IT'S WORTH IT

IT business reduces CO_2 footprint by 30% with photovoltaic installation and storage system

TESVOLT
THE ENERGY STORAGE EXPERTS

PROFILE

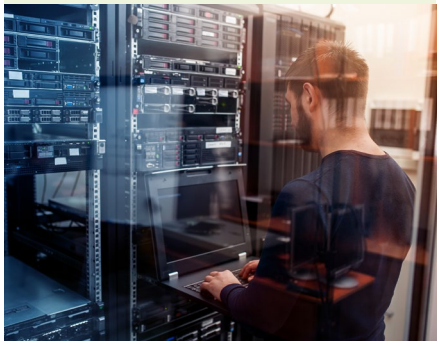
Client:
LIRA service GmbH

Industry:
IT

Region, country:
Paderborn, Germany

THE BACKGROUND

LIRA service GmbH is a resource planning software company. Working in partnership with Kronospan, one of the world's leading manufacturers of chipboard and laminate flooring, LIRA service is responsible for the complex information technology of this international organisation. It therefore develops and operates a comprehensive software portfolio for Kronospan. In addition to this, the company maintains and installs the IT infrastructure at many different sites.



THE CHALLENGE

In the spring of 2020, LIRA service moved into a new building on the Paderborn IT campus in Germany. More than 60 employees work at this site on software solutions for Kronospan's order and sales processing, production planning, storage and dispatch logistics, and bookkeeping. The business's small data processing centre with mid-range servers, 60 workstations, and two heat pumps for heating and cooling the building, consumes around 250 megawatt hours annually. As no other primary energy sources were to be installed and the new head office was in a large low-rise building with a significant amount of roof space, it made sense to use solar power to reduce the electricity drawn from the grid by using electricity produced on site.

Romberg, a well-known company specialising in electronics based in Paderborn, fitted a 99 kWp photovoltaic installation on the undulating roof. However, as the IT infrastructure has to run 24/7 and sometimes also has to be cooled, an electricity storage system was required as an addition to the photovoltaic installation. Modern lithium-ion battery storage systems are powerful and have an extremely long service life due to high-quality components and intelligent battery management systems.

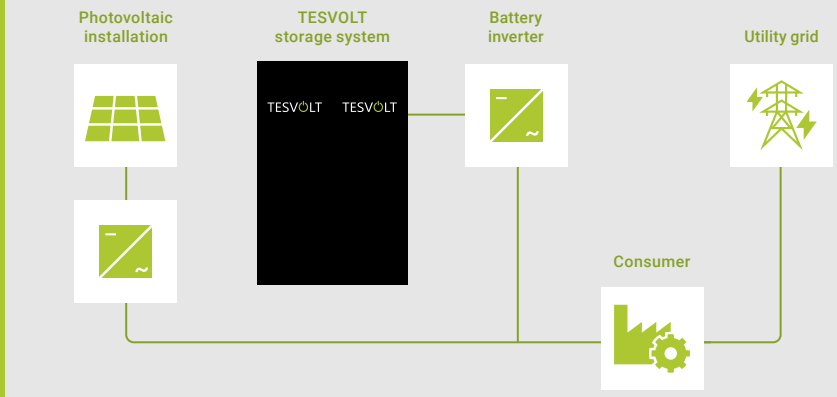
The requirements for a storage solution:

- High-performance storage system with a high depth of discharge and many guaranteed cycles for a sustainable and long-lasting investment
- Easy installation and high operational reliability in an electrically sensitive environment

INCREASED
SELF-CONSUMPTION

THE SOLUTION

Romberg subsequently upgraded the photovoltaic installation with a lithium-nickel-manganese-cobalt battery storage system. This was supplied by the storage experts TESVOLT from Lutherstadt Wittenberg who specialise in commercial and industrial applications. As with all Tesvolt products, the TS HV 70 installed for this project is designed for decades of continuous operation. It also complies with the highest safety requirements and has an energy content of 134 kWh.



"The storage system works. The product is perfect and we are extremely pleased with it."

Dietmar Rinne, CEO LIRA service GmbH

"We have relied on TESVOLT for a long time and have no doubts that this was the right decision – first-class products and superb service."

Mirco Stork, TESVOLT expert partner, Romberg Projekttechnik

THE ADVANTAGES

- 30% reduction in electricity drawn from the grid due to PV and the storage system
- CO_2 reduction reduces load of the overall portfolio of the parent company
- Sustainable corporate governance as an advantage in the competitive market for IT specialists (employer branding)
- **Safe and long-lasting**
  The system boasts an above-average lifespan of up to 30 years thanks to extremely robust SAMSUNG SDI cells and a one-of-a-kind battery management system. This optimises cells not only within a single module but also between modules within a cabinet.
- **Expandable**
  TESVOLT systems can be expanded or exchanged at any time – not just after the first few months of operation but even many years later.
- **Powerful and responsive**
  Thanks to the battery management system, TESVOLT storage systems make the energy they accumulate fully available. TESVOLT storage systems are 1C-capable, meaning they can be fully charged or discharged in one hour with the proper configuration. As a result, even high-performance consumers can be kept running when the sun isn't providing enough power.

PROJECT: FACTS AND FIGURES

Storage system	TS HV 70
Energy	134 kWh
Charging power	60 kW
Cell	Lithium NMC prismatic (Samsung SDI)
Efficiency (battery)	Up to 98%
Cycles	6,000–8,000 (0.5C to 1C cycles, at 23°C +/-5°C with 100% depth of discharge)
Operating temperature	-10 °C to 50 °C
Battery inverter	SMA Sunny Tripower Storage
Installer	Romberg Projekttechnik GmbH & Co. KG

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