

Telfords Goes Solar – A PBA Success Story

Canonical: <https://northmoregordon.com/case-studies/telfords-goes-solar-a-pba-success-story/>

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Case-study summary

This historical case study records the project, delivery approach and reported results behind Telfords Goes Solar – A PBA Success Story . It has been reorganised for clearer reading and linked to current Northmore Gordon guidance so the project evidence can be used without treating an earlier result as a present-day quote.

Evidence note: The source page is dated September 10, 2024. Figures, scheme names, equipment assumptions and client circumstances belong to that project period. Opportunities, targets and forecasts remain distinct from implemented or verified outcomes, and current eligibility should be checked before using the case as a new-project benchmark.

Project record

Key Facts

Project: 409kW Solar PBAProject Based Activities Installation

Generation: 591 MWh (Actual) vs. 516 MWh (Estimated)

VEECs Created: 2,212 (Actual) vs. 1,503 (Estimated)

Certificate Value: \$105,000 (Actual) vs. \$46,442 (Estimated)

Annual Savings: 264 MWh (Actual) vs. 201 MWh (Estimated)

Method Used: Measurement & Verification

The project exceeded initial estimates by generating 23% more VEECs, resulting in an additional \$52,000 in value.

Reduction in Energy Consumption and Costs: The project led to a significant decrease in energy usage, resulting in substantial savings on energy bills for Telfords.

Lower CO2 Emissions: The implementation of the solar system contributed to a notable reduction in CO2 emissions, aligning with environmental sustainability goals.

Enhanced System Performance: Northmore Gordon provided assurance to Telfords that the solar system installed by Watters Electrical exceeded performance expectations, further validating the effectiveness of the investment.

The Client

Telfords Building Systems is renowned for providing large, economical steel buildings that are widely used throughout Australia and exported to countries such as Vanuatu, Fiji, and Papua New Guinea. For over 35 years, they have been a trusted name in pre-engineered metal building systems.

The Project

At the Telfords site in Shepparton, a 409kW roof-mounted solar system was installed as part of a VEEC. This substantial solar installation is a significant step towards enhancing Telfords' sustainability profile and reducing greenhouse gas emissions.

Our Role

Northmore Gordon managed the complete lifecycle of the VEEC project, from initial planning to final implementation. We executed a seamless handover process between two project managers, ensuring continuity and precision in our work. Our expertise in Measurement and Verification (M&V;) allowed us to accurately measure energy savings and maximize the project's benefits. Through consistent quarterly follow-ups with Telfords, we maintain a strong client relationship, leading to successful outcomes and exceeding initial energy and cost-saving estimates.

Challenges

There were changes in energy consumption onsite, potentially due to modifications in equipment or production processes, as well as other unknown factors. These fluctuations made it challenging to determine the energy savings of the upgrade using the traditional Measurement & Verification (M&V;) method, which relies on a pre-installation baseline. However, by employing the VSS method (concurrent baseline), we were able to accurately determine the exact savings of the Energy Conservation Measure (ECM).

Data Availability: We worked through a two-month period to gather the necessary data from the client, ensuring we had all the critical information required for an accurate assessment.

Energy Consumption Patterns: The site experienced unique fluctuations in energy consumption, providing us with an opportunity to delve deeper into understanding and addressing these variations.

Telford's Building Systems is a company that specializes in the design, manufacture, and construction of high-quality modular buildings, typically in the form of prefabricated steel buildings or modular structures.

Using the results for a new project

Start with the site's current operating profile, asset condition and business objective. Define the baseline, project boundary, variables that affect energy use and the evidence available before selecting a technology or incentive pathway. This makes the comparison auditable and keeps physical savings separate from grants, certificate revenue and other financial benefits.

For a comparable project, confirm current program rules and product requirements, document installation and commissioning, and plan post-project measurement early. Historical results can show what was possible in one setting, but they do not establish current eligibility, pricing, payback or emissions outcomes.

Related guidance

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What makes the Telfords solar project a PBA success story compared to standard VEEC projects?

The Telfords project demonstrates a Project Based Activities (PBA) approach that exceeded initial estimates significantly. The actual generation of 591 MWh surpassed the estimated 516 MWh, and the project created 2,212 VEECs versus an estimated 1,503—a 47% increase. Certificate value reached \$105,000 against projections of \$46,442, delivering an additional \$52,000 in value. This outcome illustrates how rigorous measurement and verification can reveal genuine performance gains beyond conservative forecasts, supporting stronger financial returns and validating the investment case for similar manufacturing sites.

Why did Northmore Gordon use the VSS concurrent baseline method instead of the standard pre-installation baseline approach?

Telfords experienced changes in onsite energy consumption during the project period—likely from equipment modifications, production process changes, or other operational factors. The traditional pre-installation baseline method assumes stable conditions; when that assumption fails, the concurrent baseline approach (VSS method) isolates the solar system's actual contribution by comparing consumption patterns before and after installation under real operating conditions. This methodology proved essential for accurately determining the 264 MWh annual savings and justified the higher certificate outcomes.

What practical challenges did Northmore Gordon overcome to deliver this project successfully?

We navigated a two-month data-gathering phase to collect necessary information from Telfords and addressed unique site-specific energy consumption fluctuations. The team managed a handover between two project managers while maintaining project continuity, executed quarterly follow-ups to sustain client engagement, and applied sophisticated M&V expertise to work through the baseline complexity caused by onsite changes. This coordinated approach demonstrates how project management discipline, measurement expertise and consistent client communication drive successful outcomes in real-world manufacturing environments.

How does the Telfords case illustrate the importance of measurement planning in energy projects?

Telfords demonstrates that early measurement planning is critical when a site faces operational changes. Had we not employed the VSS concurrent baseline method, the project would have produced misleading results or failed verification. The case shows that identifying measurement boundaries, recording implementation dates, assigning data responsibilities and selecting the appropriate assessment method before installation determines whether a project can credibly claim its savings. For manufacturing sites with evolving production needs, this evidence-first approach protects both the investment case and certificate eligibility.

What does the 409kW solar installation at Shepparton tell us about eligibility for Victorian Energy Upgrades projects?

The 409kW system at Telfords sits within the traditional STC (Small-scale Technology Certificate) eligibility threshold for solar PV under the Renewable Energy Target. However, the project pursued VEECs through the project-based activities pathway under Victorian Energy Upgrades, indicating that solar projects can generate value through multiple certificate instruments depending on the assessment method, location and commercial strategy. This dual-pathway opportunity requires careful scheme assessment at project initiation to optimize certificate quantity, eligibility verification and ownership arrangements before equipment installation.

How should manufacturing businesses interpret the Telfords financial outcome when building their own solar investment cases?

Telfords achieved \$105,000 in certificate value from a 409kW system, but this outcome reflects that specific site's energy profile, measurement method, regional generation data and certificate market pricing at the time of installation. Manufacturers should not assume identical returns; instead, they should commission site-specific feasibility assessments that establish baseline conditions, production schedules, consumption patterns and applicable certificate pathways. The Telfords case illustrates the importance of separating energy bill savings, certificate proceeds and maintenance benefits as distinct benefit streams in the investment case, with each supported by verified assumptions.

What role did Watters Electrical play, and why does installer coordination matter for VEEC outcomes?

Watters Electrical delivered the 409kW roof-mounted solar installation, while we managed the complete VEEC project lifecycle and measurement verification. This division of responsibilities—installer focus on equipment quality and commissioning, M&V; specialist focus on evidence gathering and savings calculation—is essential for credible outcomes. Clear handover protocols, consistent communication and documented implementation records ensure that the installer's work and the measurement specialist's assessment remain coordinated, protecting both project performance and certificate eligibility.

How should other manufacturers in Shepparton or similar regions use this case study to guide their own energy projects?

Telfords demonstrates that manufacturing sites in Shepparton can pursue structured energy improvement programs with credible VEEC returns through project-based activities and rigorous M&V.; However, each site's outcome depends on its existing equipment, baseline consumption, production patterns and onsite changes. A comparable project should begin with a project brief describing production requirements, available interval data, planned equipment changes and the intended decision. We can then scope appropriate audits, feasibility studies or measurement planning that account for the specific site conditions rather than assuming the Telfords design or outcome applies universally.