

**Submission
No 78**

INQUIRY INTO COSTS FOR REMEDIATION OF SITES CONTAINING COAL ASH REPOSITORIES

Organisation: Origin
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The Hon Daniel Mookhey, MLC
Chair
Public Works Committee
Legislative Council
Parliament House
Macquarie Street
SYDNEY NSW 2000

Submission to inquiry into the costs for remediation of sites containing coal ash repositories

Origin Energy Limited (Origin) welcomes the Public Works Committee's Inquiry into the cost for remediation of sites containing coal ash repositories, including consideration of ways to facilitate increased levels of coal ash re-use.

Origin is Australia's largest energy retailer with over 4 million customers and one of Australia's largest electricity generators, gas suppliers, LNG exporters and renewable energy companies. In NSW, Origin is the largest electricity retailer and has an electricity generation portfolio comprising coal, gas, hydro, wind and solar, that is critical to maintaining reliable and affordable electricity supply across the state. Origin is committed to the long-term sustainability of the Australian energy industry, a key part of which is the beneficial re-use of major by-products such as coal ash.

As identified in the Terms of Reference, Origin is the owner and operator of the Eraring Power Station (EPS) having acquired it and the associated Eraring Ash Dam (ERAD) from the NSW Government in 2013. While Origin Energy has committed to the closure of EPS by 2032, it is strongly committed to maximising the re-use of the EPS coal ash to support recycling of waste products and to minimise the ongoing reliance on the ERAD. Origin is a committed long-term partner of the coal ash re-use industry and a member of the Ash Development Association of Australia.

Coal ash produced by the EPS has numerous applications across both the industrial and construction sectors and is currently supplied by Origin to multiple customers for a range of end uses including concrete, structural fills, pavements, aggregates and other pre-cast building materials. The ash which is not re-used is deposited in the ERAD. In FY2019, Origin increased the ash reuse of the EPS through a range of new initiatives rate by 125,000 tonnes to 35 per cent of ash produced, up from 30 per cent in the previous year.

Following a review of the Terms of Reference, Origin has noted the following points (a) through (d) for consideration by the Committee:

- a) prospective and/or current quantum of government liability for remediating contamination at sites associated with (v) Eraring Power Station;

Origin is the owner and operator of EPS as identified in the Terms of Reference. In 2013, Origin acquired the EPS and the associated ERAD from the NSW Government (“the Transaction”). Under the Transaction Origin has primary responsibility for remediation of the ERAD. As part of the Transaction, the parties entered into a Contamination Liabilities Deed (CLD) under which the NSW Government retained liability for specified contamination occurring on the Eraring site prior to Transaction. Origin has not undertaken an assessment of the quantum of the NSW Government liability for remediation of this contamination.

- b) prospective timing of government expenditure in relation to remediation at those sites;

Origin has committed to the closure of EPS by 2032. It is anticipated that following the cessation of generation operations at EPS, site remediation activities will commence. Origin has primary responsibility for remediation of EPS including the ERAD. Origin has not undertaken an assessment of the prospective timing of any government expenditure in relation to remediation at EPS. It is noted that Origin is actively re-using and recycling coal ash and is actively investigating means of increasing the rate of these activities. This is concurrent with generation operations and is aimed at reducing the quantum of remediation post operations.

- c) Economic and employment opportunities associated with coal ash re-use, site remediation and repurposing of land;

There are a range of applications where coal ash has the potential to be better utilised including roads and road bases, concrete and geopolymers, bricks, blocks, and other pre-cast building materials, lightweight aggregates, and a variety of structural fill applications, including mine void remediation. Increasing coal ash utilisation across these applications through a review of the relevant regulations (see below), should facilitate significant economic and employment opportunities including in relation to construction, processing and transport of coal ash products.

There also exists the potential for economic and employment benefits to be derived from the remediation and/or re-purposing the EPS post its forecast closure in 2032. Noting the current limitations on supplying ash from the ERAD, Origin is currently investigating a range of opportunities to re-use the ash from the ERAD to assist with future site remediation, each with associated economic and employment flow on effects as above.

- d) Adequacy and effectiveness of the current regulatory regime for ensuring best practice remediation of coal ash repositories;

Origin has regulatory obligations with respect to coal ash re-use and ash dam rehabilitation as set out in Project Approval 07_0084 which requires the preparation and implementation of a rehabilitation management plan and a long-term ash management strategy.

While Origin is committed to meeting these regulatory obligations and further growing the circular economy, there are existing regulations which are currently constraining the ability to maximise the re-use of coal ash, namely:

1. Misalignment of road standards between the Australian Standards and the NSW Roads & Maritime Services (RMS) – the current RMS standards require a higher quality for fly ash than the national standards. Investigation into aligning the RMS standards with the Australian standard may facilitate the substantial increase of re-use of coal ash from NSW generators in concrete applications;
2. Regulation governing the maximum amount of coal ash used in roads – a review of the regulations that limit the use of fly ash in road applications could allow for increased use of fly ash in pavements and other quarry products so a design can be customised to meet performance-based standards while maximising the coal ash content. Origin has successfully implemented an ultra-high fly ash pavement product on our private haul road, containing 92% ash which has exceeded the performance standards over a 25-year test period;
3. Enabling the supply of coal-ash extraction from the ERAD – In attempting to increase the recycling rate of ash extracted from the ERAD, it has become apparent that there are constraints driven by uncertainty around the application of the Regulatory framework which impede the development of new ash recycling projects utilising the ERAD. There are a number of opportunities for the supply of substantial quantities of ash from the ERAD which are currently unable to be realised. Origin would advocate for consultation with the power generation industry with a view to overcoming these constraints.

In addition to the specific areas of regulation identified above, Origin is supportive of the adoption of an efficient, clear and concise planning regime that enables for the approval of new recycling initiatives with expedient timeframes. The current regime is more suited to traditional and established industries which are able to facilitate the investment in detailed planning applications. In the case of coal ash recycling, a key driver is reducing legacy environmental impacts and as such there is benefit in bringing projects to market in an efficient and expedient manner.

Origin looks forward to further consultation with the NSW Government to develop a regulatory framework to maximise the re-use of coal ash and coal ash repositories in an environmentally safe and economically sustainable manner.

If you require any further information please contact Tim O'Grady, General Manager Government Engagement, in the first instance, on email _____ or by phone _____

Yours sincerely,

Executive General Manager
Energy Supply & Operations