

	<p>District Council of Coober Pedy</p> <p>DG Policy – Rev 7</p>	<p>Issued: 1/8/17 Updated: 10/01/2023 Next Review: 10/01/26</p>
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Distributed Generation Policy for Connecting of Electrical Equipment to the Grid

1. OVERVIEW

The Council are the distributors and retailers of electricity in Coober Pedy under the terms of a license agreement issued by ESCOSA. In order to supply safe and reliable power, anyone connecting to the network or grid has to apply to Council and comply to minimum Policy and Procedure standards as set out below.

In line with UNFCCC and Australian Standards and democratic principles Council aim to provide autonomy to residents and business with regards to self-generation of electricity while still being grid connected. Other than the specific limitations on electricity exports, the Council policies and requirements are similar to those of any other jurisdiction in Australia. The options for residents and commercial entities regarding the generation of electricity are as follows:

- There is no limitation placed on a totally off grid generation system.
- There is no limitation on residents or business generating electricity for self-consumption and being grid connected as long as no electricity is exported (ie no power fed back from the site into the Council grid);
- Under certain special and justifiable situations Council in its sole discretion may allow electricity to be exported to the Grid but will impose a limit on the amount and ramp rate that may be exported.

Council act in the interests of all its residents and ratepayers and want to ensure the maximum autonomy possible that does not affect power quality, reliability, or safety. In this regard, Council is open to any suggestions for improvements or special exemptions. Council is amenable to any suggestions that simplify the connection process, introduce improved equipment and where Australian Standards are shown to supersede Council requirements.

Council provides the following documents to guide those wishing to connect to the Coober Pedy Grid:

- Distributed Generation Policy – Connection of Electrical Equipment and Distributed Generation (this document)
- Distributed Generation Requirements for Connecting to the Coober Pedy Grid. Provides technical requirements to support system design decisions.
- Distributed Generation Application Form

The above set of documents would form the basis of the electricity contract between the Council and Customer with regards grid connection. Council and the customer would have a separate electricity supply contract.

2. DEFINITIONS

Applicant– The resident or business that wishes to connect equipment to the grid.

Connection Contract – Contract whereby all parties agree to the implementation of a distributed (or embedded) generator.

Council – District Council of Coober Pedy (DCCP).

Credit – Council allows customers to attain a credit from exporting electricity into the distribution network.

Customer – A landowner who purchases electricity from Council. A customer could be a resident or a business/ commercial entity.

Distribution Network – Council electrical infrastructure supplying electricity. Also known as the 'grid' or 'network'.

Distributed Generator – A small scale generator connected to the distribution network e.g. Solar PV (photovoltaics), wind, diesel or other. Also known as 'embedded generator' or 'distributed electricity generator'

Electricity Meter – The device that measures the electricity consumption and production at a grid connection, for the purposes of calculating an electricity bill. Electricity meters are owned by Council and conform with standards to ensure metering and billing grade accuracy.

Electricity Monitor – Other devices that measure electricity consumption and production but are not used for billing purposes and may perform at lower accuracy levels. Electricity monitors are typically owned by applicants and form part of the installation.

Electricity Senior Officer – Director/Manager of the Electricity Department within Council.

Electrical Engineering Contractor – An engineer engaged by Council to determine the electrical requirements of connecting to Council distribution network.

ESCOSA – Essential Services Commission of South Australia. www.escosa.sa.gov.au

Grid-tied, Zero Export Generation – Any generation type, but usually PV and battery that is connected to the Distribution Network whereby on site electricity generation

is fully consumed at that site. No export (feedback) of electricity is permitted. This is also referred to as a Distributed Generator System or DG System

Generation Contractor – A contractor from whom Council purchases electricity.

Genset – A standalone electricity generator that is typically diesel fuelled, and usually portable.

LV – Low voltage electricity.

Maintenance Contract – A contract ensuring that a customer maintains the generation system.

Managed Solar PV – A solar PV (photovoltaics) installation that exports electricity to the LV (low voltage) Distribution Network *with* controlled ramp and pick-up rates.

Meter Identifier – The unique number that identifies each electricity meter on the Council grid.

Off grid – Equipment that generates electricity, but is not connected in any way whatsoever to the Coober Pedy electricity network. Typically this would consist of solar PV, batteries and genset.

Projected Town Plan – Council's projected future of development within the District of Coober Pedy.

Power Purchase Agreement – An agreement whereby one party purchases electricity from another.

PV – Photo-voltaic, also referred to as solar panels or solar photovoltaic that relates to panels installed on typically a roof for generating electricity.

Ramp or pick up rates – The speed at which generator output can change, for example from zero to full generation.

Senior Officer of Council – Director/Manager of a department within Council.

Unmanaged Solar PV – A solar PV (photovoltaics) installation that exports electricity to the LV (low voltage) Distribution Network *with no* control on ramp or pick-up rates.

UNFCCC – United Nations Framework – Convention on Climate Change.

3. INTRODUCTION

Coober Pedy is unique in South Australia in that it is separate from the national electricity network and that its Council are the retailer and distributor of power.

The nature of electricity provision is that the demand by users must always be matched by the generation. Coober Pedy has a large scale generation facility that consists of solar, wind, diesel, batteries and a control system that ensures the demand (load) is always balanced by generation.

To manage the grid acceptably, a limit has to be imposed on the amount of power that can be exported into the grid, without which instability could arise and outages occur.

4. POLICY OBJECTIVE

To provide customers and installers with an opportunity to become a generator of electricity and to provide relevant information in the processes and requirements to meet Council objectives of safe and reliable power.

5. SCOPE

This policy applies to all currently connected customers and to those wishing to connect to the Coober Pedy Distribution Network. It also applies to installers of generation facilities that wish to connect to the grid. Typically the generation facilities are expected to be a combination of PV, wind, batteries and possibly a small genset. These generators are known as Distributed Generators or a DG system.

6. SAFETY AND RELIABILITY

All work on the premises is to be carried out by licensed electricians. No resident or business is authorised to do any work on the Distributed Network (grid) or on any electrical equipment that will be connected to the grid.

7. OBLIGATIONS TO ADVISE COUNCIL

Customers are required to inform Council of their intention of installing distributed generation as set out in the application process below.

Details of any electrical equipment that is connected to the grid, including PV, wind, batteries, gensets, inverter, smart meter shall be provided to the Council in a timely manner. Details to be provided include:

- A Certificate of Compliance;
- Documented protection settings;
- Commissioning results of the installation or alternatively provide certification from the manufacturer.

Failure of adherence of the Obligations to Advise Council; may result in an immediate disconnection of the Council's distribution supply to the electrical installation.

8. LICENCING REQUIREMENTS

To ensure Council adheres within the guidelines of the Generation and Distribution Licence given by ESCOSA; the applicant shall provide documented evidence of approval from ESCOSA in the event the applicants PV system is larger than 100kVA.

Refer to the Electricity General Regulations 2012 Part 3, Section 15.2¹ for exemptions of holding a generating licence.

9. OBLIGATIONS, TERMS AND CONDITIONS

For the continuance of a safe and reliable distribution network, Council may require the customer to enter a connection contract for the DG System (embedded generator), though in most cases this will not be necessary. The customer MUST not connect an unauthorised generator to the distribution prior to the approval of the DG Policy and the DG Requirements documents for the basis of the contract between Council and the Customer which contain the obligations required of either party. This contract has an indefinite life.

In addition to the obligations in these documents, Council recognises the endeavors of residents and businesses who wish to reduce their reliance on grid power and in so doing invest in a DG System. Council do not wish to adversely affect a customer's investment and as a result, Council offer the following guarantees:

- .
- Council will not invoke any policy changes to that do not also apply to normal customers (ie without a DG System).
- Council will not impose any demand (KVA) tariffs retrospectively. The only tariff will be consumption in kWh, and this price will be based on actual prices that are charged in metro Adelaide. ie electricity charges may increase or decrease as currently applies to all customers.
- That there is no limit to the size of the DG system, only a limit to what can be exported to the grid. In this case unless specific exemption has been provided, the export allowance is zero
- Council will not in any way insist that the DG system is to be turned off either partially or fully other than for safety reasons.
- Council will treat DG Systems in the same way as if a customer were simply to reduce their demand.
- Council will honor all installations for a minimum of 15 years.
- Council will allow the transfer of the assets to new owner under the same terms and conditions, noting that the contract is valid for the owner of the premises and meter.

¹

[https://www.legislation.sa.gov.au/LZ/C/R/ELECTRICITY%20\(GENERAL\)%20REGULATIONS%202012/CURRENT/2012.199.UN.PDF](https://www.legislation.sa.gov.au/LZ/C/R/ELECTRICITY%20(GENERAL)%20REGULATIONS%202012/CURRENT/2012.199.UN.PDF)

10. CONNECTION OPTIONS WITHIN THE GRID

All new customers will be connected under the 'Grid-tied Zero Export' option unless specific and special conditions are explicitly agreed

This option allows residents and business to connect to the grid with **unlimited generator capacity as long as there is no electricity export into the grid** and the system complies with the Council "Distributed Generation Requirements" and any ESCOSA requirements.

Existing systems including Councils own solar PV systems will be reviewed to ensure compliance with Council's Generation Contractor. The Council's generation contractor has limited the total availability of export capacity to Council of up to 400kW. This means that at no time can more than 400kW be fed into the grid of which 250 kW is 'Managed Solar PV' and the remainder is considered 'Unmanaged Solar PV'.

A number of electricity meter types currently exist within the Council system or will be installed in future:

- Analog Meters/Rotary Disc Meters have a revolving spinning disc. These older style meters are unsuitable for connections that export electricity and will gradually be replaced.
- Import-Export Meters measures consumption and production information at the connection point and provides billing data for electricity imported and electricity exported.
- Interval Meters also measures electricity import and export and stores data at intervals of no more than half an hour.
- Smart Meters are like interval meters and are also capable of having the data remotely read. Smart meters, in some circumstances, may be used to control loads and provide specific control signals to installations.

Council does not reimburse for any generation that is fed into the grid. This is consistent with any new grid small scale grid connected PV systems. Any system that is installed must ensure that they install a new digital meter. The rotary disc meters are not permitted with any grid connected generation system.

Owners of existing systems need to inform Council of their existing system. Council reserve the right to inspect existing systems for compliance to safety and technical requirements, as well as an export meter, may insist that the owner apply for approval under the new rules. Council endeavor to do what they can to support existing solar PV owners in this regard.

Residential owners will be charge for electricity at the rates as published on the Council website. Residential systems are considered to be up to 10kW. Anything larger is considered under the Business/Industry category.

Industry/Business owners will be charged at the rates as shown on the website, however Council reserve the right to introduce new rates that reflect a 'demand tariff' for large users which introduces a connection and peak demand tariff (measured in KVA) however this will not be done within 3 years of the date of this policy. Council

will in all cases aim to act in the interests of the community in this regard and seek a reasonable outcome regarding tariffs.

The approval of each application shall be made by two senior officers of Council:

Electricity Senior Officer

The Electricity Senior Officer must be an authorised electricity officer for council and must have a sound understanding of Council's projected town plan. The Electricity Senior Officer shall provide knowledge and insight of the capabilities and implementation of the distribution network with an embedded generator.

Senior Officer of Council

The Senior Officer of Council must be employed by Council and is responsible for the legal implementation of the application. The Senior Officer is responsible for the integration of the application into the projected town plan and to ensure compliance of the application process.

11. APPLICATION PROCESS

Any resident or business that wishes to connect any equipment to the grid shall require Council approval prior to any items purchased or works being undertaken. The intending applicant could contact Council informally to understand and discuss any proposal, and if necessary arrange to meet a Council Officer for assistance or further discussion. The will furnish the intending applicant with the appropriate Application Form, Distributed Generation Policy (this document) and the Distributed Generation Requirements.

STAGE 1: DOCUMENTATION AND ASSESSMENT

The applicant shall provide Council with the following information along with a completed Distributed Generation Application Form for assessment by the Council:

- Details of applicant;
- Type of equipment (PV Array, wind turbine, genset, batteries, inverter etc.);
- Ratings of Equipment;
- A list of all equipment that has been pre-approved by Council for installation;
- Electrical layout such as a Single Line Diagram;
- Identification of additional monitoring data from installation that may be provided to Council to support ongoing operation of the electricity grid.
- Proposed location of the generator;
- Proposed installer of the generator;
- Operation of the generator, inverter or system (eg. Grid-tied Zero Export, Managed Solar.);
- Request for a development application*, if required.

- Generating licence from ESCOSA, (when systems are larger than 100 kW)
- Meter Identifier on current bill

* A development application may be required if the solar PV array is more than 100mm from the surface of the roof of a building or load per attaching point is greater than 100kg .

http://www.dplg.sa.gov.au/html/files/Guide_Residential_Code.pdf

(Note all current framing available in Australia if installed to manufacturer's specifications will be less than 20kg per attaching point)

Council recommends using compliant (or pre-approved) electrical layouts, operation methodology, installer and manufacturers equipment (PV panels, inverter, batteries, genset). A manufacturer's certificate of compliance to Australian Standards shall constitute a pre-approved system, though this is subject to Council approval.

Council shall endeavor in reasonable time to reply to the application with either a letter of acceptance or a legitimate reason for refusal of the connection. With a letter of acceptance, Council shall provide:

- Contact details of either a Senior Officer of Council or an Electricity Senior Officer;
- Any contract documents applicable – such as a connection contract, retail contract and maintenance contract;
- An estimate of the potential costs involved in the application process;
- Breakdown of all costs/charges that to be imposed on the customer/installer such as total retail, metering, installation, commissioning;
- Metering requirements;
- Any additional Development Application necessary;
- Clear instructions of required documents and information necessary in order to undertake installation, commissioning;
- Proposed timing of installation and commissioning;
- Further documentation (if required).

On receipt of the letter of acceptance and above information the applicant will be required to provide further detail, if not already provided, including:

- A complete installation outline of the proposed equipment;
 - Single Line Diagram or electrical Layout
 - Earthing details
 - Manufacturer and Model with specifications of solar equipment
 - Installation details after the Point of Supply e.g. Consumer mains, Sub mains (if required)
 - Specific protection details of the proposed generator if not a pre-approved piece of equipment;
- Contact details of the installer and person responsible for commissioning.
- Acceptance of proposed costs/charges and permission for Council to proceed with incurring costs, such as through upgrade of the electricity meter.

Council shall keep all documentation and records of the equipment for the lifetime of the equipment and provide copies if requested by the customer.

STAGE 2: INSTALLATION

The customer must provide a signed copy of the connection contract prior to installation. Council shall provide contact details for assistance with the distribution network, connection and installation of metering equipment

Prior to commissioning the customer or installer must provide to Council:

- A copy of the certificate showing completion of installation and any applicable tests such that it is ready for commissioning;
- A copy of the commissioning tests required;
- A date to be formalised for commissioning and testing; and
- Other relevant documentation

STAGE 3: COMMISSIONING

The customer and Council shall agree on a date for the commencement of commissioning. Council reserve the right to be present for all testing and commissioning of the connected equipment. Upon completion of commissioning, the installer shall present a Certificate of Compliance from a licensed electrician for all items of equipment installed and commissioned.

12. MAINTENANCE

Council requires that every customer ensure their system is suitably maintained, and reserve the right to request the customer to provide an electrical certificate of compliance from a licensed and certified electrician to Council, stating the equipment's protection settings have been tested and work accordingly to the appropriate Australian Standards and Council Service and Installation Rules. Where applicable, a maintenance contract may be required for the equipment. The maintenance contract would include:

- Details of the current landowner.
- An emergency disconnection procedure (be provided to Council);
- Terms and conditions for the continuity of supply; and
- Responsibilities of the customer in making amendments to the approved installation.

Council will monitor the ongoing performance of the installation including through regular meter readings. If there are safety concerns, Council reserves the right to disconnect the installation.

13. AMENDMENTS TO INSTALLED EQUIPMENT

The customer must provide to Council any proposed amendments to the original installation including replacement or upgrading equipment. The customer must not make any changes to the installation prior to the approval from Council.

Amendments shall be discussed with the appropriate Council Officer and either a new application with regards to the new equipment be provided or a letter from the applicant detailing the changes shall be required, so that Council may fast track the process. Council shall:

- In reasonable time provide the customer with a letter determining the outcome of the amendment;
- Provide estimated costs involved in making amendments to the distribution network, if required;
- Provide contact details of a Senior Officer of Council.

14. CUSTOMER COMPLAINTS

The Council endeavors to address any complaints adequately and in a timely manner in accordance with its complaints policy. The complaints policy is available from Council on request. Complaints provide feedback and management opportunities to identify improvements in customer service. The Council:

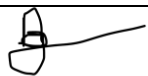
- Values integrity, fairness and equity;
- Is committed to identifying and investigating customer complaints and grievances;
- Will seek to resolve complaints in a manner that benefit both Council and customer;
- Recognises transparency as an importance in decision making; and
- Recognises customers have a right to economic, efficient, effective, and impartial responses to Council’s delivery of customer service.

Council, at the request of the customer must provide a copy of the customer complaint policy and respond in reasonable time to any customer dispute.

The obligations of Council to manage its network and customer interactions are established in its licence conditions as set by ESCOSA.

15. STATEMENT OF ADOPTION AND REVIEW

This policy was initially adopted on the 1st August 2017 and shall be reviewed every 3 (three) years, or as necessary due to legislation and regulatory changes, by Council in conjunction with the reviewed fees and charges.

Version	Date	Review Date	Manager Signature
#7	10/01/2023	Jan 2026	

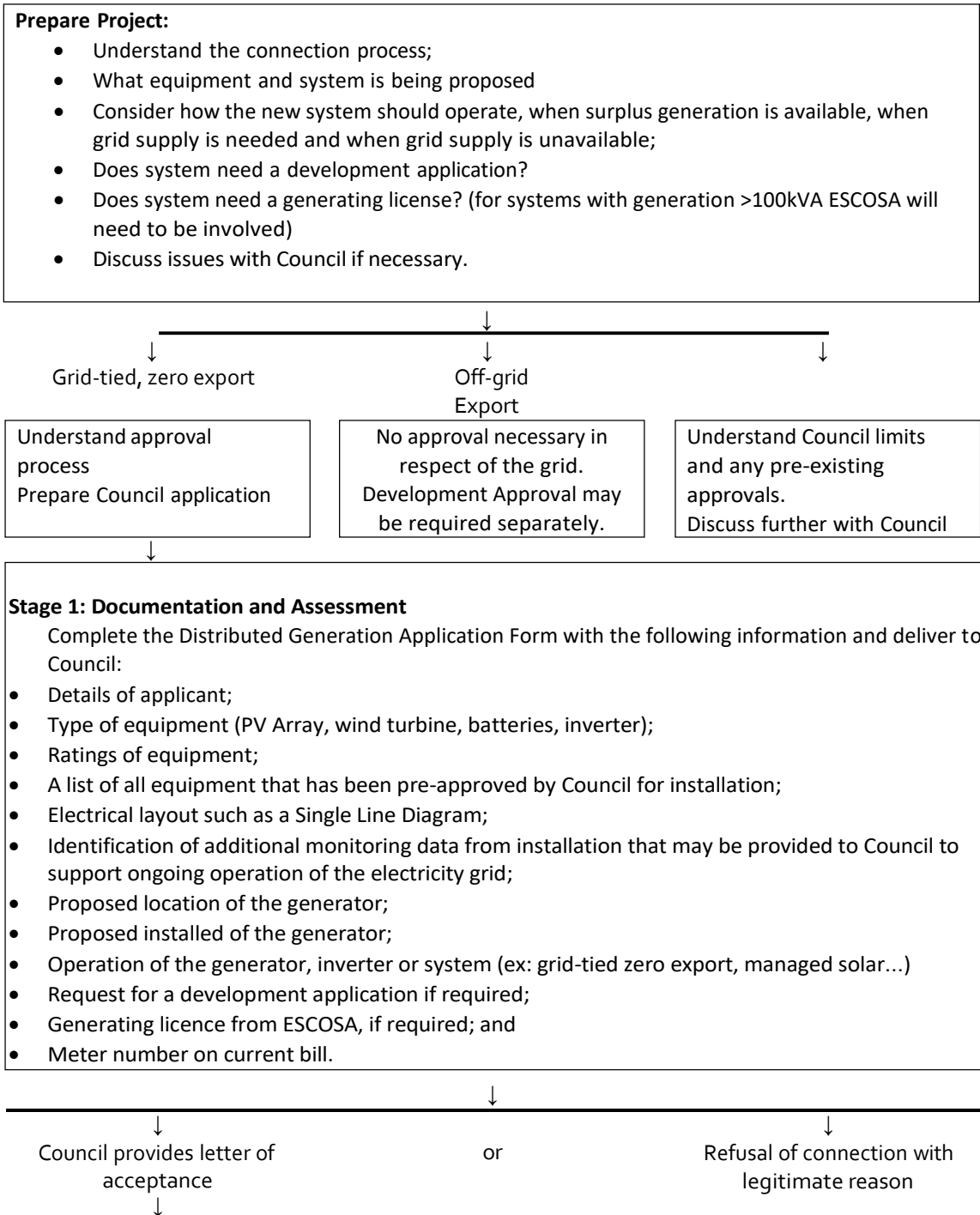
The Council may at any time alter this policy or substitute a new policy, however unless there is deemed to be a safety or major stability issue, new conditions shall not be retrospective.

Appendix A: Flowchart for understanding key stages in project approvals and decisions.

This chart should be read in conjunction with the Coober Pedy Council documents:

- Distributed Generation Application Form
- Distributed Generation Requirements for Connecting to the Coober Pedy

Grid Generally, the installer would be able to provide the information required below. The



A Council letter of acceptance will provide:

- Contact details of either a Senior Officer of Council or an Electricity Senior Officer;
- Any contract or technical documents applicable
- An estimate of the potential costs involved in the application process;
- Breakdown of all costs/charges that to be imposed on the customer/installer such as total retail, metering, installation commissioning;
- Metering requirements;
- Any additional Development Application necessary;
- Instructions and information necessary in order to undertake installation, commissioning;
- Proposed timing of installation and commissioning;



Further documentation to Council by applicant if not already provided:

- A complete installation outline of the proposed equipment;
 - Single Line Diagram or electrical Layout
 - Earthing details
 - Equipment Manufacturer and Model with specifications
 - Installation details after the Point of Supply e.g. Consumer mains, Sub mains (if required)
 - Specific protection details of the proposed generator if not a pre-approved piece of equipment;
- Contact details of the installer and person responsible for commissioning.
- Acceptance of proposed costs/charges and permission for Council to proceed with incurring costs, such as through upgrade of the meter.



Connection contract:

To be signed and provided to Council prior to installation. The connection contract will include:

- Details of the customer and Contractor/Installer;
- Location of the equipment;
- Billing restrictions if applicable;
- Responsibilities of the customer in making amendments to the approved installation of the equipment; and



Council works

- To the extent that Council needs to modify its assets, such as metering upgrades, it will endeavor to make changes in advance of the commissioning date.
- Any works that impact customer supply will proceed only after customer/s have been notified (in accordance with Council licence conditions this requires 3 days' notice).



Stage 2: Installation

Prior to commissioning the customer or installer must provide to Council:

- Signed connection contract
- A copy of the certificate showing completion of installation and any applicable tests such that it is ready for commissioning;
- A copy of the commissioning tests required;
- A date to be formalised for commissioning and testing; and
- Other relevant documentation



Stage 3: Commissioning

Commissioning and testing to necessary standards, Council specific requirements and connection agreements..

- The commissioning date agreed between Council and the applicant is the first time the installation is allowed to be electrically connected to the Council grid.
- The Council reserves the right to be present for all commissioning and testing
- The installer is to provide a Certificate of Compliance from a licensed electrician for all items of equipment installed and commissioned and a copy is to be provided to Council.

**Maintenance**

Equipment must be suitably maintained by the owner, however Council will not be involved unless there are safety concerns.

Council will monitor the ongoing performance of the installation including through regular meter readings. If conditions are not met (for example zero-export), Council reserves the right to request disconnection of the installation.

**Amendments**

The customer must provide to Council any proposed amendments to the original installation including replacement or upgrading equipment. The customer must not make any changes to the installation prior to the approval from Council. The approval for amendments will follow the process outlined above.