

# GREEN ELECTRICITY IN FULL BLOOM

Flower wholesaler relies on green electricity  
from efficient battery storage system



## PROFILE

**Client:**

Nijssen Tuin & Bulbs

**Business:**

Flower wholesaler

**Special characteristics:**

Flexible demand-driven development

**Region, country:**

North Holland, the Netherlands

## THE BACKGROUND

The northern Dutch town of Heemstede is nestled among vast dunes near the North Sea. The region is known for its flower industry. The large tulip fields between the canals and meadows of the polder landscape are a beautiful sight. This is where the Nijssen Tuin & Bulbs company has set down roots. The flower wholesaler sells flowers in its own garden centre, packs them for wholesale in nearby Amsterdam and also exports the flowers and bulbs all over the world via its own online shop.



## THE CHALLENGE

Nijssen Tuin & Bulbs, as a flower wholesaler, requires a large amount of power. The plants require lighting and watering and, depending on the season, heating or cooling. The flower bulbs must be kept below 5°C at all times to prevent them from sprouting prematurely. And, of course, the packaging machines also need electricity. In addition, the owner's own house is located on the company premises; he lives there with his family and, of course, also consumes electricity.

The company's energy demand peaks during the important main season between the beginning of June and the end of September, when the flower bulbs are harvested, washed, dried and then cooled. Covering these needs with the conventional power supply has become more and more of a challenge as business activity has increased, especially now that grid capacity in the Netherlands is under severe strain due to the energy transformation.

According to a forecast by the local energy supplier, it could take up to 10 years before the supplier would be able to offer a supply that meets local demand.

Another challenge: business trends are difficult to predict since they depend heavily on developments in international markets. This means that demand for energy can remain constant or increase sharply. What is needed is a flexible energy supply solution that can cover peak loads and, if necessary, grow along with business.



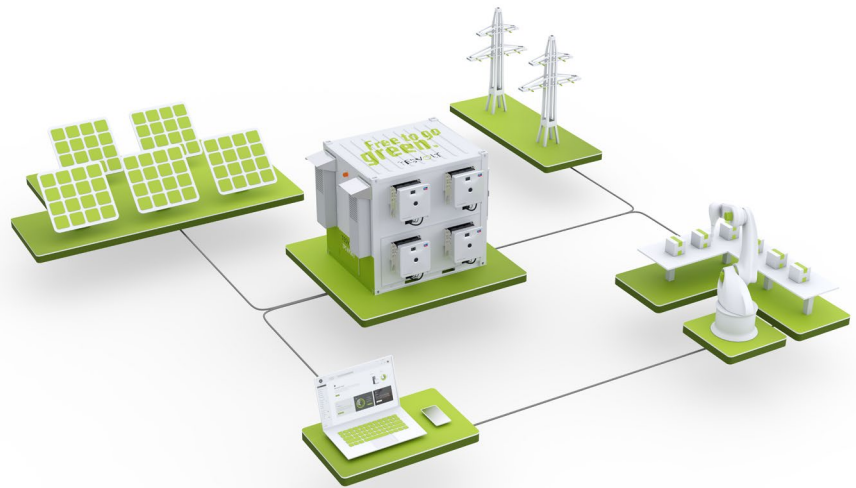
PEAK SHAVING



INCREASED  
SELF-CONSUMPTION

## THE SOLUTION

Expirion, a local installation company and long-standing TESVOLT partner, rose to the challenge. It installed a photovoltaic installation with 276 modules and 100 kWp on the roofs of the garden centre. The team also upgraded the installation to include a battery storage system that can be expanded to meet the energy demands of the flower wholesaler. Since they had to install the storage system outside for fire safety reasons, Expirion opted for TESVOLT's container storage system TPS HV 80 E.



"SMA, TESVOLT, Expirion: this is the dream team!"

Jaap Burgerhout, Director, Expirion

"The solar installation and the energy storage system work perfectly – we are very happy with them!"

Gert-Pieter Nijssen, Managing Director, Nijssen Tuin & Bulbs

## THE BENEFITS

The TESVOLT storage system TPS HV 80 E has been hidden behind the large hall of the garden centre for several months. Some advantages have already paid off for Nijssen Tuin & Bulbs.

### • Installation

Plug and play: the TPS HV 80 E is pre-configured and pre-installed in the container production facility in Lutherstadt Wittenberg. This meant the installation could be completed quickly.

### • Peak shaving

The storage system is able to reliably absorb the peak loads that occur mainly at the beginning of the harvest season in June, so power can be supplied with

a corresponding reduction in connected load.

### • Expandability

The TPS HV 80 E is completely modular and can be easily expanded as operations and energy demands grow.

### • Energy trading

The storage system runs on-grid, meaning it is connected to the power grid. Since there is a surplus of wind power in the Dutch power grid, there is the option to generate additional income in the future by storing electricity and feeding it into the grid when it is needed.

## FACTS AND FIGURES

Storage system	TPS HV 80 E
Energy/output	160 kWh / 100 kW
Cell	Lithium NMC prismatic (Samsung SDI)
Efficiency (battery)	up to 98%
Cycles	6,000 @ 1C / 8,000 @ 0.5 C (100 % EoL   70 % EoL)
Operating temperature	0 °C to +50 °C
Battery inverter	2 x SMA STPS X 50
Installer	Expirion B.V.

### TESVOLT AG

Am Heideberg 31 | 06886 Lutherstadt Wittenberg  
Deutschland | Germany  
Phone +49 (0) 3491 8797 100  
info@tesvolt.com | [www.tesvolt.com](http://www.tesvolt.com)

**TESVOLT**  
*Free to go green.*