



Chief Executive

Level 4
11 Waymouth Street
Adelaide SA 5000

GPO Box 618
Adelaide SA 5001

Tel 08 8463 3000

ABN 83 768 683 934
dem.executiveservices@sa.gov.au
www.energymining.sa.gov.au

2025D030510

Joanne Chong
Commissioner for Environment and Water
Australian Productivity Commission
circular.economy@pc.gov.au

Dear Commissioner,

The Department for Energy and Mining (DEM) welcomes the opportunity to provide additional information in response to the information requests in the Interim Report on Australia's Circular Economy.

DEM regulates, and supports the development of South Australia's mineral, petroleum and renewable energy assets.

The South Australian Government takes a technology agnostic approach to delivering secure, reliable and affordable energy and is committed to reducing emissions to net zero by 2050, including through the 100% net renewable electricity generation target by 2027.

Biogas

DEM acknowledges that biogas and renewable gases such as biomethane and sustainable aviation fuels can help support net zero emissions objectives in energy-intensive sectors. However, the current cost differential makes this transition commercially prohibitive without some form of carbon credit accounting mechanism or subsidy.

Bioderived renewable fuels such as biodiesel and sustainable aviation fuels, can often serve as drop-in fuels within existing infrastructure, machinery, and vehicles. Immediate potential demand already exists for drop-in fuels including in the construction sector where there is price parity and reliable supply with fossil fuels.

Verification and assurance of claims about renewable energy generation and emissions intensity could help secure investment, access to overseas markets, and offtake agreements, and could help increase the uptake of projects in Australia.

DEM is not aware of any biogas projects not proceeding due to regulatory barriers, but notes that some South Australian projects in recent years did not proceed due to factors such as market conditions, technology challenges, and lack of financial support.

Mining waste

In South Australia, mining waste and post-mining land uses are regulated under the *Mining Act 1971* and guided by the Multiple Land Use Framework (MLUF).

The MLUF aims to balance the interests of multiple stakeholders and promotes transparency and consistency when making land use decisions, including through targeted engagement with communities.

In South Australia, only mine sites whose resources have been entirely exhausted may be considered for alternative use. Reprocessing of mine waste may only occur where a mining tenement is in place.

In the case of abandoned or inactive sites, responsibility for rehabilitation, contamination risks, and other legacy issues and costs can act as a barrier to pursuing mining waste processing opportunities or alternative post-mining land uses.

The publication of information related to critical mineral potential on the surface as mine waste can assist exploration, promote innovation and support informed decision-making. DEM has mapped mine waste of historic tailings and has published pre-competitive data and a mine waste atlas on our website at: www.energymining.sa.gov.au/gssa.

Product stewardship schemes for small and large scale renewable energy and batteries

DEM would welcome the Commission's advice on measures to develop a robust end-of-life (EV) battery industry and notes a 2021 report by the McKell Institute for the South Australian government on opportunities for recycling lithium ion batteries found that lithium ion battery recycling is complex and expensive.

DEM notes that globally, the management of end-of-life solar photovoltaic (PV) panels, wind turbines, and grid-scale batteries is increasingly addressed through Extended Producer Responsibility (EPR) policies. These policies mandate that manufacturers are accountable for the entire lifecycle of their products, including disposal and recycling. Such policies should be given serious consideration.

South Australia's Hydrogen and Renewable Energy Act 2023 (HRE Act) establishes a licensing and regulatory framework for large-scale (greater than 5MW) hydrogen, renewable energy and battery storage projects in South Australia, covering the entire project lifecycle, including decommissioning and rehabilitation. Consequently, DEM recommends any product stewardship framework should include both small and large format solar PV and battery systems.

If you require further information or would like to discuss DEM's submission please contact Giles Dunseath-Hamilton, Director, Strategy

Yours sincerely


Paul Martyn PSM
CHIEF EXECUTIVE

23/12/25