

**Submission
No 80**

**INQUIRY INTO COSTS FOR REMEDIATION OF SITES
CONTAINING COAL ASH REPOSITORIES**

Organisation: AGL Energy Limited

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The Hon. Daniel Mookhey MLC
Chair, Public Works Committee
New South Wales Legislative Council

21 February 2020

Dear Mr. Mookhey,

Submission to the Inquiry into the Costs for Remediation of Sites Containing Coal Ash Repositories

Overview

AGL Macquarie Pty Limited (**AGL Macquarie**) welcomes the opportunity to make a submission to the New South Wales (**NSW**) Legislative Council inquiry into the costs for remediation of sites containing coal ash repositories (**Inquiry**).

We understand the Inquiry's focus includes:

- the potential quantum and timing of any NSW Government expenditure associated with remediating contamination at coal ash repositories, including Bayswater and Liddell;
- the economic and employment opportunities associated with coal ash re-use, site remediation and repurposing of land;
- the current regulatory regime for ensuring best practice remediation of coal ash repositories; and
- the risks and liabilities associated with inadequate remediation of coal ash repositories.

About AGL

AGL Macquarie is owned by AGL Energy Limited (**AGL**) and forms a key component of the company's generation portfolio.

Proudly Australian for more than 180 years, AGL supplies energy and other services to more than 3.7 million customer accounts. AGL operates the largest electricity portfolio in the National Electricity Market with an operated capacity of 10,535 MW, made up of traditional coal and gas-fired generation, renewables and gas storage and production assets. We also are Australia's leading private investor in renewable energy and operate some of Australia's largest solar and wind farms.

AGL Macquarie

AGL Macquarie owns the 2,640 MW Bayswater power station (**Bayswater**), 2,000 MW Liddell power station (**Liddell**), the 50 MW Hunter Valley Gas Turbines and a series of complex water, coal, rail and ash infrastructure systems that operate to produce around 23,000 GWh annually or approximately 35 per cent of NSW electricity supply.

AGL Macquarie is located between Singleton and Muswellbrook in the Upper Hunter Valley of NSW and employs approximately 600 people directly, with most living in the Hunter region. Bayswater and Liddell have been a major source of direct and indirect employment to the region over the last 40 years and currently contribute more than \$1.35 billion annually to the regional economy.



Coal Ash Generation, Re-Use and Storages

All coal fired power stations, including Bayswater and Liddell, produce coal ash as a result of the combustion of the coal used to generate electricity. The coal ash produced falls into 2 broad categories:

- Fly Ash – this is the lighter finer ash particles which remain suspended in the combustion flue gas and is collected in a fabric filter collection plant often referred to as a ‘baghouse’; and
- Bottom Ash – this is the heavier coarser ash particles which falls to the bottom of the boiler at the power stations.

In addition, cenospheres are also formed during the coal combustion process. Cenospheres are light weight hollow ceramic microspheres that typically form part of the fly ash produced.

At Bayswater the fly ash produced is primarily transported in slurry form to be deposited in the authorised ash repositories located on-site, known as the Ravensworth Voids and the Bayswater Ash Dam. Bottom ash produced is primarily transported in slurry form to be deposited in the Bayswater Ash Dam.

At Liddell, both fly and bottom ash is transported in slurry form to the Liddell Ash Dam.

In addition, some coal ash produced is supplied to third party operators for beneficial re-use in a range of applications, including as a component for the manufacture of cement, in accordance with a resource recovery order and exemption made by the NSW Environment Protection Authority (EPA).

The Ravensworth Voids, Bayswater and Liddell Ash Dams operate under strict environmental and planning approval conditions and laws that manage potential environmental and safety impacts during ongoing operation and provide a framework to ensure appropriate rehabilitation at end of life. Relevant environmental and planning laws and approvals include:

- the *Protection of the Environment Operations Act 1997 (NSW)* and environment protection licences issued and regulated by the EPA under that Act;
- the *Environmental Planning and Assessment Act 1979 (NSW)* and development consents granted under that Act; and
- the *Dams Safety Act 2015 (NSW)* which is administered by Dams Safety NSW.

NSW Government expenditure associated with the Ash Repositories at Bayswater and Liddell

AGL Macquarie acquired Bayswater and Liddell in September 2014. Prior to that time, Bayswater and Liddell were owned and operated by Macquarie Generation, a statutory corporation owned by the NSW Government.

The transaction was documented in a "Sale and Purchase Agreement (Macquarie Generation Assets)" entered into between AGL Macquarie, the NSW Government and Macquarie Generation (**Sale and Purchase Agreement**).

The Sale and Purchase Agreement is subject to confidentiality obligations which bind the parties, including AGL Macquarie, and extend to cover:

- the terms of the Sale and Purchase Agreement, including any terms relating to liability for contamination; and
- any baseline contamination reports prepared prior to the sale of Bayswater and Liddell power stations and associated assets.

However, while the terms of the Sale and Purchase Agreement remain confidential, we can confirm that:

- any potential contamination impacts associated with the Ravensworth Voids, Bayswater Ash Dam and Liddell Ash Dam are well understood; and



- AGL Macquarie does not currently expect the NSW Government to incur any material expenditure as a result of the rehabilitation by AGL Macquarie of the Ravensworth Voids, Bayswater Ash Dam and Liddell Ash Dam once they reach the end of their operational lives.

Our Commitments

AGL Macquarie has made very significant investments to deliver continuous improvement in environmental performance across both Bayswater and Liddell. These include:

- investing over \$8 Million directly in environmental related projects; and
- committing approximately \$40 million in expenditure over the next 5 years to further environmental improvement programs and projects.

In particular, the proposed Bayswater Water and Other Associated Operational Works Project will deliver a range of important water and coal ash related improvements at Bayswater, including:

- augmenting the Bayswater Ash Dam to provide additional ash storage capacity to ensure Bayswater can continue to operate until its planned end of life and deliver further water management improvements within the Bayswater Ash Dam; and
- increasing coal ash harvesting to up to 1,000,000 tonnes per annum during periods of peak demand to enable increased beneficial re-use of coal ash by third parties.

While AGL is investing in our environmental performance during operations, we have also provided advanced notice of our intention to retire our thermal fleet. We are committed to closing and rehabilitating Liddell and Bayswater in accordance with all regulatory requirements and our 2017 report, *Rehabilitation: AGL's approach to rehabilitation of power generation infrastructure*. This report summarises the outcomes of our strategic review of rehabilitation requirements, and our understanding of the challenges associated with closing, repurposing and rehabilitating large power generation sites.

We are also engaging with NSW Government regulatory agencies to facilitate the development of efficient and effective land use planning controls for the sites with the aim of ensuring that:

- appropriate approval pathways and assessment occur for all rehabilitation and remediation activities, as required;
- permissible uses to maximise economic and employment opportunities post-closure while remaining appropriately aligned to rehabilitation and remediation requirements; and
- the planning controls facilitate the ongoing operation of Bayswater to ensure its continued reliable, safe and efficient operation until its planned end of life.

This remains a key policy area which is complemented by our best practice remediation commitments and the ongoing regulation of the Ravensworth Voids, Bayswater Ash Dam and Liddell Ash Dam under environmental laws and our *Environment Policy*.

Feel free to contact Morgana Gidley-Baird, Senior Manager – Environment Operations on
if you require any further information.

Yours sincerely,

Head of Liddell Transition