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National Waste Working Group of the Heads of EPA (HEPA) Australia and New Zealand - National Guideline for Safe Management of End-of-Life Lithium-ion Batteries

1.Background

The Clean Energy Council (CEC) welcomes the release of the draft National Guideline (the guideline) for the Safe Management of End-of-life (EOL) Lithium-ion Batteries and supports its objective of establishing a nationally consistent approach to managing lithium-ion batteries as volumes grow across consumer electronics, energy storage systems and electric vehicles. The CEC agrees with HEPA's recognition that the rapid uptake of these technologies requires a coordinated and forward looking framework to manage EOL risks effectively.

The CEC supports the guideline's focus on reducing the safety, environmental and public health risks associated with the handling, storage, transport, reuse, recycling and disposal of EOL lithium-ion batteries. The acknowledgement of the increasing risks posed by damaged or degraded batteries, particularly the fire and chemical hazards, is appropriate and reflects the operational realities faced across the clean energy sector. The CEC agrees that clear and practical guidance across the battery lifecycle is essential to improving safety outcomes and protecting workers, communities and the environment.

The CEC also supports the intent of the guideline to provide clarity for governments, industry participants, waste and recycling operators, and emergency services. Improved coordination and alignment across these stakeholder groups is critical, and the CEC agrees that consistent guidance can help reduce fragmentation and support more efficient and effective management of end-of-life batteries. The emphasis on aligning with existing regulatory and product stewardship frameworks is particularly important to ensure coherence and avoid duplication.

The CEC agrees with the Department's approach of positioning the guideline as a non-regulatory instrument that can inform future policy development, operational practices and reforms. This provides appropriate initial flexibility while still setting out best practice expectations and supporting the evolution of product stewardship and circular economy initiatives. The CEC supports the use of this consultation process to refine the guideline and ensure it is practical, fit for purpose and capable of supporting safe, responsible and nationally consistent management of lithium-ion batteries as Australia's energy transition accelerates.

2. Context of this submission.

Australia's distributed energy transition has been characterised by high levels of consumer participation, particularly in rooftop solar and, increasingly, household and commercial battery systems. This uptake has delivered material system benefits while also reflecting strong community expectations around sustainability, safety and responsible market behaviour.

As deployment scales, the CEC acknowledges that EOL management for distributed energy technologies is becoming a significant policy and implementation issue. This applies equally to solar panels and battery systems.

3. Why EOL is emerging as a priority issue

High levels of Consumer Energy Resources (CER) uptake will necessarily result in increasing volumes of equipment reaching end of life. While consumer confidence in renewable energy technologies has historically been strong, it cannot be assumed to persist if EOL outcomes are poorly managed or unclear.

The CEC believes that EOL responsibility has implications for:

- consumer trust, particularly where households have adopted technologies in good faith;
- social licence, including broader public acceptance of the pace and scale of the transition; and
- the integrity of the transition, in terms of environmental and safety outcomes across the full lifecycle of assets, and;
- cost allocation, particularly ensuring that EOL costs are predictable, transparent and not unfairly shifted onto households, local governments or waste services.

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From a systems perspective, EOL management is now closely linked to equity considerations, safety regulation, circular economy policy and the credibility of distributed energy markets.

4. Current state of play

4.1 Scale of emerging EOL volumes

Australia is entering a period of rapidly increasing EOL volumes for distributed energy technologies:

- Solar PV module retirements are projected to increase from approximately 59,000 tonnes in 2025 to more than 91,000 tonnes by 2030, and to approach one million tonnes by 2035.
- EOL battery volumes are also expected to increase materially, driven by:
    - replacement of early residential battery installations,
    - accelerating electric vehicle uptake, and
    - increasing deployment of commercial and community battery systems.

The CEC believes that these trends highlight the need for forward looking, nationally coordinated approaches to EOL management.

4.2 Safety and environmental considerations for batteries

HEPA's draft guideline on the management of EOL lithium-ion batteries identifies a range of well documented risks associated with inappropriate handling and disposal, including:

- thermal runaway and fire incidents,
- release of hazardous chemicals during battery failure,
- environmental contamination associated with firewater runoff, and
- increasing pressures on waste, recycling and emergency response systems where batteries are mismanaged.

The CEC agrees that these risks reinforce that EOL batteries should be treated as a distinct and regulated waste stream, rather than managed within general waste pathways.

4.3 Existing stewardship arrangements

Australia has an established battery stewardship framework through B-cycle, administered by the Battery Stewardship Council (BSC). Since its commencement, the B-cycle scheme has:

- collected and redistributed stewardship levies to support safe collection and recycling,
- materially increased diversion of batteries from landfill and kerbside waste streams, and
- provided a platform for national coordination across industry and government.

At the same time, both HEPA material and BSC communications acknowledge that current arrangements are not yet comprehensive, and that voluntary participation alone may not deliver consistent national outcomes at scale.

5. Key issues for the distributed energy sector

5.1 Consumer expectations and confidence

Households that adopt rooftop solar and batteries typically expect these technologies to be managed responsibly across their entire lifecycle. Where EOL pathways are unclear, inconsistent or externally cost-shifted, there is a risk of diminished confidence in both specific technologies and in the broader transition.

5.2 Allocation of responsibility

EOL costs and risks for batteries have historically fallen disproportionately on:

- local governments,
- waste and recycling operators, and
- emergency services.

From a policy perspective, this raises questions about alignment with extended producer responsibility principles and circular economy objectives.

5.3 Regulatory and jurisdictional fragmentation

Current EOL arrangements vary between jurisdictions, including differences in landfill bans, stewardship requirements and enforcement mechanisms. In the absence of coordinated

national approaches, there is a risk of fragmented outcomes, inefficiencies and regulatory uncertainty.

6. CEC positions and responses to the HEPA consultation.

In engaging with HEPA, we propose focusing on the following themes:

6.1 Nationally consistent stewardship frameworks

- The CEC support a harmonised, and in the future mandatory battery stewardship approach that builds on existing schemes such as but not limited to B-cycle.
- The CEC recognises the need to address free rider issues and provide long term certainty for recycling and processing investment.

6.2 Integration of EOL considerations into DER deployment

- The CEC agrees that clear consumer information must be provided on EOL pathways at point of sale.
- The CEC endorses the alignment of installer, retailer and importer responsibilities with safe decommissioning and collection processes.
- The CEC supports consistent national guidance for battery removal and handling in residential and commercial settings.

6.3 Safety led reuse and recycling

- The CEC supports a precautionary approach to any second life battery applications, supported by reliable data on battery condition and traceability.
- The CEC agrees that recycling remains the appropriate default pathway for damaged, degraded or unverified batteries.

6.4 Improved data and planning

- The CEC supports enhanced national data collection on battery sales, lifetimes and retirement profiles.
- The CEC supports the integration of EOL forecasting into broader energy planning and infrastructure decision making.

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7. Concluding observations

EOL management is becoming an increasingly visible and material element of Australia's distributed energy transition. As deployment continues to accelerate, addressing battery stewardship in a coordinated, safety focused manner will be important for maintaining public confidence and system integrity.

For the CEC, engagement on these issues aligns with broader objectives around consumer trust, market credibility and delivering the energy transition in a considered and responsible way.

The Clean Energy Council Original Equipment Manufacturer (OEM) Reference Group

The OEM Reference Group (the Reference Group) recognises that the next 12 months will see:

- Increased regulator focus on solar and battery recycling, product stewardship, and supply chain traceability, and;
- Likely focus on OEM opportunities for take back, repurposing, and safe EOL handling.

The Reference Group priorities include to *Develop robust reuse/refurb/recycling policy positions that support policy shaping for circularity.* The Reference Group would be pleased to be engaged further in this ongoing discussion.

Yours sincerely,

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