

Case Study

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# N-ERGIE car park of the future

reev

N-ERGIE

# car park of the future

## an eMobility lighthouse project by reev and N-ERGIE

As an energy service provider with sustainable ambitions, N-ERGIE is committed to its responsibility towards the environment, the climate, as well as the region and the community. Based on these principles, the car park was opened in Nuremberg in July 2021. Together with [reev](#), N-ERGIE succeeded in creating the biggest electric car park in Franconia — with 128 charging points and intelligent energy management. The project was funded by the Federal Ministry of Transport and Digital Infrastructure.

### About N-ERGIE

Energy service provider with sustainability standards

With 2,500 employees and annual sales of € 3.1 billion (2020), N-ERGIE plays a significant role as an energy supplier in Northern Bavaria. The energy company has made sustainability its overarching goal. The company switched to eMobility years ago: their electric fleet now

comprises more than 100 eCars and their electricity is generated mainly by photovoltaic systems.

### Numbers, dates, facts

128 charging points are integrated in the lighthouse project

The multi-storey car park has a total of 338 parking spaces on 14 mezzanines, 128 of which offer charging options for eCars and another 25 for electric two-wheelers. In terms of managing the charging infrastructure, N-ERGIE opted for the reev [Dashboard Pro](#). In order to use resources efficiently in a project of this size, and to keep operational costs low, the automation of the processes involved was particularly important to the company. N-ERGIE's striving for sustainability and regionality is also reflected in the energy supply of the parking garage: Powerful PV modules with 100kWp were installed on the roof, which provide green electricity for the parking garage. Combined with an additional

**338**

Parking spaces

**128**

Charging points

**14**

Mezzanines

**100**

kWp  
PV power

**112**

kWh storage  
capacity

storage capacity of 112 kWh, this enables ideal energy use in the parking garage of the future. Thus, the battery storage is charged



In addition to in-depth monitoring, the reev [Dashboard Pro](#) functionalities include

features like user control or user and charging management, including flexible tariff structure and automated billing for charging processes. Public charging (ad hoc charging and eRoaming) is also possible.

„We chose a car park with this particular shape and design so that the parking space could be stacked as compactly, surface-conserving and resource-saving as possible. [...] A solution that lends itself especially to providing an infrastructure that is suitable for electric charging in densely populated urban areas.”

**Jochen Stein**

Project Manager, N-ERGIE

by the solar system when there is a surplus of energy. When there is little sun, however, the stored electricity is passed on directly to the cars.

## Motivation

As compact as possible, saving on space and resources

The idea of the multi-storey car park has its origin in the site development of N-ERGIE. The merger of two branches resulted in an increased need for parking spaces around the premises in Nuremberg-Sandreuth. The multi-storey car park meets this requirement with over 300 parking spaces for all user groups, which also prevents overcrowded city centers. Last but not least, the self-sufficiency using solar energy shows that sustainability is high-priority in this project. The use of renewable energies was a crucial requirement.

## Application

Holistically sustainable

Since the start of construction in May 2020, has been dedicated to sustainability. For instance, trees that were standing on the original site of the parking lot were replanted. The roof was planted around the PV system and two sides of the building were covered with climbing plants. The location is well connected to public transport, which allows further travelling in a way that minimises CO2 emissions.

The lighthouse project was implemented in close cooperation between N-ERGIE, reev and reev solutions. This ensured the seamless coordination of hardware, software and electrical engineering; together with the experts from N-ERGIE, including Stefan Mull as project manager for innovative technology, reev was responsible for the entire planning and design process. The highly specialised

electricians from reev solutions carried out the technical planning and programming of the charging stations, as well as the integration of load and energy management. For the hardware, the decision was made to use the eMH3 from ABL. The charging infrastructure is managed using the reev Dashboard Pro in order to use in-depth monitoring functions, while also being able to benefit from the full potential of automation. Charging processes can thus be carried out automatically and in a legally compliant manner in the background.

“Expansions and updates of the charging solution can be implemented flexibly and easily, enabling the project to remain future-proof for decades.”

**Josef Hasler**  
CEO, N-ERGIE

## Business

### eMobility for all user groups

The charging points in the newly finished parking garage are not only available to N-ERGIE employees and customers. Guests and residents are able to park and charge there. In addition to the parking spaces with charging facilities, there is also a quick charging station at the entrance.

Via an app, the intelligent parking space management assists with booking, allocation of parking spaces or carfinding. The eCar

parking spaces are also available as public charging options for ad hoc charging and eRoaming. Therefore, different user groups with different charging tariffs are set up. Their control and billing of the charging processes is clearly displayed on the reev dashboard and processed fully automatically in the background. The online operator portal also provides an overview of the individual charging processes and their consumption at all times.

## Load and energy management

### A holistic, coordinated concept

As an energy company with high sustainability standards, efficient energy management also plays an important role for N-ERGIE. It is made possible by the combination of PV system and storage: When the sun is shining, connected eCars are charged directly from the system and the electricity storage is topped up. During dark periods or power peaks, it can then release the stored energy. reev offers a load management system that regulates the power supply to the sub-distributors on the mezzanine floors and ensures that there is always enough power available for the charging stations from the photovoltaic system or the battery.

N-ERGIE has also implemented an intelligent information system. It notifies registered drivers of increased emissions in the city centers and gives instructions to park their cars. In addition to parking and charging, the facility offers sharing services, which make it possible to continue the journey from the car park.



## Outlook

### Expansion and digitisation in planning

With the car park of the future, N-ERGIE has implemented a project that has been very well received. It is a symbol for the company's environmental goals and helps to relieve the congestion of the Nuremberg city centre.

The parking garage has not only been equipped with charging options, but is also powered by electricity from solar energy, software-based charging infrastructure and intelligent load and energy management for environmentally friendly eParking for all user groups.

Even after its opening, the car park of the future is still open to innovation. The project was designed in such a way that extensions to the charging solution can be implemented flexibly. First of all, every parking space can be upgraded to an eParking space with a charging point. Another aim is to implement

more comprehensive digitisation and AI solutions in user management.

„In a project of this size, all components have to be well coordinated. The electrotechnical conception is particularly complex. Accordingly, we were happy about the close cooperation with the eMobility experts from reev.“

**Josef Hasler**  
CEO, N-ERGIE

## About reev

reev's flexible products and services for every application make it easy to get started with eMobility.

reev is an expert in smart, networked charging solutions. The Munich-based company has set itself the goal of giving everyone the opportunity to shape the future of eMobility and actively

contribute to the mobility transformation. Therefore, reev has developed a simple, transparent and fully automated charging platform for managing and controlling charging infrastructure for electric cars.

The user-friendly software solution can be individually customised and is thus suitable for every application. The software is available as a Bundle (a combination of hardware and software), as a Full Service (incl. consulting, planning, implementation, maintenance and support) or as a stand-alone solution.

