

**Template Project Brief**

**to include in a**

**Request for Quote (RFQ) for Solar and Heat Pump Installers**

***Developed by Ironbark for Australian Local Government use in preparation for the***

***Local Government Energy Efficiency Program funding (LGEEP)***

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| This document is designed for Australian Councils to use as a starting point for their RFQs for solar and heat pump system installations. It is not intended as a complete RFQ, rather it provides information that can be inserted into councils’ standard RFQ forms.  For more information about LGEEP go to: [www.realaction.com.au/funding](http://www.realaction.com.au/funding) |

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# About Ironbark Sustainability

Ironbark Sustainability is a specialist local government consultancy that works with councils around Australia by assisting them to reduce energy and water usage through sustainable asset and data management and on-the-ground implementation.

Ironbark has been operating since 2005 and brings together decades of technical and financial analysis, maintenance and implementation experience in the areas of energy & water auditing, and public lighting technologies and management.

Ironbark provides public lighting support nationally including technology advice, technology approvals, business cases and project management. Ironbark delivers strategic and specific advice and support for the establishment of effective environmental management systems for government and business clients. We pride ourselves on supporting our clients to manage their operations more sustainably.

# INTRODUCTION

Council wishes to apply for funding from the Local Government Energy Efficiency Program. In order to do this, we are seeking a suitably experienced and qualified company to supply, install and commission new solar hot water systems (gas boosted/heat pump/electric boosted) at various Council facilities. This project will be subject to Council successfully obtaining Government funding.

# PROJECT OBJECTIVE

Council has set targets for reductions in energy use and greenhouse emissions. The objective of this project is to reduce energy consumption and greenhouse emissions by identifying and installing the most appropriate solar hot water systems that cater for but do not exceed the hot water usage needs at XX Council facilities.

# SITES DESCRIPTION

There are XX Council facilities. Refer to Appendix 1 and Attachment 2 for details on existing systems and hot water usage patterns

# SCOPE OF WORK

Supply and install all necessary valves, fittings, re-circulating pumps, meters, sensors, solar control units, backflow prevention devices, hot water storage tanks with safetrays, hot water booster systems complete with appropriate flues to external/roof and all other associated fittings to complete the solar hot water supply systems.

Provide electrical and/or gas supplies to the hot water systems as required.

Lodge all necessary applications to authorities and pay all fees and charges.

Where an item is not indicated on the drawings and/or included in the specification, but is obviously required, provide the item within the accepted Contract sum.

As the works progress, the Contractor shall keep an accurate record of work as actually installed.

The work shall include, but not be limited to the following:

## General

**Quote**

It is expected that a visit to each site is required to generate the quotes. Quotes should include the following:

* Details of proposed HW system(s), make and model numbers and other project components including all associated plumbing equipment and works to make the systems fully operational (itemised costs preferred) plus costs for each (include model and make no)
* Proposed HW system type (e.g. Solar collectors w storage tank & gas boost)
* Tank Size in Litres (if relevant)
* STC's
* Value of STC's
* Expected energy reduction compared to existing system (% estimate only)
* Price excluding GST and including STC discount

Quotes should also:

* Allow for costs of installation during out-of-hours time
* Indicate any routine system maintenance requirements and associated costs
* Clarify location of pipework and proposed processes for dealing with awkward areas. For example, where pipes need to be concealed in a conduit for neatness.

**Systems**

* Council have identified that gas/electric boosted solar hot water systems or heat pumps may be the most appropriate system for these sites, however Council will consider the suggestion of other solar hot water system types should the contractor feel they better suit this Scope of Works. A brief explanation as to why a different system is proposed is required.
* The company may submit more than one option for each site if they deem it is appropriate.
* Proposed solar hot water systems should be designed to minimise energy consumption of boosters and associated greenhouse gas emissions. For example it is suggested that proposed systems have gas boosters and relatively large collector areas pitched at relatively high angles to maximise winter solar gain and minimise overheating in summer. Proposed hot water systems should cater for but not over-cater for site hot water usage needs.
* Proposed systems should meet the requirements of the Commonwealth of Australia’s Local Government Energy Efficiency Program grant requirements (i.e. they must be eligible for a minimum of 10 STCs, and be either a solar or heat pump system)
* Council will favor proposed systems that are able to cater for future changes to hot water demands and/or be scalable to cope with future demands
* The supply, install and commissioning of the hot water systems should be inclusive of all required components such as valving, safe trays and the like. This includes any required upgrades to existing piping and energy supply.
* All components used in the installations completed under the contract will be new and unused.
* Temperature control valves must be supplied and installed at the various installations in accordance with *PCA Plumbing Regulations 2008*. Full and detailed site investigation will be required of the various sites to determine exactly the number(s) required.
* To prevent scalding, the delivery temperature of water for personal hygiene purposes (primarily bathroom taps) is legally required not to exceed:
  + 45°C for early childhood centres, primary and secondary schools, and nursing homes or similar facilities for young, aged, sick or disabled persons (only a thermostatic mixing valve is acceptable to control this temperature).
  + 50°C for all other buildings (either a tempering valve may be used, or a water heater designed not to exceed 50°C which is marked, “THIS APPLIANCE DELIVERS WATER NOT EXCEEDING 50°C IN ACCORDANCE WITH AS 3498”.
  + Restricting the delivery temperature in kitchens and laundries is optional and preferences should be discussed for each site.
* Where thermostatic mixing valves are to be fitted as part of the quoted works the mixing valves will be fitted with hot and cold shut off valves and inline filters. This equipment should be set up in a lockable cabinet to facilitate regular maintenance and testing.
* Proposed work should include the supply and installation of UV stabilized lagging specifically designed for solar to the hot water system pipe work.
* Proposed works hould include the supply and installation of an insulating cover for the hot water valve (such as a valvecosy™).

**Compliance**

* Proposed solar hot water systems and installation must be designed and installed by a suitably qualified Registered Building Practitioner.
* The contractor shall be aware that there is no builder for this project and as such all building works required shall be performed by the contractor. This includes engaging any suitably licensed contractors required to carry out any electrical or gas works.
* Allow engaging a suitably qualified structural engineer to provide written report for each applicable site advising suitability for the installation of Solar Panels and associated storage units.
* The company must supply installation compliance certificates to cover and guarantee all new works.
* The company must certify that the solar hot water system is fully functional and installed in accordance with all relevant standards and legislative requirements.
* The system and installation of the system must meet all the Australian Standards codes of practice and building codes. For example:
  + The Building Code of Australia requirements under AS/NZS 4859.1, and AS/NZS 1530.3;
  + Requirements for insulation of heated water service pipes under AS/NZS 3500.4 — Heated water services
* The lagging should be solar rated, particularly for the hot roof pipes, and should have an R6 insular rating, UV resistant and should comply to the building Code of Australia requirements under AS/NZS 4859.1, AS/NZS 3500.4 and AS/NZS 1530.3.

**Installation and Commissioning**

The contractor shall be fully responsible for undertaking a full and detailed review of the roof structure at the various facilities to confirm the suitability of the proposed locations for the solar panels, complete with the required steel frames to achieve the best collector performance, as recommended by the manufacturer.

Flashings and waterproof sealants shall be provided to all pipe penetrations through the roof and the contractor will be responsible for ensuring water-tightness of any roof penetrations made as part of works.

The solar hot water system shall be installed in strict accordance to the manufacturer’s recommended method of installation.

Installation must include:

* + The rigging, cartage and disposal of the obsolete components (redundant systems, pipe work, etc).
  + The new system and all its components including lagging around pipe work.
  + Site cleanup and rubbish removal.
  + Filling and testing systems.
  + Full commissioning of the new system and all its components.
* Full commissioning must include but not be restricted to:
  + Providing a drawing of the system and its components that highlights any regular maintenance needs.
  + Providing documentation of all system warranties and associated system information sheets and manuals.

**OH&S**

* Council requires the Respondent to consider the health and safety risks associated with the proposed works in preparing their response. Council’s initial assessment of the associated risks of the proposed works include but are not limited to:

1. Confined space entry
2. Working at heights greater than 2m
3. Working near overhead hazardous utilities
4. Frequent hazardous manual handling and/or postures
5. Exposure to extreme heat/cold/UV/weather
6. Inadequate lighting
7. Slips, trips and falls on uneven or potentially slippery surfaces

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## Equipment Performance Guarantee

Guarantee that all equipment items installed under the Contract have been installed in accordance with the manufacturer’s instructions and shall operate as specified.

It shall be the Contractor’s responsibility in cases where design conditions are not met, to check and establish that all components meet the specified performance ratings.

**SCHEDULE OF RATES/PRICES**

**I/We........................................................hereby propose to undertake the works set forth hereunder in accordance with the specification at the schedule of rates as shown hereunder.**

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| Bill of Quantities means the schedule of items of work priced, extended and lodged by the Consultant which details how the Lump Sum Price offered by the Consultant is made up. The Bill of Quantities as contained in the Tender Documents is to be considered as indicative and the Consultant is to satisfy to himself that the Items and Quantities contained in the said Bill of Quantities adequately represent the work. Where the Consultant is not satisfied that the supplied Bill of Quantities adequately represent the work then in addition to pricing, extending and totalling that Bill of Quantities, the Consultant may supply additional Bill of Quantities which includes such items and quantities which the Consultant believes are necessary to complete the works.  The items listed in the Schedule of Rates are representative of the requirements listed in the Project Brief. | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
|  | **SUMMARY** | | | | | |  | |  |  |  |  |  |  |  |  |  |  |
| Item No. | ITEM | COST (exc GST and inc STC di scount) | STC’s | | STC Value | | Expected energy reduction compared to existing system (% estimate only) | |  |  |  |  |  |  |  |  |  |  |
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|  | **SUB TOTAL (GST exclusive and inclusive of STC discount)** | $ | | | | | | |  |  |  |  |  |  |  |  |  |  |
|  | **GST Amount** | $ | | | | | | |  |  |  |  |  |  |  |  |  |  |
|  | **TOTAL (GST Inclusive and inclusive of STC discount)** | $ | | | | | | |  |  |  |  |  |  |  |  |  |  |
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Name of Tenderer:

Signature of Tenderer:

Date:

*Note to applicant: it would be ideal if you also filled in Attachment 1 below.*

**ATTACHMENT 1: SYSTEM DETAILS AND COSTS**

Filling this in is optional. Council are also satisfied with those who supply the same details in a different format. For those providing information on more than one system type or more than one option for each site, then please insert a new row for each system type and option.

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| **Site** | **Current Hot Water Systems** | Proposed HW system(s) and other project components plus costs for each (include model and make no) | Proposed HW system type (e.g. Solar collectors w storage tank & gas boost) | Warranty | Tank Size – if relevant (Litres) | STC's | Value of STC's | Expected energy reduction compared to existing system (% estimate only) | Price excl gst (incl STC discount) |
| Site 1 name | 1 x 315L electric storage (located outside) [emergency provisions] – 2006 model 2 x 275L Rheem gas storage – 2010 model |  |  |  |  |  |  |  |  |
| Site 2 name |  |  |  |  |  |  |  |  |  |
| Site 3 name |  |  |  |  |  |  |  |  |  |
| etc |  |  |  |  |  |  |  |  |  |
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**Appendix 1. Details of current hot water systems and summary of hot water usage needs.**

**For more details on each site refer to Attachment 2**

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| **Site** | **Current Hot Water Systems** | **Annual Site Water Consumption (2011/2012) (kL)** | **Estimated Annual Hot Water Consumption (kL)** | **Annual Site Energy Consumption (kWh)** | **Approx hot water usage per day (KL)** | **Highest Peak hot water loads (L/min** |
| Site 1 name | 1 x 315L electric storage (located outside) [emergency provisions] – 2006 model 2 x 275L Rheem gas storage – 2010 model | 5,563 | 1,763 | 388,061 | 5 | 1,389 |
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