

Bakery Lüttel, Lingen (Germany)

“This journey was crucial to our survival: Our business probably wouldn’t exist today if we had not embarked on this mission.”



Peter Lüttel
Managing Director, Bakery Lüttelarts

Opportunity

Peter Lüttel—who inherited his family’s 116-year-old bakery in Lingen, Germany—was looking for new ways to reduce the business’s costs and energy consumption. Compared to many other craft businesses, baking requires a substantial amount of energy. This energy can come from electricity or combustion methods like gas or oil. In 2000, Lüttel’s bakery was consuming around 180,000 kWh of electricity from the power grid every year, which felt like too much to him. So, he wanted to find a cleaner, more cost-effective solution to his bakery’s increasing power needs.

Solution

Lüttel realized that his interest in electrical engineering could help him find a solution to his business’s energy needs. Since the bakery needed a new heating system, he started his journey by installing a combined heat and power CHP unit system that produces heat plus electricity as a waste product. He used this as the base for a localized heating network he created on his property that connects to all the appliances that use heat or hot water. Then, in 2013, he completed his next step of installing a 58 kWp solar panel and Powerwall system. This then supported their transition from gas to electric ovens.

Result

Their new system has drastically reduced the bakery’s reliance on the power grid, cutting their electricity bill by 50 percent despite having installed another electric oven. They have also been able to reduce their gas consumption by 50 percent at the same time. They are able to charge each Powerwall once per day with energy generated from their solar panels, when the sun is shining, and once with their CHP units, so their energy is always available when they need it. They’re even sharing their energy with customers by making their Wall Connector available to visitors in need of electric vehicle charging. The transition to solar energy has been key to the bakery’s survival, allowing them to increase their energy savings so much that they are planning to install additional Powerwall units in the future.

Project Location

Lingen, Germany



System Size

3 Powerwall Units (40.5 kWh)
58 kWp Solar Panels

Applications

Replace gas and other fossil fuels
Reduce grid energy consumption
Support e-mobility

Comissioned

2013