

Narrabri Gas Coal Seam Gas Project proposal assessment by Independent Planning Commission. NSW.

Objection.

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Introduction:

In this submission objecting to the Narrabri Coal Seam Gas Project I discuss the costs, either assured or highly probable, which include environmental degradation, ecological disruption, species extinction, contamination of groundwater, production of toxic waste materials and damage to agriculture - all due to the extraction process and transport of the product.

Also, it is now clear that the burning of gas for energy will contribute to exacerbating climate change. This fact, alarming in itself, is also alarming shareholders. Models published recently in the "Network for Greening the Financial System" by 60 central banks will be referred to by investors. The Santos CSG Project may shortly be seen as unviable.

The benefits will be very short-term gas production. This is already being challenged as unnecessary, being superseded by technological advances in solar and wind power generation and in battery development.

Standing:

Having grown up on a grazing property on the Lower Lachlan River, north-west of Hay, I know well the huge significance of water. My first memories are of the drought of the 1940's, dust storms, dying stock and the river drying to a string of waterholes. The vulnerability of the Murray-Darling Basin and the artesian water was imprinted early. The protection of water is paramount when weighing up the pros and cons of this coal seam gas (CSG) extraction project.'

Since 2000 I have been involved in the study and protection of the Pilliga Forest through Canopy Native Forest Committee of the Total Environment Centre (TEC), the National Parks Association (NPA) and Colong Foundation for Wilderness. Much of this was alongside my geologist husband Mike Atkinson (who died in 2011). We did numerous field trips, ran a Pilliga Seminar at the Royal Botanic Gardens, participated in the NPA Biodiversity Survey and have, over 20 years, submitted our concerns re the CSG exploration and development to various authorities.

As I have listened to Indigenous peoples and gained a greater understanding of their cultural connection to Country I better appreciate the importance of the preservation of whole ecosystems to them. Yes, very important to me but it is at another dimension for the Gamilaraay. The significance of this area to our First Nations People should be respected. The recent callous destruction of a 46,000 year old site of world significance in the Pilbara is an horrific example of mining companies proceeding willy nilly.

Whole eco-systems such as that of the Pilliga forest are extremely complex with scientific studies only beginning to gain insight into the many factors which contribute to this unique area's delicate balance. The flora and fauna are extraordinarily diverse. They are inextricably intertwined with the various soil types and all related to, intertwined also with the water systems – rain, surface water, creeks, aquifers and artesian storages. This means the ecosystem is not just the Pilliga forest itself but also the Murray-Darling Basin and the Great Artesian Basin (GAB). The Pilliga lies within both, feeds water into both and is essential to both these huge and valuable water storage systems. These systems should not be destabilized by drilling 850 CSG wells with accompanying infrastructure, with pipelines and with a cross-hatching of roads fragmenting the forest and interrupting natural flows. The risk of damaging the natural systems by drilling down through aquifers to reach the layer containing the coal seam gas is too great. The risk cannot be estimated in advance. If damage is done it cannot be remediated. Once an enormous project like this is underway it is unlikely that it would be halted before it runs out of gas. There is an extremely high risk of poisoning the groundwaters, destroying already threatened species and their habitat, blocking of wildlife corridors and of no safe disposal system being devised for waste products, such as huge quantities of toxic salts. Wherever disposed of they are likely to leach into the water table and contaminate that ecosystem.

Thorough independent monitoring has not been carried out on other projects. Conditions have been set and ignored. When problems have become obvious no effective stance has been taken by State or Federal governments to meaningfully punish, to stop the project or to ensure proper remediation. The recent Audit of the effectiveness of the federal Environment Protection and Biodiversity Conservation Act (EPBC) has demonstrated almost total lack of action. The current proposed changes to the Act do not strengthen the Act, they propose abdication from responsibility. There is no independent body with powers to ensure compliance. This situation makes the risk involved in approving this Narrabri CSG Project even more hazardous.

Reasons for objecting to the Narrabri Gas Project Proposal:

1. Water:

The boundary of the Great Artesian Basin extends from the Pilliga on its south-east margin, north to the top of Cape York, halfway across the Gulf of Carpentaria, then south-west almost to Alice Springs, skirts west of Coobar Pedy and around to the Pilliga again – a huge area of water trapped between two impermeable layers of rock. The GAB was filled many centuries ago and is gradually being depleted although there is some recharge from rainfall and other aquifers at certain points on its eastern border, one of these being in the Pilliga.

Aquifers in the Pilliga also feed into the Murray-Darling Basin, which overlaps the southern section of the GAB.

These two enormous complex natural water storage systems need water fed into them, need to be kept free from contamination and need to be very cautiously harvested.

Coal seam gas extraction will require huge quantities of fresh water for the extraction process; will cut through rock layers potentially allowing mixing of toxic salts with water in the aquifers above; roads, pipelines and the gas wells may interfere with catchment flows into aquifers; and disposal of

salts, of waste water, will leach into river systems wherever that takes place. This will affect ecological systems both in the Pilliga and far from it and in agriculture near to the Pilliga Forest and far beyond it.

2. Ecology:

The Pilliga's rich natural diversity is not immediately obvious to the casual visitor. Drive along the very straight Newell highway and the visitor will see callitris (native pine), ironbark and box woodland with some wattles and flannel flowers, a wallaby or two on red sandy soil, slightly undulating terrain. It does not seem spectacular. The visitor may be dismissive. However:-

The Pilliga Forest is the largest patch of temperate woodland in Australia.

The Pilliga contains the largest area of Narrow-leaf Ironbark, Broad-leaf Ironbark, Pilliga Box and Bimble Box (eastern form) found anywhere in NSW. It also contains many other plant communities that have largely been cleared out from their former ranges, eg. Silver-leaf Ironbark, Brigalow, Green Mallee and Broombush.

There is an extraordinary numbers of species, many threatened, in the Pilliga:-

- ❖ Over 900 known plant species, probably more than 1500.
- ❖ At least 12 rare and threatened plants
- ❖ About 300 native animal species (not counting invertebrates)
- ❖ 14 frogs
- ❖ Over 200 birds
- ❖ 32 mammals (including 12 bats)
- ❖ About 50 reptiles
- ❖ 22 of the animal species are threatened (Glossy Black Cockatoo, Regent Honeyeater, Gilbert's Whistler, Painted Honeyeater, Turquoise Parrot, Barking Owl, Masked Owl, Malleefowl, Square-tailed Kite, Black-breasted Buzzard, Bush Stone Curlew, Eastern Pygmy-possum, Squirrel Glider, Koala, Black-striped Wallaby, Rufous Bettong, Pilliga Mouse, Greater Long-eared Bat, Yellow-bellied Sheathtail Bat, Little Pied Bat, Large-eared Pied Bat, Eastern Cave Bat).

This extraordinarily diverse and intricate eco-system would be devastated by 850 gas wells linked by roads and pipelines as well as extensive fire breaks. Surface and aquifer water systems would be negatively affected. Migration routes would be interfered with.

This great forest is unique – so completely different to other ecosystems in NSW or elsewhere in Australia, eg such a contrast to the sandstone gorges around Sydney or to the saltbush plains out west. It stands alone. It should not be cut up, criss-crossed with roads, its integrity destroyed. The Narrabri coal seam gas project would undoubtedly destroy it.

2. Waste Disposal – sodic salts, etc.

In the drilling process contaminated water is extracted from the wells. We personally saw the lethal effects a spill of waste liquid had on the vegetation surrounding Bohena 2.in 2001 during the exploratory phase. Shrubs and trees all dead. A black ooze all over the ground. There is no plan for environmentally safe disposal of huge quantities of toxic salts. Dump it in rivers? The Murray-Darling Basin has enough salt problems. Put it in a hole in the ground? It will leach into the groundwater, the artesian reservoirs. Recycle? How could this be done economically; what useful products could be extracted; and what would be left over?

Waste products are a major issue. A solution that is workable and safe needs to be developed *prior* to approval of this or any other project.

4. Aboriginal cultural significance.

The voices of local and national Aboriginal elders need to be heard and heeded concerning the cultural significance of the Pilliga forest.

5. Agriculture.

Water supply and quality is essential to farming and stock. This CSG Project in the Pilliga will potentially affect surrounding agriculture. If the Great Artesian Basin waters are contaminated or significantly depleted the effects on agriculture will extend well into Queensland. Similarly if the water of the Murray-Darling Basin are contaminated, or seriously depleted.

Farmers there also fear the 'Trojan horse' effect, that permission will be granted to extend gas extraction into neighbouring farmland regions.

6. Trust in monitoring and enforcing compliance with conditions of consent.

Based on the history of other projects there is no evidence that at state or federal level there is the will, an efficient structure, or the funding to properly monitor compliance with the conditions set in consents. Nor are any significant punishments meted out for non-compliance. Nor are companies forced to remediate as far as may be possible. And are any projects actually ever stopped?

The DPIE June 2020 Assessment Report recommended conditional approval for this Narrabri GSG Project listing many risks as *acceptable* and set *strict conditions*. Whitehaven's non-compliance with *strict conditions* at its Maule's Creek coal mine for which approval was granted in 2013 is now being challenged by the Environmental Defenders Office in court. The Maule's Creek transgressions were not dealt with by State or Federal agencies or by the terms of its approval. *Acceptable risk* seems a very rubbery concept. *Acceptable risk*, eg that the artesian water aquifers will not be contaminated in the drilling process is a huge assumption. This should not be an *acceptable risk*. Damage which could occur to the water systems and to the ecology of the Pilliga Forest cannot be reversed with a minor fine. Contaminated groundwater cannot be purified. Extinction of species is extinction. This should not be deemed an acceptable risk. It is likely to be a disaster.

If projects are approved with strict conditions these must be determinedly and transparently monitored. Research must be funded and be independent of the company. Severe punishments, ones that have a real impact, must be applied for non-compliance. If the company causes substantial damage the project must be shut down. Essentially the government must demonstrate the *will* to protect our natural environment.

Conclusion. Short-term gain with huge unacceptable risks should not be contemplated. The Narrabri Coal Seam Gas Project should not gain approval to proceed. If the Independent Planning Commission is genuinely independent it should weigh up these arguments and those of people far more expert than I and cancel this Narrabri Project.

V.J. Atkinson. July 2020.