

SUNROCK



Unlocking Sustainable Growth:

Integrated Energy Solutions for Grid Congestion



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Introduction

The energy transition is moving at lightning speed, but the Dutch power grid simply can't keep up. Across the Netherlands, property owners, developers and tenants face growing challenges around energy reliability and grid capacity, while also adapting to broader trends such as electrification, automation and the push towards stricter climate regulations and net-zero carbon targets.

Today, roughly **14,000 companies in the Netherlands** are on waiting lists of up to 3-5 years for additional electricity connections, signaling how grid capacity is already unable to cope with demand.

For logistics and industrial companies, these challenges are already impacting daily operations and future development. Permits are delayed, expansions are paused and energy reliability is no longer a given, especially for new developments. With energy as the key to logistics and industry, how can businesses secure further growth?

At **Sunrock**, we understand the challenges of the energy landscape and work closely with our clients to find a solution tailored to their specific needs. By integrating Battery Energy Storage Systems (BESS), electric vehicle (EV) charging, and Energy Management Systems (EMS) with rooftop solar (PV) generation, companies can secure a sufficient and reliable energy supply, benefit from stable energy costs and make measurable progress toward their sustainability targets. Even in the most congested regions across the country.



"Our energy network is busier than ever. At peak times, all the energy highways become completely congested. That's why the combination of local generation, storage and intelligent energy use is essential"

says Karlijn Elias-Peters, Managing Director Netherlands.



The challenge: growing demand, limited capacity

Electric vehicles, automation, robotics, carbon reduction targets...these and other drivers are creating a huge rise in electricity demand. As local grid operators struggle to expand infrastructure quickly enough, capacity has now become a scarce resource. The **need for solutions** has never been greater.

In summary, here's what we see happening:

- **Grid connection delays are slowing construction and expansion plans. [ABN AMRO estimates](#) that delays in grid expansion cost Dutch businesses €329–376 million annually.**
- **Peak loads and dynamic pricing are raising operational costs.**
- **Uncertainty around energy availability is undermining investment decisions, given that the majority of industrial and logistics clusters (70–80%) [are in areas experiencing grid congestion.](#)**

To stay competitive, logistics and industrial companies must take control of their own energy supply. Businesses can no longer wait for the grid to catch up.

The solution: integrated systems for a flexible energy future

Sunrock's approach starts with a simple principle: use energy where it's produced. A BESS captures surplus solar energy generated on-site and stores it for later use (for example, during evening hours or periods of peak demand). The BESS can also charge from the grid at night, ensuring stored energy is available during the day when demand and grid costs are higher.

The system is managed by a smart EMS, the intelligent control unit that continuously and cost-effectively balances energy production, storage and consumption.

With EMS, energy flows are adjusted in real time based on:

- Solar generation and available battery capacity
- Load peaks and operational demand
- EV charging cycles

This integration allows properties to stay within contracted grid limits while maximising clean energy use, keeping operations reliable, efficient and future-ready.



📍 Ede, The Netherlands 🔋 Battery: 300 kW / 929.5 kWh ☀️ PV system: 0.8 MWp

Case study: eCommerce Distribution Centre in Ede - powering mechanisation with an integrated energy solution

AS Watson Health and Beauty Benelux enlisted Sunrock to support the mechanisation rollout at its eCommerce distribution centre in Ede, where all online customer orders for Kruidvat and Trekleister are processed.

Sunrock **provided a fully integrated Behind-the-Meter (BTM)** energy solution designed to enable operational growth while ensuring a reliable and sustainable power supply. The system combines a 0.8 MWp rooftop solar PV installation, a 300 kW / 929.5 kWh BESS, and an intelligent EMS that balances energy flows in real time. The distribution centre can now power its automation while avoiding grid constraints, with 35% of consumption provided by the clean energy system on site.

“After identifying grid congestion as a major challenge, the Sunrock team developed and implemented an innovative energy solution that fully leverages the PV system, delivering a sustainable and efficient energy supply perfectly aligned with the site’s specific constraints and needs”

says Alexander Webhofer, Head of Supply Chain Online Business Benelux at AS Watson.



Smart control: the power of Energy Management Systems

Sunrock's EMS acts as an intelligent control system. Let's focus on why it matters for your business: enabling cost savings, operational continuity, and flexibility for future growth.

The system enables:

- Peak shaving, reducing energy costs and avoiding grid overload.
- Priority management, ensuring critical processes always have power.
- Scalability, adapting to evolving operational needs and new assets.
- Dynamic optimisation, adjusting operations to energy prices and demand.



“The EMS is where everything comes together,” explains Nick van den Bovenkamp, Product Owner at Sunrock.

“It's what makes the energy system intelligent — constantly analysing, prioritising and balancing the flow of solar energy, storage and consumption. That's how we deliver a reliable energy supply against the lowest cost, while maximising the share of clean energy used by our clients.”



 Dordrecht, The Netherlands

 PV system: 1.6 MWp

Case study: Picnic, Dordrecht - powering operations with local solar energy

At Picnic's automated fulfillment center in Dordrecht [Sunrock delivered a 1.6 MWp rooftop solar system](#) designed for 100% local consumption, equivalent to nearly 500 households' worth of electricity per year. By incorporating an EMS into the PV system design, on-site energy usage is managed by limiting the output of the PV system based on that consumption. The maximum amount of solar electricity generated can thus be consumed locally to meet Picnic's operational needs; lowering carbon, energy costs and dependence on the grid. Up to 30% of consumption is provided by the solar system.

“At Picnic, efficiency and sustainability go hand in hand. We are committed to reducing our carbon footprint and have set the ambition to cut scope 1 and 2 emissions by 42% by 2030. Partnering with Sunrock allows us to directly power our operations with solar energy and helping us achieve our long-term climate goals.”

explains Anna Krotova, Sustainability Lead at Picnic.



The business case: the benefits of grid congestion solutions

Across the Netherlands, grid congestion has become one of the biggest barriers to business growth and electrification. The reality is that companies have few viable alternatives. Diesel generators are no longer a sustainable option due to emission limits, and waiting for grid capacity expansion can take years. For many, this means postponing operations or halting electrification altogether.

That's why integrated clean energy systems are no longer just a "nice-to-have". With these combined solutions, companies gain access to a reliable and flexible energy supply that makes future-proof businesses.

Key benefits include:

- Optimised energy bill through on-site solar consumption and peak avoidance.
- Stable operations, even in areas with limited grid capacity.
- Future-proof assets aligned with ESG, BREEAM, BENG and GRESB standards, key for developers, investors, and tenants.
- Higher property value and lower risk due to energy resilience, predictable operating costs, and strong sustainability credentials.

According to [research by Knight Frank](#) and [academic studies](#), BREEAM-certified buildings can achieve higher rents and increased asset value. More on sustainable building standards [here](#).

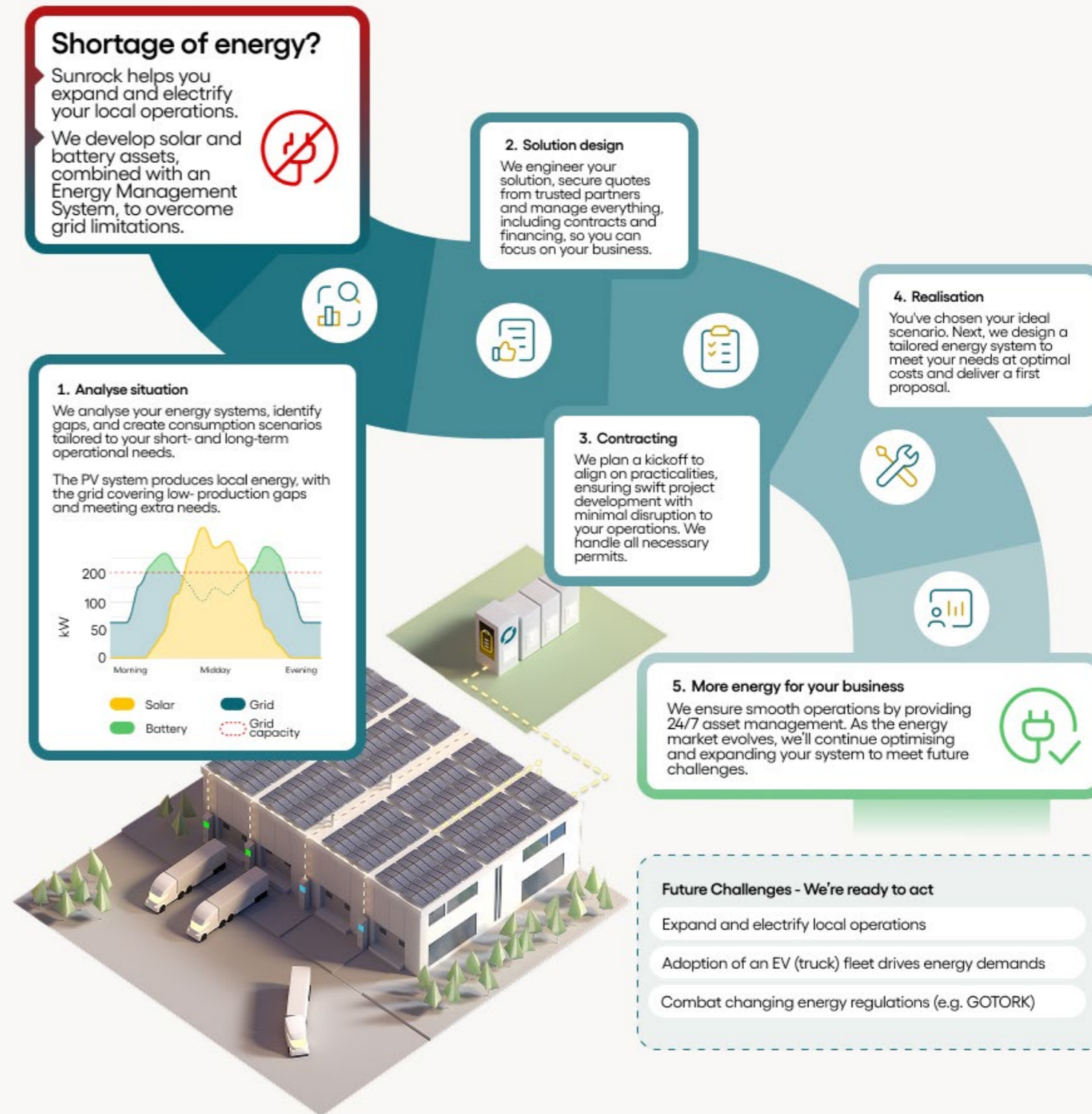
Sunrock's solutions are continuously optimised to maximise solar self-consumption and minimise grid transportation costs. Depending on the client's energy profile, the combination of PV, BESS and EMS can significantly lower total energy expenses, especially as electric vehicle fleets and logistics electrification expand.



"In today's market, sustainability is not only profitable but has become the foundation for successful business. Integrated energy solutions help property owners and tenants meet ESG goals and certification standards, while adhering to schemes like BENG. All this while reducing operational costs and strengthening asset value,"

says **Daan Terlingen, Senior Business Developer at Sunrock.**

Realising your energy system





📍 Halfweg, The Netherlands
🔋 Battery: 312 kW / 645 kWh
☀️ PV system: 1.97 MWp

Case study: Sunrise Real Estate, Halfweg - building ahead despite limited grid supply

When Sunrise Real Estate developed a new multi-tenant distribution center in Halfweg, grid congestion posed a serious risk of delaying the building's operational start. Sunrock enabled the project to move forward by designing an integrated solution with a flexible battery system, steered by an EMS. This allowed the building to operate six months ahead of schedule, avoiding costly delays for tenants.

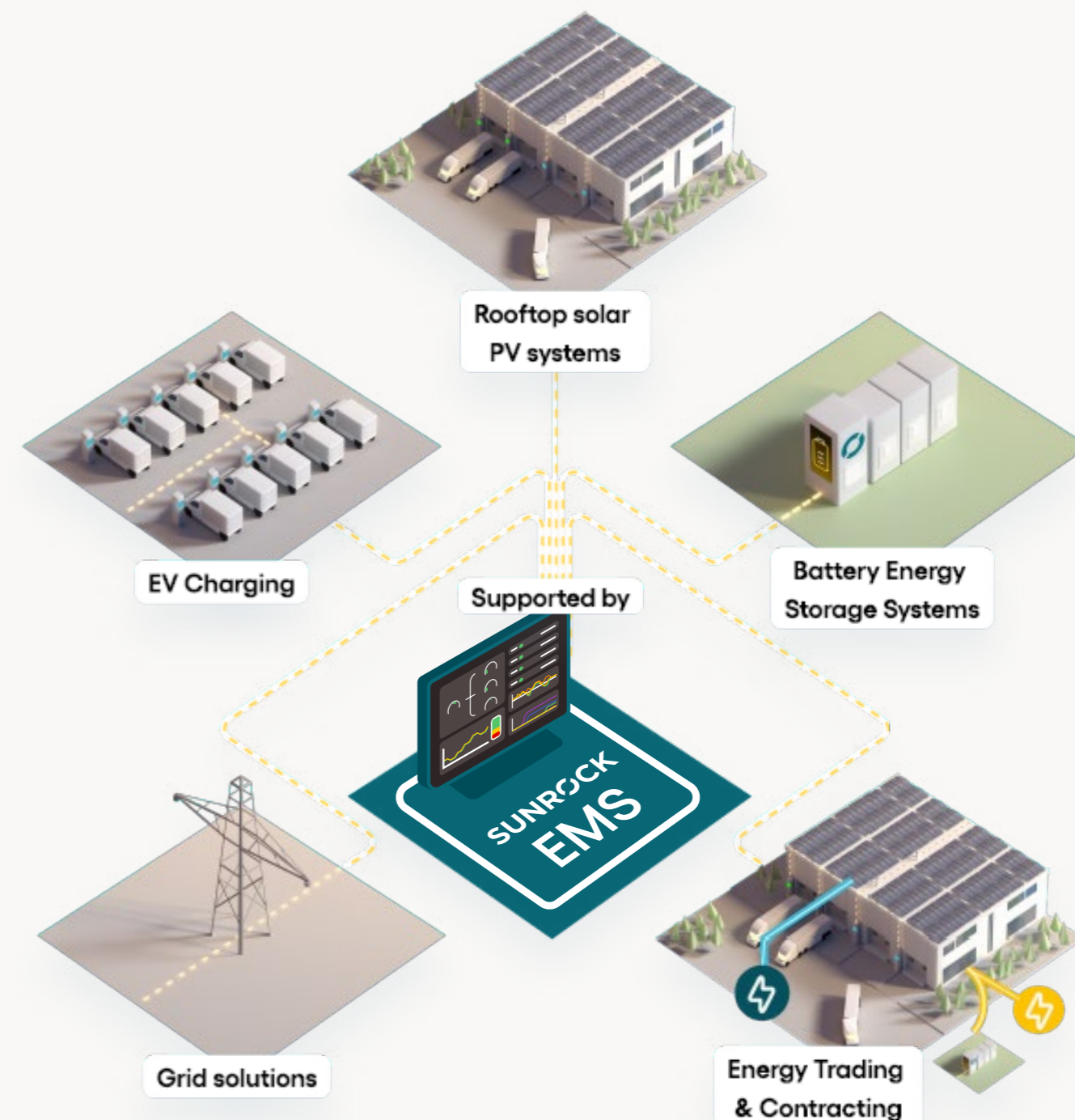
After these six months, the BESS was transitioned to an energy-trading configuration to maximise value for the site. If tenant demand increases and creates new peak-load challenges, the battery can be reconfigured to provide on-site peak shaving again. This ensures the energy system can adapt to evolving needs while maintaining efficiency and long-term value for tenants.



Bart Meij, Project Manager at Sunrock:

"This project shows how an integrated energy system can tackle grid limitations while keeping developments on schedule. By combining solar PV with battery storage, we've created a reliable and flexible energy setup that ensures operational continuity and sustainability."

A Fully Managed Integrated Energy System



Conclusion: from challenges to opportunities

Grid congestion is today's greatest energy challenge in the Netherlands, but it's also a major driver of innovation. Companies that take control of their own energy systems will gain the freedom to grow, operate sustainably and stay ahead of the game.



As Tim Kayser, Director Commercial Strategy, Products, and Marketing puts it:

"Whether it's a logistics hub, production site or warehouse, our clean energy solutions enable our clients to grow. That's how we prepare their business for the future, today."

At Sunrock, we're committed to working with our partners and clients to transform the challenges of grid congestion into opportunities for sustainable and reliable energy and long-term growth.

Proudly servicing our customers



5.000.000 +

sqm of rooftop covered



1,340+ GWh

clean energy since 2019



1.500.000 +

solar panels



300+

solar and battery assets operational

Contact

Grab a coffee with our experts to discuss your energy challenges and how we can help.

Daan Terlingen, Senior Business Developer
d.terlingen@sunrock.com
+31 6 27658673
sunrock.com



Get in touch!

SUNROCK Your energy just got smarter.

Contact

Email: info@sunrock.com
sunrock.com