

THE NARRABRI CSG PROJECT

Three main objections to the Narrabri gas proposal

Environmental; the 850 proposed well heads, roads, pipelines, salt and BTEX contaminated wastewater will irreversibly degrade farmland, aquifers, local waterways and the iconic Pilliga Forest. Gas wells and pipelines are fire hazards and can flare flammable methane even during periods of high fire danger. Methane is a powerful greenhouse gas; we need to reduce GHGs to zero by 2040 to stay within 1.5c of warming this century.

Economic; gas fracking is capital intensive and highly centralised, run by a few large overseas owned corporates such as Santos and Woodside. These rely on public subsidies and low tax regimes to make profits at taxpayer expense, especially now with record low gas prices, and the collapse of major gas companies such as US giant Chesapeake. BHP exited gas production in 2018 after \$20 billion losses. Unsubsidised renewables are now cheaper than coal and gas, even before a carbon price is factored in. This is likely to leave the Santos project stranded in the near future.

Social; Gas projects have been halted in Northern NSW and in Gloucester due to strong opposition by locals and the wider community. Narrabri is no different. Gas fracking employs few locals and is mainly FIFO. There is a strong precedent of falling land values, and decreased farm production, in areas affected by gas fracking. Landholders are also ineligible for public liability insurance.

DR MICHAEL SCHIEN

13th July 2020

400-character IPC submission re Narrabri CSG

850 CSG WELLS AROUND NARRABRI WILL PERMANENTLY DEGRADE FARMLANDS, WATER RESOURCES AND WHAT'S LEFT OF THE PILLIGA KOALA HABITAT. PROFITS FLOW OVERSEAS TO SANTOS, AND TO SHORT TERM FIFO WORKERS. WITH UNSUBSIDISED RENEWABLES NOW CHEAPER THAN GAS AND COAL, THIS WOULD BE A LOSS TO TAXPAYERS, THE ENVIRONMENT, THE CLIMATE, LOCAL LANDHOLDERS AND FUTURE GENERATIONS.

THE IMPLICATIONS FOR HUMAN HEALTH AND WELLBEING OF EXPANDING GAS MINING IN AUSTRALIA

Onshore Oil and Gas Policy
Background paper
2019

The evidence is clear that gas mining harms the necessary supports for human health and indeed life: stable climate, air and water quality and security, food security, community cohesion and, in some locations, geological stability. The cumulative impacts of this industry on the wider requirements for good health and wellbeing are extremely concerning.

In particular, gas mining is responsible for an increasing proportion of Australia's global fossil fuel carbon footprint. Climate Analytics¹ indicates that our domestic and export fossil fuel emissions are now 5% of global emissions and current developments could increase this to 12-17% by 2030.

Accordingly, Doctors for the Environment Australia (DEA) urges the Australian government to commit to a national energy plan that prioritises the urgency of climate change and urges a ban on new gas and oil developments, and stringent regulation of existing gas developments, while vigorously promoting a coordinated transition to renewable energy.

The evidence

Over the past six years, health and environmental researchers, have published over 1,500 research papers on the impacts of gas mining. This research comes mainly from the United States where rapid and expansive development of gas and oil fields has occurred in close proximity to residential areas.

We have reviewed this research and recognise that the exploration and extraction of natural gas (methane) and oil from conventional and unconventional sources pose many risks to human health and wellbeing.

1. Greenhouse gas emissions

The substantial and rising greenhouse gas footprint of the expanding gas and oil industry threatens global efforts to urgently reduce emissions.

Emissions caused by gas are often underestimated through:

- ❖ Failure to consider the footprint of the entire lifecycle of gas production, processing, transport and use which makes it little different from the footprint of coal;
- ❖ Underestimation of the quantity and duration of fugitive methane emissions;
- ❖ Inappropriate application of climate-forcing potency of methane over a 100-year time timeframe (20 times more than CO₂), rather than the more appropriate 20-year timeframe (86 times higher potency) given the already measurable health impacts of current rapid warming;
- ❖ Failure to consider the potential significance of large-scale methane-emitting accidents (e.g. Aliso Canyon storage facility in California) and leakages that are difficult to stop quickly;

- ❖ Failure to recognise the economic competition between abundant gas from large expansions and low emission renewable energies in the energy market.

The rapid increase in global warming has many health impacts in Australia and throughout the world.

2. Chemicals used in drilling and released from coal seams and shale

The second major concern to health from gas mining is the wide array of chemicals used in drilling and hydraulic fracturing, and released into the environment through airborne emissions and wastewater, and also emitted from the high level of industrial activity (e.g. compressor stations, gas processing plants, on-site diesel-powered machinery and heavy vehicles) surrounding the production process.

Furthermore, potentially toxic chemicals within shale and coal seams are released into the air and wastewater. They include volatile organic compounds notably benzene, phenols, polycyclic aromatic hydrocarbons (PAHs), heavy metals, salt and technologically enhanced naturally occurring radioactive materials that may become concentrated through treatment processes.

Studies examining the potential toxicities of chemicals found in shale gas wastewater have reported that while many have not been evaluated, some are known carcinogens and/or have the potential for endocrine disruption and/or are associated with neurological, reproductive and developmental harm.

There are many ways by which ground and surface water is impacted by gas well activity, through spillage, injection procedures, spills or deliberate discharge of inadequately treated water and leakage from wastewater pits and ponds.

Potentially harmful substances are emitted into the atmosphere during dewatering, gas production and processing, wastewater handling and transport. They include PM_{2.5} and PM₁₀, volatile organic compounds, hydrogen sulphide, formaldehyde, diesel exhaust and ground level ozone.

3. Health effects in gas field communities

The evidence of the health impacts of gas mining is in its infancy, due to limited resourcing to date. However, concerning aspects have already emerged in the scientific literature.

Associations have been reported between residences close to gas mining activities and asthma exacerbations, sinus conditions and migraines, skin rashes, fatigue and headaches as well as hospitalisations for heart, neurological, respiratory, immune system diseases and some cancers. Most of these studies have been from

the US, but similar reports have occurred with coal seam gas mining in Queensland.

In addition, there have been reports of negative birth outcomes, such as low birth weight, pre-term delivery, higher risk births and some birth defects in pregnancies spent closer to gas mining activities, compared to pregnancies spent further away, or in the same area before commencement of gas mining activities.

Increased levels of stress, depression, criminal activity and traffic accidents have also been reported among those living near gas mining. These changes likely reflect psychological and social disturbance among individuals and whole communities. Australian researchers have found that stress about coal seam gas mining may contribute significantly to mental health risks among directly affected farmers.

Of particular concern to Australian agriculture and remote communities is research showing an unpredicted but consistent rise in water footprint—up to 7.7- and 14-fold increases in water usage and waste used per well in semi-arid regions across the United States.

Demonstrated health impacts either directly or indirectly through water, air, and soil, require that the precautionary principle is applied to protect the Australian community.

Further reading and references

1. Climate Analytics

https://www.acf.org.au/australia_on_track_to_become_one_of_the_worlds_major_climate_polluters

The full document - "The implications for human health and wellbeing of expanding gas mining in Australia" can be accessed here:

<https://www.dea.org.au/wp-content/uploads/2018/12/DEA-Oil-and-Gas-final-28-11-18.pdf>

Evaluating the significance of Australia's global fossil fuel carbon footprint Report prepared by Climate Analytics for the Australian Conservation Foundation (ACF)

https://d3n8a8pro7vhmx.cloudfront.net/auscon/pages/16166/attachments/original/1562469729/FINAL_Carbon_footprint_report_Formatted.pdf?1562469729

DEA Fact Sheet: Climate Change and health in Australia

https://www.dea.org.au/wp-content/uploads/2017/02/DEA_Climate_Change_Health_Fact_Sheet_final.pdf

DEA Fact Sheet: Oil Spills & Health Don't Mix

<https://www.dea.org.au/wp-content/uploads/2019/06/DEA-Fact-Sheet-Oil-Spills.pdf>

26 July 2019

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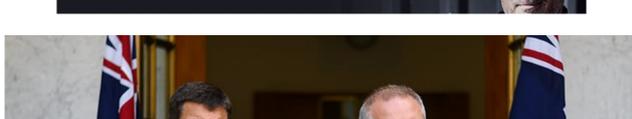
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Gas lobby seizes Covid moment, and declares war on Australia's future

Giles Parkinson 22 May 2020 0 Comments

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The history of war tells us that such events are usually launched on doubtful and fabricated pretexts: The US war in Iraq, the German invasion in Europe at the start of WWII, all the way back to Julius Caesar's invasion of Britain, and just about every war in between.

And so it is with the extraordinary attack launched on Australia's future by its incumbent fossil fuel industry, and the gas lobby in particular. Its *casus belli* is the Covid-19 pandemic, and the fossil fuel industry has been enabled to do this after being invited by the Morrison regime to do more or less at it pleases and design its own future.

The reach and sheer audacity of the proposals unveiled over the past week is extraordinary, and the lasting impact on Australia's future may dwarf anything that Tony Abbott and his Far Right cheerleaders may have done; notwithstanding his white-anting of the Carbon Pollution Reductions Scheme more than a decade ago, the scrapping of the carbon price in 2014 and the unceasing campaign against science and engineering.

Australia finds itself at a critical juncture. It benefits from the stunning cost reductions in solar, wind and battery storage, and key institutions have [mapped out a path to a high renewable energy grid](#). Experts are shining the light [on a future of green manufacturing](#) and ["green energy exports"](#) that could enhance the position of the country as a significant energy superpower.

But the fossil fuel industry and its backers, with their focus almost entirely on short-term profits and ideological claptrap, have other ideas. They have decided to throw a live grenade into Australia's own economic bunker, and its environment, and put the future of the current and emerging generation at risk.



Consider the list of what has emerged from the government-appointed gas-industry led reviews in the past week, including the King Review, the Covid Commission, the technology investment roadmap, and from the intense pressure being put on energy regulators.

- Bastardising the remit of the [Clean Energy Finance Corporation and the Australian Renewable Energy Agency](#) in an attempt to force them to invest away from renewable and smart and enabling technologies and into gas and carbon capture and storage.

- Polluting the already controversial and ineffective Climate Solutions Fund by creating a "base-line" that [industry experts suggest will allow big polluters to increase their emissions and get paid for doing so](#).

- Delaying [critical energy market rule changes and reforms](#) that might have encouraged smart new technologies such as battery storage and demand management, and end the rorting of the current system by incumbent coal, gas and hydro generators.



- Pushing the case for gas and CCS in a ["technology investment roadmap"](#) that otherwise clearly identifies wind, solar, storage and other technologies such as EVs, heat pumps, energy efficiency and demand management as the cheapest and most reliable options.

However, none of these quite reaches the breadth, depth and cynicism of the so-called Covid-Commission, which appears entirely possessed with the narrow interests of the gas industry, from where many of these commissioners have emerged.

A leaked master plan from the manufacturing taskforce of the NCCC - its formal acronym - has as its centrepiece a mad proposal to resuscitate a widely discredited multi-billion dollar plan to build an east-west gas pipeline, locking in a white elephant at taxpayers expense for decades to come.

But it is the sheer range and scale of the government subsidies proposed that beggars belief.

The Covid Commission wants the government to underwrite new gas generators, get state governments to sign "contracts for difference" to further underpin gas supply, provide cheap capital for smaller companies, provide tax incentives for gas infrastructure, directly finance new pipelines and "gas hubs," jump regulatory barriers to fast-track these investments, and adjust the regulatory returns.

It also proposes a range of different support measures and government interventions, including "take or pay" contracts, lifting state-based moratoria on gas exploitation, and cutting red and green tape.

This from an industry that has been around for half a century, and claims to be both low cost and low emissions - neither of which is true on any assessment.

At the proposed gas prices assumed under the Covid plan, more than half of the gas reserves in Australia would be uneconomic, according to energy experts. The plan simply doesn't stack up without massive government intervention and huge taxpayer subsidies.

The advice flies in the face of expert assessments on the future of the grid from Australian Energy Market Operator, seeks to reverse the shift from baseload to flexible and dispatchable generation, and ignores the potential of using genuinely low-emissions technologies to both lower the cost and green up Australia's manufacturing and energy-intensive industries.

The brazenness of this assault from the gas industry has taken many in the energy sector by surprise. They say, however, that this is no accident, for the plan is sophisticated and premeditated, even if the circumstances - government fiat under the pretext of Covid-19 - are opportunistic.

Energy experts describe it variously as "nuts" and an "outrage", destined to saddle the country with higher costs, higher emissions and stranded assets. Some recognisable commentators have had this to say:



The Covid Commission to declare the chutzpah to declare this even for others in the gas industry. The Australian Energy Council warned that markets should be allowed to work, and the main oil and gas lobby APPEA warned "it should not subsidise already commercial or mature technologies."

APPEA said such subsidies and interventions "would simply undermine private investor confidence and inhibit market efficiencies." That has already been witnessed by the federal government's underwriting scheme that is focused on new gas generation and has already brought investment to new dispatchable technologies to a crashing halt.

But APPEA was otherwise pretty happy with the broad thrust of the commission. Why wouldn't it be? And who is going to stop this assault from the gas industry? Where are the points of resistance?

Certainly not in the PM's office, where the gas lobbyists must come face to face with their old mates in Morrison's advisory team, which includes the former CEO and deputy CEO of the fossil fuel industry's peak lobby group, the Minerals Council of Australia.

Morrison himself, according to an article published on John Menadue's site last week, is one of 22 current Coalition MPs and Senators who form part of the network built around the Institute of Public Affairs and its satellites. Not not one thinker of note amongst them, the author writes. They don't support government intervention, unless it is on behalf of their backers. See: [IPA is wrecking our democracy](#).

Nor will resistance be encountered in the office of the minister of energy, Angus Taylor, who has governed his portfolio by intervention, and undermined investor confidence along the way. His fingerprints are all over these initiatives. He has made no secret of his desire to see a "gas-led recovery" and can barely bring himself to utter the words 'wind,' 'solar' and 'batteries,' let alone give them support.

This is partly led by Taylor's personal ideology, and partly by personal ambition. The one-time ferocious anti-wind campaigner - despite the smell of scandal that hovers around his office - is also relentlessly ambitious. He wants to be PM. And this is just as much about carrying favour in the Coalition and media's right-wing rump as it is about any economic or policy vision.

In summary, this is disaster capitalism at its worst. Gas, because of the release of methane, is little better than coal when it comes to greenhouse gas emissions. Its role as a "transition" fuel is questionable at best, and terribly short-sighted, and the construction of expensive gas infrastructure destined to be stranded assets is pure madness.

How did it come to this? How did this committee get appointed. Who holds it to account? Here is the PM's secretary Phil Gaetjens dodging the questions at a Senate committee last week:

"I think it was for the networks they have across business to, as I said, get ideas from business that what an obstacle is and how to actually treat things. So I'm not aware of any specific issue that related to how they were chosen. I think it was a quick but broad process that actually got these people."

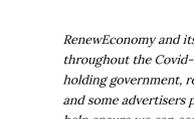
Sir Humphrey he is not, but the intent to obscure is clear enough.

RenewEconomy and its sister sites [One Step Off The Grid](#) and [The Driven](#) will continue to publish throughout the Covid-19 crisis, posting good news about technology and project development, and holding government, regulators and business to account. But as the conference market evaporates, and some advertisers pull in their budgets, readers can help by making a [voluntary donation here](#) to help ensure we can continue to offer the service free of charge and to as wide an audience as possible. Thankyou for your support.

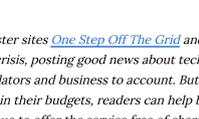
Giles Parkinson
Giles Parkinson is founder and editor of [Renew Economy](#), and is also the founder of [One Step Off The Grid](#) and founder/editor of [The Driven](#). Giles has been a journalist for 35 years and is a former business and deputy editor of the Australian Financial Review.

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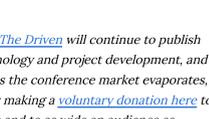
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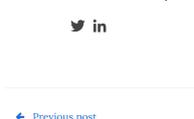
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by Sophie Vorrath on 13 July 2020 at 11:10 AM



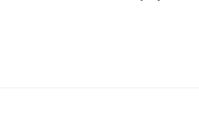
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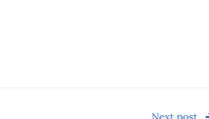
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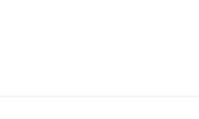


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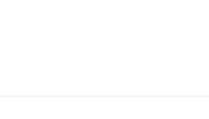
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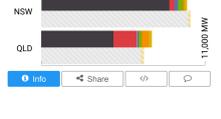
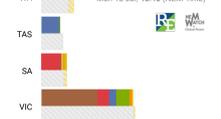
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