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## Executive summary and recommendations

Australia has one of the oldest and least efficient fleets of coal-fired power stations in the world.<sup>3</sup> Australia's power stations release more than a million tonnes of toxic pollution into the air each year, affecting not just communities that live near the power stations, but also those further away, such as Sydney. Toxic pollution can travel great distances, so the pollution from Australia's power stations is breathed in by millions of Australians. However, the health impacts of this toxic pollution are unfairly imposed most heavily on communities closest to power stations.

This report focuses primarily on the four pollutants that have been monitored most extensively and have well-established regulations and standards: coarse particles (PM<sub>10</sub>), fine particles (PM<sub>2.5</sub>), sulfur dioxide (SO<sub>2</sub>) and oxides of nitrogen (NOx). These pollutants are extremely harmful to health, causing and worsening a range of medical conditions such as asthma, respiratory problems, stroke, angina, heart attack and cancer.<sup>4</sup> They irritate and inflame the lungs, leading to chronic lung disease and restricted lung growth in children.<sup>5</sup> Children and elderly people are particularly affected.

For this report we reviewed the emissions data, licences, community complaints, compliance records and rehabilitation plans of ten of Australia's most toxic coal-fired power stations in NSW, Victoria and Queensland.

The following are just some of our many significant discoveries.

- Coal-fired power stations emit more than 30 toxic substances that have serious impacts on the communities that live near them including heart attack, stroke, asthma, lung cancer, respiratory and cardiovascular disease, irritation of the eyes, nose and throat, choking and coughing, headache, general discomfort and anxiety, wheezing, colds, flu and bronchitis, coughing, shortness of breath, tiredness and nausea.
- Coal-fired power stations are the biggest source of PM<sub>2.5</sub>, SO<sub>2</sub> and oxides of nitrogen in Australia.
- In almost all cases the emissions limits applied to Australian power stations are significantly less stringent than the standards in the European Union, United States and China. For example the Victorian and Queensland power stations' particle limits are less strict than all three international limits. Loy Yang A's particle limit is eight times China's limit. The mercury limits for some NSW power stations are *666 times higher* than the US limits. This is unacceptable.
- Pollution reduction technologies that have been available for many years and are frequently used overseas could significantly reduce power station emissions but are not being used in Australia. All power stations are emitting significantly more pollution than they would if they had currently available pollution reduction technologies installed.
- There are significant problems with the monitoring and reporting of power station emissions. For example, at the Yallourn power station a representative admitted to EPA Victoria that at times of excessive pollution it 'simplified' its reporting by

stating that it was emitting at levels that correspond with its licence limits. Reports to the National Pollutant Inventory for some NSW power stations appear to be wildly in error.

- No power station in Victoria, NSW or Queensland has been prosecuted for any offence in the past ten years.
- None of the ten power stations has rehabilitation bonds or financial assurances imposed on it to ensure decommissioning and rehabilitation will occur if the operator does not adequately rehabilitate after closure.

We have found that state government regulators in each state have allowed power station operators to continue to emit unacceptable levels of pollution. How does this happen? Their emission limits have been lax when compared to international standards; the monitoring and reporting they require from power stations is inadequate; they have not required power stations to implement pollution reduction technologies that many power stations overseas have installed; and they do not strictly enforce the law. As a result, communities are exposed to excessive and preventable levels of toxic pollution.

Building new coal-fired power stations is not the answer. New coal-fired power stations, even those described as 'ultra-super critical' or 'HELE' (high efficiency, low emission) only marginally reduce toxic emissions. Constructing new coal-fired power stations to replace Australia's old, inefficient fleet would still result in millions of tonnes of toxic pollution being released into our air, water and land.

Australia's state and national governments are ill-prepared for power station closure, decommissioning and rehabilitation. This is illustrated by the absence of rehabilitation bonds or financial assurances imposed on any of the power stations we reviewed. Failing to plan for closure maximises the social and economic harm in the very communities that have lived for decades with the pollution from these power stations.

Figure 1 represents some of the key findings of our research.

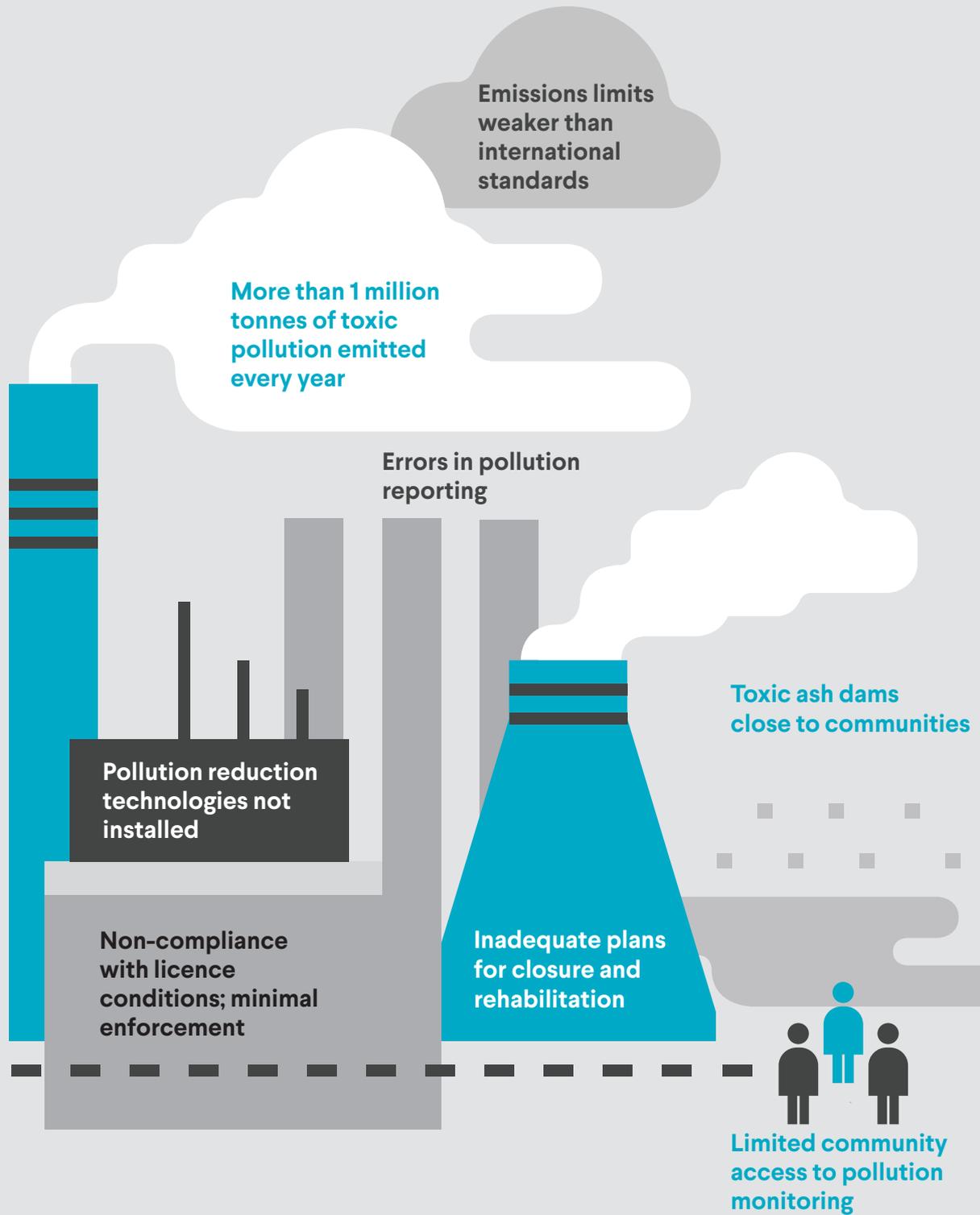
So what should be done? Strong regulation is critical to reduce the toxic burden power station pollution gives to people who live nearby. Communities, especially communities living in the shadow of power stations, have little control over the air they breathe. They rely on strong regulation to protect their health. All governments must acknowledge the toxic burden power station emissions leave with Australian communities and should regulate power stations accordingly.

Governments should impose stricter emissions standards that in turn will give companies the incentive to install better pollution reduction technologies and improve their operating practices.

Ultimately though, the only way to avoid the death and disease that coal-fired power stations impose on Australian communities is to avoid the pollution in the first place. This requires a transition away from coal-fired power stations to renewable energy generation, which produces no toxic pollution.

Figure 1

## Australia's coal-fired power stations: toxic and under-regulated



## Recommendations

1. That the Federal Government **commission a comprehensive and independent assessment** of the health impacts of Australia's coal-fired power stations.
2. That the Federal Government recognise the need for a strong and consistent national approach to the regulation of air pollution and **develop and implement binding national emission standards** for coal-fired power stations that require international best practice.
3. That Australia's state governments **require mandatory continuous monitoring** of stack emissions from all stacks of all major power stations and the data be reported publicly in real time.
4. That Australia's state governments **subject all power stations to an emissions reduction program for PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>** to reduce their toxic pollution in line with Best Available Techniques to reduce the toxic health burden imposed on the community.
5. That Australian governments **develop and implement a national load-based licencing scheme** with fees that reflect the health impacts and other externalities of power stations, ideally led by the Federal Government through the National Environment Protection Council.
6. That the Federal Government **commission an independent audit of reporting** to the National Pollutant Inventory and instruct power stations on how to improve the accuracy and rigour of their reporting.
7. That federal and state energy ministers **undertake a national audit to assess the costs of decommissioning and rehabilitating** Australia's coal-fired power stations, consistent with best practice, and impose bonds or financial assurance requirements on all coal-fired power stations, their ash dams and associated infrastructure.
8. That in light of the level of toxic emissions released by all coal-fired power stations regardless of their age, all Australian governments **commit to not build, finance or approve any new coal-fired power stations** in Australia and instead invest in the development of renewable energy technologies to progressively replace Australia's aging power station fleet.