From monitoring to intelligence: how AI is changing the future of commercial energy

For years, commercial and industrial (C&I) businesses have been told that the path to lower energy costs is simple: install solar, add storage, monitor performance and use energy more wisely. A principle that's easy to understand, less so to implement.

Words: Nathan Childs, Solis Europe

A factory does not operate like a home. A warehouse does not use energy in a neat, predictable pattern. A hotel, logistics centre, supermarket, agricultural site or manufacturing facility can see demand rise and fall dramatically throughout the day. Machinery starts. Refrigeration cycles change. EV chargers come online. Production lines run overtime. Electricity prices move. Solar generation drops behind cloud cover. Grid export limits apply. Peak charges hit at the worst possible moment. The list goes on.

For many businesses, the issue is no longer whether solar and storage make sense. They do. The harder question is how to operate them intelligently enough to unlock their full value.

That is where artificial intelligence (AI) is changing the conversation.

Across the C&I energy sector, AI is moving energy management away from fixed settings and manual decisions, and toward a system that can learn, forecast, optimise and act on its own, without regular user configuration or input. Instead of simply showing a site manager what happened yesterday, the next generation of energy platforms will increasingly decide what should happen next.

For businesses, this could be the difference between owning an energy system and truly controlling one.

The end of 'set it and hope'

Traditional energy management has often relied on fixed rules. Charge the battery at this time. Discharge at that time. Prioritise self-consumption. Keep a certain percentage of backup reserve. Export when possible. Import when needed.

These settings are useful but are limited. They assume tomorrow will look like today. In commercial environments, that is rarely true.

A business may have different operating hours across the week. A factory may run a night shift one day and not the next. A site with EV charging may see unpredictable spikes. At the same time, electricity tariffs are becoming more dynamic, with pricing that can change according to market conditions, grid demand and time of use.

This creates a problem: the best decision at 10am may no longer be the best decision by 2pm.

AI helps by making energy management more responsive. By analysing live site data, historical consumption, weather forecasts,


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solar generation, electricity prices, battery status, and site behaviour, an intelligent system can continuously adjust how energy is used, stored, imported and exported.

For a commercial business, that means the system is no longer just reacting. It is planning.

Solis AI: from monitoring platform to smart energy assistant

With more than two decades of experience in solar inverter technology, Solis has built its reputation on helping homes, businesses and large-scale projects convert, manage and maximise solar energy more effectively. Today, as the market shifts from simple solar generation to smarter, more flexible energy systems, Solis is expanding that role through integrated storage, monitoring and AI-powered energy management.

Solis AI is built into SolisCloud, the company's intelligent monitoring and control platform, taking it beyond system visibility and into active energy optimisation. Rather than simply showing users what their system is doing, Solis AI is designed to help automate decisions that previously required time, technical knowledge and regular manual adjustment.

The core idea is simple: set the system up, allow it to learn the site and let it optimise energy flows in the background.

This matters because most businesses do not have the time or resource to micromanage their energy system every day. A facilities manager may be responsible for maintenance, compliance, safety, contractors, building operations and budgets. Energy is important, but it is rarely their only job.

Solis AI can sit alongside different operating modes depending on the needs of the site. Some businesses may still want manual Timed Plans for predictable schedules. Others may prefer Self-Use to maximise solar consumption. Some may want Revenue Maximisation where export or tariff opportunities exist. But for many, the most powerful proposition is full automation: a system that learns, adapts and manages itself.

Why C&I storage is where AI becomes especially powerful

In the residential market, AI can help homeowners save money and simplify energy use. In the C&I market, the impact can be much larger.

That is because C&I sites often have higher consumption, more complex load profiles, larger solar arrays, stricter operational needs and greater exposure to demand charges and tariff volatility. A poorly timed import spike can be expensive. A battery that discharges too early can leave the site exposed later in the day. A system that fails to consider tomorrow's weather may miss the chance to store cheap energy overnight.

Energy storage gives a business flexibility. AI helps decide how to use that flexibility.

This is where Solis' C&I battery offering, particularly EverCore, becomes central to the story.

EverCore is Solis' all-in-one C&I energy storage solution, bringing together battery storage, inverter technology and energy management in a more integrated system. Available across capacities including 100 kWh, 120 kWh and 261 kWh. EverCore is designed for commercial environments where performance, reliability, safety and ease of deployment matter.

The significance is not just the battery itself. It is the fact that the system can be delivered as a joined-up solution. For installers, that means fewer moving parts across multiple suppliers. For business owners, it means clearer accountability. For service teams, it means simpler support. And when combined with SolisCloud and Solis AI, it creates the foundation for a more intelligent C&I energy ecosystem.

Sandy Woodward, European General Manager at Solis, explains: 'For commercial and industrial customers, energy storage is no longer just about adding a battery to a site. It is about creating a complete, intelligent energy solution that is easier to install, manage and support over the long term. With EverCore, Solis brings the inverter, battery, EMS and aftersales support into one connected ecosystem, giving customers and installers a single point of contact and greater confidence in the performance of the whole system.'

That single point of contact is important. The C&I market has often been slowed down by complexity. Inverters from one manufacturer. Batteries from another. EMS from a third party. Monitoring on a separate platform. Service responsibility is split between different providers.

When something goes wrong, the customer does not want a debate over which component is responsible. They want an answer.

A more integrated approach helps reduce that friction.

A real-world example: the mid-sized manufacturer

Imagine a medium-sized manufacturer with rooftop solar, an EverCore C&I battery system, production machinery, office loads, electric forklifts and growing EV charging demand.

Before AI, the site relied on fixed charge and discharge schedules. The system works, but it cannot easily respond to weather, changing electricity prices or unexpected production patterns.

With Solis AI, the system becomes more dynamic:

- Monday: Solar generation is strong, so the battery charges during the day and holds energy for the expensive late afternoon peak period.

- Tuesday: Cloudy weather is forecast, so the system charges earlier from lower cost grid energy to prepare for reduced solar output.
- Wednesday: A large order creates an unexpected overtime shift. Solis AI detects the higher demand pattern and preserves battery capacity for the evening.
- Thursday: Overnight, electricity prices fall, so the battery charges cheaply before supporting morning operations.
- Friday: The site closes earlier, so the system adjusts instead of storing energy for a peak demand period that will not happen.

Across the week, the value comes from many small decisions made automatically:

- Charging when energy is cheapest
- Discharging during expensive peak periods
- Prioritising solar self-consumption
- Preparing for poor weather
- Avoiding unnecessary grid imports
- Supporting changing production schedules

The result is a system that helps the business reduce costs, use more of its own solar energy and manage demand more intelligently, without asking the facilities team to constantly adjust settings manually.

Helping businesses without adding complexity

One of the biggest barriers to C&I energy storage is not interest. It is confidence.

Businesses may understand the value of solar and batteries, but still worry about complexity. Who will manage the system?

AI can help reduce that concern by making advanced energy management feel simpler.

Instead of presenting endless settings, the system automates important decisions. Instead of requiring constant oversight, it can learn from the site. Instead of forcing businesses to choose between control and simplicity, it will offer both.

AI gives business owners a way to grow into that complexity, without being overwhelmed by it.

The bigger picture: energy as an active asset

Energy has always been seen as a cost to be managed. Businesses received a bill, looked for ways to reduce it and hoped prices didn't skyrocket. That isn't the mindset any more for a lot of businesses.

With solar, storage, and AI, energy becomes an asset. A business can generate it, store it, shift it, optimise it and potentially use it to support wider operational goals. The battery isn't just a backup mechanism. The inverter is not just a conversion unit. The monitoring platform is not just a dashboard.

Together, they become part of the business infrastructure.

For installers, it means a more complete solution to offer customers. For business owners, it's a clearer route into intelligent energy management. And the wider market, it signals where C&I energy is heading next.

The next phase of commercial energy will not be defined simply by who has the most storage or the largest solar array. It will be defined by how intelligently those systems operate.

AI is not going to remove the need for good design, quality installation, technical support or reliable products. All those fundamentals still matter. But it will make energy systems more adaptive, more responsive and more valuable to the businesses that depend on them.

Visitors to Intersolar Europe will have the opportunity to explore Solis' latest residential and commercial energy storage solutions firsthand.

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