

A LONG-TERM INVESTMENT

Battery storage system helps with young cattle rearing

TESVOLT
Free to go green.



PROFILE

Client:
Heiner Meevissen, cattle farmer

Industry:
Cattle industry

Region, country:
Brüggen, NRW, Germany

THE BACKGROUND

The cattle farm belonging to Heiner Meevissen lies in Brüggen, an area in the westernmost part of North Rhine-Westphalia and just a few kilometres from the Dutch border. He and his family have reared young cattle here for decades. In his cowsheds, Meevissen primes up to 120 heifers for the work they'll be doing in dairy farms – a job that comes with responsibilities, given that monitoring the animals, feeding them and overseeing health management in the rearing process are all essential for profitable cows that live for a long time.



THE CHALLENGE

Animal farming is energy-intensive. Cowsheds need lighting and in summer need ventilators to keep them cool. Water also needs to be pumped, and feeding and milking systems managed. In intensive years, Meevissen can pay up to EUR 35,000 for electricity.

Yet with a total of 4,500 m² of barns on his land, some of which he rents out, Meevissen commands a huge hidden potential: sunlit surfaces. As a result, Meevissen hired RedTherm, a specialist for sustainable energy concepts based in Uedem, Germany, to harness this energy for him. RedTherm laid a 400 kWp photovoltaic system over the roof surfaces in stages.

Some of the electricity produced by this can be fed in by Meevissen directly. But given that there are large consumers on his farm that also need powering at night, the cattle farmer wanted to find a way of keeping the electricity produced during the day for night-time use.

Lithium-ion battery storage systems adapted for commercial enterprises are now able to do an excellent job of this.

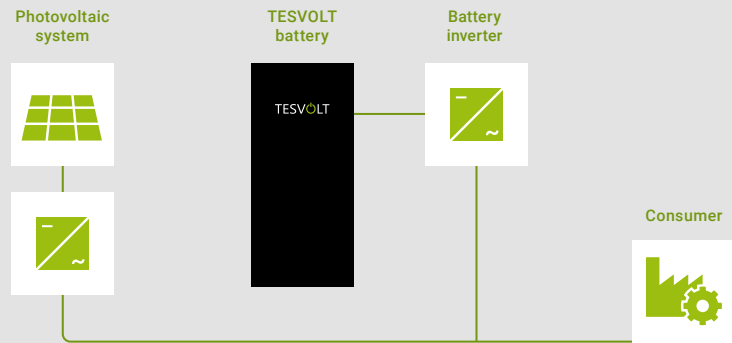
The requirements for a storage solution:

- High-performance storage system with a high depth of discharge and a high number of guaranteed cycles for a sustainable and secure investment
- Easy installation and high operational reliability in a tough environment



THE SOLUTION

RedTherm went looking for a suitable storage system and struck gold with TESVOLT, a German company based in Lutherstadt Wittenberg. The TESVOLT lithium-ion battery storage systems feature an unparalleled battery management system that delivers not only outstanding performance but also a high level of durability. This makes them the ideal solution for industrial applications. RedTherm installed the TS 48 V with its energy content of 28.8 kWh and a continuous discharging power of 18 kW.



»I really am 100% satisfied with the storage system. Which is why I have already persuaded several colleagues and friends of the benefits of this TESVOLT product.»

Heiner Meevissen, cattle farmer

»We now only sell TESVOLT for these kinds of applications. Having the technical edge is one thing, but their service is just simply phenomenal.»

Klaus Mycka, Engineer at RedTherm

THE ADVANTAGES

- **99 % self-sufficient**
Only 1% of the electricity consumed by the farm still comes from the grid
- **Safe and long-lasting**
The system boasts an above-average lifespan of up to 30 years thanks to extremely robust Samsung battery cells and the 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's 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 48 V
Energy content	28.8 kWh
Discharging power	18 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 Island
Installer	RedTherm GmbH & Co. KG

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