



# Case Study

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## N-ERGIE

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**N-ERGIE**

# The Parking Garage of the Future: An eMobility Lighthouse Project by reev and N-ERGIE

As an energy service provider with sustainable ambitions, N-ERGIE acknowledges its responsibility toward the environment, the climate, the region, and the community. In line with this commitment, the Parking Garage of the Future was inaugurated in Nuremberg in July 2021. Together with reev, the company successfully implemented the largest electric parking garage in Franconia – featuring 128 charging points and intelligent energy management. The project was funded by the Federal Ministry of Transport and Digital Infrastructure.

## About N-ERGIE

An Energy Service Provider with a Commitment to Sustainability

With 2,500 employees and an annual turnover of €3.1 billion (2020), N-ERGIE plays a significant role as an energy provider in Northern Bavaria. The company has made sustainability its overarching goal. Years ago,

it already began transitioning to eMobility: today, its electric fleet consists of more than 140 electric vehicles. The majority of its electricity is generated using photovoltaic systems.

## Facts and Figures

128 Charging Points Integrated into the Lighthouse Project

The parking garage spans 14 half-levels and offers a total of 338 parking spaces, 128 of which are equipped with charging points for electric cars, along with 25 additional spots for electric two-wheelers. For the operation of the charging infrastructure, N-ERGIE opted for the reev Dashboard Pro. Given the scale of this project, the company placed particular emphasis on process automation to efficiently manage resources and minimize operational effort.

**338**

parking  
spaces

**128**

charging  
points

**14**

half-levels of  
parking space

**99 kWp**

photovoltaic  
capacity

**112 kWh**

battery  
storage

N-ERGIE's commitment to sustainability and regional energy sourcing is also evident in the energy supply of the parking garage. On the



The functions of the reev Dashboard Pro include, in addition to advanced monitoring features such as consumption tracking and user and charging management, flexible tariff design and automated billing of charging processes. Public charging (ad hoc charging and eRoaming) is also possible.

roof, high-performance photovoltaic modules with a capacity of 100 kWp have been installed to generate green electricity for the facility. The combination with an additional storage capacity of 112 kWh ensures optimal energy utilization in the Parking Garage of the Future. When there is a surplus of solar energy, the battery storage is charged, while the stored electricity is directly supplied to the vehicles when sunlight is scarce.

## Motivation

### As Compact, Space-Efficient, and Resource-Conserving as Possible

The idea for the parking garage originated from N-ERGIE's site development plans. The merger of two branch offices created an increased demand for parking spaces around the company premises in Nuremberg-Sandreuth.

The multi-level parking garage meets this demand while also helping to reduce congestion in city centers by providing more

than 300 parking spaces for various user groups. The partial self-sufficiency through solar energy further underscores the project's strong focus on sustainability. The use of renewable energy was a key requirement from the start.

"We chose a parking garage of this design and structure to stack parking spaces as compactly, space-efficiently, and resource-conservingly as possible. [...] It's a solution that is particularly suitable for providing the necessary charging infrastructure in highly dense urban areas."

**Jochen Stein**

Projectmanager at N-ERGIE

## Implementation

### Holistically Sustainable

From the very beginning of construction in May 2020, the project has been guided by the principles of sustainability. For example, the trees originally located on the site were transplanted. The roof is equipped with a photovoltaic system and green roofing. Additionally, the location offers convenient access to public transportation and a VAG-Rad bike-sharing station, encouraging further CO<sub>2</sub>-saving mobility.

The implementation of this lighthouse project was carried out in close collaboration between N-ERGIE, reev, and reev solutions. This ensured seamless interaction between

hardware, software, and the electrical design. Together with N-ERGIE's experts, including Stefan Mull as the project manager for innovative technology, reev took on the entire planning and project execution. The highly specialized electricians from reev solutions handled the technical planning and programming of the charging stations, as well as the integration of load and energy management.

The hardware selection fell on the eMH3 from ABL. To utilize advanced monitoring

“Extensions and updates to the charging solution can be implemented flexibly and easily, ensuring that the project remains future-proof for decades to come.”

**Josef Hasler**  
CEO of N-ERGIE

functions and fully benefit from the potential of automation, the charging infrastructure is operated with the reev Dashboard Pro. This allows charging sessions to be processed automatically and in compliance with legal requirements in the background.

## Operation

### eMobility for All User Groups

The completed parking garage and its charging points are available not only to N-ERGIE employees and customers but also to guests and local residents. In addition to the parking spaces with charging capabilities,

there is also a DC fast-charging station with a power output of 150 kW at the entrance.

An intelligent parking management system supports users via an app that handles everything from reservations to space allocation and final car-finding assistance. As public charging stations, the electric vehicle spaces can also be used for ad hoc charging and eRoaming. This creates various user groups with different charging tariffs. The management and control of these charging sessions are clearly displayed to N-ERGIE's fleet manager through the reev Dashboard, an online operator portal. The billing of charging sessions is automated and compliant with legal requirements, running seamlessly in the background. The online portal provides the fleet manager with real-time insights into individual charging sessions and their consumption.

## Load and Energy Management

### A Comprehensive, Coordinated Concept

As an energy company committed to sustainability, efficient energy management is a key priority for N-ERGIE. This is achieved through the combination of a photovoltaic (PV) system and battery storage. On sunny days, connected electric vehicles are charged directly from the solar system while simultaneously filling the battery storage. During periods of darkness or peak demand, the stored energy is released to supply the charging stations.

reev provides load management that regulates the electricity supply to the sub-





distributors on each half-level, ensuring a constant and sufficient power supply from the PV system or the battery.

Additionally, N-ERGIE has implemented an intelligent information system that notifies registered drivers when emission levels in the city center are elevated, encouraging them to park their vehicles. Beyond parking and charging services, the facility also offers sharing options, enabling users to continue their journeys using alternative modes of transport.

## Outlook

### Expansion and Digitalization in Progress

With the Parking Garage of the Future, N-ERGIE has completed a project that has received widespread positive feedback. It stands as a visible symbol of the company's environmentally conscious goals and helps

reduce congestion in Nuremberg's city center. The garage has not only been equipped with charging infrastructure but, thanks to solar power, software-based charging systems,

“In a project of this scale, all components must be perfectly coordinated. The electrical design, in particular, is highly complex. We were therefore very grateful for the close collaboration with the eMobility experts from reev.”

**Josef Hasler**  
CEO of N-ERGIE

and intelligent load and energy management, it serves as an eco-friendly eParking solution for all user groups.

Even shortly after its inauguration, the Parking Garage of the Future remains open to innovation. The project was designed to allow for flexible expansion of the charging infrastructure. In principle, every parking space can be upgraded to an electric parking spot with its own charging point. Additionally, N-ERGIE plans to implement more advanced digital solutions, potentially integrating AI technologies into user management.

## About reev

reev offers flexible products and services that provide an easy entry into eMobility for any application.

reev is an expert in intelligent, networked charging solutions. The Munich-based company has set itself the goal of enabling everyone to shape the future of electromobility and actively contribute to the mobility transition. To achieve this, reev has developed a simple, transparent, and fully automated charging platform for managing and controlling electric vehicle charging infrastructure.

The user-friendly software solution is customizable and suitable for any application. The software is available as a bundle (a combination of hardware and software), as a full-service package (including consulting, planning,



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