THE FUTURE OF BATTERY STORAGE INSTALLATION IN AUSTRALIA

Storage Integrity Working Group (SIwG)

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Clean Energy Council

November 2015

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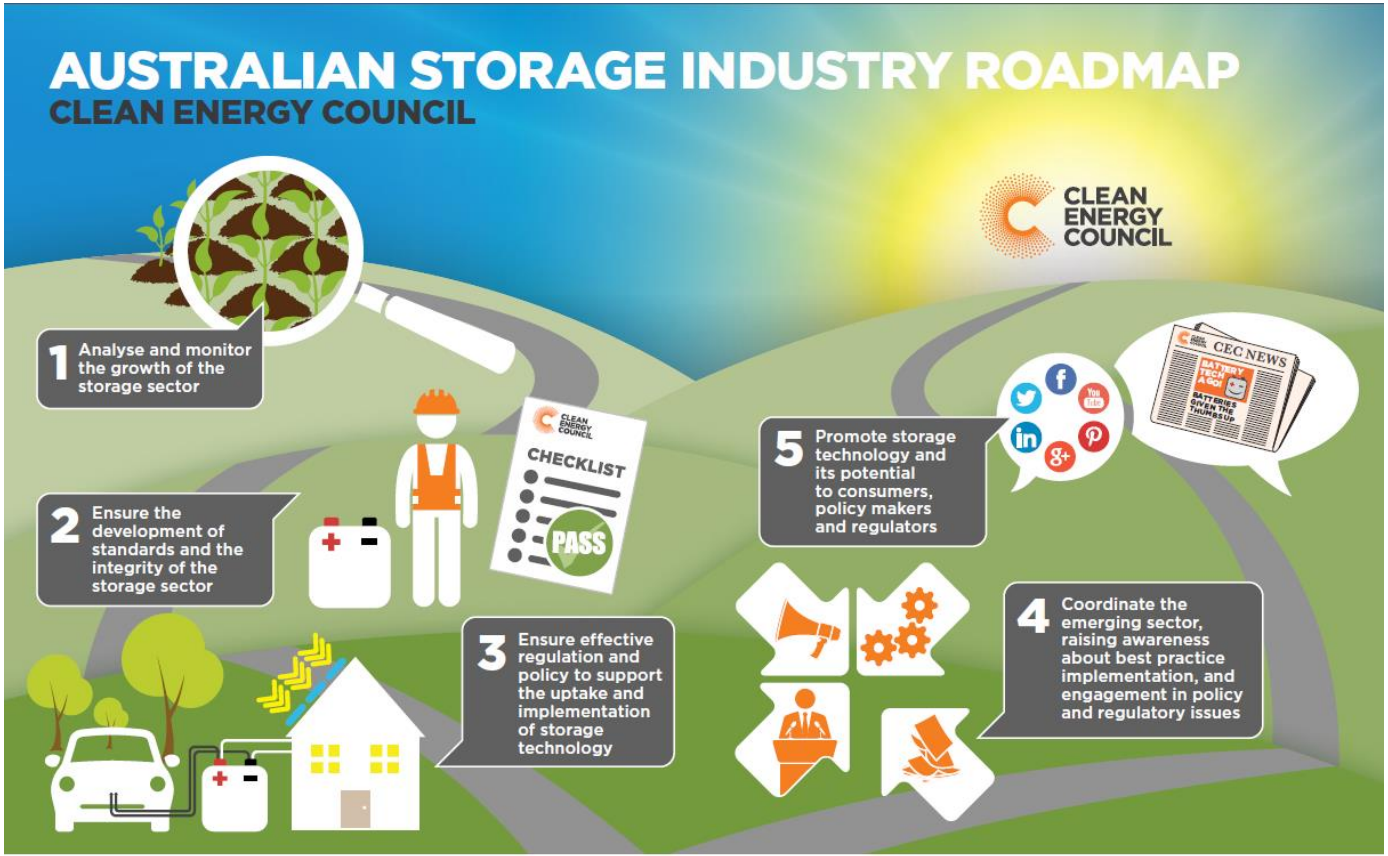

To download the roadmap and sign up to receive updates through the Energy Storage Network, visit cleanenergycouncil.org.au/storage.

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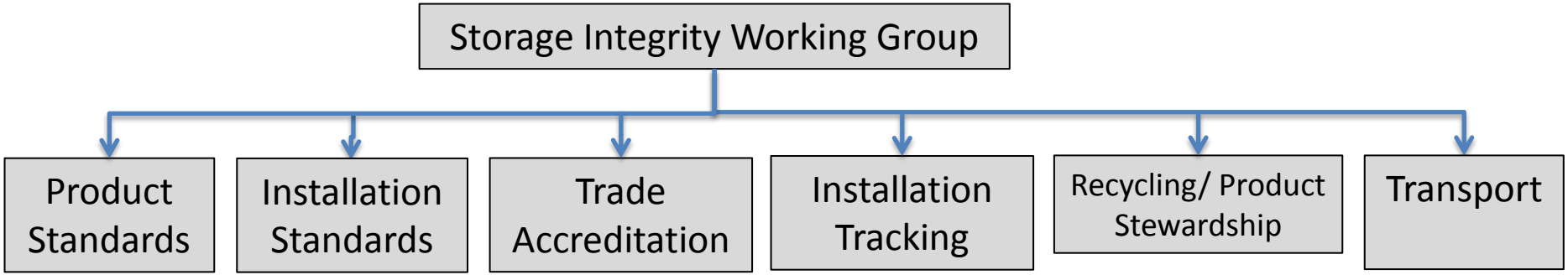
OVERVIEW

- Concerned with safety implications of grid connected battery storage (GCBS) systems
- Comprised of six different sub-committees



OVERVIEW

- Representatives Include:

Additionally:
Fire emergency services, industry members, non-for-profits, battery suppliers, testing houses & logistics

PRODUCT STANDARDS

- Review existing International Product Standards
- Perform “gap analysis” to determine suitability to Australian conditions (eg. temperature)
- Investigate developing “Approved Battery List” (CEC currently maintains approved solar module & inverter list)

INSTALLATION STANDARDS

- Review existing International and (disparate) Australian Installation Standards
- Create “Installation Guidelines” (rules on how to install a GCBS system)
- Mandatory for CEC accredited installers to follow
- Developed in concert with forthcoming, dedicated & unpublished GCBS Australian Standard

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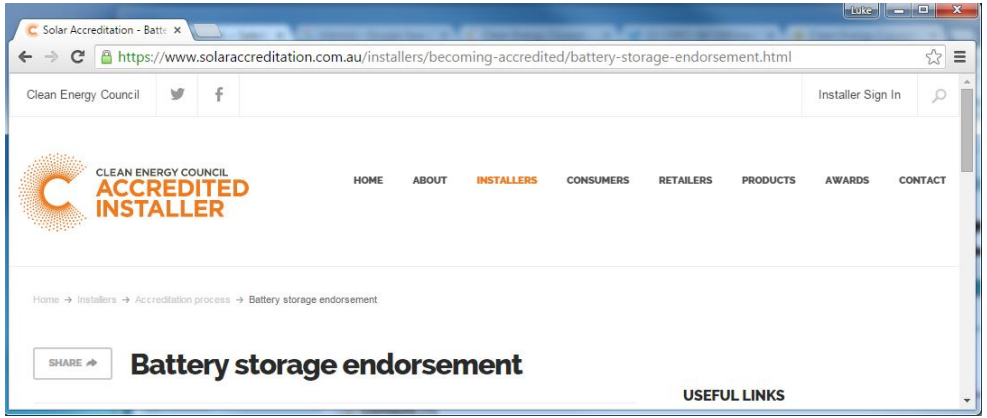
ACCREDITATION

- Create a special electrical trade accreditation for installing GCBS systems

- Maintain a list of Registered Training Providers & Courses
  - 10 x solar installers with new accreditation
  - 4 x RTOs offering applicable course



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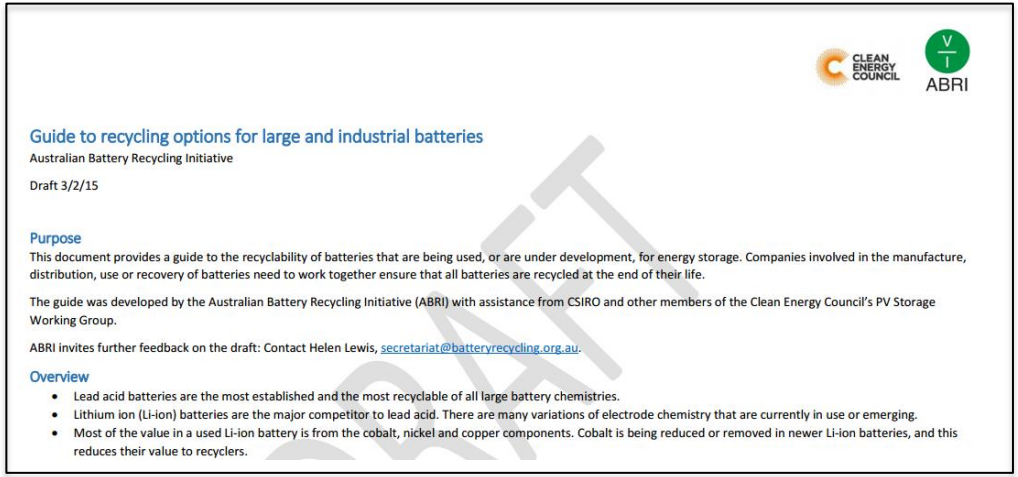
TRACKING

- Project scope an online registration portal for GCBS systems (desktop and smartphone app)
- Obtain project implementation costing
- Registration of systems to fund inspection regime

RECYCLING/ PRODUCT STEWARDSHIP

- Identify recycling options for battery technologies – including gaps in collection infrastructure

- Develop an end-of-life guide for:
  - manufacturers and distributors
  - consumers on how to recycle used batteries



CLEAN ENERGY COUNCIL ABRI

Guide to recycling options for large and industrial batteries

Australian Battery Recycling Initiative

Draft 3/2/15

Purpose

This document provides a guide to the recyclability of batteries that are being used, or are under development, for energy storage. Companies involved in the manufacture, distribution, use or recovery of batteries need to work together ensure that all batteries are recycled at the end of their life.

The guide was developed by the Australian Battery Recycling Initiative (ABRI) with assistance from CSIRO and other members of the Clean Energy Council's PV Storage Working Group.

ABRI invites further feedback on the draft: Contact Helen Lewis, secretariat@batteryrecycling.org.au.

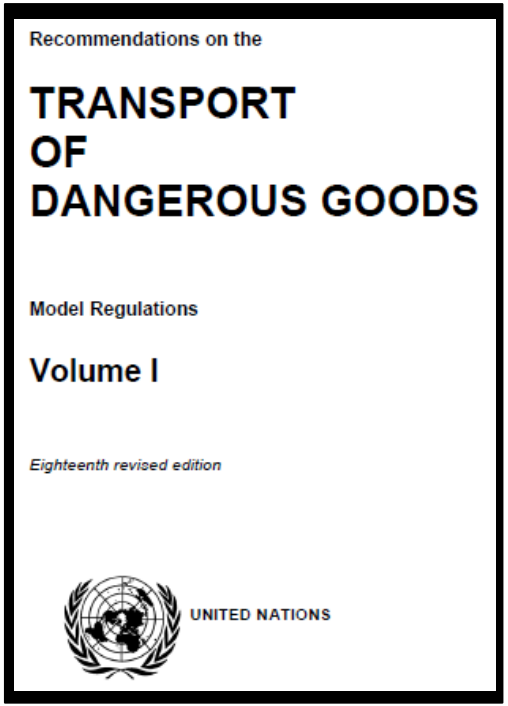
Overview

- Lead acid batteries are the most established and the most recyclable of all large battery chemistries.
- Lithium ion (Li-ion) batteries are the major competitor to lead acid. There are many variations of electrode chemistry that are currently in use or emerging.
- Most of the value in a used Li-ion battery is from the cobalt, nickel and copper components. Cobalt is being reduced or removed in newer Li-ion batteries, and this reduces their value to recyclers.

DRAFT

TRANSPORT

- Develop best practice guide for transportation of battery storage
- To include stakeholders from WorkCover and First Response sector
- References United Nations Model Regulations on “Transport of Dangerous Goods”



MEMBERSHIP & INVOLVEMENT

- Thank-you to CEC members

- We welcome CEC members to apply to contribute to the Storage Integrity Working Group

THANK YOU

Contact CEC

Web: https://www.cleanenergycouncil.org.au/technologies/energy-storage.html

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Phone: (03) 9929 4141

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