



Green Grocers:

Coop Norge's sustainability success with Pixii's battery energy storage systems

In the competitive grocery retail market, sustainability is not just a trend; it's the cornerstone of consumer loyalty. With shoppers increasingly backing their values with their wallets, it's vital for businesses to make sustainable choices, not just in word but in action.

The challenge

Coop Norge, Norway's second largest grocery chain, were ranked by Norwegian consumers as industry winners in the Sustainable Brand Index 2023, Europe's largest market study in sustainability. While awards and recognition are great, Coop were determined to keep pushing forward to exceed their consumers high expectations and achieve their own ambitious sustainability goals.

With the aim of harnessing solar energy at their Gardemoen warehouse and limiting peak power consumption, all while reducing energy costs and CO2 emissions, Coop embarked on a pilot project to trial Pixii's battery energy storage technology.

Applications/functions in use:



Peak shaving



Excess solar power storage



PV self consumption

Case details

- Objective:** Meet sustainability goals and reduce energy costs
- Project:** Coop Gardemoen Warehouse pilot
- Industry:** Commercial & Industrial
- Country:** Norway

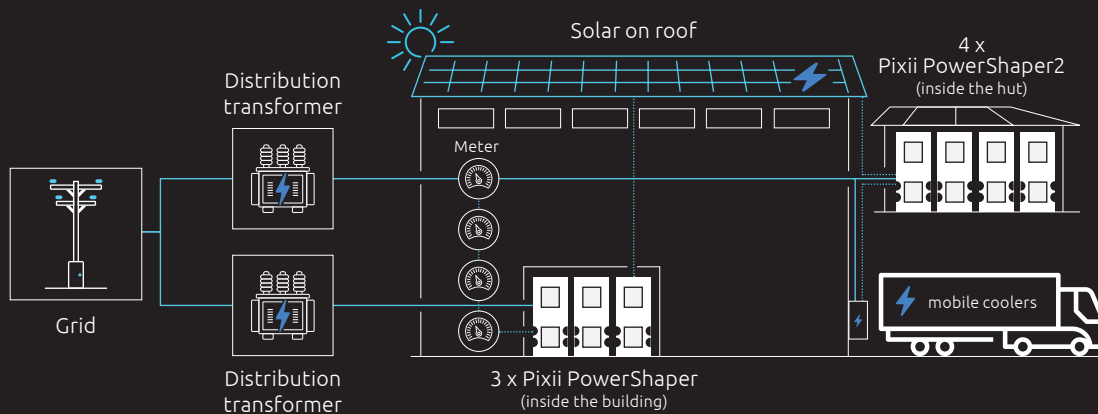
Background

Coop is Norway's second largest grocery player and a distinct consumer-owned organization. With a history dating back to the 1840s, Coop is rooted in the values of consumer cooperatives that aimed to offer goods at reasonable prices.

Unlike traditional businesses, Coop's over 2 million co-owners have a say in the business, emphasizing a vision where choosing Coop pays off not just for its customers, but also for its suppliers, employees, and the broader society.

Their core belief revolves around creating value for the many, rather than wealth for a few.

Solution and benefits



The solution

Coop incorporated two systems of several Pixii Powershaper cabinets.

One system, consisting of 4 Pixii Powershaper cabinets, was strategically placed outside, while the other, housing 3 cabinets, was set up inside.

This distributed approach ensures that the energy solution is closer to areas of high demand, guaranteeing superior power quality. Additionally, with distinct meters for each system, optimization becomes a smoother process, maximizing efficiency.

The Benefits

The Pixii Powershaper comes with smart functionality like peak shaving, enabling Coop to reduce grid tariffs and deliver real load reduction to the grid owner.

The Pixii battery energy storage system is fully integrated, allowing Coop to get the most out of their solar panels and reduce their dependency on the grid through smart power management, re-directing excess power generation to batteries for later use during peak hours.

By boosting available power, the outside system has replaced a 2 MW transformer, enabling the electrification of mobile coolers on trucks that transport frozen and chilled food. It even opens the door for fast electric truck charging in the future. And with its modular architecture, the Pixii BESS makes it easy for Coop to scale the system to their needs, keeping CAPEX to a minimum.

But Coop is not just saving money, they're making it. The Pixii system allows Coop to participate in the energy flexibility markets, enabling them to monetize their system's flexibility through Fast Frequency Reserve (FFR) as an additional revenue stream. And thanks to favorable government incentives, the system actively generates a recurring revenue, further increasing ROI.

The results

The success of the Gardemoen pilot project has exceeded expectations, not only boosting the power capacity of Coop's warehouse, reducing CO2 emissions and energy costs, but also enhancing Coop's green image by going beyond the already high expectations of their customers.

Technical overview

Solution: Pixii PowerShaper

- Outdoor system capacity: 100kW/200kWh, 4 cabinets.
- Indoor system capacity: 60kW/130kWh, 3 cabinets.

Usage: Peak shaving, Solar energy storage, Fast Frequency Reserve.

Value Proposition: Scalability and smart power management.

"Our solutions empower retailers to lead in sustainability, reduce costs, and meet the evolving demands of today's eco-conscious consumers."

Morten Schøyen, CPO, Pixii AS



4 x Pixii PowerShaper2 located in an external building outside

"Our partnership with Pixii through Solcellespesialisten has propelled us closer to our sustainability vision and the first energy positive warehouse in Norway. It's not just about being green; it's about being smart, efficient, and future-ready, and also challenging regulators and grid owners by showing what is possible to achieve by using battery energy storage systems."

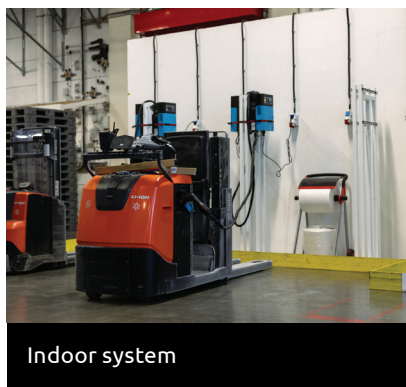
Roy Rossebø, Energy Manager Coop Norge SA



At work in this case: Pixii PowerShaper2, 7 x 50kW modular energy storage with an output of 350kW



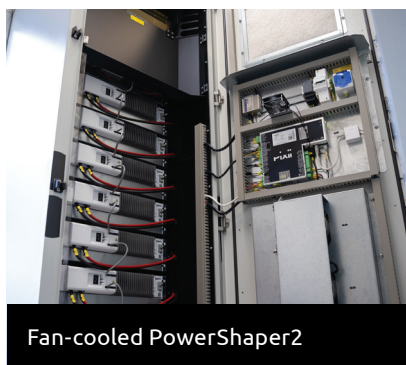
External building



Indoor system



Pixii Gateway



Fan-cooled PowerShaper2

"Our cutting-edge technology isn't just about power; it's about empowering retailers to lead in sustainability, reduce costs, and meet the evolving demands of today's eco-conscious consumer."

Morten Schøyen, CPO, Pixii AS

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