

# Australia Regulatory Update

34<sup>th</sup> Joint Technical Liaison Meeting

Tokyo, Japan

April 18<sup>th</sup> – 19<sup>th</sup> 2024

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*Representing: CMEIG – Construction & Mining Equipment Industry Group*



The Construction & Mining Equipment Industry Group (CMEIG) is a non-profit organisation to represent the construction and mining equipment industry and allied equipment and services on issues impacting on the delivery of business.

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# Agenda

*Images shown here are for illustrative purposes only*

- Regulatory Landscape
- Recent Developments and Focus Areas
- Standards & Regulations Development Activities
- Industry Group Activity



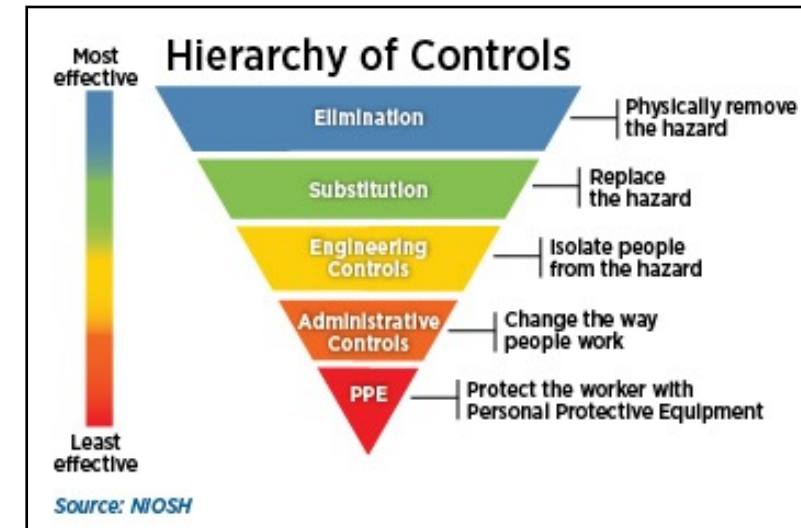
# Regulatory Landscape

Images shown here are for illustrative purposes only

- A common regulatory aim throughout the region –

## ***Equipment free from risks to health and safety so far as is reasonably practicable***

- Risk-based approach to managing health and safety in the workplace
  - Regulators use *Codes of Practice, Guidelines, Bulletins, Other guidance* to convey expectations
  - May refer to standards as a benchmark, however aim is generally risk-based
  - Significant onus on end users to address health and safety risks
- Now have Australia-wide harmonised Work Health & Safety (WHS) Laws\*
    - Broadened scope, stringent penalties, additional requirements
    - Emphasis on hierarchy of controls
    - State / application-specific underlying guidance material
    - VIC will not adopt\*



\*NOTE: Other regulatory schemes also exist besides WHS

# Regulatory Landscape

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LEGALLY BINDING

Act

- Formal, broad description of law
- Identifies duties of stakeholders
- Requires equipment free from risks to health and safety so far as is reasonably practicable

e.g.

- *NSW Workplace Health and Safety Act*
- *QLD Coal Mining Health and Safety Act*

Standards called up here...

Regulations

- More detail on stakeholder duties
- Identify key hazards and obligations
- Risk based – require identification of hazards and control of risk

e.g.

- *QLD WHS Regulations*
- *WA Mine Safety & Inspection Regulations*

Codes of practice

- Provide guidance on how to meet obligations
- Admissible in court as example of best practice

e.g.

- *QLD Crane Code of Practice*
- *NSW Electrical Engineering Control Plan for Mines*

Guidance material

- More detailed guidance
- Evidence of what is considered reasonably practicable

e.g.

- *AS 4871, EN 13309, ISO 3471*
- *NSW MDG 15*
- *Incident reports, safety alerts*

...vs all other standards  
(irrespective of whether ISO, AS, IEC etc)



# Recent Developments & Focus Areas

Images shown here are for illustrative purposes only

- Mobile Equipment Fires
  - Ongoing industry focus on fires on mobile plant
  - Revised standard published - AS 5062:2022 – Greater emphasis on fire prevention, fire risk assessments, surface temp mgt.
  - EMESRT has published a revised Design Philosophy and Performance Requirement 4 ([link](#))
  - Australia actively engaged in ISO 13649 project
- Air Quality
  - AS ISO 23875, Cabin air quality
  - HEPA Filtration e.g. Queensland Recognised Standard 20 (Dust control) ([link](#))
  - New regulations in various states to manage crystalline silica workplace exposure risks
  - CMEIG advisory notice on this topic ([link](#))
- Autonomy and Collision Avoidance
  - Increased focus owing to:
    - Publishing of parts of ISO 21815, South Africa
    - Australian adoption of AS 17757,
  - Final stages - Revision of *Western Australia Safe Mobile Autonomous Mining Code of Practice*



# Recent Developments & Focus Areas

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- EMC (Electromagnetic Compatibility)
  - Proposal by the ACMA (Australian Communications and Media Authority) ([link](#))
    - (Existing)  
EMC **emissions-only** to ISO 13766
    - (Proposed)  
EMC **emissions and immunity** to ISO 13766
- Pressure Vessels
  - (Existing)  
All in-scope pressure vessels in Australia require design registration
  - (New/Clarified)  
Additional item registration requirements for Hazard Levels A,B,C per AS 4343



**Work Health and Safety (General) Regulations 2022**  
**Schedule 5** Registration of plant and plant designs  
**Division 2** Items of plant requiring registration  
**cl. 4**

## **Division 2 — Items of plant requiring registration**

### **3. Items of plant requiring registration**

- (2) Pressure vessels categorised as hazard level A, B or C according to the criteria in Section 2.1 of AS 4343:2014 (Pressure equipment — Hazard levels), except —
  - (a) gas cylinders; and
  - (b) LP Gas fuel vessels for automotive use; and
  - (c) serially produced vessels.

# Recent Developments & Focus Areas

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- Glazing
  - Recent incidents highlighting the importance of using the right glazing solution
    - *Engulfment* - CMEIG has published a paper on the origin of 40 psi glass ([link](#))
    - *Impact* - Industry glass testing underway to compare different glazing solutions and their comparative impact resistance

Coal Inspectorate | Bulletin | No.214 V 1 | 29 August 2023

## Dozer falls into coal stockpile void

### What happened?

On 4 November 2022, a bulldozer fell backwards into a coal valve void during train load-out operations. The investigation for this incident has now closed with a number of recommendations listed below, to avoid future dozer stockpile incidents. This particular incident was one of several involving dozers from 2022 and 2023.



Coal Inspectorate  
Resources Safety & Health  
Queensland

**ALERT | ALERT | ALERT | ALERT | ALERT**

Coal Inspectorate | Alert | No.392 V 1 | 09 June 2021

### Sudden tyre failure ejects rock shrapnel through a dozer's cabin

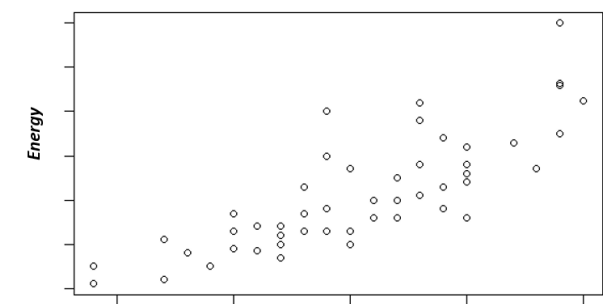
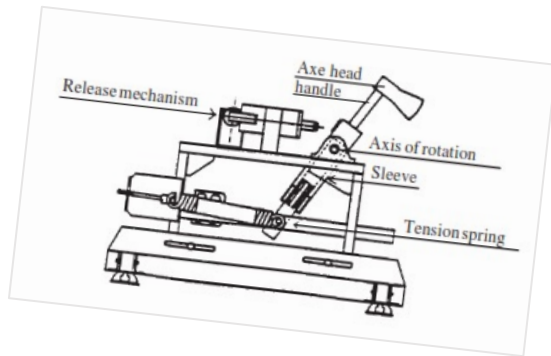
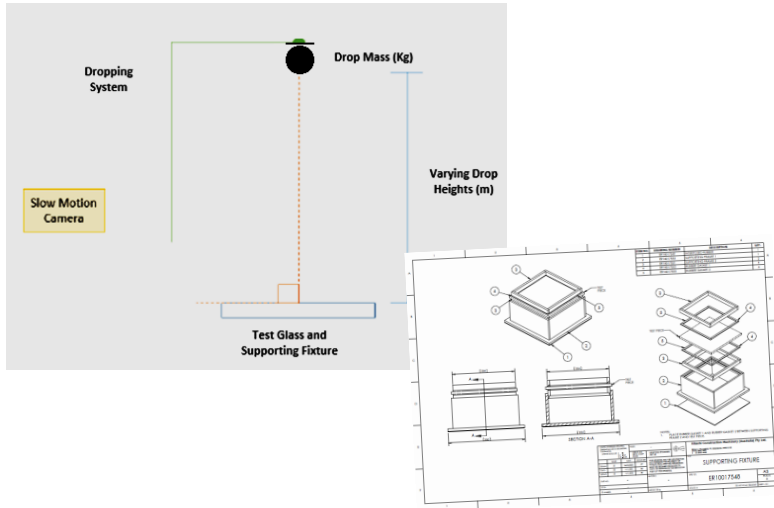
A Cat 795F rear dump was being loaded by a rope shovel when a basalt rock approximately 400mm in diameter has fallen on the offside and rolled beneath the truck unnoticed. Once loaded the truck has driven forward over the rock causing Position 6 tyre to immediately fail (figure 2). This sudden eruption caused numerous pieces of basalt rock shrapnel to eject from the floor, with one rock weighing 950 grams striking a manned Cat D10T dozer parked 40.5 metres away. This rock penetrated the dozer cabin's right-side window (figure 3) before passing through the cabin and exiting by shattering and pushing out the rear window (figure 4). The rock was later found on the ground behind the cabin. The dozer's operator stated that he was





# Recent Developments & Focus Areas

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**Glass properties**  
e.g. thickness, construction (annealed, tempered, laminated, # laminated, polycarb)

**Work in progress....**

# Recent Developments & Focus Areas

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- Electrification Training and Licensing

**Electrical Safety Act 2002 review**

In 2020 the Honourable Grace Grace MP, Minister for Industrial Relations, appointed Mr Dick Williams to lead a review of Queensland's [Electrical Safety Act 2002](#) [7].

The Review was to ensure Queensland's electrical safety laws continue to provide high safety standards for workers and communities, while recognising that new and emerging technologies have had significant effects on electricity generation, storage, and supply.

The [Final Report](#) (PDF, 3 MB) of the Review of the Electrical Safety Act 2002 has been published. Feedback on the recommendations of the Final Report will be used to inform Government consideration of the recommendations and help to develop an approach to implementation.

A [Discussion Paper](#) (PDF, 1 MB) has also been published. The Discussion Paper considers options to address the following issues raised in the Review:

- Electrical safety considerations of new and emerging technologies
- The changing landscape of electricity and the workforce, and
- Electrical safety and electric vehicles.

A [summary of the Discussion Paper](#) (PDF, 11 MB) provides an overview of the topics explored in the Discussion Paper and Final Report.

The [Preliminary Government Response to the Final Report](#) (PDF, 188 KB) outlines the approach Government will undertake to consider the recommendations made by the Review.

**Consultation closed**

Submissions on the Final Report closed on **15 August 2023**

Submissions

The submission

Vehicle Class	Voltage Range
Electric motorcycles	48 to 52V
Electric cars	200 to 800V
Electric passenger buses	380 to 800V
Electric heavy trucks	800 to 900V
Electric mining vehicles	3000V+

Note: the level of voltage identified in the table is for discussion purposes only, and vehicle models can operate at different voltages even within the same class of vehicle.



**WorkSafe**.qld.gov.au

## Electric vehicle guidance

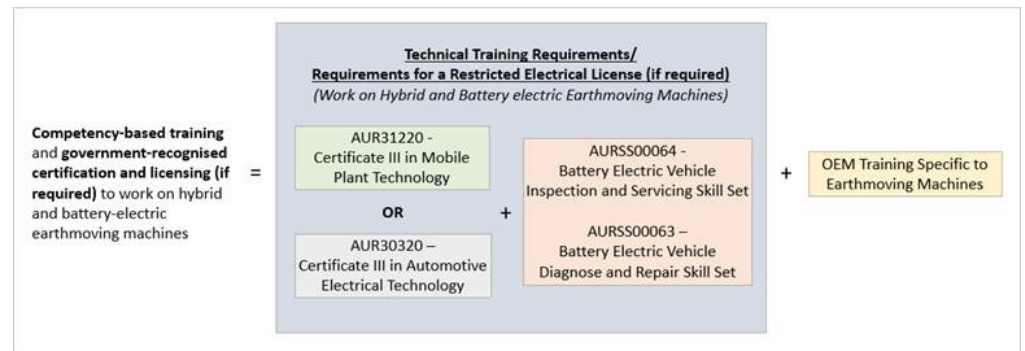
Electric vehicles (EVs) include battery-powered electric vehicles (BEV), hybrid electric vehicles (HEV), plug-in hybrid electric vehicles (PHEV), and diesel-electric vehicles.

### 1 Review of the Electrical Safety Act 2002 and licensing amnesty for work on electric vehicles

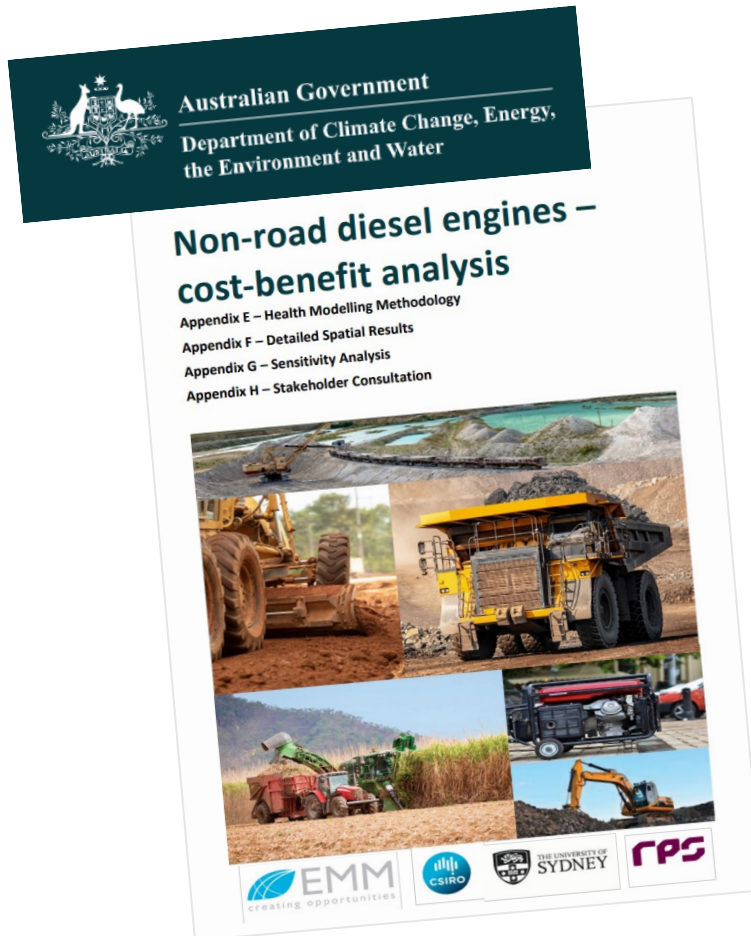
A [comprehensive review of Queensland's Electrical Safety Act 2002](#) [7] (the Review) was completed in 2021.

While the recommendations of the Review are being considered, licensing requirements for work on the propulsion parts of electric vehicles will not be enforced (under section 73 of the [Electrical Safety Regulation 2013](#) [7]).

The Electrical Safety Office (ESO) will focus on compliance with primary safety duties under the [Electrical Safety Act 2002](#) [7] and [Work Health and Safety Act 2011](#) [7].



# Recent Developments and Focus Areas



- **Non-Road Diesel Engine Emissions**

- DCCEEW Completed a Cost Benefit Analysis considering 4 scenarios:
  1. Business As Usual
  2. Industry Agreement (non-regulatory)
  3. Phased Standards (Commonwealth Regulation) – ***T3 → T4f***
  4. Best Practice Standards (Commonwealth Regulation) – ***T4f as soon as practicable***
- Industry awareness in Feb 2023
- Consultation throughout 2023
- No decision made as yet
  - *RIS concluding late 2023/early 2024 to inform ministers' decision*

# Recent Developments & Focus Areas

*Images shown here are for illustrative purposes only*



**The Hon Catherine King MP**  
Minister for Infrastructure, Transport, Regional Development and Local Government

## A New Vehicle Efficiency Standard tailored for Australia

27 March 2024

Legislation for the Australian Government's New Vehicle Efficiency Standard is being introduced.

Australian motorists will soon be able to choose from a wider range of more efficient, modern vehicles, and be able to save at the bowser.

The new Standard will reduce emissions from new passenger vehicles by more than 60 per cent by 2030, and roughly halve the emissions of new light commercial vehicles over the same period.

The Australian Government has closely consulted with a broad range of stakeholders over the past year, and received around 9,000 submissions during the latest consultation period.

Measures in the Standard will include:

- **Recategorising a limited number of 4WDs from passenger car to light commercial vehicle.** This acknowledges that some off-road wagons use similar ladder-frame chassis, and need comparable towing capacity above 3 tonnes, to dual cab utes. This includes models such as the Toyota Landcruiser and Nissan Patrol;
- **Smoothing the emissions trajectory for light commercial vehicles.** This reflects adjustments announced by the US EPA to its vehicle Standard and smooths the transition for utes, vans and 4x4s;
- **Adjusting the weight-based relative emissions limits (known as the break point),** recognising that heavier vehicles emit more;
- **Staging implementation to enable preparation and testing of essential data reporting capabilities.** To ensure we get the implementation right in partnership with industry, the scheme will commence on 1 January 2025 but manufacturers will not begin earning credits or accruing penalties until 1 July 2025.



# Standards Development Activities

Images shown here are for illustrative purposes only

## Harmonisation with ISO TC127

- Industry-collaborative realignment of Australian and ISO standards
- Refreshed ME-063 (ISO/TC 127 mirror committee) strategy
- Increased international engagement and participation

**Withdrawn ~60 AS and AS/NZS standards**

### Develop/Maintain unique Australian Standards

Typically for where an intl. equivalent does not exist

### Modified adoptions of ISO Standards

Modified adoptions where necessary / until alignment

- **End Goal – realignment via systematic review or AU advocacy at ISO**

### Harmonisation with ISO/TC 127 Portfolio

**120,137,140 ISO TC 127 direct adoptions complete/approved**

**Working on ISO 20474 series**



STANDARDS HEROES

**Standards Awards Winners**

Recognising excellence

Outstanding Committee Award



ME-063, Earthmoving Equipment

ME-063, Earthmoving Equipment, initiated a strategic portfolio refresh 18 months ago. The committee implemented a three-pronged strategy of direct text adopting international standards and modify-adopting international standards where appropriate for Australia, all while continuing to retain, develop and sustain a number of unique Australian Standards.

Standards Australia recognises outstanding dedication at annual Standards Awards

27 May 2022



# Standards Development Activities

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## Harmonisation with ISO TC127



*\*Full list available [here](#)*

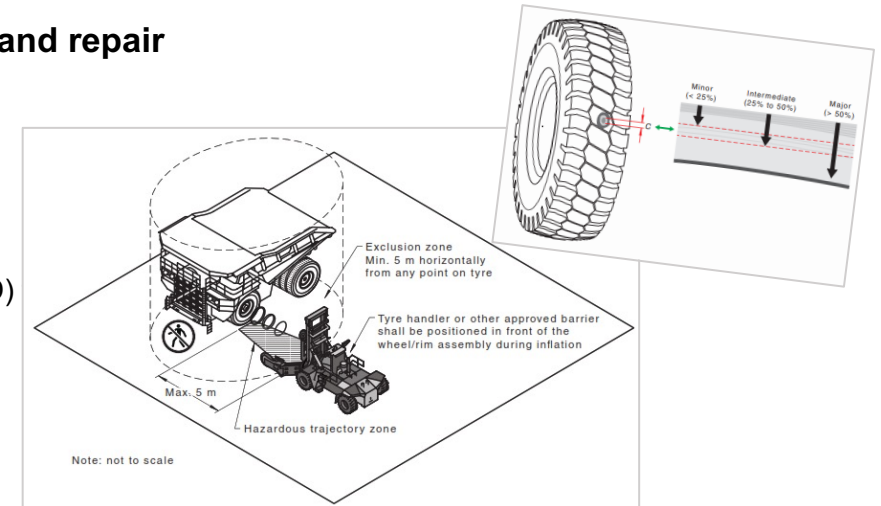
# Standards Development Activities

- **AS 4457 – Earth-moving machinery – Off-highway rims and wheels – Maintenance and repair**

- **Part 1 – Wheel Assemblies and Rim Assemblies**
- **Part 2 – Tyres**
- Aligned with upcoming regulatory guidance - Queensland RS-13
- Clarity on classification of tyre wear and repairability
- Identification and management of rim components
- Requirement for Mechanical Interference Designs (MID) and Mechanical Retention Designs (MRD)
  - i.e. Means to prevent inflation or correct seating of split rim lock-rings in the gutter section

*Part 1 – Publishing stage*

*Part 2 – Public comment in 1H 2024*



- **AS ISO 3457 – Earthmoving Machinery – Guards**

- MOD Adoption of ISO 3457
- Additional context around hierarchy of controls, selection of guards

*Publishing stage (1H 2024)*

- **AS 20474 – Earthmoving Machinery – Safety (Series, Parts 1-14)**

- Based on ISO 20474, Part 1 Modified for Australian context
- Part 2 – 15 Direct text adoption

*Public comment 2H 2024*

Part 1 – General (Mod)  
Part 2 – Dozers  
Part 3 – Wheeled Loaders  
Part 4 – Backhoe Loaders  
Part 5 – Hydraulic Excavators  
Part 6 – Dumpers  
Part 7 – Scrapers  
Part 8 – Graders  
Part 9 – Pipelayers  
Part 10 – Trenchers  
Part 11 – Landfill Compactors  
Part 12 – Cable Excavators  
Part 13 – Rollers  
Part 15 – Compact Toolcarriers

# Standards Development Activities

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illustrative purposes only

• AS 3450	(Brakes – <i>ISO 3450 + In-service Brake Testing</i> )	Published
• AS 5327	(Access Systems – <i>MOD ISO 2867 + Powered Access</i> )	Published
• AS 5062	(Fire Prevention and Protection)	Published
• AS ISO 13031	(Quick Couplers)	Published
• AS 23875	(Mining – Cabin air quality)	Published
• AS ISO 3457	(Guarding)	Post-Public Comment
• AS 4457 (2 part series)	(Maintenance of Rims & Maintenance of Tyres)	Post-Public Comment (Part 1)
• AS 5368	(Electrical Safety – Mining Equipment)	Pre-Public Comment #2
• AS 20474 (14-part series)	(Earth-moving Machinery – Safety)	Pre-Public Comment
• AS #####	(Battery Electric – Underground Coal & Hard Rock)	Drafting/Under Discussion
• AS #####	(Earth-moving Machinery – Support Stands)	Drafting/Under Discussion
• AS #####	(Earth-moving Machinery – Glazing & Operator Protection)	Drafting/Under Discussion

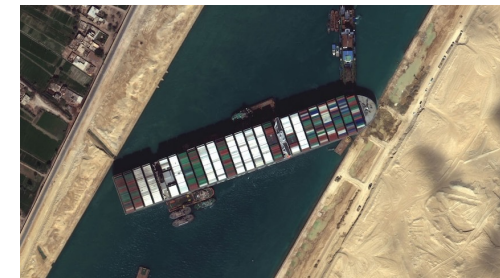
# Emerging Topics

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- Sustainability
  - Hydrogen economy
  - Electrification (e.g. Resources sector announcements and initiatives)
  - Education and Training, Skills gap (e.g. electrical licensing requirements)
  - Circular Economy
  - PFAS management
  - Minimum Energy Performance Standards (MEPS) → e.g. EU Ecodesign Directive
  - NRDE
  - Vehicle Fuel Efficiency Standards ([link](#))
- Supply chain management
  - Urea shortage, shipping & logistics
  - International competitiveness (e.g. R2R)
  - Cybersecurity
- Resource demand outlook
- Politics and Geopolitics

**“Australia’s ambition is to become a Renewable Energy Superpower...”**

– Australian Government Dept. of Climate Change, Energy, the Environment and Water



<https://www.cmeig.com.au/working-groups/engineering/>

[illegible]



