i am your price estimate template

for a battery storage system

1. ****

About this template

This price estimate template is for businesses who wish to obtain quotes for the supply and installation of a battery storage system.

The template is designed to help you obtain an ‘apples for apples’ comparison of battery storage products and pricing before you proceed with a detailed design.

Every installation is unique and with many battery storage products on the market, you may be offered a range of solutions claiming to meet your specific needs.

Note: this document is provided by the Office of Environment and Heritage (OEH) for informational purposes only. It is **not** a substitute for a detailed engineering specification, nor for the advice of technical and legal professionals. OEH accepts no liability for any damage which may occur to any person or organisation taking action or not on the basis of this publication. Readers should seek appropriate advice when applying the information to their specific needs.

For more information see the [***i am your battery storage guide webpage***.](http://www.environment.nsw.gov.au/business/battery-storage.htm)

Instructions for using this template

* **Delete** this page before sending your completed template to a supplier.
* **Read** through each section and add or delete text as required.
* Some sections provide headings only. These are prompts for you to **insert your own company-specific information** if required.
* Some sections (purple text) **might** **require the technical input of an energy consultant**. Alternatively, these topics are covered in the OEH battery storage training course. See the [Battery storage for business training webpage](http://www.environment.nsw.gov.au/business/battery-storage-training.htm) for more information.

### Colour key:

[Green text] contains instructions for using the template. **Delete** this text before sending the template to prospective suppliers.

{Red text} indicates you need to add information specific to your circumstances, company or project.

\*Purple\* text may require technical input.

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Request for price estimate

Supply and installation of a battery storage system for

{Insert business name}

Prepared by:

{Name}

{Date}

Contact numbers:

Email:

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# Introduction

[Modify as appropriate:]

As part of {company name’s} effort to reduce energy consumption and associated costs, we are considering the installation of a complete {solar photovoltaics (PV) and} battery storage system at {site name and address}.

The resulting {solar PV and} battery storage system and its installation must be fully compliant with all relevant standards. Where no standards exist, best practice shall be followed at all times. We refer respondents to the best practice principles outlined in the battery storage installation guidelines available through the [Clean Energy Council](https://www.cleanenergycouncil.org.au/cec.html) and the [Australian Energy Storage Council](https://www.energystorage.org.au/).

This document is intended as a brief to assist in the preparation of relevant responses to our needs, and will act as a reference guide for us to evaluate proposals.

Please provide a complete response to this Request for Price Estimate when making a proposal, enabling us to thoroughly consider product offers and pricing.

# Objectives

Our primary objective is to reduce energy consumption and associated costs with a high-performing {solar PV and} battery storage system that meets all health, safety and legal requirements.

Due to the variety of solutions that may be offered to us, we request that you explicitly address the needs of the project, and meet all regulatory compliance and best practice principles. We also request that you provide documented evidence showing the solutions offered meet all relevant standards and best practice guidelines.

To be considered for this project, the solution you propose should provide:

[Modify as appropriate:]

* a warranted lifetime of at least {10 years or 3650 full cycles} at {XXX} MWh throughput – whichever comes first.
* a payback period of {XXX} years based on a simple calculation of energy savings, and assuming an inflation rate of {XXX}%.

More specifically, the {solar PV and} battery storage system shall be designed to provide:

[Modify or delete, as appropriate:]

* \*financial return by optimising time-of-use tariffs
* financial return by reliably reducing capacity charges (peak shaving or lopping)
* maximum self-consumption of solar PV generated onsite
* functionality to provide an additional power source in periods of high electricity usage in addition to grid power
* basic back-up functionality in the event of grid failure
* fuel saving for existing fossil-fuel generators using solar PV and battery storage
* off-grid power with fossil-fuel back-up
* wholesale energy market trading.\*

[The following statement is included to reassure respondents that you are not just ‘tyre kicking’. They will make an investment in time on their proposals and will require reassurance that you are serious.]

{We have a budget allocated to fund this project. / We invite offers for external funding. We own the site / building / have a lease of {XXX years}} and are prepared to modify the electrical infrastructure.

As {owners of the site / building / holders of the lease}, we are prepared to construct a suitably sized, fire-rated battery room or enclosure if required.

[Provide details of the type of battery technology you require. Different battery technologies have different performance characteristics, so you may want to specify these in this section. Refer to the [Battery Storage Guide](http://www.environment.nsw.gov.au/business/battery-storage.htm) or seek further technical advice to help you address this section.]

We are impartial to any specific battery chemistry technology but expect respondents to offer the best chemistry for our application.

[OR]

We require respondents to present batteries with the following chemistry:

* \*valve-regulated lead-acid
* advanced lead-acid with capacitor storage
* lithium-ion
* lithium-ion battery of lithium-iron phosphate composition
* flow battery of any chemistry
* sodium-ion
* other.\*

[Provide details about the type of battery storage system you require:]

Our preferred procurement model is for a single supplier to provide a complete {solar PV and} battery storage system, including the design, supply and installation of the system, and also including all required infrastructure and hardware, such as batteries, inverters, cabling, switchgear and distribution board modifications and metering.

Respondents who are able to demonstrate a clear understanding of the task and the capability to deliver the above-listed functionality may be invited to work with us to define final project specifications and to submit a detailed design proposal and pricing for final consideration.

We request that you provide relevant case studies or examples of relevant solutions you have supplied and installed, demonstrating your capability to meet our objectives and functional requirements.

# Project information

[Modify as appropriate to provide a description of your site and the activities of your business.]

An energy consumption analysis has been conducted to identify our energy usage on site:

* the entire site uses, on average, {XXX kWh} of energy per day
* the peak demand is typically {XXX kVA}, and is calculated on a {monthly / rolling yearly} basis.

## Usage details

[Provide usage details for the previous 12-month period:]

| Month (previous 12-month period) | Peak quantity (kWh) | Shoulder quantity (kWh) | Off-peak quantity (kWh) | Total consumed (kWh) | Capacity charges(kVA) |
| --- | --- | --- | --- | --- | --- |
| January |  |  |  |  |  |
| February |  |  |  |  |  |
| March |  |  |  |  |  |
| April |  |  |  |  |  |
| May |  |  |  |  |  |
| June |  |  |  |  |  |
| July |  |  |  |  |  |
| August |  |  |  |  |  |
| September |  |  |  |  |  |
| October |  |  |  |  |  |
| November |  |  |  |  |  |
| December |  |  |  |  |  |
| **Total** |  |  |  |  |  |

The load profile of the site and current tariff structure indicate that a battery storage solution needs to be designed to achieve:

[Delete or add where applicable:]

* Peak shaving of {XXX} kVA peak with a maximum of {XXX} kWh capacity

[OR]

* a discharge cycle of {XXX} kWh over a period of {XXX} hours (maximum of {XXX} kWp) to optimise a time-of-use tariff using {solar PV and} off-peak power.

Solar PV {is / is not} already on site. {Additional / A new} solar PV system of up to {XX} kW {will / will not} be required to provide energy at a lower cost than the grid.

Any additional energy needs outside these performance requirements will be supplied by the electricity grid.

## Tariff information

[Fill in the tariff details in the tables below:]

The relevant tariff details currently applicable to our site are as follows:

| Item | Details |
| --- | --- |
| Time of peak periods | {Weekdays 7am–9am and 5pm–8pm} |
| Time of shoulder periods | {Weekdays 9am–5pm} |
| Time of off-peak periods | {All other times} |
| Number of peak periods in a week | {10} |

| Item | Energy charges ($/kWh) | Network charges ($/kWh) | Other charges ($/kWh) | Total rate ($/kWh) |
| --- | --- | --- | --- | --- |
| Peak  |  |  |  |  |
| Shoulder  |  |  |  |  |
| Off-peak |  |  |  |  |

|  |  |
| --- | --- |
| Item | Energy charges ($/kVA/month) |
| Capacity charge  |  |

## Site location

[Provide details of site location.]

The location of the site is {address in full}.

## Proposed location of battery storage system

[Insert images of the site with approximate dimensions.]

## Location of electrical switchboards

[Delete or modify as appropriate:]

* The location of the site’s main electrical switchboard and metering in relation to the proposed location of the battery storage system is {insert description / site plan / photographs}.
* The location of the electrical distribution board nearest the proposed battery storage system is {insert description / site plan / photographs}.

## Available roof area for solar PV {if required}

[Insert Google map image of the roof area showing true north.]

The location of the roof area in relation to the proposed location of the battery storage system is {insert description / site plan / photographs}.

[Provide a description of limitations that may impact the installation of solar panels,
e.g. trees, skylights, asbestos roof sheeting, poor access, other services.]

The proposed location of solar PV has the following possible constraints: {insert description / site plan / photographs}.

## Monitoring system

[Delete or modify as appropriate:]

The solution must be able to monitor the power flow into and out of the {solar PV and} battery storage system to assist with energy management and system performance monitoring. The monitoring must be available to users via an interface such as an online portal or an application for a mobile device.

## Battery management systems

[Delete or modify as appropriate:]

* The battery management system (BMS) shall be an integral part of the proposed battery storage system, and designed to ensure that all critical operating parameters are managed and maintained for safe and reliable operation.
* The proposed battery inverter / charger must be compatible with the BMS {and any solar PV inverter(s)} to ensure full functionality. Please provide full details of the BMS features and confirmation of compatibility with proposed inverters and monitoring systems.

## Battery back-up

[Modify as appropriate:]

Battery back-up {is / is not} required.

## Consultation requirements

[Your battery project will require several other parties to be involved. If construction of a new room is required, this means you may have to engage appropriate specialists to design and build the room to relevant codes. Your battery supplier should allow to work with these parties and deal with any special requirements they may impose. Delete or modify this section as appropriate:]

* Your estimate should allow for the required time and resources to liaise with the local network service provider (NSP) on our behalf, with respect to any or all network connection requirements typical of grid-connected {solar PV and} battery storage solutions.
* Your estimate should allow for the required time and resources to liaise with structural and fire services consultants to ensure the {solar PV and} battery storage solution meets their respective requirements.

## Additional required documentation

All products proposed must be submitted with at least the following information:

1. A generic design that meets Australian Standards. In the absence of official standards, please provide the supporting best practice information and documentation. Providers will need to demonstrate site-specific compliance as part of their obligations if selected to supply the project.
2. A statement of compliance covering all elements of each product’s specifications. Any areas where compliance is not possible must be shown.
3. Certificates of compliance with the standards as outlined above.
4. A data sheet with product picture, manufacturer’s name and country of manufacture.
5. Detailed warranty statements.
6. An indication of the expected availability of replacement items.

# Specific project needs checklist

The battery storage {and solar PV} system will need to meet the minimum performance criteria outlined in the table below. We expect your proposal to establish a solution and provide supporting data that demonstrates the performance of your offer.

Please complete the ‘response’ column in the table below with details of your proposal against each item.

[Fill in the ‘Minimum expected performance’ column in the table below. You may need to seek the input of a technical expert. Leave the ‘Response’ column blank for suppliers to complete.]

| Specification checklist | Minimum expected performance | Response |
| --- | --- | --- |
| Solar PV capacity |  |  |
| Solar PV system output first year |  |  |
| Watts/panel |  |  |
| Per annum degradation first year |  |  |
| Per annum degradation after first year |  |  |
| Solar PV product warranty period |  |  |
| Solar PV performance warranty period |  |  |
| Battery storage  |  |  |
| Battery chemistry |  |  |
| Battery nominal operating voltage |  |  |
| Usable storage capacity first year |  |  |
| Battery continuous peak power output |  |  |
| Schedule of warranted battery degradation provided  |  | Y/N |
| Battery warranty (years) |  |  |
| Battery warranty (cycles) |  |  |
| Battery warranty (energy throughput) |  |  |
| Lifetime expectation (years) |  |  |
| Lifetime expectation (cycles) |  |  |
| Lifetime expectation (energy throughput) |  |  |
| Warranted maximum operating ambient temperature |  |  |
| Warranted maximum storage ambient temperature |  |  |
| Solar inverters |  |  |
| Inverter continuous peak power output |  |  |
| Product warranty (years) |  |  |
| Warranted maximum operating ambient temperature |  |  |
| Zero export capability listed |  |  |
| Battery inverters/battery management system |  |  |
| Inverter continuous peak power output |  |  |
| Product warranty (years) |  |  |
| Warranted maximum operating ambient temperature |  |  |
| Zero export capability listed |  | Y/N |
| Method of solar inverter control |  |  |
| Maximum solar PV capacity |  |  |
| DC operating voltage range |  |  |
| Ability to charge from grid power  |  | Y/N |
| Ability to charge and discharge, and programmable time windows |  | Y/N |
| Ability to discharge by external peak demand trigger |  | Y/N |
| Documentation |  |  |
| Design prepared to meet Australian Standards or CEC guidelines in lieu of standards  |  | Y/N |
| Statement of compliance with general specification |  | Y/N |
| Data sheets for all proposed equipment provided |  | Y/N |
| Warranty documentation for all proposed equipment provided |  | Y/N |
| Certification of compliance with Australian Standards for all equipment provided |  | Y/N |
| Installer information |  |  |
| Installation warranty offered by installer |  |  |
| Conditions for replacing equipment |  |  |
| Examples or case studies of similar installations provided |  |  |
| Price estimate |  |  |
| Price before Small-scale Technology Certificate (STC) rebates incl. GST |  |  |
| Final price after Small-scale Technology Certificate (STC) rebates incl. GST |  |  |
| Delivery date |  |  |
| Other items |  |  |
| Allowance for time and resources to liaise with network service provider  |  | Y/N |
| Allowance for time and resources to liaise with structural and fire engineers |  | Y/N |
| Compliant monitoring system |  | Y/N |
| Compliant battery management system |  | Y/N |
| Specific exclusions |  |  |
| Specific inclusions |  |  |
| General comments |  |  |

# Working with our company

[Outline any legal or other requirements for doing business with your company. This can include everything from a legal contract to some simple company policy requirements. Retain these sections as required.]

## Parties

[Lists full legal name of entities that are requesting the offer and entities providing the offer.]

## Legalities and definitions

## Terms

## Insurance and licence requirements

## Health, safety and the environment

## Payment terms and methods

## Additional information/requirements

# Respondent’s details

[This is for respondents to complete.]

Supplier name:

Supplier address:

Contact name:

Email:

Contact numbers:

Company website:

Company promotional material: