



GMCA Renewables and Energy Efficiency Panel

Draft Scope

Introduction

The Goulburn Murray Climate Alliance (GMCA) is a member-based unincorporated Alliance comprising 13 local governments, the Goulburn Broken and North-East Catchment Management Authorities, Alpine Resorts Victoria, and our Associate member DECCA Hume.

The alliance catchment encompasses more than 14 million hectares of one of Australia's most prolific food producing regions, which includes the Goulburn Valley, as well as the Murray-Darling Basin's internationally significant Ramsar wetlands, and one of Australia's most significant tourist hubs in the eastern mountain ranges. Its municipal councils are highly diverse in size, location and focus covering over 120 postcodes, ranging from rural, to the large multicultural urban areas of Shepparton, Wodonga, and Mitchell on the fringe of metropolitan Melbourne.

Scope

On behalf of the GMCA, **Lead Council** invites responses from suitably qualified tenderers for appointment to Council's register of prequalified suppliers of services and technologies for a period of two (2) years commencing July 2024.

Council invites respondents to provide pricing for standard offerings and pricing for common standard variations.

The services and technologies to be covered in this panel include:

1. **Small-scale solar PV** for households and businesses.

The standard offerings to be quoted for this panel are:

- 2 kW
- 5 kW
- 7 kW
- 10 kW

2. **Battery storage systems** for households and businesses.

The standard offerings to be quoted for this panel are:

- 10 kWh
- between 10-15 kWh
- between 15 kWh – 20 kWh (comprising multiple batteries)



3. **Heat pump hot water systems** for households and businesses.

The standard offerings to be quoted for this panel are:

- < 200 litres
- 200 – 300 litres
- > 300 litres

4. **Reverse cycle air conditioning heating and cooling systems** for households and businesses.

The standard offerings to be quoted for this panel are:

- 2 kW
- 4 kW
- 6 kW
- 8 kW

5. **Induction cooktops** for households and businesses.

The standard offerings to be quoted for this panel are:

- 60 cm width
- 75 cm width
- 90 cm width

- Respondents should provide competitive pricing for systems such that the Council can advertise and encourage residents to take up these offers from Council's "Partner installers".
- Respondents shall provide a clear description of their nominated solar panels and inverter proposal under each standard offering and provide the supporting technical documentation
- Participating Councils and community groups will be responsible for coordinating and funding all marketing and communications to promote the products and services in this scope.



Fee Proposal

Lead Council requests that respondents address each item below as part of their proposal:

Standard Solar Offers

Item	Price
Budget 5 kW solar PV	
Budget 6.6 kW solar PV	
Budget 10 kW solar PV	
Premium 5 kW solar PV	
Premium 6.6 kW solar PV	
Premium 10 kW solar PV	

Solar PV System Suppliers will need to demonstrate adherence to the requirements outlined below, noting that while system components may exceed these requirements, they will not necessarily be regarded as superior/ favourable:

Standards	Approved list of CEC panels from Nov 2021 and installed before the expiration date of the approval. IEC61215 and IEC 61730 certified (including the MST-23 Class C fire test) 'Solar Homes approved products list (Clean Energy Council) https://www.solar.vic.gov.au/approved-products
Bloomberg's New Energy Finance Tier Rating listing	Tier 1 as per Q1 2022 listing of Bloomberg NEF publication or panels manufactured in Australia Australian produced panels will also be considered if they meet the criteria below
Cell	Mono-crystalline or Poly or Multi-crystalline
Panel efficiency	≥ 20%
Power tolerance	0 to +5W
Maximum Temperature co-efficient (P max)	-0.4%/0C or less (i.e., between zero and -0.45)
Normal Operating Cell temperature	430C +/-20C



Performance Warranty	Annual linear performance output warranty is required with at least: <ul style="list-style-type: none"> • 90% at 10 years • 80% at 25 years
Modern Slavery Statement	Mandatory, must be provided

In addition, suppliers should adhere to the following specifications for complementary technology, namely inverters:

Standards	On CEC list of approved inverters at the date of installation. Compliant with the latest release: AS4777, IEC612109, IEC61727 Solar Homes approved products list https://www.solar.vic.gov.au/approved-products
Efficiency	String inverters: CEC/European weighted inverter efficiency factor or equivalent Inverter Size Peak Efficiency 1-5kW 96% or greater 97% or greater 5kw+ 97.5% or greater 98% or greater Micro Inverters: CEC/European weighted inverter efficiency factor or equivalent Inverter Size Peak Efficiency All 95.5% or greater 96.5% or greater
Ingress Protection rating	IP65 (min), or suitable for the proposed inverter location
Three phase (option)	Provide a fully balanced three phase AC output



MPPT	Maximum Power Point Tracking (MPPT) algorithm shall include global peak scanning.
Protection	Overload, short circuit and transient
Grid Protection	Automatic Anti-Islanding protection system required to disconnect device if supply from the grid goes outside pre-set parameters (i.e., under/over voltage, under/over frequency). Any additional grid protection settings as per DNSP requirements.
LCD Display	Required for residential systems
Monitoring	Free online platform for production monitoring. Wi-Fi available. If the inverter does not have Wi-Fi, hardwire shall be part of a standard installation (see section 10)
Warranty	10-year manufacturer warranty required from date of installation, and must include full onsite replacement of a faulty unit
Inverter Load Ratio	Inverter Load Ratio (ILR) no higher than 1.33.
Warranty	10 installation warranty required from date of installation
Standards	Compliant with the latest release: AS5033, AS3000, AS3008, AS2053, AS1768
Working on heights	Compliant with AS1657 and AS1891
Modern Slavery Statement	Preferred, but not mandatory



Should the standard offerings not be suitable for a dwelling, then suppliers may offer alternative pricing on a case-by-case basis. Documentation of reasoning for deviations from the standard offerings is required as it may be subject to review.

Standard Installation	Non-Standard installation options	Price on Application
Single Storey	Second Storey	Switchboard replacements, upgrades, mains cabling or other works
Pitched corrugated iron roof	Tilted system	
Single array	Tiled Roof	Tilt framing, Klip-loc and Tile Roof framing for part of system
Minimal/no shading or different orientations String inverters	Klip-loc roof	Non-standard system sizes and configurations
Flush system	DC Optimisers	
Full export	Dual MPPT (only 2- 3kw options, otherwise standard)	Hardwired communications setup
Wi-Fi communications setup	Addition or subtraction of solar panels	System Health Check (of existing systems from previous rounds)
	Split array	
	New circuit breaker housing to support 2 poles for solar circuit	
	Micro inverters	
	Meter works (via distributor)	
	Export limitation gear	
	Alternative panel/inverter	
	Battery storage	
	Crane/alternative lifting gear	
	Special edge protection	
	Skip bin	
	Out of hours work/shutdown	
	Inverter cage	
	DNSP temporary isolation	

Standard Battery Storage Offers



Item	Price
Battery < 10 kWh	
Battery 10 kW – 15 kWh	
Battery > 15 kWh	

Standard Common Variations*

*Note some items below may be zero at the respondent's option.

Item	Price
Microinverters / Optimisers \$/kW	
Three-phase premium \$/kW	
Kliplok roof premium \$/kW	
Tile roof premium \$/kW	
Tin roof premium \$/kW	
Switchboard reconfiguration premium	
Difficult access / difficult roof premium	
Long cable run / oversized cables premium	

Should the standard offerings not be suitable for a dwelling, then suppliers may offer alternative pricing on a case-by-case basis. Documentation of reasoning for deviations from the standard offerings is required as it may be subject to review.



In addition, suppliers must take account of the following technical specifications:

Standards	<p>Must be included in approved batteries as per CEC listing that meet the Australian or international version of the lithium battery safety standard 62619:2017.</p> <p>Must be included in the latest battery product listing from Solar Victoria (https://www.solar.vic.gov.au/product-lists)</p>
Storage capacity (in kWh)	Minimum 5kWh
Power output (kW)	Minimum 3 kW continuous
Depth of discharge (%)	Minimum 80%
Round Trip efficiency (%)	Minimum 90%
Blackout/backup protection	Yes, mandatory
Operating conditions	At least within -5~+45oC
Warranty	Battery and supporting electronics- 10 years Cycle Count: 3,500 minimum At least 70% of energy retention at 10 years
Modern slavery statement	Mandatory, must be provided



Heating, Ventilation and Cooling (HVAC) Offers

Item	Price
2 kW	
4 kW	
6 kW	
8 kW	

HVAC systems and associated components under this program are required to be successfully installed under the vast majority of situations. In order to understand the impacts to system pricing, Suppliers must supply pricing for standard and non-standard installations. Specific site requirements that require additional costs will be sought on a case-by-case basis (price on application).

Tenderers will need to demonstrate adherence to the following requirements, noting that while system components may exceed these requirements, they will not necessarily be regarded as superior/ favourable:

Standards	Minimum Energy Performance Standards (MEPS) and carry an Energy Rating Label.
Rated ACOP – as published by Solar Victoria	System Size (based on cooling rating) KW Minimum ACOP rating 2 – 2.65KW 5.0 2.66 – 3.54KW 4.5 3.55KW and above 4.3
Demand response	No – System does not need to be DR Enabled or DR Ready. DR enabled or DR ready will be viewed favourably.
Power	Up to 10kW based on Cooling capacity
Warranty	≥ 5-year manufacturer warranty required from date of installation and must include full onsite replacement of a faulty unit.
Installation	Installation will require to be done by an approved installer under the Solar Victoria Website at the time of installation: https://www.heatingupgrades.vic.gov.au/approved-suppliers .



	Installation will also be required to be done by an accredited provider on the Essential Services Commission's website https://www.veu-registry.vic.gov.au/Public/Participants2.aspx
Licence	RAC01 - Unrestricted Refrigeration and Air conditioning Licence. Note: RSS03 - Restricted (Single Head Split Systems) will be accepted for the rates program, but the Supplier needs to provide also an installer with a full license in order to participate of the Bulk Buy Stream.
Warranty	≥5 installation warranty required from date of installation
Standards	Compliant with the latest release: AS1055, AS1668, AS1667, AS2913, AS3000, AS3102, AS3108, AS3350, AS3823, AS4254, AS4426

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Standard Installation	Non-Standard installation options	Price on Application
Single Storey	Second storey	Switchboard replacements, upgrades, mains cabling or other works
Up to <3m between indoor and outdoor unit	>3m between indoor and outdoor unit (\$/m)	
Back-to-back installation	Outdoor unit on roof	Multi-head split systems and cassette systems
Outdoor unit installed with wall bracket	Outdoor unit on concrete plinth	
Wi-Fi communications setup (if included)	Decommissioning of existing fixed gas system	
All penetrations filled to minimise draughts	Decommissioning of existing fixed electric system	
	Decommissioning of existing fixed Reverse Cycle Air-Conditioning (older than 7 years)	
	New circuit breaker housing to support new HVAC system	

Heat Pump Offers



Item	Price
< 200 litres	
200 – 300 litres	
> 300 litres	

Tenderers will need to demonstrate adherence to the following requirements, noting that while system components may exceed these requirements, they will not necessarily be regarded as superior/favourable:

Standards	Hot water heat pump product according to the Solar Victoria product listing.
Refrigerant	R744 (CO ₂) or R290 (propane)
Coefficient of performance (COP)	4.0 or greater
Tank size	200L or greater
Tank type	Glass/vitreous enamel or Stainless Steel
Configuration	All in one or split
Additional top up/resistive element	Optional but allowed
Operating sound level dB	No greater than 50 dB
Min operating temp range (degrees Celsius)	-5.0 - +40
Warranties	Minimum Tank: 6 years Heat pump/condenser: 5 years Parts: 2 years Installation warranty: 2 years

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Standard Installation	Non-Standard installation options	Price on Application
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<ul style="list-style-type: none"> • Single Storey • Decommissioning and removal of existing system • Outdoor storage tank unit on suitable plinths/slabs as per manufacturer's requirements with anker bolts (if necessary) • Ground mounted condenser unit (on mounting block or suitable plinth/base) where relevant • All ½" copper tubing for standard install • Minimum 11mm fire-rated foam pipe insulation with aluminium foil on all outlet supply pipework up to penetration into building • "Valve cosy" or equivalent insulation on pressure and temperature relief valve Installation of external controller including all wiring (if relevant) Installation of appropriately sized DC power isolator • Options for 200L 250L, 270L 300L, 315L or similar options 	<ul style="list-style-type: none"> • Wall mounted condenser split via wall bracket (if relevant) ½" copper tubing for inlet and/or outlet installation (per meter) to new supply points of home/business • Second storey installation of ½" copper tubing as described above Installation of 10A or 20A external general power outlet (if required) • Supply and installation of dedicated switchboard circuit (including breaker and all wiring) • Move existing water points (hot and cold) 	<ul style="list-style-type: none"> • Temporary hot water system installation • New installations (where no hot water system is currently installed) • 150L – 199L, 315L +storage tank options
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Induction Cooktops Offers

Item	Price
60 cm width	
75 cm width	
90 cm width	

Cooktops must be installed adhering to the Australian Standard (AS/NZS 4386.2: *Domestic kitchen assemblies - installation*)



Supplier Requirements

Accreditation

Accreditation by the Clean Energy Council of Australia (CEC), formerly the Australian Business Council for Sustainable Energy (BCSE), to carry out PV design and installation works must be held and evidenced by The Contractor.

All solar PV modules, inverters and batteries proposed must be listed on the CEC approved product list.

For further information, please see the Clean Energy Council of Australia Website at <http://cleanenergycouncil.org.au/>

Licences

A licenced electrician must carry out all Low Voltage electrical work (i.e. exceeding Extra-Low Voltage of 50V a.c. or 120V ripple-free d.c.) and all electrical work associated with connecting the photovoltaic system into the building's power system and the electricity grid.

Standards

In carrying out the installation of grid-connected solar power systems, the following most recent Australian Standards must be followed by the Contractor when undertaking installations resulting from Council leads:

- AS 5033 - Installation of Photovoltaic Arrays AS 3000 - Electrical Wiring Rules
- AS 3439 – Low-voltage switchgear and control gear assemblies
- AS 1768 - Lightning Protection
- AS 1170.2 - Wind Loads
- AS 4777 - Grid Connections of Energy Systems via Inverters
- AS 2053 - Conduits and Fittings for Electrical Installations
- AS 4509 - Stand-Alone Power Systems
- AS1664 - Aluminium Structures Building Code of Australia NATSPEC Reference Specification latest Edition Ausgrid Electrical Supply and Network Standards, in particular NS194 and ES11, which specifically deal with embedded generation.

Monitoring

All solutions must provide the customer with monitoring capability of the system's power flows to assist with energy management and system performance monitoring.

Monitoring of both generation and consumption must be available to users via an interface such as an online portal and/or a mobile device application.

The Contractor shall include the price to commission the monitoring equipment, and the proposal must clearly state any ongoing subscriptions required.



Response

Suppliers must respond by phone or email to installation leads within two (2) working days or better, to acknowledge receipt of the quote request, and request any further information if it is required from the householder to complete the requested quotation. Suppliers must be able to complete in-home consultations where community participants are unable to provide relevant information digitally.

Supplier to provide a desktop quotation within seven (7) business days to the participant household via email or post if unable to receive information digitally.

Site visits must be undertaken for all quotations to confirm costs, assess condition of roof and access to site, as necessary. Site visits are to be completed within ten (10) business days after the desktop quotation has been accepted. Supplier to design a system that meets all technical and customer requirements, is compliant with requirements of network distributor and meets CEC Solar Retailer standards.

Suppliers are to quote for systems that clearly displays cost of system components, itemising any additional costs such as cabling, split arrays, two storey property. The quote must also clearly itemise discounts, including STCs, pensioner discount if applicable, and Solar Homes rebate.

Any manufacturers offered must have an established office within Australia, have evidence of recent installations in Victoria and have no major violations identified by the CEC.