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Media Information

IAA Mobility 2025: Elli launches bidirectional charging pilot and starts recruiting

- **Energy independence at home: At IAA Mobility 2025, Elli is launching a comprehensive pilot project for bidirectional charging of electric vehicles. This technology can reduce charging costs[1] by up to 75%[2]. At the same time, Elli starts recruiting pilot participants in Germany.**
- **Energy market trading: In a follow-up project, Elli will make the energy stored in EVs available via a virtual power plant connected to the European Power Exchange (EPEX). Elli's in-house trading team ensures continuous market access 24 hours a day, seven days a week.**
- **Driving the energy transition in Europe: The goal is to integrate Elli-operated large-scale storage systems and bidirectional charging solutions into a "Managed Battery Network" (MBN). This network will help stabilize the use of volatile renewable energy and accelerate the energy transition across Europe.**

Munich, September 9, 2025 – At IAA Mobility 2025, Volkswagen Group subsidiary Elli presents a pilot project for bidirectional ("Bidi") charging in private households for the first time. In the future, homes can be powered by EV batteries and the home's solar power system.

A key component of the Bidi pilot project is a legally compliant 11 kW bidirectional charger that connects home solar and the EV with a modular software platform developed by Elli. The bidirectional charger, developed in cooperation with Elli's partner CUBOS – a leading provider of sustainable energy solutions – enables the EV battery to be used as a home energy storage unit and powers households with self-generated solar energy. Energy from the grid, the vehicle, and the home are managed intuitively via the Elli Charging app.

With smart bidirectional home charging, customers can significantly reduce their charging costs[1] under certain conditions, in some cases by up to 75 percent[2]. At the same time, independence from the electricity grid can be achieved to a comparable extent through the use of self-generated solar power combined with bidirectional charging.

Starting today, Volkswagen Group's customers and solar panel provider OTOVO's customers can

apply for Elli's pilot initiative, which will launch in Germany in December 2025. As part of the project, Elli will provide selected participants with a DC bidirectional charger.

Volkswagen Group EVs built on the MEB platform – including select Volkswagen Passenger Cars, Volkswagen Commercial Vehicles, and CUPRA models with software version ID. Software 3.5 or higher and 77 kWh batteries – are already technically capable of enabling DC bidirectional charging. With this pilot project, Elli seamlessly builds on existing technological capabilities and brings them into private homes.

Scaling Bidi charging across Europe

To analyze the regional scalability of bidirectional charging across Europe, the Volkswagen Group is also conducting several innovation projects – including one in which Volkswagen Sweden is involved. The testing campus, set up in 2021 in collaboration with the Stenberg housing cooperative, is designed to showcase and evaluate the technical energy functionalities and CO_2 impact of vehicle-to-home and vehicle-to-grid charging.

Elli's mission is to bring bidirectional charging to market maturity and enable Europe-wide commercialization. This requires scaling both hardware and software for customer-side energy integration, and supporting harmonized EU-wide legislation.

Energy trading with the Managed Battery Network

The new Bidi ecosystem is connected to Elli's "Managed Battery Network" (MBN), the company's virtual power plant. This smart energy system optimizes the use of renewable energy by storing electricity at specific times of the day and making it available later through wholesale energy trading.

The vision behind this approach is future-oriented, significantly reducing EV charging costs, maximizing renewable energy usage, and supporting the energy transition in Europe.

Giovanni Palazzo, CEO of Elli, explains: "With our pilot project at IAA Mobility 2025, we're opening a new chapter in the history of electric mobility. Bidirectional charging is the enabler of energy self-sufficiency at home, and with the initial rollout of our Managed Battery Network, we are elevating vehicle batteries and storage systems to the level of critical energy resources. In doing so, we're bridging the gap between mobility and energy."

By the end of the decade, Elli aims to integrate large-scale storage systems and hundreds of thousands of EV batteries across Europe into a Managed Battery Network (MBN), orchestrating the integration and monetization of storage capacities through its own energy trading platform. This approach will enable better use of volatile renewable energy and accelerate the energy transition in Europe.

In the first step, beginning in 2026, several hundred decentralized EVs will be connected to a virtual power plant (VPP) for the first time. Subsequently, Elli will market these flexibilities via its own trading operations on the EPEX intraday power exchange.

Elli PowerCenter for large-scale storage

In parallel, Elli is launching its large-scale energy storage business. The new Elli PowerCenter will be completed in Salzgitter in December. The facility, with a capacity of 20 MW and 40 MWh, uses

LFP battery packs from PowerCo and will serve as a platform for energy trading and future grid services. With this step, Elli is entering a new business area within the energy value chain and positioning itself as a key provider of energy and flexibility solutions.

[1] Charging costs include total electricity costs, including procurement costs, fees, charges, and levies, calculated based on the reference year 2022.
[2] The stated maximum cost savings of up to 75% as well as the degree of independence from the public power grid are based on internal simulations conducted by Volkswagen Group Innovation. The analysis considered a specific scenario: a four-person household (4 MWh/year) with an electric vehicle (77 kWh), annual mileage of 5,500 km, a photovoltaic system (7.5 kWp; yield 9 MWh), a home storage unit (5 kWh), a home energy management system (HEMS control and optimization components), and a dynamic electricity tariff (EPEX Spot DA) — compared to the same household without a PV system, home storage, and HEMS. The evaluation also incorporated insights from an internal meta-study referencing scientific sources as well as calculations conducted by Volkswagen Group Charging GmbH. The results, along with a detailed breakdown of the underlying assumptions, can be accessed at https://www.elli.eco/de/privatkunden/produkte/wallbox/laden-mit-dynamischem-stromtarif#ersparnisrechner

For more information on this topic, please visit https://www.elli.eco/de/privatkunden/produkte/wallbox/bidirektionales-laden and. www.volkswagen-group.com.

CUBOS was founded in 2018 as part of the Wolfsburg-based ES-TEC Group to develop comprehensive energy solutions for businesses – ranging from photovoltaic systems and storage to complete charging infrastructure. More than 100 employees design, install, and operate customized PV systems and charging stations. CUBOS's expertise also includes energy management and billing software, as well as its own premium hardware. With 24/7 service and locations in Wolfsburg, Berlin, Hamburg, Düsseldorf, and Munich, CUBOS helps companies generate their own energy and use it as efficiently as possible.

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