Submission to the State Commission Assessment Panel on

- Alinta Energy Reeves Plains Power Station

- AGL Energy Grand Trunkway, Torrens Island

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Healthy planet, healthy people.

Submission to the State Commission Assessment Panel SCAP[1] on

1. Development Application Number 312/V005/17 Alinta Energy Reeves Plains Pty Ltd Reeves Plains Power Station, comprising the construction of a 300 MW capacity gas fired peaking power station.
2. Development Application Number 010/V067/17 AGL Energy Ltd Q302 in DP 55734 Grand Trunkway, Torrens Island, comprising the construction of a two stage power station with a total capacity of 420 MW

Doctors for the Environment Australia (DEA) is a non-profit, independent national organisation of medical doctors and students which advocates on health issues related to environmental factors which at the local, national, and global scale, have a profound influence on health.

In making this submission we consider both projects together as they share commonalities of concern to us.

Greenhouse Gas Emissions

Australia's greenhouse gas emissions are rising[2]. The national target of 26%-28% reduction on 2005 levels by 2030 is a very weak target likely to draw international condemnation when the Paris Agreement is reviewed[3], but even this weak target looks unlikely to be met[4]. By aligning emission reductions from the electricity generation sector with this target, other sectors of the economy such as transport, agriculture, and forestry will be left to do the heavy lifting.

The National Energy Guarantee, which followed the Turnbull Government's failure to implement the recommendation of a Clean Energy Target by the Independent Review into the Future Security of the National Electricity Market (Finkel Review), has been described by experts as worse than business as usual with regard to emissions.[5] However, the head of the Energy Security Board, Ms Schott, has stated that the NEG leaves open the possibility for states to set their own emission targets. South Australia has been a world leader in renewable energy and has demonstrated that decoupling the economy from carbon is possible, exemplified by high levels of wind energy, high penetration of home solar PV generation, concentrated solar thermal power, and battery technology.

Global warming is no longer over the horizon. Sixteen of the seventeen hottest years on record have occurred since 2001.[6] Scientists are warning of dangerous tipping points.[7] Australia is vulnerable to climate change with extreme heat, drought, flooding, and coastal erosion all more frequent than would be the case without global warming. The impacts on health are now well known with heat stress causing death in vulnerable groups such as the very young and elderly; bushfires causing death, injury and mental stress; floods causing drowning; and an increase in the range of vector-borne diseases.[8,9]

Gas and diesel are fossil fuels. Although gas, with its lower combustion emissions, is frequently touted as a bridge fuel to a lower-emissions future, fugitive emissions of methane throughout the gas chain are likely to negate any advantage of gas over coal in reducing emissions.[10,11] Methane is 86 times more powerful than CO_2 as a greenhouse gas over a twenty year time frame and much uncertainty remains as to the extent of fugitive and migratory emissions from the Australian gas industry.[12]

DEA submits that further fossil fuel electricity generation cannot be justified in light of Australia's rising emissions, the failure of federal policy to address the issue, the opportunity cost in displacing renewable energy and the liability to future carbon pricing.

Health Impacts of Pollution from Gas and Diesel fired Electricity Generation

Poor health outcomes in relation to the extraction of conventional and unconventional gas are now well documented and, for those living close to these activities, may include sinus and other respiratory problems, particularly asthma, and adverse birth outcomes, namely, prematurity and low gestational weight babies.[13] [14] Contaminated water, air pollution and conflict in farming communities over mining activities contribute to ill health.[15] While extraction of gas is not directly associated with the proposed gas-fired power stations upstream consequences should not be ignored.[16]

While recognising that the combustion process involved in gas-fired power generation is much cleaner than for coal-fired generation, DEA submits that significant air pollution is produced. Pollutants include nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compounds (VOC), particulates (PM_{10}, $PM_{2.5}$) and hazardous air pollutants (HAP: formaldehyde, benzene) and sulphur dioxide. All of these are known to be injurious to health and we draw your attention to the 3,000 premature deaths annually in Australia as a consequence of poor air quality.[17] The particular profile of emissions will depend on whether gas or diesel is used, with particulate pollution worse in the case of diesel, and is also dependent on how the power is utilised (peaking power, continuous etc.). The modelling done for both applications shows pollution levels well within existing standards. However, DEA contends that:

1. The likelihood of exceedances of air quality standards will not be known until the plants are operating;
2. For some pollutants, especially particulates, there is no safe threshold;
3. In the case of the Barker Inlet proposal, the proximity of the plants to housing and work places already exposed to significant industrial and transport pollution is of particular concern.

Conclusion

At this time, when global warming is shaping an energy transformation around the world, South Australia is recognised as a leader in renewable energy. To turn to fossil fuel power generation in order to fill a shortfall in capacity is regressive and cannot be justified on health grounds (or economic grounds, given the price of gas). Dispatchability, a key requirement of the Energy Security Board, can be achieved with batteries, concentrated solar thermal with storage and pumped hydro and, together with demand management and higher levels of solar, can provide South Australia with energy which is not only reliable but healthy.

Doctors for the Environment Australia requests that a DEA representative appear before the Planning Commission in relation to these applications.

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Health and Energy Subcommittee
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