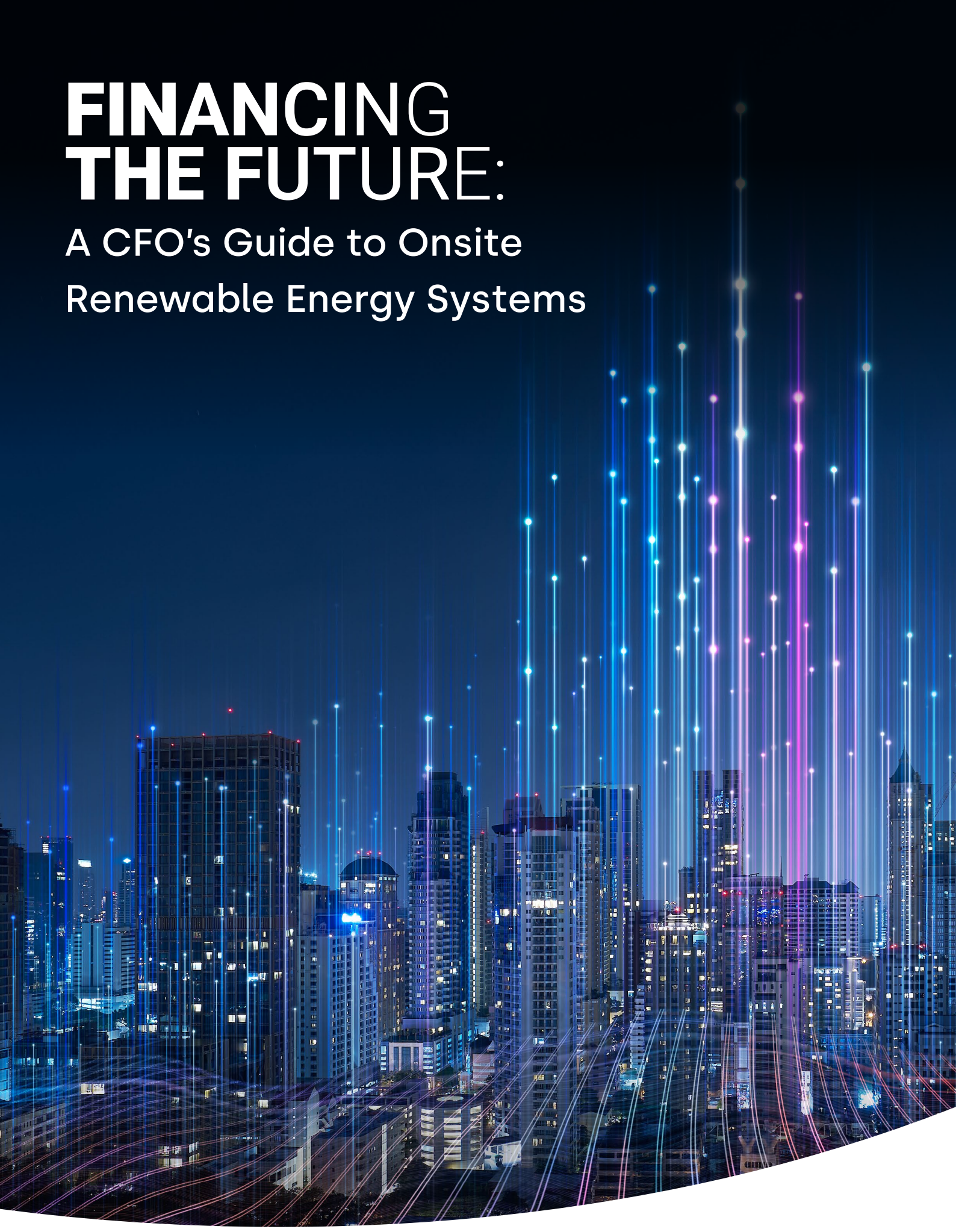
FINANCING THE FUTURE:

A CFO's Guide to Onsite Renewable Energy Systems



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Paying for onsite renewable systems: what are the options?

As energy price volatility continues to rise, many commercial and industrial (C&I) organisations have started to see onsite renewable systems as a solution to spiking energy costs, rather than as a green option with a high price tag.

It's critical to understand that the risk of energy price volatility is not a temporary future problem, but a pressing and systemic issue. CFOs cannot afford to wait for the next crisis to disrupt their cost assumptions; proactive deployment of advanced renewable energy systems will play a key role in ensuring long-term financial stability.

Onsite renewables come with a host of financial, strategic and environmental benefits. With smart design, they boost companies' energy security, allow them to drastically cut costs and beat price volatility, help them reach their sustainability targets, and can create an additional revenue stream through energy exports.

CFOs face a choice: continue with 'green' electricity purchases and hope existing infrastructure can handle ever-increasing electrification demands or proactively plan for future supply and demand requirements – which will reduce risk, enhance shareholder value and manage the renewable transition.

But what's the best way to finance your renewable energy ambitions? Is full asset ownership and management the best path? Or is it better to invest in core areas of your business and outsource some – or all – of the technical and commercial risks of renewables and their system upgrades to a third party?

Dozens of C&I organisations have already partnered with Wattstor to turn their onsite renewable projects into a reality – and many are currently benefiting from the innovative finance solutions we provide.

This guide is designed to provide you with a clear understanding of available funding opportunities, so you can make informed decisions that align with your organisation's priorities and financial goals.

Ready to think outside the grid? Let's dive in.

Challenges

WHAT FACTORS ARE HOLDING BACK THE ENERGY TRANSITION?

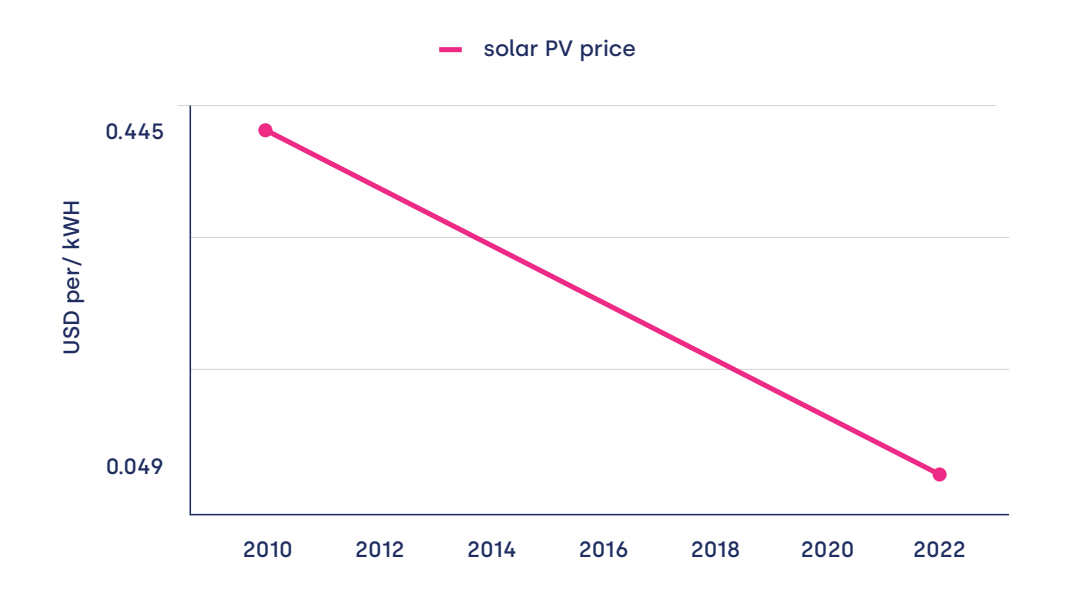
The competitiveness of renewable energy presents a compelling financial proposition for C&I organisations. Thanks to the falling costs and increased efficiency of technology, onsite renewables are becoming increasingly accessible for businesses.

In 2010, electricity from solar PV was priced at USD 0.445/kWh – 710% more expensive than the cheapest fossil fuel option.

By 2022, this dropped to USD 0.049/kWh, making solar PV 29% cheaper than the cheapest fossil fuel option[1].

Nevertheless, the significant upfront capital expenditure remains a key obstacle. Even with reduced technology costs, installation and grid connection expenses alone can strain capital budgets, especially when there are competing investment priorities. Organisations must always consider the potential return on investment (ROI) of investing in renewables and electrical system upgrades, rather than in core areas of the business where their expertise lies.

ROI uncertainty further complicates the decision-making process. With energy price volatility on the rise, it can be difficult to predict payback periods. For example, for those hoping to generate revenues from electricity exports, the increasing instances of negative electricity prices - where businesses face a bill for exporting - can compromise ROI and make the business case uncertain.



1 IRENA, "Renewable power generation costs in 2022", page 17. https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2023/Aug/IRENA_Renewable_power_generation_costs_in_2022.pdf

In 2024, Germany experienced 521 hours of zero and negative prices[2], while the UK had 149 hours of negative prices[3].

This is bad news for those hoping to capitalise on energy exports, unless the right technology for hedging against price volatility is in place.

Regulatory and policy changes also add to this uncertainty. With the increased popularity of solar, government support and incentives are declining. This, coupled with potential delays in grid connections, introduce additional financial risks that must be carefully evaluated.

Access to capital can also be a challenge. Traditional lenders might be hesitant to finance projects they consider risky or outside the borrower's area of expertise. On the other hand, navigating the complexities of available financing mechanisms, such as purchase power agreements (PPA) vs. traditional loans, requires due diligence and internal resource allocation.

Finally, it's important to note that many third party financing options, such as capital leases, will still generally be reflected on the balance sheet, impacting key financial metrics. This distinction is crucial for CFOs evaluating the overall financial impact of renewable energy investments.

Beyond financial considerations, CFOs must recognise the importance of supporting their company's carbon footprint reduction targets too. Inaction around energy supply arrangements is simply not an option. Embracing renewable energy is not just a strategic financial move, but a crucial step towards achieving sustainability goals and meeting evolving regulatory requirements.

2 Wattstor internal data.
3 https://modoenergy.com/research/sep-24-negative-price-explainer-marginal-generators-subsidized-nuclear-rego-ro-cfd-contracts-for-difference

Comparison

THE CHOICE IS YOURS: FINANCING OPTIONS FOR YOUR RENEWABLE PROJECT

What benefits can you expect from self-funding, asset finance, traditional PPAs, and Wattstor's combination of fully funded energy systems and our new flexi-capped tariff, Price Protect? Take a look below for an overview of the pros and cons of all options.

Finance strategy	Corporate investment	Asset finance	3rd party PPA	Wattstor Price Protect ESA
Renewable energy ESG benefits				
Energy* resilience				
Upfront cash outlay				
Day One Cash-Flow Benefits				
Technical risks of ownership				
Commercial risks of ownership				
Balance sheet treatment of contracts**				
Grid supply price risk				
Grid export price risk				
Simple contracting regime				

* Energy resilience requires a well-designed energy storage system alongside a renewable energy generation scheme.
** Most asset financing and many third-party PPA structures can lead to lease treatment and capitalisation under IFRS16.

Corporate investment

Self-funding onsite renewable energy projects offers complete asset ownership and control. However, this seemingly straightforward path to energy independence requires careful scrutiny. While retaining full control over generation and output is certainly attractive, CFOs must evaluate the financial implications.

Before allocating capital, businesses must conduct a comprehensive cost-benefit analysis to strategically evaluate the relative attractiveness of renewables against alternative investment opportunities. And it's recommended that an in-house team of energy specialists assess and minimise the technical and financial risks of a renewable energy project, as well as ensuring the project is designed and optimised for maximum ROI.

If not, do you have a trusted energy partner you can delegate this responsibility to? These are critical questions that must be answered before committing substantial capital.

A good rule of thumb is considering the three Cs: capital, competency and complexity. Can the organisation afford to take substantial capital away from other operations? Is energy management part of your core business operations? If not, is it still wise to invest in renewables? Lastly, can the organisation effectively handle the complexity of such projects? If the answer is a sound 'yes' to all of these questions, then self-funding might be a good option.

CFOs must also acknowledge the uncertainty in ROI modelling. Payback periods are sensitive to fluctuating energy prices, unpredictable forecasts and socio-political instability, which can affect government policies. It's essential to consider whether the expected ROI from energy exports is realistic and thoroughly assess how onsite renewable generation impacts the ability to source competitively-priced grid electricity to meet remaining energy needs.

While self-funding grants offer complete control over assets and output, they also create a significant capital outlay and expose organisations to uncertainty. In other words, maximum control, but with maximum risk.

Did you know?
Cost overruns approach $1.2 billion on the average capital project - 79% of the initial budget.

Source: McKinsey & Company

Asset finance

For organisations that decide against self-funding, debt financing or lease arrangements offer an alternative solution for acquiring renewable energy assets. These options mitigate the immediate impact of a large capital expenditure, giving access to renewable generation assets without a substantial upfront cash outlay.

However, there are several considerations. The first is the term or length of the financing agreement. Typically, organisations can only finance their identifiable project assets this way for up to 10 years. The fixed monthly repayments can be a substantial ongoing financial burden.

CFOs should also consider that leasing arrangements will generally be classified as a capital lease and will be reflected as such on the organisation's balance sheet. The transaction will appear as capital employed, even if shareholder funds were not used.

Finally, this option does not eliminate the inherent technical and commercial risks of the project, and does not automatically guarantee that the system in place will be designed and optimised to minimise costs and maximise efficiency in the long run.

Project finance through a PPA

With no upfront costs and no capital employed on your balance sheet, accessing a renewable energy project through a power purchase agreement (PPA) can seem like an ideal solution.
A PPA also transfers the technical risks of the project to the solution provider, eliminating one of a CFO's main concerns. In fact, the solution provider will be interested in making the renewable system work as efficiently as possible, since their own ROI will be based on how much output the system generates compared to its capex and running costs.

Another benefit of a PPA is that payments will be spread across a much longer period compared to a traditional loan: typically 15 to 25 years.

However, there are further considerations. The first is that the vast majority of PPAs are indexed to inflation, or some fixed annual increment. Your payments will almost inevitably rise over time, regardless of market electricity price fluctuations.

Escalating negative prices
There was a six-fold surge in negative price periods in Great Britain between 2022 and 2024.

Source: Renewable Energy News

Many PPA providers will also be looking at ways to minimise their technical risk. This means they might not be keen to introduce elements that add layers of complexity to the system – such as battery storage or an energy management system. But without these elements, organisations will be exposed to price volatility, low export revenue outcomes and unfavourable supply terms for the balance of their power requirements.

In addition, PPA providers typically base payments on generation, not consumption, and do not assume business consumption or export risk. Consequently, your organisation will pay for most of, if not all, generated electricity, regardless of usage or optimal export timing.

PPAs based on generation then often limit the size of renewable projects to match immediate business needs, stopping the business from realising its full renewable potential. This results in a lower percentage of self-generated power, diminishing potential energy savings, CO2 reductions and energy resilience.

Lastly, a PPA doesn't eliminate your organisation's reliance on the grid. You will still have two electricity providers – PPA and grid – requiring contract management, regular procurement and grid interface optimisation.

Wattstor's solution: fully funded energy systems meet Price Protect

Wattstor's combination of fully funded onsite energy systems and our new dynamic capped tariff, Price Protect, has been specifically designed to give organisations all the benefits of a PPA – with none of the risks.

Our energy experts will design, build and optimise a bespoke system for your organisation – including infrastructure upgrades, renewable assets, battery storage and our flagship AI-based energy management system, Podium. Crucially, we will pay for it in full, with zero investment needed from your organisation.

Thanks to our experienced international team of experts, we embrace system complexity rather than shying away from it, to help your organisation maximise energy output and efficiency. Our integrated battery storage and Podium platform ensure optimal output and overcome grid constraints, helping your organisation make the most of its available space.

Curious to know more about our fully funded energy systems? Download our guide.

Price Protect - how does it work?

Let's start with why we developed Price Protect in the first place: C&I companies often struggle to justify an investment in battery storage because the business case is not as simple as signing off on a solar investment. In addition, energy storage opens up opportunities to add more solar capacity, thus increasing the number of project options. This economic and technical optimisation process is beyond many C&I companies and is not well understood by many of the established solar PV providers.

The challenges of co-locating solar & storage

Adding a battery to the standard solar configuration is still seen as too complex by many behind-the-meter project developers because:

- industrial processes are highly variable, leading to complex, hard to predict load profiles.
- predicting and managing grid imports and exports on top of this base layer of complexity is often seen as a step too far.

In addition, customers who invest in batteries, still have to negotiate a supply contract to enable them to stay connected to the grid for times when onsite demand/surplus exceeds the limits of both storage and generation. Procuring a much smaller amount of electricity puts the customer in an unfavourable bargaining position, where they are often faced with higher per-kWh tariffs due to their smaller size and less predictable load profile.

The Price Protect solution

Wattstor designed Price Protect to eliminate these frictions through a simplified, risk-mitigated supply model, combining the following benefits:

- A **single, long-term p/kWh tariff** structure based solely on whole site consumption, whether electricity flows from the grid and/or from the onsite renewable system.
- No need for customers to manage:
  - Grid purchasing strategy
  - Variability in import/export
  - Market volatility
- Wattstor assumes full operational risk and responsibility for system performance.

How it works

Wattstor optimises the entire system using a mixture of advanced engineering, market-leading energy management and AI-driven optimisation through Podium.

Revenue model for Wattstor

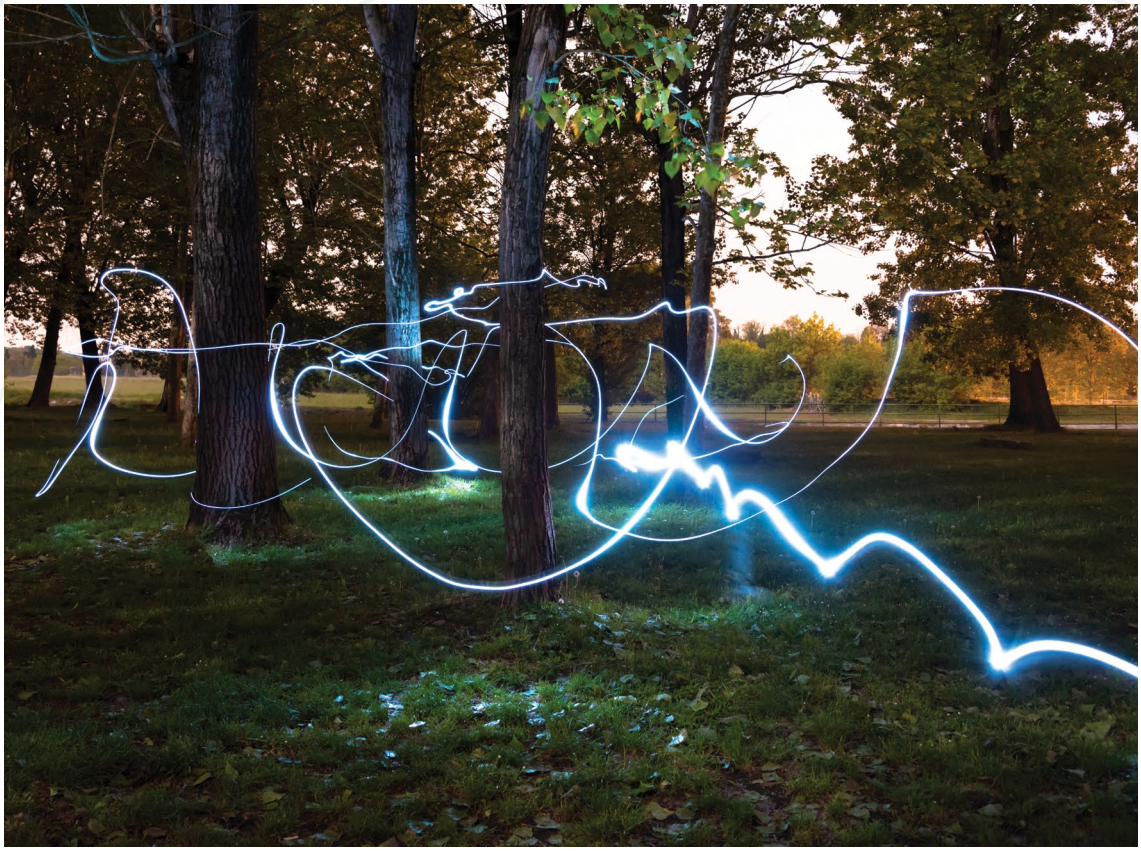
We have developed a long-term single tariff model where the customer doesn't have to worry about where their power is coming from, nor what is happening to grid electricity prices. By constructing a single tariff in p/kWh that only applies to what a customer is consuming – what is needed to run their business – we can offer both energy savings and simplicity. If power has to be exported, we retain that revenue, whatever it is, and take the long-term risk on how much value that may provide to us.

Wattstor earns returns through:

- Long-term system optimisation
- Efficient market operations
- Recovery of upfront capital over the contract term (up to 25 years)

We recover our capital investment gradually, while optimising the system to consistently buy electricity below average market prices.

As capital is repaid and asset performance holds, we can maintain for our customers a fixed, guaranteed price cap - even when grid supply costs rise above the cap. This structure ensures long-term stability for the customer, while aligning our incentives around operational excellence and sustained value delivery.



Price Protect as a sustainable, long-term partnership

The Price Protect supply tariff is designed to offer a stable, long-term solution that sits between two familiar benchmarks: the typical cost of a solar-only PPA, and the prevailing cost of full grid electricity supply. Crucially, it incorporates a market tracking mechanism, ensuring that customers automatically benefit from any downward movement in wholesale energy prices.

In periods of rising market rates, the tariff includes a contractual ceiling: an agreed, fixed p/kWh cap that holds steady throughout the duration of the agreement. There is no annual indexation or inflationary adjustment applied to this cap, meaning the effective cost of electricity falls year-on-year in real terms. This embedded structure provides financial certainty and supports long-term decision-making—what we refer to as a "no-regret" mechanism. It allows businesses to de-risk one of their most volatile operating costs.

The only element of cost we cannot control is the standing charge imposed by the local Distribution Network Operator (DNO), which is based on the site's contracted grid capacity. That said, we actively assess whether our battery integration can reduce this capacity threshold. Where it cannot, we simply pass the standing charge through to the customer, fully and transparently.

Ultimately, the Price Protect model shifts the investment and operational risk to Wattstor - the party best placed to manage system performance and market exposure. For the customer, this means access to below-market electricity pricing with a high degree of long-term predictability. It enables better budgeting, de-risks energy procurement and helps underpin future capital planning with confidence.

Curious to find out more about Price Protect?
Book a meeting with one of our experts today.

Conclusions

CONFIDENTLY NAVIGATE THE CHANGING ENERGY LANDSCAPE WITH WATTSTOR

In the complex landscape of onsite renewable financing, CFOs face a critical decision: how to balance costs, control, risks and ROI?

While self-funding offers complete asset ownership, it demands substantial upfront capital and exposes organisations to market volatility and technical risks. Asset financing mitigates upfront costs but introduces costly monthly repayments and liabilities. Traditional PPAs, on the other hand, offer the benefit of zero capital investment, but carry risks like limited flexibility and ROI.

Wattstor's integrated approach, combining fully funded onsite energy systems with our unique Price Protect tariff, is specifically designed to remove all obstacles to the clean energy transition, while maximising its financial and environmental benefits. We eliminate capex hurdles, design bespoke, optimised systems - with battery storage and AI-driven energy management - and take upon ourselves more risks than associated with traditional PPAs.

By transforming energy price uncertainty into a strategic advantage, Wattstor enables CFOs to enhance financial stability, optimise resource allocation, and drive sustainable growth.

Join in the renewable energy revolution. Are you with us?

ABOUT WATTSTOR

Wattstor is a next-generation energy company providing complete onsite renewable energy solutions. We believe sustainable, affordable energy is a business essential and are committed to removing all obstacles to the clean energy transition.

Our fully funded energy systems help make net zero a reality for C&I organisations in all sectors – with no upfront costs and guaranteed lower-than-grid electricity prices. And our unique dynamic but capped energy tariff, Price Protect, lets you capitalise on energy price dips while shielding you from spikes.

From industry-leading consultancy to unique tariffs, state-of-the-art solar + BESS, and a powerful AI-based EMS, Wattstor is the one-stop specialist for organisations eager to fast forward their net zero ambitions.

About our financial partners

Ara Partners is a global private equity firm focused on funding decarbonisation initiatives. They invest in technologies that are displacing existing, polluting industrial processes, as well as businesses that provide products and services that support decarbonisation.

Ara Partners became a majority growth equity investor in Wattstor during 2023, demonstrating real trust in our vision and technology. The support of this multi-billion dollar ESG infrastructure fund gives us solid foundations to continuously expand on our offer and establish long term energy partnerships with our customers.

Janom Investments is a long-time investment partner of Wattstor – supporting us in our mission since 2016. They are one of the pioneers of clean tech with a focus on Central and Eastern Europe and have a strong track record of successfully investing in early-stage renewable energy projects in the region. Their long-term commitment and strategic focus has helped Wattstor build a strong customer portfolio and expand into new European markets.

Are you ready to think outside the grid? Get in touch.

Get in touch

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