



SECURE POWER FOR RELIABLE DELIVERY OF GOODS

Photo: Achim Banck

Profile

Client:

Voigt Logistik

Industry:

Transport and logistics company

Special characteristics:

planned further expansion of performance

Region, country:

Neumünster, Germany



The background

Voigt Logistik is one of the largest logistics companies in Schleswig-Holstein. In order to keep up with the increasing flow of goods, the company had to build a new handling hall in the autumn of 2018. Since the company also wanted to take a step in the direction of sustainable logistics, it included the production and use of solar power in the planning from the beginning.

The challenge

With a turnover of nearly 100 million euros and over 400 employees, Voigt Logistik is among the leading transport and logistics service providers in Northern Germany.

Due to this economic success, the company's old handling centre's capacity of 1,400–1,800 shipments a day had reached its limits. In Neumünster-Süd, the southern part of Neumünster, the company has thus established a new location with a 10,000 sqm large handling hall complete with 106 loading bays— an investment worth 15 million euros. This includes a 251 kWp photovoltaic installation, which Voigt Logistik had installed on the roof of the hall.

The work in a handling hall typically begins very early in the morning, often before sunrise, so electricity is needed to power the lights and

air conditioning. The electric vehicles used for transporting pallets are in constant motion all day and cannot be charged until the evening, when most shifts end. An industrial battery storage system is the best solution for such a situation. Not only does it help to distribute the self-produced electrical energy throughout the day, it also serves to cushion the peak loads that become necessary for charging the electric vehicles.

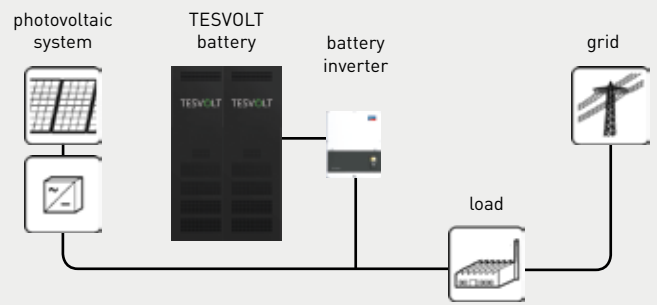
The requirements for a storage solution:

- easy upgrading by way of an expandable system
- great durability to safeguard operation and investment long-term
- sufficiently high performance for capping peak loads when e-vehicles are charging

The solution

The company Bernd Ickert Elektroanlagen GmbH, famous across Germany for outfitting the new Elbphilharmonie concert hall in Hamburg, won the public tender and installed the photovoltaic installation.

Since the exact consumption values of the new handling hall remained unknown in the beginning, a large focus in the project planning was on expandability. Thus, the company installed two TESVOLT HV 70 lithium-ion battery storage systems with a capacity of 403 kWh and an output of 120 kW.



The advantages

With the larger hall, Voigt Logistik was able to raise its handling capacity to around 2,500 inbound and short-distance lorries can begin their routes 30 minutes earlier than before. The lithium-ion storage system ensures that the electricity produced on the roof is able to support these procedures with maximum efficiency.

- **Expandability**
 - TESVOLT systems can be expanded or exchanged at any time – not just after the first few months of operation, but after several years as well.
- **Long service life**
 - Built for up to 30 years: Made possible by robust Samsung battery

cells and one of the most advanced battery management systems on the market.

- **Reliable operation**
 - Certified installers can monitor storage health down to the cellular level.
- **High-speed charging**
 - TESVOLT storage systems are 1C-capable, which means that they can be completely charged or discharged in one hour if configured accordingly. Voigt Logistik is currently charging its electric forklift trucks with battery-saving 0.3C.

Project facts and figures

| | |
|-------------------------------------|---|
| Storage system: | TS HV 70, made in Germany by TESVOLT |
| Energy content/ discharge power: | 403 kWh (84 modules), 120 kW |
| Cell: | Lithium NMC prismatic (Samsung SDI) |
| Efficiency (battery): | up to 98% |
| Cycles: | 6,000–8,000 (0.5C to 1C at 23°C +/- 5°C with 100% depth of discharge) |
| Operating temperature: | -10 to 50°C |
| Battery inverter: | 2 x SMA Sunny Tripower Storage 60 |
| Installer: | Bernd Ickert Elektroanlagen GmbH |

“The TS HV 70 is the first TESVOLT storage system we have worked with, but certainly not the last. We were particularly impressed by the quick assembly and full support service.”

Christoph Hermann, Bernd Ickert Elektroanlagen

“In logistics, we move at a quick pace, so the infrastructure just has to work. I’m pleased that TESVOLT’s products are made with quality German workmanship and provide us with the security and reliability we need every day for our business.”

Henning Voigt, Managing Director of Voigt Logistik

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