FORESIGHTED
Hypermarket manager Stéphane Onillon is able to save €75,000 in electricity costs a year with the PV system planned and installed by Rémi Cazamajour. truélia

SEIZING NEW OPPORTUNITIES FROM THE SUN

November 4, 2016, was a very special day for Stéphane Onillon. The 42-year-old manages the hypermarket Leclerc in Pineuilh near Bordeaux, and on November 4 Michel-Edouard Leclerc, CEO of France's largest retail chain, came personally to Pineuilh to officially inaugurate the brand-new PV system on the shopping mall's parking lot roof. "It was such an exciting moment," recalled Onillon. "The PV system is a special project. It will not only help us make our electricity supply more sustainable but will also enable us to become more independent from the electric utility company and save money year after year."

Onillon will save €75,000 a year on the mall's electricity bill thanks to the system, which has an output of 500 kW. The clean solar power will be used almost completely in the shopping mall itself and will cover around 15% of its overall annual electricity demand. As a special service for customers, Onillon has installed charging stations for electric cars in the parking lot, which are also fed by the PV system.

"More and more business managers like Onillon are using self-generated solar power directly or in conjunction with storage systems to reduce their operating costs," said Maik Brüschke, Head of Product Group Solutions Commercial at SMA. "But this is just the beginning. In the future, they will have even more opportunities to benefit from having PV systems installed on their buildings, parking lot rooftops and ground surfaces, and will see their energy costs reduced even further. The key lies in intelligent energy management."

The idea is to manage various energy sources and loads, including photovoltaics, heat pumps, CHP plants or electric vehicles in combination with storage systems and electricity purchased from the grid, in a way that optimizes the costs of supply. And as photovoltaics are set to be the world's most cost-effective energy source in the foreseeable future, this primarily means using as much self-produced solar power as possible. →

COMPANIES SAVE HARD CASH WITH SOLAR POWER.

DIGITIZATION IS GIVING RISE TO NEW BUSINESS MODELS.

"For private households, SMA has already been offering a comprehensive energy management solution for many years," said Brüschke. "These experiences have also been incorporated into our energy management solution for commercial business, which we will be bringing to market over the course of this year." When it comes to commercial energy management, far more components need to be integrated into the system and managed with pinpoint accuracy than in private households. To allow companies to reduce electricity costs effectively, the SMA system analyzes energy flows in operation, identifies efficiency potential and can manage generators, consumers and storage systems accordingly. Ensuring optimum interaction between all components is dependent upon them being able to communicate with each other seamlessly. To enable this, SMA has already been working for some time with leading companies in neighboring sectors such as heat and cooling technology as well as the automotive sector.

A key element for SMA's new, integrated solutions is the Sunny Tripower CORE1, the world's first free-standing inverter specially designed for commercial applications. "This means that it can be installed without a frame directly on the rooftop or on the ground in the shortest time, allowing us to reduce installation time by as much as 60% depending on the design of the roof," explained Brüschke. To reduce project costs even further, SMA has also equipped the Sunny Tripower CORE1 with other functions that enable it to be integrated quickly and easily into the overall system. The new inverter features state-of-the-art interfaces for rapid and straightforward communication and grid integration – which will be especially important for the decentralized and digital energy supply of the future.

CUSTOMER-FRIENDLY
Hypermarché Leclerc visitors can charge their e-cars with clean solar energy while shopping.

EFFICIENT
With the Sunny Tripower CORE1, commercial PV system operators like Stéphane Onillon will be able to save up to 60% on installation time and further reduce their operating costs.

"The next step where we would like to provide our customers with greater support in the future is integration into the energy market," continued Brüschke. "After all, decentralization and digitization of the energy supply are bringing about a whole new set of opportunities for companies." For example, they could sell surplus self-generated solar power to other companies or become part of a virtual power plant made up of multiple decentralized generation systems. Another opportunity in the future will come from utilizing the batteries of company-owned electric vehicles. Targeted charging with cost-efficient (PV) electricity as well as discharging while vehicles are not being used will present additional opportunities for energy optimization of the overall system.

But doesn't that all sound rather complicated and like too much hard work? Brüschke laughs: "We wouldn't be SMA if we left our customers to handle all this alone. With our expertise and our partners, we are there for our customers to make the actually complicated world of decentralized energy supply systems as simple as possible. This is why we offer end-to-end solutions from a single source. This includes tools for system design and system simulation as well as system components and also integrated energy services for analyzing and optimizing energy flows or integration into the energy market. We also take care of operational management and system maintenance on request. And, where needed, we adapt the system flexibly to suit changes in operators' needs at any time, thus allowing our customers to concentrate fully on what they do best: their core business." ■

OPERATORS DON'T HAVE TO TAKE CARE OF ANYTHING.