



Flexicharge NL

How the charging station supplier Flexicharge is using smart charging technology from Bender to drive the mobility transition

A 100 % CO₂-neutral electricity supply by 2050: the Netherlands has set ambitious climate targets and is tackling the energy transition with a determined approach.

When it comes to meeting these objectives, smart charging technologies and the switch to electric mobility play a central role. Bender Benelux accompanied the Dutch company *Flexicharge* as it grew from a start-up into one of the leading specialists for charging stations and charging points. Its products use intelligent, updatable charge controllers that support a variety of networks, enable reliable charging of electric vehicles and efficiently control smart grids.

All systems go for an ambitious energy transition

In 2018, the Dutch government announced a complete turnaround in its energy policy, declaring that it planned to stop extracting gas from its own gas field in Groningen by 2030 and achieve a completely CO₂-neutral electricity supply by 2050. To meet these goals, the Netherlands also needs to drastically reduce its coal and oil consumption. Since the announcement, the Dutch have been working at full steam to further develop the country's wind and solar power facilities. At the same time, mobility in the Netherlands is also undergoing a fundamental transformation: in line with its new focus solely on electric mobility, it will ban sales of vehicles with combustion engines from 2030 onwards. Thanks to strong governmental reward programs for the purchase or leasing of electric cars, the electric mobility sector is already booming. In 2021, electric vehicles even achieved a market share of around 25 % of all new cars registered for the second year in a row.

Smart charging as the key

Raymond Vergouwe, Technical Sales at Bender Benelux, believes that electric mobility will play a key role in the success of the energy transition in the Netherlands: "In the future, our energy should predominantly be obtained from wind and the sun. To make optimal use of these renewable energies, we need to generate, store, and distribute them intelligently. To achieve this, we need to use appropriate technology such as smart grids, micro-grids and other smart solutions in

combination with electric vehicles." These form part of the smart grid and can be used for energy storage. For this to occur, charging stations need to offer smart charging technology that not only simply charges electric vehicles with electricity but also does much more: for example, communicating with the vehicle bidirectionally, intelligently connecting to (Home) energy management systems and managing and installing updates via remote access.

A dynamic market and high demands

The charging infrastructure in the Netherlands is currently undergoing rapid expansion. "The market is attractive, extremely dynamic and highly competitive," explains Raymond Vergouwe. One of the country's suppliers of charging infrastructures, which works in close cooperation with Bender, is the company Flexicharge. The start-up was launched in 2015 with the vision of developing a charging station that brings together attractive design, maximum safety and reliability, and future-proof functions. When searching for a partner for its charge controllers, it soon established contact with Bender Benelux. "Our conversations were excellent and extremely cooperative right from the start," states Vergouwe. "They were looking for a sophisticated technical solution, and we had the answer that ticked all the boxes: initially our intelligent CC612 charge controller and now, since 2020, the successor CC613."

More than a technical partnership

These initial discussions led to the start of an extremely successful business relationship. "Right from the start, we never felt like a supplier but always like a partner working together with the customer to achieve progress. We initially provided Flexicharge with intensive support and technical training, and now the company is able to offer first-level support itself," declares Vergouwe, explaining the development of the cooperation. Flexicharge is constantly increasing its share in the Dutch market and opened two new production sites last year. It now has a total of three manufacturing facilities that produce electric charging stations for private households and companies and charging solutions for large car parks with 20 to 40 EV charging spaces. Up to now, the company has only supplied AC charging stations, but it plans to introduce its first DC stations at the end of the year. Bender Benelux has also been commissioned to supply the charge controllers for these fast-charging stations.

»»Let's charge the future together!««

At the heart of charging stations

Charge controllers form the core of charging stations because they determine the performance of the station and how it is connected to other components. Dynamic load management, which ensures that the energy available is intelligently distributed and a stable power supply is guaranteed at all times, is becoming an increasingly important demand for all charging stations. The charge controllers from Bender used by Flexicharge feature integrated dynamic load management that enables them to be flexibly adapted to suit different power sources and outlets without a subordinate system. With their multi-level load management, they enable larger charging parks with more than 250 outlets to offer automatically optimised charging. What's more, they also offer a multitude of other intelligent applications such as enabling individual charging stations or vehicles to be prioritised based on requirements or coordinating charging times, for example so that vehicles are charged during working hours.

The European Green Deal

One of the measures adopted by the European Union to combat climate change is the "Fit for 55" package. This package contains clear guidelines on how net CO₂ emissions should be reduced by 55 % by 2030. One development planned to achieve this target is the rapid expansion of the charging infrastructure for electric vehicles. By 2025, for example, the EU has set itself the target of providing an EV charging station every 60 kilometres on the most important motorways throughout Europe.

Offering future-proof solutions

Particularly in the case of such young and dynamic markets as the charging station market, it is important to offer future-proof solutions that will still be able to be used when individual parameters change. Frank Mehling, Business Development from Bender's business unit eMobility, addresses this requirement, explaining that: "When developing our charge controllers, we consciously focused on ensuring that they are updatable. As a result, they can be easily adjusted to meet future requirements via software updates, without needing any replacement hardware or work to be carried out on the charging station itself." The charge controllers also offer a wide variety of communication solutions ranging from Ethernet and WiFi interfaces to integrated 4G modems. This enables them to be easily linked into back-end systems and makes them suitable for remote maintenance. The integrated powerline communication between the vehicle and the charging station in accordance with the standard ISO 15118 additionally facilitates easy implementation of plug & charge solutions. "Our charge controllers are smart, flexible and future-proof. And with our technical support, our partners such as Flexicharge can make the most of strong background support whenever they need it," states Frank Mehling, summarising the success story.



Marcel Vriens and Reinier van den Berg are the founders of Flexicharge, one of the leading providers of charging stations in the Netherlands. Their success is based on a solid foundation that they have built with their eye for good design, instinct for finding future-proof solutions, and knack for dynamic markets.

What was your vision when you launched the company Flexicharge?

We wanted to create a product that is different to those already available: a charging station that works perfectly and is also so attractive that people are happy to install it on their property.

How did Bender impress you as a partner?

At the start, we had a multitude of questions – and Bender always had the right answers. The charge controllers are technically superior, and Bender was always a reliable supplier, even under difficult circumstances. This is important for us because our customer demand is growing rapidly, and we want to meet it with reliable deliveries.

The development of charging stations is an extremely dynamic field. How do you remain fit for the future?

We always offer our customers state-of-the-art technology. This is why Bender's flexible, updatable solutions are ideal for us. We can quickly respond to new developments and easily integrate them into our charging stations via an update. —