



Recharge your car's battery wherever you want!

Bosch and clever-tanken.de are making vehicle recharging easier than ever

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- ▶ Bosch management board member Heyn: "Bosch and clever-tanken.de are putting an end to the tangle of recharging options. Clever Laden ['clever charging'] gives drivers unrestricted access to charge spots."
- ▶ More choice: Clever Laden helps drivers across Germany locate some 11,500 charge spots operated by various companies.
- ▶ More transparency: Recharging a vehicle and paying takes just a few clicks.

Stuttgart, Germany – Finding a charge spot, recharging the battery, and paying for the electricity sounds easy enough in theory, but the reality is often quite different. Instead, what drivers usually encounter on the road is a bewildering jumble of operators, connectors, rates, and payment systems. In a bid to help drivers of electric cars locate exactly where they can recharge their vehicles, Bosch is joining forces with the German website clever-tanken.de. With over 20 million visits each month (IVW/Google Analytics August 2018), clever-tanken.de is the market leader for fuel-price information in Germany. The result of this collaboration is Clever Laden ("clever charging"), a new feature of the price-comparison website's app. The app will not only feature prices for gasoline, diesel, and LPG, but also the locations of charge spots throughout Germany. Around 11,500 public charging points in Germany are already accessible through the apps thanks to the Bosch charging network. Integrated filters sort the charge spots by availability, charging capacity, and required connector. In addition, the app streamlines the charging process with a uniform access and payment system. "Bosch and clever-tanken.de are putting an end to the tangle of recharging options. Clever Laden gives drivers unrestricted access to charge spots," says Dr. Markus Heyn, a member of the board of management of Robert Bosch GmbH.

Negotiating the recharging jungle

It is not only price and depreciation that make people reluctant to buy an electric vehicle; range and charging infrastructure are also central concerns. According to Germany's National Association for the Energy and Water Management Industries (BDEW), there were some 13,500 publicly accessible and web-enabled charge spots across the country in July 2018. Thanks to the Bosch charging network, Clever Laden covers approximately 85 percent of these charge spots. "Electric car drivers are afraid of getting stranded somewhere because they can't find a charge spot. Clever Laden takes that fear away. In the future, the app will show drivers precisely where they can recharge their vehicle's battery," Heyn says. The app also knows which charge spots are unoccupied, what connector a customer has to have, what charge capacity is available, and what the total electricity price will be. All drivers of electric cars have to do is download the Clever Tanken app to their smartphone. Then they just select the "electric" powertrain type to display nearby charge spots in a list or on a map.

Obstacle-free recharging

Clever Laden not only helps make sense of the recharging jungle, but also makes the entire process simpler: without having to look into technical and contractual issues themselves beforehand, electric car drivers can use the app to start and pay for the recharging process at any charge spot stored in the system. To make this possible, Bosch negotiated agreements with the operators of the charge spots. Drivers only have to sign on once. After that, all they need to use the app is a PayPal account or credit card. Charge spot operators benefit as well, as Clever Laden increases the capacity utilization of their charging infrastructure. "This collaboration aims to offer electric car drivers consumer-friendly services by cutting down on the current jumble of recharging and payment options. This will boost drivers' interest in e-mobility," says Steffen Bock, the founder and CEO of clever-tanken.de.

A high-performance data network

What the users of Clever Laden don't see is that behind the app is a powerful network of IT systems that are connected in real time. These keep the app constantly up to date, so drivers will know at any given time whether a charge spot is occupied or available. The technology behind this is provided by the Bosch IoT Suite, a cloud-enabled software package for developing applications on the internet of things. It covers the various regional power suppliers and charge spot providers as well as partner services, such as for payment transactions. Bosch has been offering apps for finding, recharging, and paying at charge spots since 2016. Available through car manufacturers such as Renault, the Bosch service is already used by several thousand electric car drivers. Clever Laden now expands the service to every electric car driver, regardless of vehicle make.

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