



Eaton helps Comptoir Electrique de Sarrebourg to become energy independent and self-sufficient in the event of a power failure

Location:

Sarrebourg, France

Challenge:

Comptoir Electrique, electric material specialist, wanted to become energy independent and self-sufficient in the event of a power failure, while reducing its environmental impact and streamlining its operating costs.

Solution:

Eaton xStorage Building and xStorage Home

Results:

This complete installation was able to meet the various expectations of Comptoir Electrique de Sarrebourg in terms of self-consumption and energy independence. Comptoir Electrique was able to calculate a ROI that would be achieved within a decade. And last but not least power cuts can be avoided thanks to Eaton's solutions.

"By implementing xStorage into our system, we have seen a significant drop of about 90% in our electricity usage thanks to the self-consumption of sustainable energy from photovoltaic sources"

Stéphane Cordier, technical sales representative, Comptoir Electrique de Sarrebourg

Background

Since 1973, Comptoir Electrique de Sarrebourg has specialized in the installation and sale of electrical equipment, providing quality advice to its customers. Following its expansion in 1983, the company was divided into two areas: business and consumer sales and professional installations.

Up to now, Comptoir Electrique de Sarrebourg has specialized in trading electrical equipment for industrial, professional and private use. The supplier has also developed its panel builder activity, enabling it to produce enclosure and automation systems.

In addition, the power distribution network in the region where the company is located is subject to sporadic power outages.

Despite their flourishing business, Comptoir Electrique started thinking about a desire to reduce expenses and the amount of energy they consumed from the grid, while ensuring security in the event of a power outage. This desire for self-sufficiency and security naturally led them to Eaton, with whom they have worked since 1974.

Challenge

The main challenge was to find a solution that was cost-effective, easy to implement and which met the company's need for self-sufficiency and security.

As a result, the proposed solution had to be self-contained and enable the company to become energy independent and self-sufficient in the event of a mains failure, while maximizing the environmental and financial impact. To achieve this, a storage system had to be added to the photovoltaic control panel on the roof to maximize the benefits of self-consumption.

It was therefore essential to choose a high-quality, environmentally responsible solution that met all the company's requirements, included a "back-up" function to overcome sudden power outages and continued to support the various energy needs of the site. The choice of solution then came about naturally.



Powering Business Worldwide

Solution

Comptoir Electrique de Sarrebourg needed a sustainable solution to help it effectively manage its energy in a safe, efficient and reliable manner.

It was decided to implement the xStorage Home and xStorage Building solution within the company's various departments. These systems are capable of storing the energy produced by photovoltaic panels so that it can be used on demand. Alternatively, these systems can even redistribute energy to the public grid. With this capacity to store energy, it is therefore possible to overcome any power outages which could delay an industrial production process or cause data loss on a computer network.

The entire installation consists of Eaton products (AC and DC protection, energy distribution and the human-machine interface [HMI] to control the system). Everything is powered by a 40-kWp photovoltaic array on the roof terrace and by an Eaton xStorage Building 60-kWp storage system to maximize self-consumption.

"This eight-month project included the installation of photovoltaic panels on the roof, the wiring of the energy enclosure system and the installation and configuration of the xStorage solution, finishing with commissioning," said Stéphane Cordier, technical sales representative at Comptoir Electrique de Sarrebourg. "Uptime is the most innovative aspect of this solution and it definitely attracted us to it, however the economic and ecological aspect also played a major role in our decision to adopt the solution."

Results

In order to check that the solution was working correctly following implementation, the product was subjected to a set of real-life tests, including mains failures. It was therefore possible to see how the system was meeting expectations following installation and commissioning.

Since then, Comptoir Electrique has measured a significant drop in electrical consumption (about 90%) and has been able to benefit from as much uptime as possible during mains failures.

"Eaton's xStorage solution has already allowed us to continue to be supplied with electricity while a general blackout, following a storm, deprived the commercial area in which we are located of power" says Stéphane Cordier. "We were able to continue working during two hours in good conditions until the power came back on"

In addition to the many measurable benefits such as reducing electricity bills and CO2 emissions, the company was able to calculate a return on investment that would be achieved within a decade.

Taking uptime into account is necessary in order to obtain a complete overview of the savings achieved. For example, power cuts amounting to around 16 hours of work over a year can be avoided thanks to Eaton's solutions.

This complete installation was thus able to meet the various expectations of Comptoir Electrique de Sarrebourg in terms of self-consumption and energy independence.



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