN, GERMANY

PRIMOVE E-BUS

World's first capital to introduce wireless charging

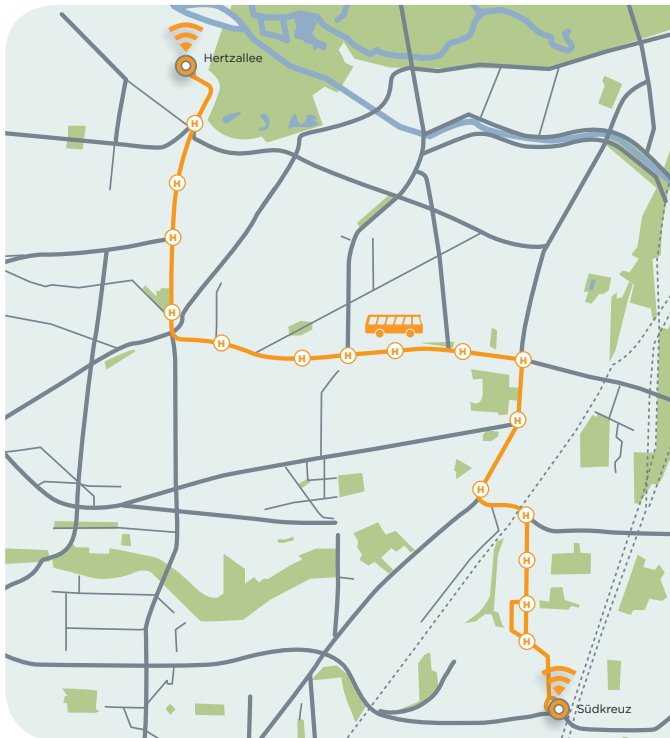






Berlin is the first capital city to turn a complete bus line into an eco-friendly route using e-buses with the wireless **BOMBARDIER PRIMOVE** charging system and the compact **PRIMOVE** battery system.

Since August 2015, passengers on the city centre bus line 204 are able to enjoy a quiet and zero-emission ride through Berlin. The German Federal Ministry of Transport and Digital Infrastructure is supporting

the project in the context of the "International Showcase Programme for E-mobility Berlin Brandenburg".

Bombardier's innovative **PRIMOVE** system charges the Berlin buses batteries at 200 kW in the very few minutes of dwell time spent at the end stations. This allows the e-buses to serve the 6.1 km long bus line back and forth – without additional stops or battery changing for an entire day. A third charging station for overnight charging is installed at the bus depot of the local operator Berliner Verkehrsbetriebe (BVG).



 Bus line 204	6.1 km
Journey time	24 minutes
Journey time in %	80 %
Headway	20 minutes
 End stops	2
Charging time	4 - 7 minutes
Depot	1
Charging time	7 - 17 minutes
 Bus stops (total)	18
 Number of e-buses	4

Adopting proven technology

The e-buses have been built by the Polish manufacturer Solaris. The 12-meter long vehicles are nearly identical to the Urbino 12 electric bus equipped with the *PRIMOVE* charging and battery systems, which is in successful passenger operations in Braunschweig, Germany, since March 2014.

How many CO₂ emissions are saved?

Berlin's new fleet of e-buses will save around 260 tons of CO₂ per year. In order to achieve the same effect, around 250 private cars in Berlin, on the basis of normal driving behaviour, would have to be switched to electric mode.

The PRIMOVE e-buses in facts

Bus	Solaris Urbino 12 electric (12.0 m) • Weight (empty): 13,000 kg • Capacity: 34 seated, 41 standing
Charging system	<i>PRIMOVE</i> charging 200 • Charging power: 200 kW • Efficiency: > 90 % • Grid connection: AC 400 V
Battery system	<i>PRIMOVE</i> battery 90 • Type: Li-ion • Capacity: 90 kWh • Voltage: 660 V
Propulsion system	Vossloh Kiepe propulsion system 12 m: • Drive power: 160 kW • Auxiliary Operating Supply Voltage: 400V AC • 24 V DC supply

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