

I am a retired science teacher and the grandmother of very young children. For four decades I taught the physics of global warming. This was not a matter of activism but simply part of the Year 7 curriculum. In 2021 we already have more than one degree of average global warming since pre-industrial times. I find it simultaneously inconceivable and an outrage to my sense of fairness and responsibility to the rising generations, that new greenhouse-gas generating fossil fuel projects, with intended lifespans of decades, are being considered by my government.

Below I elaborate more on this argument that the Kurri Kurri gas power plant should not proceed. I will also argue that such a plant is actually in contravention of our commitments to the Paris Accord, as well as unnecessary and harmful to the people, and especially children, living in the area.

Gas contributes significantly to global warming

There is a lie being promoted by fossil fuel lobbyists that gas makes a useful 'transition' fossil fuel. But that is like arguing that a 'mild' cigarette will help you give up the regular variety. Any fossil fuel will do significant harm. The CSIRO tells us that fugitive methane emissions associated with the level of oil and gas currently produced in Australia already contributes an astonishing six percent of our current greenhouse gas emissions.¹

Methane concentration in the atmosphere is already more than two and a half times higher than pre-industrial levels. Once emitted, methane stays in the atmosphere for about nine years – a far shorter period than carbon dioxide. However, its global warming potential is 86 times higher than carbon dioxide when averaged over 20 years and 28 times higher over 100 years.

The CSIRO states, 'Clearly, current upward trends in methane emissions are incompatible with meeting the goals of the Paris climate agreement. But methane's short lifetime in the atmosphere means any action taken today would bring results in just nine years. That provides a huge opportunity for rapid climate change mitigation. In Australia, methane emissions from fossil fuels are rising due to expansion of the natural gas industry, while agriculture emissions are falling'.² This is a very significant statement and should not be lightly disregarded. It is also significant that agriculture is genuinely essential but is managing to decrease its emissions while gas is, outside vested interest groups, largely regarded as inessential/replaceable, and definitely obsolete in the foreseeable future.

Other sections of the business community are also recognizing the need to move away from the gas industry. Suncorp, one of Australia's largest insurers, has announced that it will begin phasing out underwriting, financing or directly investing in new oil and gas exploration and extraction from 2025. It recognizes that climate change is having an impact on its profits through the huge payouts following fire, rain and hail damage. Inevitably gas projects will become

¹ <https://gisera.csiro.au/factsheet/fugitive-methane-emissions-factsheet/>

² <https://blog.csiro.au/emissions-of-methane-are-rising/>

uninsurable as the result of existential, financial and possibly also legal risks. There is no reason to think that this project will be an exception.

Current predictions of a global warming average of five degrees by 2100 have been criticized for including 'high levels of coal use' but also defended because 'high emissions' scenarios can come around in other ways. One of these is the massive release of methane which might come from the already warming Arctic permafrost. Obviously another is the mining and use of methane gas as a fuel, exactly as is involved in this project.

I feel it is important to add that whatever number of degrees of projected warming is given, that figure is a *global average*. The average over land will be, according to Melbourne University's climate expert David Karoly, one and a half times the global average. So we are talking 7.5 degrees Celsius over land by 2100. AND Australia is likely to be one of the worst impacted nations.

New gas fields development is being discouraged by the International Energy Agency

The IEA was created in 1974 to help co-ordinate a collective response to major disruptions in the supply of oil. While oil security remains a key aspect of their work, the IEA has evolved and expanded significantly since its foundation. It sees itself as, "Taking an all-fuels, all-technology approach" and "recommends policies that enhance the reliability, affordability and sustainability of energy".

In a May 17th announcement the IEA wrote:

"The IEA's pathway to (a) brighter future brings a historic surge in clean energy investment that creates millions of new jobs and lifts global economic growth. Moving the world onto that pathway requires strong and credible policy actions from governments, underpinned by much greater international cooperation."

"The contraction of oil and natural gas production will have far-reaching implications for all the countries and companies that produce these fuels. No new oil and natural gas fields are needed in the net zero pathway".

Fortunately while the IEA also wrote, "Advanced economies (must) reach net zero before developing economies" it continued, "The IEA stands ready to support governments in preparing their own national and regional roadmaps, to provide guidance and assistance in implementing them, and to promote international cooperation on accelerating the energy transition worldwide." Maybe our government could seek their advice.

Health implications for residents

Air quality in the Hunter region, where the Kurri Kurri plant will be burning new gas, is already poor and only “acceptable” because the region is classified as ‘industrial’ and subject to different standards to other regions.

The NSW Department of Planning, Industry and Environment informs us:

Air quality alerts are issued to the media and subscribers when air quality is poor. Hunter New England Health encourages community members to check the local air quality index to find information on current air pollution levels.

This is marvellous but is a clear indication that the air quality in the region is already a problem. NO_x emissions from the proposed plant will increase these already high pollution levels both during the periods when it is operating and also, and significantly, when the plant is starting up. Given that these emissions contribute significantly to childhood asthma this is concerning for the 2/3 of Kurri Kurri and Cessnock families who have young children.

Other emissions from the proposed plant include CO, which effects the heart and brain, PM₁₀ and PM_{2.5} particles which also reduce lung and heart function and increase asthma and SO₂, which also harms respiratory function. All in all, a poison soup in the air.

In addition, there is currently no gas supply to the site. The pipeline proposed for use by the proposed plant is subject to the private Queensland Hunter Gas Pipeline project. This pipeline is approved but has not commenced construction. As a consequence, the proposed plant will initially run on highly polluting diesel, with diesel to remain as a ‘backup’ source for the life of operation. Diesel is even more polluting than gas!

Kurri Kurri gas plant would be in contravention of existing laws/commitments

The NSW Department of Planning, Industry and Environment also informs us:

The NSW Government actively regulates industry to reduce emissions of air pollutants. . . . EPA reviews the licences of mines, power stations and other industries to limit emissions.

The taxpayer-funded construction of a new, unnecessary gas plant which will introduce more pollution would be in contravention of this commitment to ‘reduce emissions’. It also contradicts, in at least two distinct ways, the NSW Clean Air Strategy 2021-30, which promises to, “Support private sector investment in new clean energy generation ... to replace ageing fossil fuel-powered generators as they retire in coming years”.

Conclusion

In the 2018 words of Professor Hans Schellnhuber, Founding Director (1992-2018) of the Potsdam Institute for Climate Impact Research, 'Climate change is now reaching the end-game, where very soon humanity must choose between taking unprecedented action or accepting that it has been left too late and bear the consequences'.

In May 2021 in Australia, Federal Court Justice Mordecai Bromberg wrote that the anticipated climate-related devastation will "largely be inflicted by the inaction of this generation of adults, in what might be described as the greatest injustice ever inflicted by one generation of humans upon the next."

Please choose wisely.