Technical Guidance - Additional or Retrofitted Battery Energy Storage Systems

Technical Guidance – Additional or Retrofitted Battery Energy Storage Systems

This technical guidance document is intended to provide New Energy Tech (NET) Approved Sellers with guidance on how to comply with the technical requirements of the New Energy Tech Consumer Code (NETCC) relating to the supply of information to customers when adding or retrofitting battery energy storage systems.

Introduction

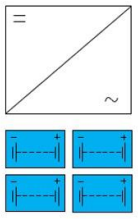
The NETCC sets good practice standards for providing Residential and Small Business Customers with New Energy Tech products, systems, and services. NET Approved Sellers have obligations to their customers regarding the quality of the technical information and service provided during the quotation, installation, and post installation stages of the delivery of the NET.

This document outlines recommended actions that can be undertaken by the NET Approved Seller to fulfill the technical requirements of the NETCC for adding to or retrofitting battery energy storage systems. It does not cover in detail all requirements for the various federal, state and territory rebates. Always consult the latest information provided by government agencies.

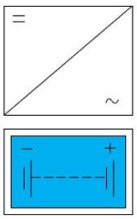
A list of the NETCC clauses addressed in this document and their corresponding recommended actions are found in Appendix A.

The following definitions are taken from AS/NZS 5139:2019 Electrical Installations – Safety of battery systems for use with power conversion equipment:

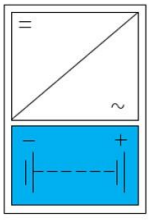
- Section 4 – Pre-assembled and integrated battery energy storage system (BESS): Consists of Power Conversion Equipment (PCE), have lithium chemistries in the battery system(s), isolation and protection devices, and appear on the CEC Approved Battery List as a BESS in the equipment category.
- Section 5 - Battery system (BS): System comprising one or more cells, modules or batteries, have lithium chemistries, and appear on the CEC Approved Battery List as a BS in the equipment category.
- Section 6 – Other batteries: Any other battery system that does not appear on the CEC Approved Battery list.



Battery Energy Storage System (BESS)
Consists of Power Conversion Equipment (PCE), battery system(s) and isolation and protection devices



Pre-assembled battery system
The battery system and inverter are in separate dedicated enclosure



Pre-assembled Integrated BESS
The battery system and inverter are within a dedicated enclosure

Delivery Stages

The delivery of the system is categorised into 3 stages:

- Quotation
- Installation
- Post Installation

Quotation

During the quotation stage the Approved Seller should:

1. Technology Summary

- Provide a summary of the purpose of adding to or retrofitting the existing battery energy storage system. This may include but is not limited to:
    - On-site energy management via load shifting by storing excess energy generated by other energy sources on site for later use.
    - Providing backup power for when the electricity grid is unavailable.
    - To participate in a virtual power plant (VPP) or to facilitate energy trading.
    - Whether the system will be 'on-grid' or 'off-grid".
    - How any existing solar PV system will be incorporated with the addition or retrofitting of battery modules.
    - Any existing solar PV that *cannot* be incorporated with the addition or retrofitting of battery modules.
- Conduct an analysis of the customer's current energy usage data to determine the average amount of energy used per day/month/year and the energy usage patterns.
    - The customer energy usage data should be obtained from the customer meter data.
- Conduct an analysis of the customer's current energy costs based on customer electricity bills.
- Depending on the purpose of the battery energy storage system, include a description of how the proposed battery energy storage system is expected to impact/change the customer energy usage, electricity costs, and that the battery system is 'appropriately sized'. The impact/ change may include:
    - Reduction in usage of grid electricity by storing excess energy generated by other energy sources (i.e. PV) on site for later use (energy management via load shifting).
    - Reduction in dependency on the electricity grid by providing backup power when the grid is unavailable (for areas prone to grid electricity supply shortages).
    - Allowing stored energy to be traded using variable feed in tariffs or as part of a virtual power plant (VPP).

2. Proposed System - Components

Component Details

- Include a list of major system components of the additions or retrofitting of the battery energy storage system including:
    - Battery system make and model(s) which comprises of either:
        - Battery modules and BMS.
        - Pre-assembled battery system.
        - Pre-assembled integrated BESS.
    - Inverter(s) make and model (existing or new proposed inverter not required for pre-assembled integrated BESS).
    - Battery rack/cabinet (if battery modules or pre-assembled battery system requires external battery racks/cabinets for mechanical mounting/protection).
    - Balance of system components such as wiring can be excluded unless the item is a level 2 or level 3 equipment (in accordance with Electrical Equipment Safety System (EESS – VIC, QLD, TAS, WA)/ Proclaimed products (SA)/declared article (NSW)).
        - The make and model of external DC isolators (switch disconnectors) or circuit breakers used to isolate the battery should be included.
    - Any upgrades to existing site electrical infrastructure required to install proposed battery energy storage system.
- All components of the system should be suitable for installation under Australian legislation and Standards.
- Any technical features/characteristics/specifications of the product/system advertised/stated should be supported by scientific research or testing conducted by the manufacturer or third-party test laboratory.
    - Examples of technical features include but are not limited to:
        - Roundtrip efficiency.
        - UPS function (Transfer time and interruption time).
    - NET Approved Seller should ask manufacturers for proof of technical claims which may be in the form of product certification by an accredited third-party test laboratory or manufacturer in house testing. Evidence of technical claims or manufacturer declarations should be provided in writing and the NET Approved Seller should keep an electronic copy on file.
- Provide information about the country of manufacture for the major components.
    - Check manufacturer documentation (installation manual or datasheets) for country of manufacturer/assembly – if documentation does not state, ask manufacturers for country of manufacturer/assembly for products intended for the Australian Market. Claims made by manufacturer should be in writing and the NET Approved Seller should keep an electronic copy on file.

Proposed System Details

- Provide a proposed site plan of the product/system installed:
    - Proposed location for the following system components:
        - The Battery system (Battery modules/Pre-assembled battery system/Pre-assembled integrated BESS).
        - Inverter(s) (existing or proposed; not required for Pre-assembled integrated BESS).

- Any bollards required to be installed in front of battery energy storage system.
- Safety exclusion zone around battery energy storage system if required.
- Location of main switchboard.
- Any other existing NET on site.

- Provide the following specifications for the additions to or retrofitting of the battery energy storage system:
  - Updated nominal energy storage capacity.
  - Updated usable energy storage capacity (start and end of warranty Period).
  - Nominal and maximum battery energy storage system power output.
  - Battery cycle number (how many cycles the battery is expected to achieve throughout its warrantied life) and the reference charge/discharge rate.
  - Minimum throughput energy (the total amount of energy expected to deliver over the warrantied period).
- Battery energy storage system specifications should be based on technical specifications as stated in the manufacturer documentation.
- Compare site energy generation (if applicable), and energy usage patterns to show the impact of the battery energy storage system on customer energy usage. The impact may include but is not limited to:
  - Energy management via load shifting: On average, how much excess energy generated from other energy sources on site is expected to be stored in the battery energy storage system for later use.
  - Reduce reliability on the grid: When the battery energy storage system is fully charged, how many loads can be supplied by the energy storage system when it is fully charged for a set period of time.
    - Proposal should include the estimate of the load kW ratings (i.e. Fridge – 500W, Dishwasher – 2300W), this should be based on a reputable source (the source should be referenced).
  - Where a battery energy storage system is intended for energy trading purposes, the following information should be provided:
    - Estimate cost to charge battery (if grid electricity is used to charge battery).
    - Estimate Revenue from selling stored energy. This should also reference the c/kWh trading price.
- Information about the overall battery energy storage system design lifespan and warranty. This should clearly:
  - Distinguish between parts and labour warranty periods.
  - Identify the base warranty offered by manufacturers of major components – this is the warranty provided with the sale of the component.
  - Identify extended warranties that are available for purchase.
  - Identify the difference between the product/system design lifespan versus the warranty periods:
    - The design lifespan generally refers to the time interval from when a product is installed to when it is discarded although for batteries this may be the cycle number or energy throughput.
    - The design lifespan is generally an estimate based on how the product/system is intended to be used.
    - The design lifespan may be greater than the product/system warranty period as the product/system can still work after the warranty period has passed but may require maintenance or repairs at the cost of the customer.
    - Include any information about maintenance that would impact the lifespan of the system.

3. Quotation Conditions

- Quotations should include information about:
    - Limitation of the product or service including features that are not available (or available at additional cost) such as monitoring the performance of the battery energy storage system.
    - Features of the battery energy storage system that are partially available or available subject to conditions such as internet connectivity which may be fulfilled using an ethernet connection but will require the purchase of a Wi-Fi dongle for Wi-Fi capabilities.
    - Any conditions that will impact/limit the system performance (or financial impact of the system) including but are not limited to:
        - Environmental (weather) conditions: The ambient temperature may affect the life span of the battery energy storage system.
        - Grid conditions: Grid connect systems without backup configuration will not operate in the absence of the electricity grid (i.e. during grid blackout).
        - Grid network constraints:
            - The Distribution Network Service Provider (DNSP) may impose constraints on battery energy storage system export to the grid depending on the grid voltage levels at the point of system and grid connection.
            - Guidelines and information for any relevant state or territory emergency backstop mechanisms required for the additional or retrofitted NET (if applicable).
            - Information about any network remote/dynamic control of the system as required/offered by the Distribution Network Service Provider (DNSP).
    - Any technical constraints required for the system to be installed/operate including but are not limited to:
        - Export limits: Any export limits imposed by the local electricity grid operator (DNSP) as part of the network connection agreement.
        - Meter changeover: Any meter changeover or reconfiguration required for the electricity meter to recognize export of energy to the electricity grid.
        - *Western Australia only (WA):* Limitations on when the battery system can charge from the grid.
    - Any customer obligations required for the battery energy storage system to be installed/operated such as maintaining an internet connection for remote monitoring of system performance or ensuring unobstructed access to the battery energy storage system for emergency situations.
- Quotations should include the following attachments for the proposed battery energy storage system components – battery system(s), inverter(s) (if applicable):
    - A copy of the product brochure/data sheet.
    - A copy of the product manufacturer warranty T&Cs which should contain manufacturer/importer contact details for warranty claims.
    - Any product manufacturer end of life return to base policies.
    - Information for which component is a recyclable component.
    - Information about Recycling standards for the battery energy storage system.
    - Information about any local council/state legislation on disposal of battery energy storage system components.
- If there is an existing NET on site, the quotation should also include how the existing product/system will integrate (if applicable) with the new battery energy storage system. This includes but are not limited to:
    - If the site has a PV system, can the excess electrical energy generated by the PV system be used to charge the batteries.

- If the existing PV is to be used in conjunction with the additional or retrofitted battery system, do all the components of the existing solar PV system meet the current relevant standards? If no, the addition to or retrofitting of the battery system *may not be* eligible for small-scale technology certificates (STCs) under the Small-scale renewable energy scheme (SRES). Include in the quote any additional costs to bring up the existing NET up to code.
- Has the existing solar PV inverter been delisted from the CEC Approved Inverter Products list due to safety concerns? If yes, the battery system may not be eligible for STCs.

Installation

Prior to planning the installation of the additions or retrofitting of the New Energy Tech, ***AS/NZS 5139*** requires the performance of a risk assessment; regardless of the type of battery system planned to be installed. The system should be installed according to the relevant installation standards, codes, and legislation. Ensure compliance and testing of the New Energy Tech is completed for the relevant State or Territory Emergency Backstop mechanism (if applicable), and that all labelling of the installation is completed.

At the completion of the system installation the system handover to customer should include the following information (in hardcopy or electronic copy):

1. System Information

- A list of battery energy storage system major components including:
  - The Battery system (Battery modules/Pre-assembled battery system/Pre-assembled integrated BESS).
  - Inverter(s) make and model (not required for Pre-assembled integrated BESS).
  - Battery rack/cabinet (if battery modules or Pre-assembled battery system requires external battery racks/cabinets for mechanical mounting/protection).
  - Balance of system components such as wiring can be excluded unless the item is a level 2 or level 3 equipment (in accordance with Electrical Equipment Safety System (EESS – VIC, QLD, TAS, WA)/ Proclaimed products (SA)/ declared article (NSW)).
    - The make and model of external DC isolators (switch disconnectors) or circuit breakers used to isolate the battery should be included.
  - The list should include the make and model of each component and the number of components installed.
- For each electrical component listed the serial numbers of the components installed (or alternatively a photo of the serial number).
  - Serial numbers for DC isolators (switch disconnectors) and circuit breakers can be excluded.
- For each electrical component listed a picture of the component nameplate label.
- A site plan of the battery energy storage system installed – including:
  - The Battery system (Battery modules/Pre-assembled battery system/Pre-assembled integrated BESS).
  - Inverter(s) (not required for Pre-assembled integrated BESS).
  - Any bollards installed in front of battery energy storage system.
  - Safety exclusion zone around battery energy storage system if required.
  - Location of main switchboard.
  - Any other existing NET on site.
- An electrical single line diagram of the battery energy storage system installed.
- Copies (electronic or hard copy) of major components and ancillary or auxiliary equipment operating manuals and warranty T&Cs

- The manufacturer warranty T&Cs which should contain manufacturer and/or Australian importer contact details for warranty claims.

- Provide a copy of third-party manufacturer and electricity network operator privacy policies.

2. System Compliance Information

- Provide a list of Standards the product/system and the installation comply with. For battery energy storage systems this may include but are not limited to:
  - Inverter Product Standards:
    - AS/NZS 4777.2 Grid connection of energy systems via inverters – Part 2 Inverter requirements
    - IEC 62109-1 Safety of power converters for use in photovoltaic power systems – Part 1 General requirements
    - IEC 62109-2 Safety of power converters for use in photovoltaic power systems – Part 2 Particular requirements for inverters
    - IEC 62477-1 Safety requirements for power electronic converter systems and equipment – Part 1 General
  - Battery Product Standards:
    - IEC 62619 Secondary cells and batteries containing alkaline or non-acid electrolytes – Safety requirements for secondary lithium cells and batteries for use in industrial applications
    - UL1973 Standard for Batteries for Use in Stationary, Vehicle Auxiliary Power and Light Electric Rail (LER) Applications
  - Installation Standards:
    - AS/NZS 3000: Wiring Rules
    - AS/NZS 5139 Electrical installations – Safety of battery systems for use with power conversion equipment
      - For compliance with AS/NZS 5139:2019 also indicate section (section 4/5/6) the battery energy storage system was installed in accordance with.
    - AS/NZS 4509.1 Stand-alone power systems - Safety and installation
    - AS/NZS 4509.2 Stand-alone power systems - System design
    - AS/NZS 4777.1 Grid Connection of energy systems via inverters – Part 1 installation requirements
    - Compliance and testing to the relevant state or territory emergency backstop mechanism (if applicable).
- Any electrical inspection certificates.

3. System Operating Information

- Provide instructions for battery energy storage system shutdown and start up.
- Provide recommended usage (time of day) for optimal system performance.
  - If trading energy, advise system owner to liaise with energy retailer or VPP provider for optimal time to trade energy as per agreement with energy retailer/VPP provider.
- Operating instructions for monitoring devices if monitoring devices are provided (or inbuilt into the battery energy storage system) including instructions on supporting systems required by the monitoring device that need to be provided by system owner such as a stable internet connection.
- Information about any network remote/dynamic control of the system as required by the local electricity network operator (DNSP) and agreed upon by the customer.
- Provide a warranty document with information about the overall system design lifespan and warranty.

This should clearly:

- Distinguish between parts and labour warranty periods.
- Identify the base warranty offered by manufacturers of major components – this is the warranty provided with the sale of the component.
- Identify extended warranties that are available for purchase and if there is a time constraint for when the extended warranties must be purchased by.
- Identify the difference between the product/system design lifespan versus the warranty periods:
  - The design lifespan generally refers to the time interval from when a product is installed to when it is discarded although for batteries this may be the cycle number or energy throughput.
  - The design lifespan is generally an estimate based on how the product/system is intended to be used.
  - The design lifespan may be greater than the product/system warranty period as the product/system can still work after the warranty period has passed but may require maintenance or repairs at the cost of the customer.
- Contact details for warranty claims with NET Approved Seller.

- Information about the recommended maintenance schedule for battery energy storage system.
- Instructions for how to decommission the battery energy storage system.

4. System Fault Information

- Instructions on how to recognize battery energy storage system faults.
- Instructions for how to isolate/shutdown battery energy storage system in the event of an fault or emergency situation including but not limited to fires, floods, or physical damage to components/system due to collision/impact.
- Contact information in the event of an emergency.
- Provide a hardcopy and electronic copy of the battery energy storage system SDS and advise the system owner that the SDS must be stored in an easily accessible location for emergency services personnel.

5. Information for System Owner

- Provide a copy of the relevant NETCC consumer information guide.
- Provide customer with the full name and licence/accreditation number of the tradesperson who designed/signed off on the installation.
- A copy of the accepted quotation including any agreed variations between the NET Approved Seller and the customer.

Post Installation

Post installation the NET Approved Seller should:

- Respond in a timely manner for any system issues within the warranty period.
- Notify customer when aware of any relevant data breaches.
- Monitor industry notification channels including the ACCC website (or any direct notifications from component suppliers) for product recalls/defects notices and notify customer of any relevant recalls and carry out the required corrective actions.
- If agreed at point of sale conduct a comparison of customer electricity bills and grid energy usage data to quantify the benefit of the NET.

Retailer's warranty

Approved Sellers should provide a minimum 5 year retailer's warranty covering the battery energy storage system and related workmanship. This retailer's warranty exists in addition to any warranties provided by manufacturers.

Appendix A

Clause	Section	Description	Tech Guide Recommendation
1d	Part A Overview	Ensure that products, systems, services and documentation provided under the Code are suitable and fit for purpose	Where a battery energy storage system is designed to store electricity for use as an alternative supply to the grid: NET Approved Seller should obtain and analyse the customer current energy usage data including: • Average amount of energy used per day/month/year. • Energy usage patterns (time of day). • This data should be obtained from customer meter data. If the site has existing energy generation that is intended to be used in conjunction with battery energy storage system, NET Approved Seller should obtain and analyse the site energy generation data including: • Average amount of energy generated per day/month/year. • Energy generation patterns (time of day). • This data should be obtained from data logged by the energy generation system or from an external meter installed at the output of the energy generation system. Compare site energy generation and proposed battery energy storage capacity to current energy usage data to determine the impact of the battery energy storage system on customer energy usage. The impact may include but is not limited to: • Energy management via load shifting by storing excess energy generated on site for later use to reduce usage of grid electricity. • Reduce reliability on the grid (for areas prone to grid electricity supply shortages).

1d	Part A Overview	Ensure that products, systems, services and documentation provided under the Code are suitable and fit for purpose	Where a battery energy storage system is designed to facilitate trading of stored energy, NET Approved Seller should take into account the following considerations: • Feed-in tariff rates available to customer (fixed or variable) • Cost to charge batteries from the grid - if applicable • Are 'appropriately sized'
1d	Part A Overview	Ensure that products, systems, services and documentation provided under the Code are suitable and fit for purpose	The impact of the new additional or retrofitted energy storage system should take into account: • Battery usable storage capacity at start and end of warranty period • Battery cycle number • Minimum throughput Energy Rated output power
3c	Part B Our required practices	Not make any false or misleading claims about the price, value, quality, capacity, output or other performance characteristic of our New Energy Tech, for example, through selective advertising, exaggeration or misleading focus on one or a few aspects only of the New Energy Tech	Any technical features/characteristics/specifications of the battery energy storage system stated on information provided to customer should be supported by scientific research or testing conducted by the manufacturer. NET Approved Sellers should ask manufacturers for proof of technical claims which may be in the form of product certification or in-house testing. Evidence of technical claims should be provided in writing and the NET Approved Seller should keep an electronic copy on file.
3e	Part B Our required practices	Not make any misleading claims about the place of origin (manufacture and assembly) of our products	NET Approved Sellers should check manufacturers documentation for country of manufacturer/assembly – if documentation does not state, ask manufacturers for country of manufacturer/assembly for products intended for the Australian Market. Claims made by manufacturer should be in writing and the NET Approved Seller should keep an electronic copy on file.
3f	Part B Our required practices	Not mislead you about the impact our New Energy Tech will have on your energy usage or costs	The impact of the new additional or retrofitted energy storage system should take into account: • Battery usable storage capacity at start and end of warranty period • Battery cycle number • Minimum throughput Energy Rated output power

3f	Part B Our required practices	Not mislead you about the impact our New Energy Tech will have on your energy usage or costs	NET Approved Seller should determine current energy costs using customer electricity bills, meter data.
3f	Part B Our required practices	Not mislead you about the impact our New Energy Tech will have on your energy usage or costs	For projected savings from reduction in grid electricity usage, the comparison should be based on current energy prices as per customer's current electricity bills. Another comparison based on predicted future grid electricity costs may also be prepared. When preparing comparison based on predicted future grid electricity costs, NET Approved Seller should state source of future electricity cost projections.
3g	Part B Our required practices	Ensure that any claims relating to performance and energy cost savings of our New Energy Tech are reasonably based and where available, based on reputable sources	The impact of the new additional or retrofitted energy storage system should take into account: • Battery usable storage capacity at start and end of warranty period • Battery cycle number • Minimum throughput Energy • Rated output power These specifications should be taken from technical specifications provided by the product/system manufacturer documentation.
3g	Part B Our required practices	Ensure that any claims relating to performance and energy cost savings of our New Energy Tech are reasonably based and where available, based on reputable sources	NET Approved Seller should determine current energy costs using customer electricity bills, meter data.
3g	Part B Our required practices	Ensure that any claims relating to performance and energy cost savings of our New Energy Tech are reasonably based and where available, based on reputable sources	For projected savings from reduction in grid electricity usage, the comparison should be based on current energy prices as per customer's current electricity bills. Another comparison based on predicted future grid electricity costs may also be prepared. When preparing comparison based on predicted future grid electricity costs, NET Approved Seller should state source of future electricity cost projections.

7a	Fit for purpose inquiry	Ask you about your specific circumstances, needs and expectations. This includes the extent to which you plan to use our New Energy Tech to supplement or improve the efficiency of energy use while connected to an Energy Network or be isolated from the Energy Network (also known as "off-grid") or your expected outcomes from participating in forms of New Energy Tech supply such as virtual power plants or other energy markets	Where a battery energy storage system is designed to store electricity for use as an alternative supply to the grid: NET Approved Seller should obtain and analyse the customer current energy usage data including: Average amount of energy used per day/month/year. • Energy usage patterns (time of day). • This data should be obtained from customer meter data. If the site has existing energy generation that is intended to be used in conjunction with battery energy storage system, NET Approved Seller should obtain and analyse the site energy generation data including: • Average amount of energy used per day/month/year. • Energy usage patterns (time of day). • This data should be obtained from data logged by the energy generation system or from an external meter installed at the output of the energy generation system. Compare site energy generation and proposed battery energy storage capacity to current energy usage data to determine the impact of the battery energy storage system on customer energy usage. The impact may include but is not limited to: • Energy management via load shifting by storing excess energy generated on site for later use to reduce usage of grid electricity. • Reduce reliability on the grid (for areas prone to grid electricity supply shortages).
7a	Fit for purpose inquiry	Ask you about your specific circumstances, needs and expectations. This includes the extent to which you plan to use our New Energy Tech to supplement or improve the efficiency of energy use while connected to an Energy Network or be isolated from the Energy Network (also known as "off-grid") or your expected	Where a battery energy storage system is designed to facilitate trading of stored energy, NET Approved Seller should take into account the following considerations: • Feed-in tariff rates available to customer (fixed or variable) • Cost to charge batteries from the grid - if applicable • The additions to or the retrofitted Energy Storage System must be *'appropriately sized'* to ensure STCs can be registered and claimed (if applicable). • State whether the new additional or retrofitted Energy Storage System is 'on-grid' or 'off-grid'.

		outcomes from participating in forms of New Energy Tech supply such as virtual power plants or other energy markets	
9b	Quote – general requirements	An itemised list of the New Energy Tech to be supplied, including relevant specifications. For products and systems, this will include the manufacturer, model, year, quantities, configuration and performance specifications. For services, this will include the nature and purpose of the services, whether the services are ongoing, scheduled (and if so what frequency) or responsive to your request, the duration of the service commitment and whether the services will be provided remotely or at your premises	Quotations should include a list of major system components of the battery energy storage system including: • Battery modules and BMS/Pre-assembled battery system/Pre-assembled integrated BESS • Inverter(s) - not required for pre-assembled integrated BESS • Battery rack/cabinet (if battery modules or Pre-assembled battery system requires external battery racks/cabinets for mechanical mounting/protection). • Balance of system components such as wiring and safety switches excluded unless required by a relevant installation Standard or if item is a level 2 or level 3 equipment (in accordance with Electrical Equipment Safety System (EESS – for VIC, QLD, TAS, WA)/Proclaimed products (for SA)/declared article (for NSW)). DC Isolators and Circuit breakers are considered Level 3 equipment/proclaimed product/declared article. The system components should be suitable for installation under Australian legislation and Standards.
9e	Quote – general requirements	Information about product, system or service limitations that are likely to be relevant to you (e.g. where a battery does not provide a back-up facility)	Quotations should include information about: • Limitation of the product or service including features that are not available (or available at additional cost) such as monitoring battery performance. • Partially available or available subject to conditions such as internet connectivity which may be achieved with an ethernet connection but will require an additional W-Fi- dongle for Wi-Fi connectivity.

9e	Quote – general requirements	Information about product, system or service limitations that are likely to be relevant to you (e.g. where a battery does not provide a back-up facility)"	Quotations should include information about conditions that will impact/limit the system performance including: environmental (weather) conditions, grid conditions, grid network constraints - export limit or network dynamic control, installation site requirements such as the installation of a bollard in front battery energy storage system to protect battery energy storage system from collision or impact.
9f	Quote – general requirements	A performance estimate for the New Energy Tech to be supplied, which will be reasonably based, where available rely on reputable sources and comply with any relevant Administrator guidance	The impact/performance of the new additional or retrofitted energy storage system should take into account: • Battery usable storage capacity at start and end of warranty period • Battery cycle number • Minimum throughput Energy • Rated output power • A reasonable estimate of the amount of energy the existing solar PV system may contribute to the new additional or retrofitted Energy Storage System These specifications should be taken from technical specifications provided by the product/system manufacturer documentation.
9j	Quote – general requirements	Details of any guarantees and for a New Energy Tech product or system - the name and contact details of our supplier in case you want to pursue your consumer guarantee rights under the Australian Consumer Law against that supplier or if for any reason you are unable to contact us. warranties that apply. We will specify: the specific details of the guarantee or warranty and how it applies to you	Quotation should include a copy of the battery energy storage system manufacturer warranty T&Cs which should contain manufacturer and/or Australian importer contact details for warranty claims, and cover any ancillary or auxiliary equipment warranty information.

9k	Quote – general requirements	For a New Energy Tech product or system, information about its expected life and what is involved in disposing of it at the end of its life	Quotations should include the following: • Information from the NET Approved Seller about the overall system warranty – this should clearly distinguish between parts and labour warranty periods, information about base warranties and available extended warranties. • Information about product/system warranty versus the product/system design lifespan. • A copy of the manufacturer warranty T&Cs which should contain manufacturer/importer contact details for warranty claims. • Include any component manufacturer end of life return to base policies. • Information for which component is recyclable components. • Including information about Recycling standards. • Information about any local council/state legislations on disposable of products.
17ai	Quote - design	A site-specific installation design or plan (a sketch or diagram is acceptable) including any configuration or positioning issues and how the New Energy Tech will integrate with other New Energy Tech you may have	Quotations should include: • A site map showing the physical locations/layout of the battery system, inverter(s) - if separate to battery system, proximity of battery energy storage system and inverter to main switchboard, any safety exclusion zones around the system or safety bollards required to be installed in front of battery energy storage system. • Any specific access requirements to the product/system required for maintenance/emergency situations. If there is existing NET on site, how the new product/system will integrate (if applicable) with the new product/system.
17aii	Quote - design	A site-specific performance estimate for the New Energy Tech	The impact/performance of the new additional or retrofitted energy storage system should take into account: • Battery usable storage capacity at start and end of warranty period • Battery cycle number • Minimum throughput Energy • Rated output power These specifications should be taken from technical specifications provided by the product/system manufacturer documentation.

18b	Quote - connections	An explanation of the steps that need to be taken to obtain approval and/ or reconfiguration of your meter and the relevant paperwork that must be completed and submitted prior to installation	Quotations should include information about: • Any technical constraints (export limits, tariffs, meter changeover/reconfiguration) required for system to be installed/operated. • Any customer obligations required for the system to be installed/operated. How any relevant state or territory emergency backstop mechanism will interact with the additional or retrofitted ESS.
32	Delivery, installation and safety	If you purchase New Energy Tech that requires physical installation by us, we will ensure your safety and the safety of our installers. We will install in accordance with all applicable safety standards, manufacturer's specifications, relevant Australian Standards, Energy Network standards and good industry practice, using an installer that is trained, competent and where applicable, holds any required qualification or certification to undertake the work	System handover to customer should include the following information: • A list of major system components of the battery energy storage system including: • Battery modules and BMS/Pre-assembled battery system/Pre-assembled integrated BESS • Inverter(s) - not required for pre-assembled integrated BESS • Battery rack/cabinet (if battery modules or Pre-assembled battery system requires external battery racks/cabinets for mechanical mounting/protection). • Balance of system components such as wiring and safety switches excluded unless required by a relevant installation Standard or if item is a level 2 or level 3 equipment (in accordance with Electrical Equipment Safety System (EESS – for VIC, QLD, TAS, WA)/Proclaimed products (for SA)/declared article (for NSW)). • For each component listed a list of the serial numbers of the components installed (or alternatively a photo of the serial number). • For each component listed a picture of the component nameplate label. • A site plan of the product/system installed - including physical locations of the components battery energy storage system and its proximity to the main switchboard. • An electrical/mechanical schematic of system installed.
32	Delivery, installation and safety	If you purchase New Energy Tech that requires physical installation by us, we will ensure your safety and the safety of our installers. We will install in accordance with all	System handover to customer should include the following information: • Provide list of Standards the product/system and the installation complies with. • Provide a list of optional Standards the system and installation complies with.

		applicable safety standards, manufacturer's specifications, relevant Australian Standards, Energy Network standards and good industry practice, using an installer that is trained, competent and where applicable, holds any required qualification or certification to undertake the work	• If any engineering service is provided a copy of the engineering report or certification for the engineering service. • Any electrical inspection Certificates. • Provide copies (electronic or hard copy) of major components operating manuals and warranty T&Cs. • Provide a hardcopy and electronic copy of the battery energy storage system SDS. • Provide a copy of NETCC consumer information guide. • Provide customer with the name and licence/accreditation number of the tradesperson who designed/signed off on the installation.
34d	Activation	Advise you of contact details for queries or following up on progress	System handover to customer should include contact details (phone number, email address) for customer in the event of any errors/issues with system operation.
34e	Activation	Advise of any potential problems that may arise	System handover to customer should include the following information: • Instructions on how to recognise product/system faults. • Instructions for how to isolate/shutdown product/system in the event of an fault or emergency situation including fires, floods, physical damage to product/system due to collision/impact. • Contact information in the event of an emergency.
37a	Operating Information	Provide you with comprehensive information for safe and effective operation, maintenance and optimisation of your New Energy Tech	System handover to customer should include the following information: • Provide instructions for system shutdown and start up. • Provide recommended usage (time of day) for optimal system performance. • Provide recommended maintenance instructions include maintenance schedule. • Operating Manuals for major components. • Instructions for how to decommission product/system. • Instructions on how to recognize battery energy storage system faults. • Instructions for how to isolate/shutdown battery energy storage system in the event of an emergency situation including but not limited to fires, floods,

			physical damage to components/system due to collision/impact. • Contact information in the event of an emergency. • Provide a hardcopy and electronic copy of the battery energy storage system SDS.
37b	Operating Information	Explain to you any obligations that you may have to facilitate or enable the New Energy Tech (for example, to maintain an internet connection that we are able to access)	System handover to customer should instructions/details of supporting systems/services required that are provided by system owner.
37ci	Operating Information	Written instructions and a physical or electronically recorded demonstration (for example, an instructional video	System handover to customer should include the following information: • Provide instructions for system shutdown and start up. • Provide recommended usage (time of day) for optimal system performance. • Provide recommended maintenance instructions include maintenance schedule. • Operating Manuals for major components.
37cii	Operating Information	Providing you either with a measuring or monitoring device that connects to the New Energy Tech or with continuous access to a remote monitoring service (in either case that will facilitate accurate measurement of benefit that is based on objective standards acceptable to the Administrator) together with written instructions as to how to use that device or access that service	System handover to customer should include the following information: • Operating instructions for monitoring devices. • Instructions for how to use monitoring device/interpret data and notifications provided by monitoring device. • Instructions on supporting systems required by monitoring device that needs to be provided by system owner.

37ciii	Operating Information	A commitment to provide you with regular reports that accurately quantify the benefit that you are deriving and that meet any guidelines made by the Administrator in relation to reporting of this kind (for example, in the case of a service that is designed to reduce your energy bills by smart management of your energy consuming products).	A comparison of electricity meter data/bills post installation to ensure product/system is meeting the performance estimate at regular intervals (as agreed upon).
38b	Performance	Performing properly	A review of the battery energy storage system energy throughput and electricity bills post installation to ensure product/system is meeting the performance estimate.
38c	Performance	Reflecting any agreed contract and meeting the performance specifications outlined by us to you	Post installation NET Approved Seller should conduct a comparison of electricity meter data/bills after first 3 months and then every year (if agreed upon with customer).
38e	Performance	New Energy Tech that utilises information and communications technology will be secure	Post installation NET Approved Seller should: • Provide a copy of third party manufacturer and Network privacy policies. • Notify customer when aware of any data breaches.
39	Performance	If we become aware that New Energy Tech that we have supplied to you is defective or unsafe, we will promptly tell you and offer to fix the problem if this is possible or otherwise remove the product or system from your premises and provide reasonable compensation to you	Post installation NET Approved Seller should monitor industry notification channels including the ACCC website (or any direct notifications from component suppliers) for product recalls/defects notices and notify customer of any relevant recalls and carry out the required corrective actions.

43	Warranty Claim	We will provide you with the name and contact details of our New Energy Tech product or system supplier in case you want to pursue your consumer guarantee rights under the Australian Consumer Law against that supplier or if for any reason, you are unable to contact us	System handover to customer should include a copy of the manufacturer warranty T&Cs for the components of the battery energy storage system which should contain manufacturer and/or Australian importer contact details for warranty claims, and for any ancillary or auxiliary equipment that relates with the core NET product.

info@newenergytech.org.au
03 9929 4195

newenergytech.org.au