
Media information

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Elli and MITNETZ STROM publish concept for smart grid integration of EVs

- **Smart grid integration to increase share of green power grid supplied and relieve local grids**
- **An algorithm automatically compares the planned charging processes between EVs and grid operators**
- **Financial incentives to ensure best possible use of grid capacity**
- **First results of the pilot project are expected in autumn**

Berlin/Zwickau, June 21, 2022 - Elli, a brand of the Volkswagen Group, and MITNETZ STROM have now launched the nationwide pilot project for smart grid integration of electric vehicles. In the first step, around 20 drivers of Volkswagen models ID.3¹, ID.4² or ID.5³ are involved in making electric cars part of the energy system in the future and increasingly using green electricity from the region for charging.



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With the concept "Innovation Impulse for Future-Proof Grid Integration of E-Mobility," the two project partners are now presenting together with E-Bridge the centerpiece of this field testing at E-World (June 21-23) in Essen, Germany. There, they will provide a first insight into what a practical implementation of smart charging could look like.

The idea behind it: An algorithm uses price incentives to compare the cars' charging plans with regional electricity output from renewable energies and the available capacities in the distribution grid. The resulting flexible grid usage is intended to reduce the frequency of bottlenecks in the power grid and create financial benefits for participants.

"With this project, we are demonstrating for the first time how electric cars can be synchronized with the power grid in a user-friendly way. The car becomes a rolling electricity storage unit for the grid operator. For drivers, financial added value is generated via price incentives," says Niklas Schirmer, Vice President Strategy Elli. "By making the electricity demand of EVs more flexible, more renewable, regionally generated electricity can be used." In 2020 alone, about 6,200 GWh of green power had to be curtailed in Germany.

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"Together, we are supporting the energy and transport transition locally and investing in the energy future. E-mobility and the energy industry are working hand in hand here. EVs can run on green electricity and relieve the strain on the power grid where it is particularly needed. We can prevent bottlenecks in the local grid by using newly developed software to allocate charging processes for electric vehicles to the available grid capacities. The concept now provides us with important insights into whether our approach is customer-friendly," adds Dr. Michael Lehmann, Head of Process and System Management at MITNETZ STROM.

The results of the pilot test are expected in the fall of 2022. Further information and the concept for download are available at www.smartes-laden.eu.

About the company Elli

Elli is a brand of the Volkswagen Group and a provider of energy and charging solutions. The company, which employs around 200 people, caters to the needs of customers at the interface between energy and mobility. Elli's goal is to make the benefits of the energy transition accessible to everyone - easily and effortlessly. To provide all electric vehicle drivers and fleet managers with a seamless and holistic charging as well as energy experience. Elli was founded in 2018 and has locations in Berlin, Wolfsburg and Munich.

About the company: MITNETZ STROM GmbH About the company: E-Bridge Consulting GmbH

Mitteldeutsche Netzgesellschaft Strom mbH (MITNETZ STROM), headquartered in Kabelsketal, is a wholly owned subsidiary of envia Mitteldeutsche Energie AG (enviaM). As the largest regional distribution system operator in eastern Germany, MITNETZ STROM is responsible, among other things, for planning, operating and marketing the enviaM electricity grid. The electricity distribution grid managed by MITNETZ STROM has a length of around 73,000 kilometers and covers parts of the federal states of Brandenburg, Saxony, Saxony-Anhalt and Thuringia.

About the company: E-Bridge Consulting GmbH

E-Bridge Consulting (E-Bridge) is a consulting company with expertise in energy. E-Bridge supports numerous companies in the energy supply sector in implementing and realizing their corporate strategic goals. The tasks range from co-designing the regulatory and policy framework to the

development and realization of modern operational and planning strategies and processes to successful selection and implementation of the supporting IT systems.

¹ ID.3 - combined power consumption in kWh/100 km (NEDC): 13.7-12.9, CO₂ emissions in g/km: 0; efficiency class: A+++

² ID.4 - power consumption in kWh/100 km (NEDC): combined 14.8; CO₂ emissions in g/km: 0; efficiency class: A+++

³ ID.5 - combined power consumption in kWh/100 km: 14.6 (NEDC); CO₂ emissions in g/km: 0; efficiency class: A+++

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About the Volkswagen Group:

The Volkswagen Group, with its headquarters in Wolfsburg, is one of the world's leading automobile manufacturers and the largest carmaker in Europe. Ten brands from seven European countries belong to the Group: Volkswagen Passenger Cars, Audi, SEAT, Cupra, ŠKODA, Bentley, Lamborghini, Porsche, Ducati and Volkswagen Commercial Vehicles. The passenger car portfolio ranges from small cars all the way to luxury-class vehicles. Ducati offers motorcycles. In the light and heavy commercial vehicles sector, the products range from pick-ups to buses and heavy trucks. Every weekday, 672,800 employees around the globe are involved in vehicle-related services or work in other areas of business. The Volkswagen Group sells its vehicles in 153 countries.

In 2021, the total number of vehicles delivered to customers by the Group globally was 8.9 million (2020: 9.3 million). Group sales revenue in 2021 totaled EUR 250.2 billion (2020: EUR 222.9 billion). Earnings after tax in 2021 amounted to EUR 15.4 billion (2020: EUR 8.8 billion).
