BEST PRACTICE GUIDE – BATTERY STORAGE EQUIPMENT

Hilary Lai

PRODUCT PROGRAM SPECIALIST,
CLEAN ENERGY COUNCIL

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BEST PRACTICE GUIDE: BATTERY STORAGE EQUIPMENT – ELECTRICAL SAFETY REQUIREMENTS

There is currently no specific product safety standard in Australia that covers the risk of battery storage equipment in households.

The Best Practice Guide was developed to provide a set of consistent and transparent minimum safety criteria that can be applied when assessing the safety of lithium-based battery storage equipment intended for household, domestic, residential or similar use.

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BEST PRACTICE GUIDE: BATTERY STORAGE EQUIPMENT – ELECTRICAL SAFETY REQUIREMENTS

The Best Practice Guide specify requirements that battery storage equipment should meet for providing an acceptable level of protection against the following hazards:

- **Electrical**
- **Mechanical**
- **Thermal**
- **Fire**
- **Radiation**

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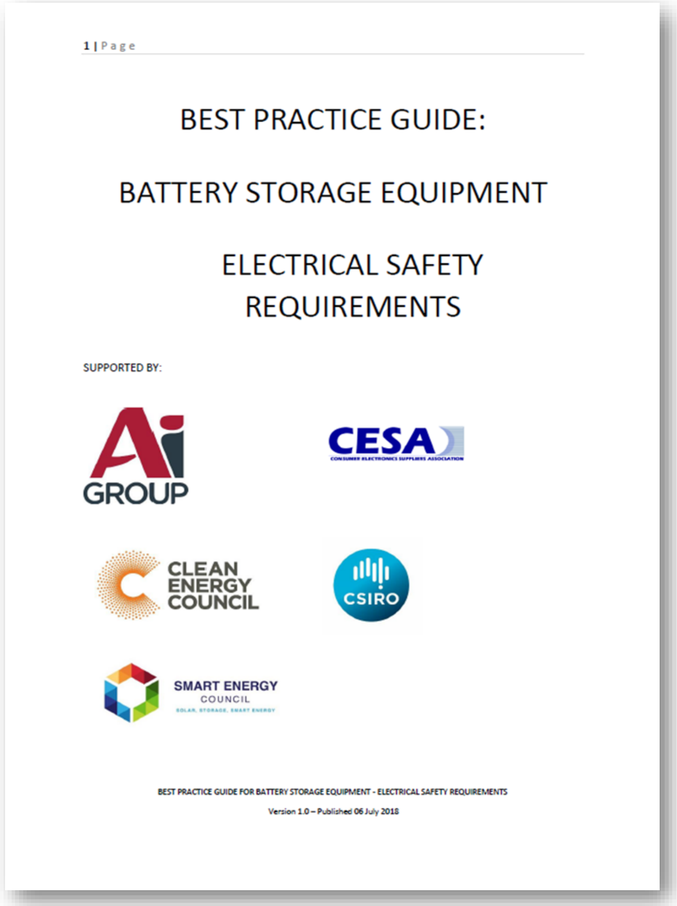
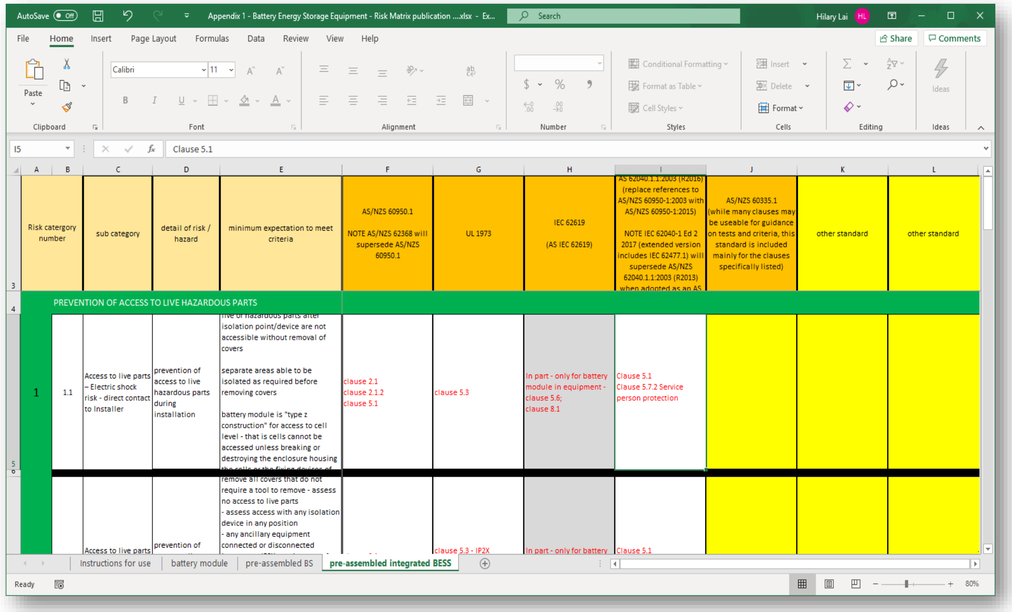
BEST PRACTICE GUIDE & RISK MATRIX

http://www.batterysafetyguide.com.au/





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DEVELOPMENT OF THE BEST PRACTICE GUIDE

The Best Practice Guide was developed by industry associations involved in renewable energy battery storage equipment.

Participants in the development of the Best Practice Guide include:

- Industry organisations
- Manufacturers of battery storage equipment
- Energy network operators
- Private Certification bodies
- Consumer and Electrical Safety Regulators

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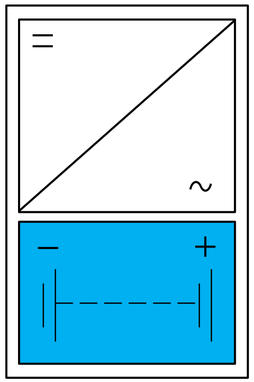
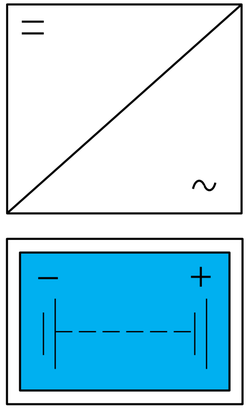
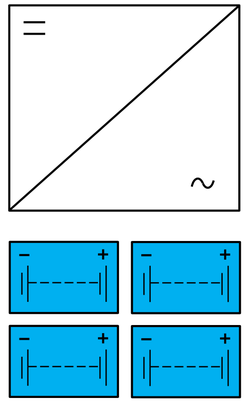
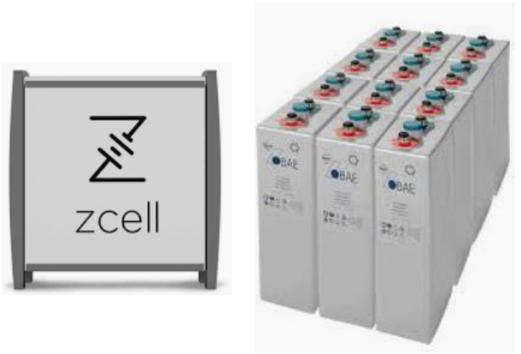
TYPES OF BATTERY STORAGE EQUIPMENT









SCOPE OF BEST PRACTICE GUIDE

The Best Practice Guide applies to Pre-assembled Battery Storage Equipment intended for household or similar use:

- **Lithium Battery Storage Medium**
- **Rated capacity between 1kWh and up to and including 200kWh**
- **Max DC Voltage: 1500VDC**
- **Max AC Voltage: 1000VAC**

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WHO SHOULD USE THE BEST PRACTICE GUIDE

Manufacturers and importers can use the criteria detailed in the Best Practice Guide to demonstrate their battery storage equipment meets industry best practice requirements for safety.

For installers, installation requirements of Section 4 and Section 5 of AS 5139 can be applied to Battery Storage Equipment that are compliant to the Best Practice Guide.

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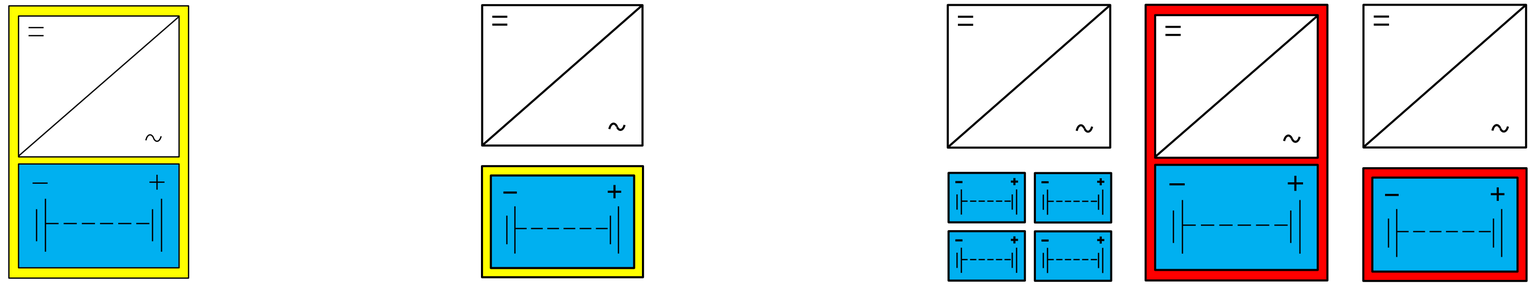
BEST PRACTICE GUIDE & AS/NZS 5139

KEY:

- Battery
- ‘Best Practice Guide’ compliant BESS or BS
- ‘Best Practice Guide’ non-compliant BESS or BS

SECTION 1

SECTION 2



SECTION 4

BESS

Best Practice Guide compliant

SECTION 5

BS

Best Practice Guide compliant

SECTION 6

Other

Best Practice Guide Non-compliant

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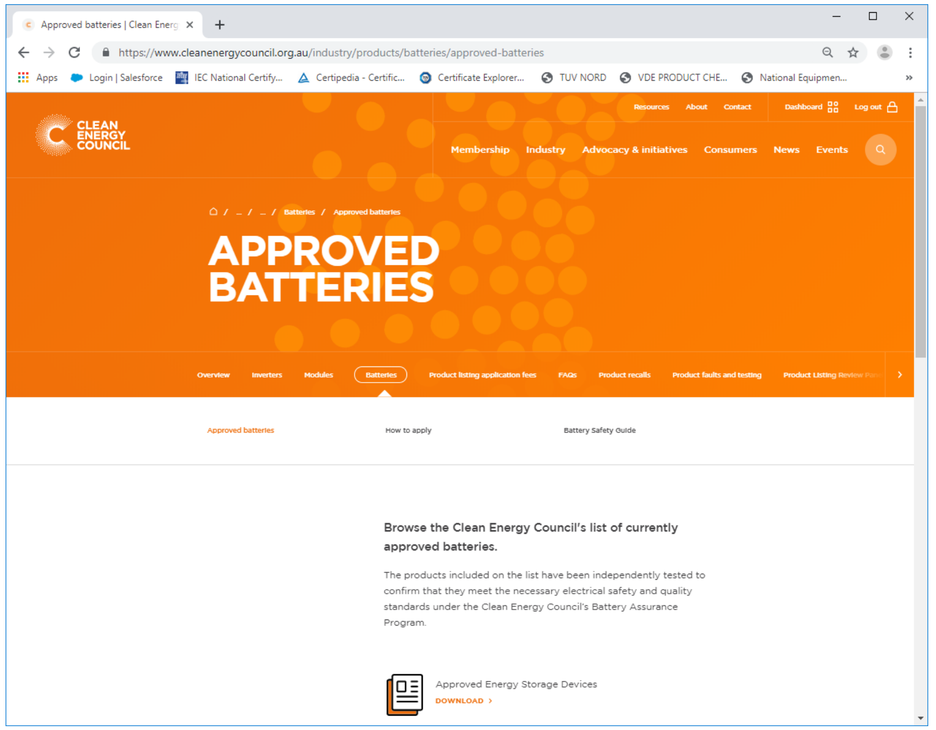
CEC BATTERY ASSURANCE PROGRAM

The CEC List of Approved Batteries (Battery Assurance Program) is a list of lithium-based energy storage devices that meet industry best practice requirements and is based on compliance to the Best Practice Guide.

https://www.cleanenergycouncil.org.au/industry/products/batteries/approved-batteries



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SCOPE OF THE CEC BATTERY ASSURANCE PROGRAM

Products on the CEC Approved Battery List are required to meet the following requirements:

- **Products are independently certified by an accredited certification agency to the safety standards and requirements as specified in the Best Practice Guide.**
- **Manufacturer's documentation including datasheets, installation and operating instructions, safety datasheets, warranty terms and conditions meet industry best practice requirements.**
- **Manufacturer’s documentation is assessible to the public on manufacturer and Australian importer websites.**

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SUMMARY

The Best Practice Guide is intended to provide industry with the means of assessing the safety of lithium-based battery storage equipment.

The Best Practice Guide should be used in conjunction with:

- AS 5139 – Electrical installations – Safety of battery systems for use with power conversion equipment
- AS 4509.1 – Stand-alone power systems safety and installation
- AS 3000 – Electrical installations (Wiring Rules)

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FURTHER INFORMATION

For questions relating to the Best Practice Guide or the Clean Energy Council Battery Assurance Program please contact the Clean Energy Council products team at products@cleanenergycouncil.org.au.

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THANK YOU

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