



darebin climate action now
alphington - fairfield - northcote - preston - reservoir - thornbury

Submission to NSW MAJOR PROJECTS

Concerning the HUNTER VALLEY GAS PROJECT

7 June 2021

Submitted by:

Professor Ann Sanson (Convenor)

On behalf of Darebin Climate Action Now

Contact details:

Address: 17 Hartington St., Northcote, Vic. 3070

Email: annvs@unimelb.edu.au

Phone: 0408 948 811

Darebin Climate Action Now (DCAN) is a local not-for-profit organisation of City of Darebin residents concerned about global warming and our governments' inadequate responses to this threat. For over a decade we have educated ourselves and members of our local community about the causes of and appropriate responses to the climate emergency. We have more than 1000 members.

We are seriously concerned about the federal government's plan to spend at least \$610 million of taxpayers' money on the Commonwealth Government's Snowy Hydro gas-powered peaking station at Kurri Kurri in the Hunter Valley.

On the basis of our research, we believe there are three key reasons why this development should not proceed:

- Its significant negative health consequences for local residents, especially children
- Its significant contribution to greenhouse gas emissions, increasing the severity of climate change
- Clear evidence that new technologies and demand reduction measures can eliminate any shortfall or unreliability in power supply and remove the need for this development, leaving it as a stranded asset.

Health consequences

The proposed development will be located in an already heavily industrialised region where air quality is already a concern. Currently the Snowy Hydro's Environmental Impact Statement refers to lax regulatory limits for 'Electricity Generation' but it is doubtful that this technicality allowing dirty air is fair or defensible.

Because there is no existing local source of gas in the early stages of the plant's operation, and intermittently thereafter, it will use diesel and produce diesel engine exhaust (DEE). When breathed in, chemicals in DDE increase the risk of developing long-term health problems including lung cancer and possibly bladder cancer. In Australia, DEE is the second most common cancer-causing agent that workers are exposed to, behind ultraviolet radiation exposure.¹

When gas is burned, it produces significant harmful emissions of NO_x, CO, SO and PM₁₀ and PM_{2.5} particles. CO affects the heart and brain, PM₁₀ and PM_{2.5} particles reduce lung and heart function and increase asthma, and SO₂ harms respiratory function. Even if they only operate intermittently, gas power stations have been found to emit 3-7 times as much NO_x when they are starting up as during one hour of full-load operation. This is a serious problem, significantly increasing air pollution (which is already compromised in the Hunter region), a known contributor to asthma and other respiratory problems. Model simulations in the

¹ <https://www.cancer.org.au/cancer-information/causes-and-prevention/workplace-cancer/diesel>

United States suggest that emissions from natural gas sources may cause 5,000 to 10,000 premature mortalities each year in the U.S. from air pollution.²

Contribution to greenhouse gas emissions

Vested interests (banks, mining corporations and fossil fuel corporations) are currently pushing the idea of a 'gas-led' economic recovery and promoting gas as a 'transition fuel' in the critically important shift to renewable energy needed to avoid the worst impacts of climate change. Proponents argue that it has less impact on climate change than other fossil fuels. This is demonstrably fallacious.

As a greenhouse gas, methane is about 85 times as potent as CO₂. CSIRO research indicates that fugitive methane emissions associated with current levels of production of oil and gas in Australia already contribute 6% percent of our current greenhouse gas emissions.³

When used in an electric power plant, natural gas substantially increases, rather than decreases, global warming (by increasing CO₂e⁴) compared with coal over a 20-year time frame. Over a 20-year time frame, the CO₂e from using natural gas is 2.3 and 2.8 times that using coal.

A 2020 report by the Australia Institute⁵ found the gas industry provides few jobs, pays little tax and would lock in decades of high emissions and high energy prices. It shows that the gas industry is one of the least labour intensive industries in Australia, providing around one eighth as many jobs per dollar spent as the average for all Australian industries. We understand this plant will provide only 250 direct jobs during the construction phase and a mere 10 when fully operating, which is only two percent of the time.

Lack of need for an additional gas-fired electricity power plant

The rapidly falling cost of renewable energy and storage and the risk of catastrophic climate change are all economic drivers for a rapid global transition to the renewable energy and storage combination.

The Australian Energy Market Operator (AEMO)'s Integrated System Plan includes a 'step change' scenario with its plan to achieve 94% renewables by 2040⁶. Among the key messages in this Plan are that gas prices and network costs will continue to increase, while battery costs and renewables will continue to fall. It says, "Australia is on track to experience the fastest

² Mark Z. Jacobson (2020). Evaluation of Coal and Natural Gas With Carbon Capture as Proposed Solutions to Global Warming, Air Pollution, and Energy Security. *Cambridge University Press*, <https://web.stanford.edu/group/efmh/jacobson/WWSSBook/WWSSBook.html>

³ <https://gisera.csiro.au/factsheet/fugitive-methane-emissions-factsheet/>

⁴ CO₂e means "carbon dioxide equivalent emissions per unit energy produced"

⁵ [https://www.tai.org.au/sites/default/files/P908 Gas-fired backfire %5Bweb%5D_0.pdf](https://www.tai.org.au/sites/default/files/P908%20Gas-fired%20backfire%20web%200.pdf)

⁶ <https://aemo.com.au/en/energy-systems/major-publications/integrated-system-plan-isp/2020-integrated-system-plan-isp>

energy transition in the world". Developments such as the proposed fossil-fuel burning peaking plant will therefore quickly become stranded assets.

Planning for a sustainable future requires policy makers to listen to and act on scientific evidence, and to work with communities to prioritise our shared natural environment. The Kurri Kurri proposal ignores scientific evidence on the urgent necessity to reduce our reliance on fossil fuels. It also flies in the face of the recommendations such significant bodies as AEMO and the Australian Energy Security Board.

Conclusion

The earth is already too hot. We are already seeing unprecedented bushfires, floods, hurricanes and extreme temperatures in Australia as well as globally. A recent paper by eminent scientists including Will Steffen and Hans Schellnhuber (2018)⁷ states that we could trigger a cascade of tipping points and pass the planetary threshold for irreversible warming and a Hothouse Earth even if we remain at two degrees Celsius of warming. We must transition to zero emissions at emergency speed.

There are three powerful arguments against this development: the significant risks it poses to the health of Australians living in the area; its contribution to catastrophic climate change from increased production and use of gas; and the fact that new technologies and demand reduction measures can eliminate any shortfall or unreliability in power supply and remove the need for this development, leaving it as a stranded asset. A new investment in fossil fuels will simply continue to contribute to the climate emergency.

We need our government to plan for a sustainable future, which requires it to listen to and act on scientific evidence, and to work with communities to prioritise safeguarding the natural environment on which we all depend, and planning for a safe and sustainable future for our children and grandchildren. Using taxpayer money to build new fossil fuel infrastructure at this point in history is a crime against future generations. This was forcefully confirmed recently when Federal Court Justice Mordecai Bromberg found that the federal Environment Minister had a duty of care to not act in a way that would cause future harm to younger people.⁸ Construction of the Kurri Kurri gas plant would clearly contribute to future harm to the next generation.

⁷ Will Steffen, Johan Rockström, Katherine Richardson, Timothy M. Lenton, Carl Folke, Diana Liverman, Colin P. Summerhayes, Anthony D. Barnosky, Sarah E. Cornell, Michel Crucifix, Jonathan F. Donges, Ingo Fetzer, Steven J. Lade, Marten Scheffer, Ricarda Winkelmann, and Hans Joachim Schellnhuber. Trajectories of the Earth System in the Anthropocene. *PNAS*, 2018 DOI: [10.1073/pnas.1810141115](https://doi.org/10.1073/pnas.1810141115)

⁸ <https://www.theguardian.com/australia-news/2021/may/27/australian-court-finds-government-has-duty-to-protect-young-people-from-climate-crisis>