

BEST PRACTICE GUIDE - BATTERY STORAGE EQUIPMENT

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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.

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






BEST PRACTICE GUIDE & RISK MATRIX

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

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BEST PRACTICE GUIDE: BATTERY STORAGE EQUIPMENT ELECTRICAL SAFETY REQUIREMENTS

SUPPORTED BY:



BEST PRACTICE GUIDE FOR BATTERY STORAGE EQUIPMENT - ELECTRICAL SAFETY REQUIREMENTS
Version 1.0 – Published 06 July 2016

Appendix 1 - Battery Energy Storage Equipment - Risk Matrix publication ...xlsx - Ex...

Risk category number	sub category	detail of risk / hazard	minimum expectation to meet criteria	AS/NZS 60950.1 NOTE AS/NZS 62368 will supersede AS/NZS 60950.1	UL 1973	IEC 62619 (AS IEC 62619)	AS 62040.1.1:2003 (R2016) (replace references to AS/NZS 60950-1:2003 with AS/NZS 60950-1:2015) NOTE IEC 62040-1 Ed 2 2017 (extended version includes IEC 62477.1) will supersede AS/NZS 62040.1.1:2003 (R2013) when adopted as an AS	AS/NZS 60335.1 (while many clauses may be useable for guidance on tests and criteria, this standard is included mainly for the clauses specifically listed)	other standard	other standard
PREVENTION OF ACCESS TO LIVE HAZARDOUS PARTS										
1	1.1	Access to live parts - Electric shock risk - direct contact to installer prevention of access to live hazardous parts during installation	live or hazardous parts after isolation point/device are not accessible without removal of covers separate areas able to be isolated as required before removing covers battery module is "type 2 construction" for access to cell level - that is cells cannot be accessed unless breaking or destroying the enclosure housing	clause 2.1 clause 2.1.2 clause 5.1	clause 5.3	In part - only for battery module in equipment - clause 5.6; clause 8.1	Clause 5.1 Clause 5.7.2 Service person protection			
		Access to live parts	prevention of							

Instructions for use | battery module | pre-assembled BS | pre-assembled integrated BESS



DEVELOPMENT OF THE BEST PRACTICE GUIDE

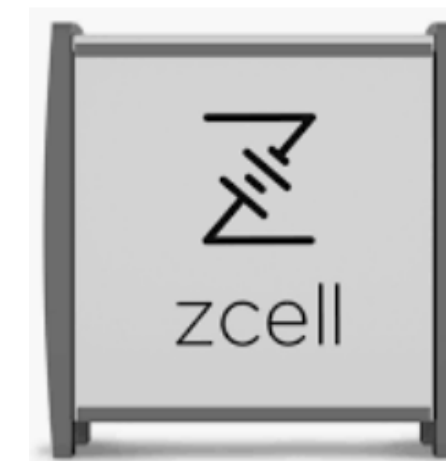
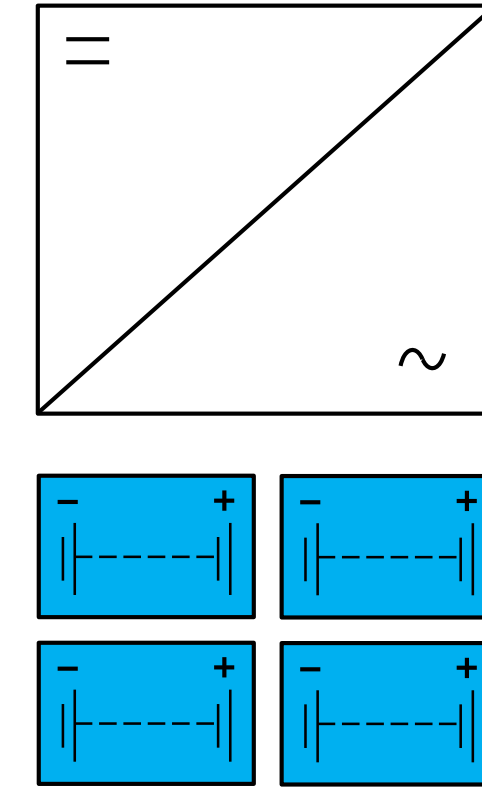
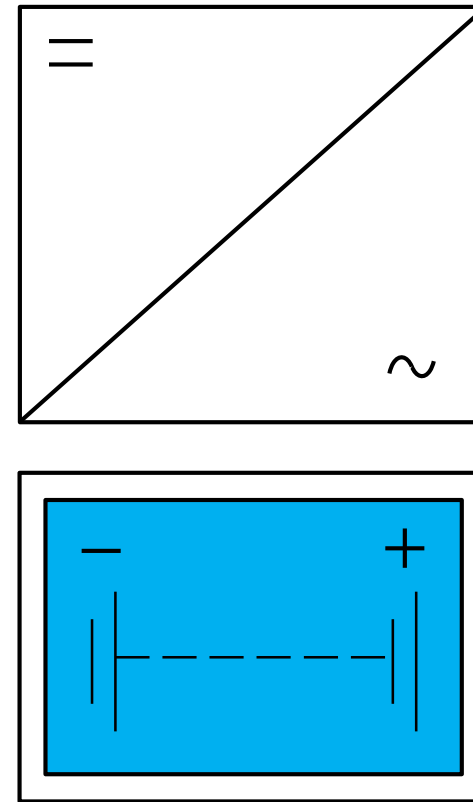
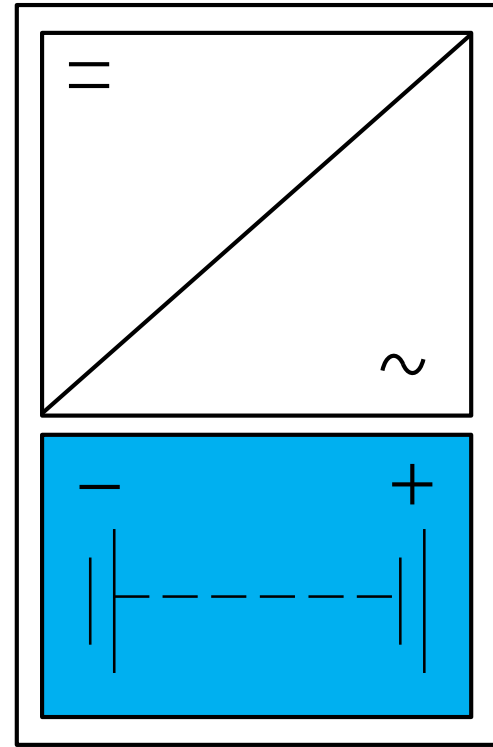
The Best Practice Guide was developed by industry associations involved in renewable energy battery storage equipment.

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



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

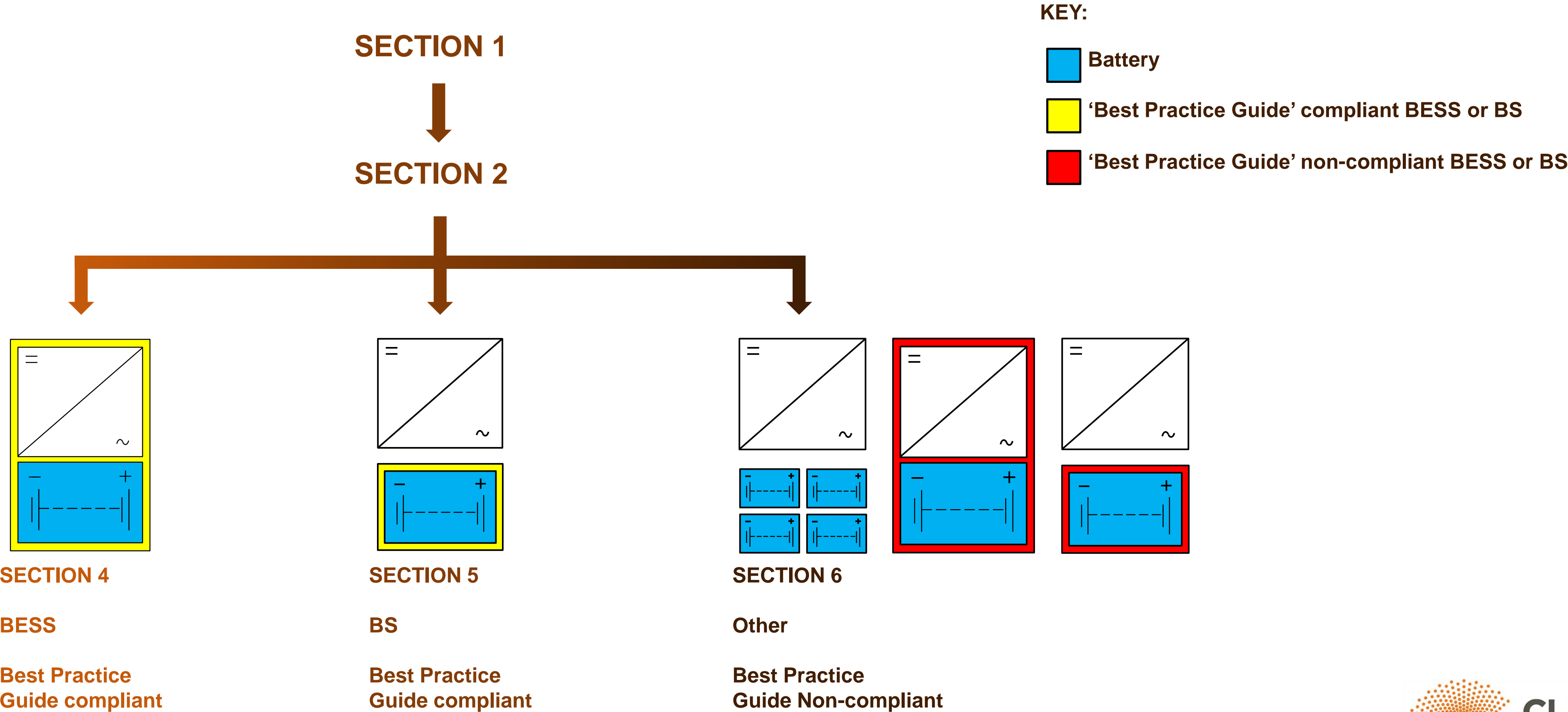


WHO SHOULD USE THE BEST PRACTICE GUIDE

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.

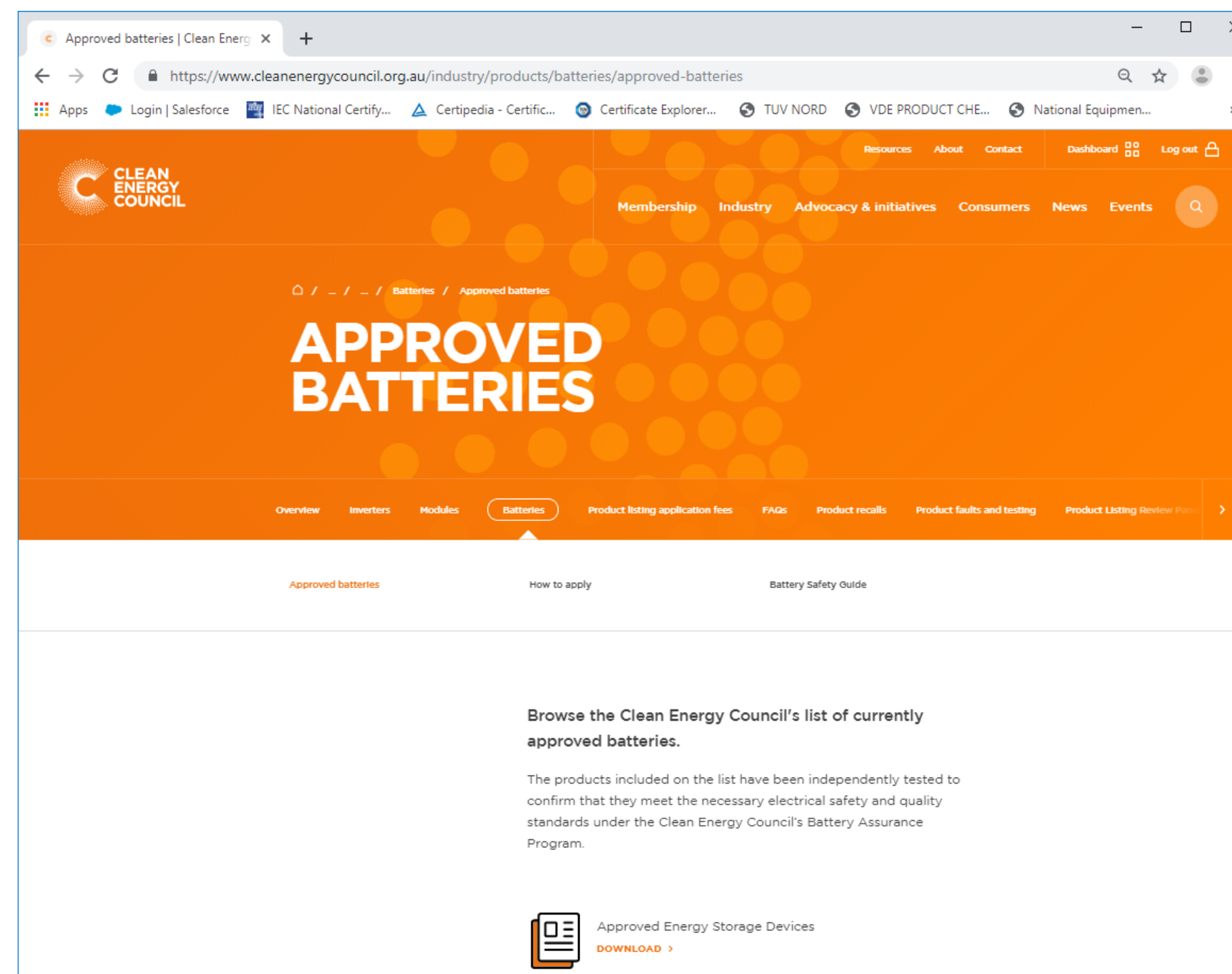
BEST PRACTICE GUIDE & AS/NZS 5139



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>



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.

SUMMARY

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

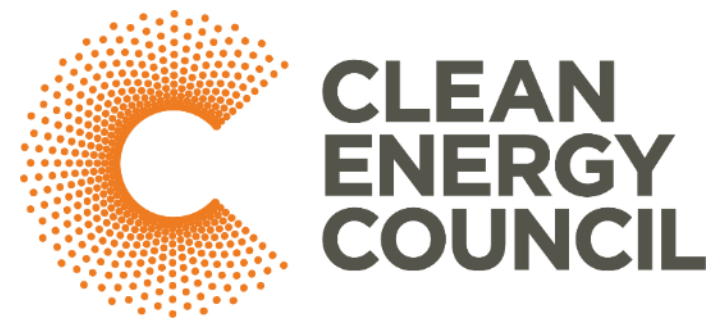
The Best Practice Guide should be used in conjunction with:

- 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)

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.





THANK YOU

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