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Dear Mr Gathercole and Dr Jones

National Pollutant Inventory data 2020-2021 – unexplained increases in particulate pollution and mercury pollution at NSW coal-fired power stations

1. We refer to the National Pollutant Inventory (**NPI**) data for the reporting period 2020-2021, released on 31 March 2022. As you are aware, the NPI provides the community, industry and government with information about pollutants in Australia on an annual basis. It estimates the quantity of pollution for 93 toxic substances and attributes these to sources.
2. After analysing the 2020-2021 NPI data, we have identified a number of increases in certain pollutants for some NSW coal-fired power stations, this is despite four out five of the coal-fired power stations generating less electricity than in 2019-2020.
3. The purpose of this letter is to bring the increases to the attention of the NSW Environment Protection Authority (**EPA**) as the appropriate regulatory authority for the

scheduled activity of electricity generation under the *Protection of the Environment Operations Act 1997* (NSW) (**POEO Act**).

4. We seek that the EPA investigate the cause/s of the increases with a view to taking regulatory action for any breaches of the POEO Act. We also seek that the EPA respond to this letter providing an explanation for the increases and outlining what regulatory action it intends to take. To assist the EPA in its investigations we have provided further details of the increases of greatest concern below.

Increases in particulate pollution

5. Vales Point power station, operated by Sunset Power International Pty Ltd, trading as Delta Electricity, recorded a 123% and 210% increase in 2020-21 for coarse particle pollution (**PM₁₀**) and fine particle pollution (**PM_{2.5}**) respectively. This is despite generating 8% less electricity in 2020-2021 than in 2019-2020. The increases are detailed in Table A.
6. Similarly, Liddell power station, operated by AGL Macquarie Pty Ltd, recorded increases in PM₁₀ and PM_{2.5} pollution of 88% and 139% respectively in 2020-2021, despite generating 31% less electricity in 2020-2021 than in 2019-2020. The increases are detailed in Table A.
7. Combined Liddell and Vales Point power stations emitted an additional 215 tonnes of PM_{2.5} compared to 2019-20. The most dangerous form of air pollution is PM_{2.5}, which can cause adverse health effects and increased risk of death. There is no safe level of exposure. Therefore any increase in PM_{2.5} is of significant concern.

Power station	Vales Point			Liddell		
	2019-20	2020-21	% Change	2019-20	2020-21	% Change
Year / % Change						
PM 10μm (kg)	86,000	192,000	123%	410,361	770,075	88%
PM 2.5μm (kg)	30,930	95,870	210%	107,972	257,886	139%
Electricity generation (GJ)¹	26,561,860	24,372,427	-8%	37,960,485	26,305,616	-31%

Table A: increases in particle pollution at Vales Point and Liddell power stations

¹ Australian Government Clean Energy Regulator, 'Electricity sector emission generation data' (28 February 2022) available at: <<http://www.cleanenergyregulator.gov.au/NGER/National%20greenhouse%20and%20energy%20reporting%20data/electricity-sector-emissions-and-generation-data>>.

Increase in mercury pollution

8. Mercury pollution substantially increased at Bayswater, Eraring, Vales Point and Mount Piper power stations. Mercury is highly toxic and accumulates in both the environment and organisms. Any release of mercury is significant. It is therefore very concerning that four NSW power stations combined emitted an additional 78 kilograms of Mercury compared to the year before.
9. In 2020-2021, mercury pollution at Bayswater power station rose by 81%, by 93% at Eraring power station, by 100% at Vales Point power station on the previous reporting year of 2019-2020. This was despite these power stations generating less electricity. Table B provides further details.
10. In 2020-2021, mercury pollution at Mount Piper power station rose by 135%. While electricity generation did increase at Mount Piper power station, its mercury emissions rate (kilogram per gigajoule of energy) still increased by over 50%.

Power Station	Mercury (kg)			Electricity generation (GJ)		
	2019-2020	2020-2021	% Change	2019-2020	2020-2021	% Change
Bayswater	60	108	81%	56,724,062	51,517,714	-9%
Eraring	14	27	93%	53,580,557	52,235,712	-3%
Vales Point	8	15	100%	26,561,860	24,372,427	-8%
Mount Piper	7	17	135%	18,698,302	29,108,758	56%

Table B: increases in mercury pollution at NSW power stations

Concerns relating to increases in particle pollution and mercury pollution

11. We are concerned that the increases may be the result of failures in pollution control technology, such as fabric filter bags. We refer you to previous correspondence between Environmental Justice Australia and the EPA (your reference: DOC20/966794) in which we sought that the EPA investigate increased particulate emissions at Vales Point power station arising from the NPI data for the reporting period 2018-2019. We note that upon investigation, the EPA determined that the increase in annual particulate emissions from Vales Point was the result of elevated emissions from the unexpected failure of several filter bags. Consequently, we highlight the importance of the EPA conducting investigations based on the increases in pollutants identified in the 2020-2021 NPI data and maintain the importance of scrutinising the NPI data to inform the EPA's regulatory operations.

12. The substantial and unexplained rise in particulate pollution at Vales Point and Liddell power stations and in mercury pollution at Bayswater, Eraring, Vales Point and Mount Piper power stations warrants investigation by the EPA.

13. We ask that the EPA seriously investigate whether breaches of the POEO Act have occurred having regard to the following sections of the POEO Act:

a. s 64(1):

64 Failure to comply with condition

(1) **Offence** if any condition of a licence is contravened by any person, each holder of the licence is guilty of an offence.

In particular, we draw the EPA's attention to the following conditions contained in each of the environment protection licences for Vales Point, Liddell, Bayswater, Eraring and Mount Piper power stations:²

- i. operating condition O1, which provides that activities must be carried out in a competent manner;
- ii. operating condition O2, which provides that plant and equipment must be maintained in a proper and efficient condition and operated in a proper and efficient manner; and
- iii. reporting condition R2, which requires the licensee or its employees to notify relevant authorities of an incident causing or threatening material harm to the environment.

b. s 124(a) and s 124(b):

124 Operation of plant (other than domestic plant)

The occupier of any premises who operates any plant in or on those premises in such a manner as to cause air pollution from those premises is guilty of an offence if the air pollution so caused, or any part of the air pollution so caused, is caused by the occupier's failure—

- (a) to maintain the plant in an efficient condition, or
- (b) to operate the plant in a proper and efficient manner.

c. s 148:

² The relevant environment protection licences are: Vales Point – licence no. 761; Liddell – licence no. 2122; Bayswater – licence no. 779; Eraring – licence no. 1429; Mount Piper – licence no. 13007.

148 Pollution incidents causing or threatening material harm to be notified

(1) **Kinds of incidents to be notified** This Part applies where a pollution incident occurs in the course of an activity so that material harm to the environment is caused or threatened.

Section 148 places a duty on persons (employees, employers, occupiers and others) to notify the relevant authority of an incident that causes or threatens material harm to the environment.

14. We request that you please confirm receipt of this letter and confirmation that you will investigate:

- d. the increase in PM10, PM2.5 and mercury pollution at Vales Point power station;
- e. the increase in PM10 and PM2.5 pollution at Liddell power station;
- f. the increase in mercury pollution at Bayswater power station; and
- g. the increase in mercury pollution at Eraring power station;
- h. The increase in mercury pollution at Mount Piper power station.

15. In the event that the EPA has already investigated the above increases and they have resulted in regulatory action, please advise what regulatory action the EPA took and how the action will ensure similar increases or pollution incidents will not occur in the future.

Please telephone Jocelyn McGarity on 02 4003 3606 to discuss any aspect of the above. We otherwise look forward to your response.

Yours faithfully

Environmental Justice Australia

