# Warehouse C&I ESS Power Station

## SGCX Parallel with SHT energy storage system

**68.2**kWp
Installed capacity

**10.8**MWh
Annual output

## BACKGROUND

In Parma, Italy, a cutting-edge project has seamlessly integrated Logger control with SHT parallel and SGCX models to power a warehouse, office, and electric vehicles. Built upon the SG50CX foundation, the system now parallels four SUNGROW SH15T units, significantly enhancing solar energy efficiency. Excess daytime electricity is stored in batteries, ensuring continuous energy supply during nighttime and early morning hours. This milestone project, connected to the grid on August 30, 2024, is Europe's first successful test plant for Logger control of SHT+CX models, setting a pioneering standard for sustainable energy integration.

As distributed energy resources continue to expand in the energy sector, the importance of power plants in ensuring grid stability has become crucial. Particularly noteworthy is the attainment of CEI0-16 and CEI0-21 system certifications by SUNGROW's SHT series products in Italy. In this context, SUNGROW is actively promoting the adoption of sustainable energy practices in the small-scale commercial and industrial sectors.

## QUICK FACTS

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|---|---|
| Project name: **SEP ENERGIA S.R.L** | Commissioning: **30.08.2024** |
| Location: **Via Coppi, 17, 43122 Parma PR, Italy** | Installed capacity(PV): **68.2 kWp** |
| Technology provider: **SUNGROW** | Inverter: **SG50CX**、**SH15T** |
| Owner: **SEP ENERGIA** | Battery: **SBH100** |

> Participating in the project has given us the opportunity to gain an in-depth understanding of the product, enabling us to offer this solution to our customers with the assurance that it works effectively

PIERPAOLO GRECO
ENGINEER, SEP ENERGIA

# CHALLENGE

A warehouse in need of 24/7 energy, especially to meet the substantial power demands of its refrigeration units. The existing AC couple system is insufficient to meet the power demands. Furthermore, spatial constraints within the warehouse present hurdles for conventional containerized Energy Storage System (ESS) solutions, These challenges are often encountered in small-scale C&I environments. On a positive note, the warehouse features a generous roof space, presenting a great opportunity for installing solar panels to fulfill the facility's daytime energy requirements.

# SOLUTION

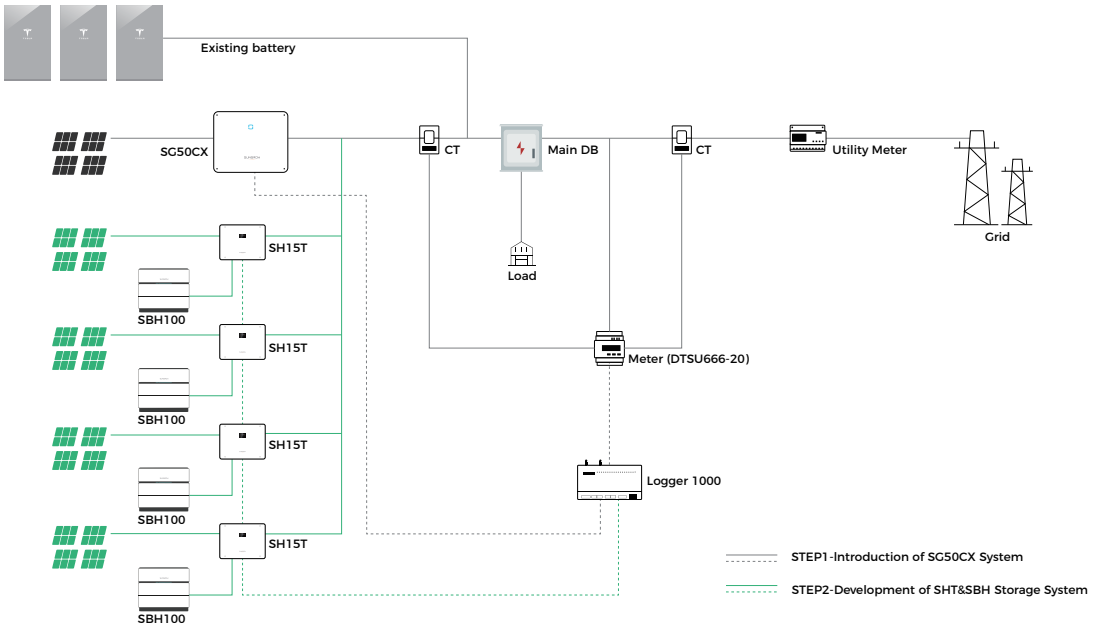
Integrating Sungrow's PV and storage systems presents a dual advantage. It optimizes rooftop space to reduce daytime energy demand, cutting grid dependency and costs. Additionally, the system is scalable, ready for future expansions with PV panels, inverters, and battery capacity.

**Step 1 – Introduction of SG50CX System**

The SG50CX system boosted self-consumption rates during daylight, surpassing AC couple limitations.

**Step 2 –Development of SHT&SBH Storage System**

To further optimize energy utilization, the project integrated the SHT&SBH storage solution.



> In the past, we had to install hybrid inverters for storage systems alongside traditional inverters. Unfortunately, these systems were not able to communicate with each other and always required a meter to measure the production of the other devices. With the new Sungrow inverters we now have the possibility of combining hybrid and non-hybrid inverters in a single installation, increasing reliability, speed of installation and allowing us to monitor the entire system with a single monitoring system

PIERPAOLO GRECO
ENGINEER, SEP ENERGIA

**Small Space, Big Use**

**Modular design | no heavy forklifts or crane tools**

The Sungrow system is ideal for Warehouse's compact indoor areas. Its easy installation and modular design make it adaptable to various settings without the need for heavy machinery. For example, in constrained spaces like the Parma power station, the SBH's stackable design allows for simple installation and maintenance, while the SG50CX inverter with excellent heat dissipation design ensures efficient operation, even in tight gaps.

**Empowering Small Businesses with Energy Independence**

**Parallel up to 13 Units | 8 SHT + 5 SGCX**

The Sungrow SHT system with battery provides small businesses with easy energy independence through its flexibility and scalability. By supporting parallel operation with the SGCX series, businesses can boost profits by maximizing the use of surplus solar energy.

**Effortless Retrofitting**

**Flexible add or modify equipment using the Logger**

The system allows easy addition of devices without disruption or dismantling existing setups. Whether you have solar PV systems, energy storage units, or AC-coupled models, the SHT parallel connection system, combined with the Logger communication and control solution, allows seamless installation or expansion of equipment at any location.

**Backup  Power Anytime**

To ensure continuous power supply for critical equipment in offices, warehouses, or refrigeration units 24/7, household battery and storage systems can also function as backup power sources. Multiple units managed through the Logger can offer a backup power option for small commercial loads, enabling them to tackle sudden power outages, electrical fluctuations, and safeguard precision electrical equipment in factories.

## TEST ITEMS

- Simple revamping design
- Complex communication systems for various models
- Easy control of third-party equipment
- Overall system control and fast shutdown

## ABOUT SUNGROW

Sungrow, a global leader in renewable energy technology, has pioneered sustainable power solutions for over 27 years. As of June 2024, Sungrow has installed 605 GW of power electronic converters worldwide. The Company is recognized as the world's No. 1 on PV inverter shipments (S&P Global Commodity Insights) and the world's most bankable energy storage company (BloombergNEF). Its innovations power clean energy projects in over 170 countries, supported by a network of 490 service outlets guaranteeing excellent customer experience. At Sungrow, we're committed to bridging to a sustainable future through cutting-edge technology and unparalleled service.

For more information, please visit https://www.sungrowpower.com