

There are currently too few charging points for e-cars and anyone who does fill up with electricity needs to know their way to the nearest station. The construction and operation of a charging station is just as complex and expensive as locating them.

Programmed E-Hubbub

COPY — Roger Homrich



The number of charging points for electric vehicles has risen to almost 21,000 as of mid-2019. This is half of what is necessary for the few electric cars that are currently on the road in Germany.

For the one million electric vehicles forecast to be on the road in 2020, the number would be far from sufficient. The Chancellor promises to remedy the situation by 2030, stating there will not only be an influx of ten million electric cars, but the construction of one million charging stations along with them. The small number of charging stations is not the only problem from the driver's point of view. Even today there is a proliferation of charging infrastructure. Operation is anything but simple; tariff systems and prices are a mess; some charging stations can only be operated with apps, others only with customer cards; paying by SMS, cash or credit card is often a mistake. There must be a simpler way.

INTELLIGENT E-CHARGING STATIONS

Consider that the operation of the charging stations themselves is complicated. Every charging station is a computer including hardware and software, which not only has to provide electricity, but also has to bill for it. In addition, the charging stations themselves should be serviced remotely and report errors. Since the costs for setting up and operating the charging infrastructure are high, many providers like to charge significantly more per kilowatt hour than household electricity.

With Gridware, the Berlin-based company Grid & Co., has developed an open and manufacturer-independent all-in-one system in the Open Telekom Cloud, including a usage and billing platform, with which operators of all sizes can centrally manage their charging stations. From small providers with only a few charging points to electricity providers that set up charging stations throughout Germany, everything can be managed with Gridware. The software forms the interface between electric car drivers, billing providers, electricity grid operators and charging lot operators. Configuration, control and monitoring of the charging lot are carried out via browser. New charging points are simply added without reconfiguring the entire charging fleet. "It was important to us to make the registration of a charging station as easy as possible," says Georg Schmitt, Founder and Managing Director of Grid & Co. "Therefore, the efficient and economical use of our software is even seen in the operation of just one charging lot with a single charging point."

CASHLESS BILLING

Grid & Co. equips each charging station with a SIM card which is used to transfer data on the operating status of the station and billing information to the Open Telekom Cloud. Individual dashboards are available to customers. Statistics provide information on loading processes and capacity utilization. Users of a charging station pay for the charging process via credit card, PayPal or EC card. Gridware also enables operators to set the prices for each charging station flexibly and individually. If the charging infrastructure is integrated into the system, the charging points can be maintained remotely and updated to the latest system status.