

NT GREENS RESPONSE TO 'DRAFT FINAL REPORT'
of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory

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Introduction

The NT Greens have a long-held position that fracking is both environmentally and economically reckless. Protecting our water is crucial for the growth and prosperity the Northern Territory, and integral to the natural environment in which we live. Over 90% of the Northern Territory is reliant on our underground water sources. Fracking poses a serious threat to our land, water, health and livelihoods.

The potential future consequences of fracking are far-reaching and irreversible. It is our position that there is no environmental or economic indicator that indicates hydraulic fracturing in the Northern Territory is in the public social, environmental or economic interest.

General Comments

Over the last decade there has been growing community opposition to fracking from right across the community spectrum – farmers, health professionals, city and country dwellers, scientists, Indigenous Australians, economists and many others. These community members are united in their concern about the threat fracking poses to our land and water as both a consequence of personal experience with fracking on their land as well as the scientific and media reports associated with both Australian and international fracking enterprises. The NT Greens stand with the community in their opposition to fracking.

The NT Greens' position can be summarised as follows:

1. We must urgently transition away from carbon polluting fossil fuels like coal and gas towards clean energy to mitigate against the worst impacts of climate change. We therefore do not support any new fossil fuel development.
2. There is an unprecedented level of risk associated with fracking and it has potentially catastrophic impacts on surface water, groundwater, clean air and a safe climate. Some of these risks are unclear and unknown prior to the commencement of fracking due to all environmental factors not being accounted for (which is often not possible). This is particularly so in the Northern Territory which has had insufficient environmental examination partly due to the particular conditions here that are not present in other fracking sites and so cannot be comparable. Fracking thereby poses an unacceptable risk to our land and economic livelihoods.
3. There is no social license for fracking in the Northern Territory. Significantly, hundreds of Traditional Owners and Alawa and Mangarrayi Aboriginal Land Trusts are contesting fracking agreements, and there has been mass, broad community opposition.

Water Quantity

Fracking is extremely water intensive. This is of particular concern in the Northern Territory where water is in limited supply. Approximately 90% of the Territory's water is derived from ground water, and some regions - such as Alice Springs - rely entirely on single, non-replenishable sources of water. The risk of depleting these water supplies and threatening our communities and agricultural land is a risk that the NT Greens considers unacceptable.

The NT Greens welcome the recommendation for comprehensive groundwater studies to be undertaken, particularly in light of the current lack of baseline data in the Northern Territory. We particularly welcome the expansion of the Water Management District and new Water Allocation Plans to include the Beetaloo area. However, for any decision regarding the viability of fracking in the Northern Territory to be evidence-based; this work must be completed before a final decision on the viability of fracking exploration or production is made by Government, and it must be demonstrated that risks associated with water quantity have been addressed.

Water Quality

Preserving the quality of our limited water resources is of critical importance to the NT Greens, and to the broader community. We share the community's concerns about the contamination of clean water supplies; and the risks that the leakage of chemicals used in the extraction process poses to public health, agriculture, pastoralism and the natural environment.

Fracking poses a significant threat to water quality in the Northern Territory, just as it has to the water supplies of other regions in Australia. In 2014, a leaked report identified "leaks of water containing high levels of radioactive uranium from a coal seam gas (CSG) wastewater pond operated by Santos" in Northern NSW.¹ This leak resulted in uranium levels being measured at twenty times the safe drinking water levels in the aquifer.

Early last year, claims filed in Federal Court details years of Origin failing to adhere to its legislative and regulatory requirements to prevent leaks and contamination from its CSG activities. These claims include efforts to cover up and conceal contamination, spills and other environmental impacts.²

The University of Melbourne Energy Institute found in April 2017 that CSG operations "could significantly increase gas releases from weak or porous zones such as the Condamine River" in southern Queensland.³ Alarming, the report also found "in the Queensland CSG-producing areas,

¹ Matthew Currell, 'Coal Sea, Gas Leaks Could Be A Problem For Decades,' *The Conversation* <<https://theconversation.com/coal-seam-gas-water-leaks-could-be-a-problem-for-decades-24718>>

² Michael Slezak, 'Origin Energy ignores Coal Seam Gas well leaks, says whistleblower' *The Guardian* <<https://www.theguardian.com/environment/2017/jan/27/origin-energy-ignores-coal-seam-gas-well-leaks-whistleblower-says>>

³ Dominique Schwartz et al, 'CSG could increase methane emissions near bubbling Condamine river, report finds,' *ABC online* <<http://www.abc.net.au/news/2017-04-17/csg-could-increase-methane-emissions-near-condamine-river/8445758>>

there seems to be no clear understanding of the potential impacts of current and future human activities on the various aquifers.”

Given that these scarce water supplies are relied on by the people, livestock and natural environment of the Northern Territory; any contamination of water supplies poses a significant risk to our health, food, economy and land.

Land

Biodiversity is crucial to the survival of our natural ecosystems, human health, medicine and food production. Significant habitats and microhabitats of rare and endemic species occur right across the Northern Territory. The NT Greens’ position is that an extensive independent Strategic Regional Terrestrial Biodiversity Assessment (SREBA) must take place before any decisions are made to allow gas exploration in an area. It is crucial that an extensive, independent SREBA takes place before exploration - not just before production - because of the risk of damage that occurs at an exploration phase including increased trucking and equipment, increased personnel, increase of on-site human and other waste, risk of introducing weeds and feral species, flaring of waste gas risking fire, risk of chemical spills, and general ignorance of biodiversity values. Only after a full and independent SREBA can informed decisions be made about licensing for exploration and informed decisions about land management plans be made. Exploration is fracking so the only way to mitigate the risk of fracking is to ensure baseline studies inform exploration permits and authority decisions.

We welcome the Inquiry’s recognition that weed control and feral species control is of the utmost importance but note with concern that the Territory Governments’ prior record on weed control and feral animal control is lacking. In fact it has been the Government action in the past that propagated and forced the propagation of weeds like gamba grass for pastoralism⁴. Infestations of widespread weeds like this are likely to show up in baseline studies of weeds in prospective fracking areas making it even more difficult to monitor further spread from fracking equipment, trucks and people in new areas.

While the recommendations regarding weed control look useful, any recommendation is only as useful as its full implementation with resources to carry it out and meaningful penalties for breaches. Roadways and cattle stations in the NT currently carry a legacy of poor weed control.

Greenhouse Gases

Notwithstanding the other regional and local risks posed by fracking; fracking is a disaster for our climate, with dangerous methane pollution leaking from wells and pipes as ‘fugitive’ emissions. The Melbourne Energy Institute has questioned Australia’s ability to meet its emission reduction targets under the Paris Agreement due to atmosphere methane emissions from CSG.⁵ The report author stated, “this report shows that these migratory emissions are a potentially significant source of

⁴Weed Management Branch Department of Land Resource Management 2014. Weed Management Plan for *Andropogon gayanus* (Gamba Grass) p.3

⁵ Stephen Long, ‘Methane Emissions from Coal Seam Gas Development Raise Climate Change Concerns,’ *ABC online*

<<http://www.abc.net.au/news/2017-02-28/methane-emissions-from-coal-seam-gas-climate-change/8310932>>

greenhouse gases from coal seam gas extraction, but that there is very limited data available to assess the full scale of the risk.”⁶

There are similar uncertainties associated with estimates of fugitive emissions from hydraulic fracturing for shale gas.⁷ The potential fugitive emissions created by fracking is an enormous concern for the NT Greens, and for anyone who is concerned with the long term need to halt dangerous climate change. Without the data to confidently assess migratory emissions, the possible impact of fracking on the climate is unacceptable.

The NT Greens back evidence-based policy which indicates the only safe, secure and affordable energy future for Australia is one that is powered with clean, renewable energy. We are fortunate here in the Northern Territory to have ample opportunity to invest in, and benefit from, clean renewable energy.

The panel should consider recent developments in the measurement of global methane concentrations from NASA. Nature Communications has published a peer reviewed article concluding fossil fuel activities have contributed the largest share of the rising global methane concentrations by around 17MT/yr⁸. This suggests that global methane levels in the final report have been underestimated and average fugitive emission rates need to be revised. This research again highlights the significant uncertainty in measuring methane concentrations and the high range of estimates. Until we know conclusively the contribution of fracking activities, both upstream and downstream, it is unethical and irresponsible to suggest the development of another industry will have a negligible impact on global emissions.

Health

While the health impacts of fracking have not been fully explored, the evidence to date suggests that fracking may pose serious risks to human health. The Australian Medical Association’s position is encapsulated in former Australian Medical Association President Dr Steve Hambleton’s comments as follows:

“Despite the rapid expansion of CSG developments, the health impacts have not been adequately researched, and effective regulations that protect public health are not in place. There is a lack of information on the chemicals used and wastes produced, insufficient data on cumulative health impacts, and a lack of comprehensive environmental monitoring and health impact assessments.”⁹

The NT Greens share the AMA’s position that until there is sufficient evidence to ensure safety, the precautionary principle must be applied.

A recent review of 685 peer-reviewed scientific papers on the impacts of unconventional gas published between 2009 and 2015 showed that the weight of scientific evidence ‘indicates hazards

⁶ The Melbourne Energy Institute, ‘Migratory Emissions,’
<<http://www.tai.org.au/content/risk-migratory-methane-emissions-resulting-development-queensland-coal-seam-gas>>

⁷ UK Environment Agency
<https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/325988/Considerations_for_quantifying_fugitive_methane_releases_from_shale_gas_operations.pdf>

⁸ <<https://www.nature.com/articles/s41467-017-02246-0>>

⁹ Australian Medical Association media release, 23 May 2013

<<https://ama.com.au/media/ama-calls-coal-seam-gas-health-checks>>

and elevated risks to human health': 84% of public health studies contain findings that indicate public health hazards, elevated risks, or adverse health outcomes; 69% of water quality studies contain findings that indicate potential, positive association, or actual incidence of water contamination; and 87% of air quality studies contain findings that indicate elevated air pollutant emissions and/or atmospheric concentrations.¹⁰

The NT Greens are also seriously concerned about the psychological impacts of fracking on members of our community. We, like many in the community, were deeply saddened by the suicide of Darling Downs Farmer, George Bender, in 2015 who was in the midst of a long fight to keep Origin Energy off his agricultural land.

We note international experiences, such as those documented in Sangaramoorthy et al's 2016 study of *Place-based perceptions of fracking along the Marcellus Shale*, which demonstrate the considerable negative psychosocial effects of fracking on the communities and the acute collective trauma associated with environmental change and degradation through fracking. While Sangaramoorthy's study demonstrates the importance of a place-based approach to understanding the impacts of fracking; it provides guidance of possible harmful social impacts such as the degradation of community and place-based identity, and feelings of disempowerment and vulnerability in addition to the economic stress associated with plummeting land values and rising costs of insurance that have left people economically destitute and unable to service both the costs associated with their land and daily necessities. Moreover, any economic gain is linked predominantly to non-local transient workers and businesses.¹¹

The NT Greens are deeply concerned about the resilience and wellbeing of regional, rural and urban communities. The threat fracking poses not only to the physical health of people in affected communities, but also the psychological health and the wellbeing of the community as a whole, is unacceptable.

Aboriginal People and Impacts

The NT Greens recognise that any fracking which occurs will be on the traditional lands (also known as 'country') of Aboriginal peoples. We recognise that sovereignty was never ceded. As such, the NT Greens believe that the views of Aboriginal people are crucial to any decision about the viability of fracking in the Northern Territory.

We note the widespread engagement of Aboriginal peoples across the country with fracking proposals including Elders from the Northern Territory travelling from Borroloola to Sydney to protest plans to frack their land.¹² We also recognise the strong resistance to fracking from Traditional Owners across the Northern Territory - including from Borroloola, Arnhem Land,

¹⁰ Larissa Waters additional comments on Fracking Inquiry, <https://www.google.com/url?q=https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Gasmining/Gasmining/Interim%2520Report/d05&sa=D&ust=1518301796253000&usg=AFQjCNGCHJnOjrxcdC53ZuXSjpvb58k-g>

¹¹ Sangaramoorthy et al, 'Place-based perceptions of the impacts of fracking along the Marcellus Shale' *Social Science and Medicine* <<https://www.sciencedirect.com/science/article/pii/S0277953616300028>>

¹² 'Northern Territory Elders in Sydney to Protest Fracking,' *NT News* <<http://www.ntnews.com.au/news/northern-territory/northern-territory-elders-in-sydney-to-protest-fracking/news-story/934f292ab532c788b3eeff85f5b9b81c>>

Mataranka, Kalkarindji and Alice Springs.¹³

The NT Greens welcome the attention paid to the complex cultural issues that fracking poses for Aboriginal people in the Report.¹⁴ We defer to comments made by Aboriginal peoples and representative organisations for guidance as to how well the Report encapsulates and addresses these challenges. We acknowledge - with serious concern - the number of risks to Aboriginal people and their culture that fracking poses which are outlined in the Report in section 11.4.

We note, however, that there are a range of structural barriers to affected Aboriginal peoples and Traditional Owners (TOs) receiving the clear, accurate, accessible information they require to make decisions about fracking on their lands. We support recommendations 11.1 - 11.6 in the Report which attempt to ensure the early participation of the Aboriginal Areas Protection Authority to support advocacy with and on behalf of TOs; however, we believe that any consultation and decision making mechanisms must incorporate ongoing evaluation to ensure that consultation is genuine and meaningful. Indeed, personal experiences of a TO, an NT Green party member, would indicate that consultation extends to publicly announcing in meetings the fracking investigation proposals and future business plans but not seeking opinions, views or TO environmental and social concerns in regards to the land in question or acknowledging concerns related to sacred sites. As part of ensuring this process is genuine and informed, the NT Greens recommend that Aboriginal peoples be enabled to obtain further, independent advice at the gas company's expense should they request it and have advocacy mechanisms in place to ensure their voice is heard.

A key concern regarding Aboriginal consultation is the practical difficulty of gaining free prior informed consent, when land tenure does not allow for a decision to be changed at the production stage. It is highly concerning that the draft final Report is recommending cultural assessments and baseline assessments be prepared before production when damage can be done in the exploration stage. This means that Indigenous land holders will not be able to make a decision before the exploration stage that is informed by baseline studies or cultural assessments as a right of veto has been forfeited at the production stage. Specifically, recommendation 11.8 must be revised to require cultural assessments to be completed before TOs are asked to consent to an exploration permit or exploration authority. Unless this is changed Aboriginal people will not have an avenue to influence the outcome of decisions relating to gas development and all consultation becomes meaningless as they won't be fully informed.

Social

Over the last decade that has been consistent community opposition to fracking. The Inquiry recognises community apprehension, but fails to acknowledge the lack of Social License to Operate that current exists in many areas across the Northern Territory.

The NT Greens have considerable concerns that at the last round of inquiry public submissions the APPEA representative seemed to consider opposition to fracking to be a defiance problem not one based on reasonable environmental, health and social concerns. Such attitudes fail to recognise the genuinely held concerns of communities, and will prevent the gain of a SLO in any community. We note the Inquiry has identified these rationally held community concerns in the list of 115 risks identified by the Inquiry panel.

¹³ Northern Territory Seed Mob <<http://nt.seedmob.org.au/>>

¹⁴ We particularly note the attention paid in sections 11.1 & 11.4.

As outlined in this submission, the NT Greens hold a range of strong concerns about the impacts of fracking on land, water and in our communities. We believe it is of the utmost importance that any activity of this nature has a Social License to Operate. We acknowledge the panel's recommendations for gas companies and government to ensure Social Impact Assessment (SIA) & Human Health Risk Assessment (HHRA) and full disclosure of exploration and production plans to seek community input. However, a Social License to Operate does not currently exist, and it is our view that it is unlikely to exist as concerns about the environmental impacts of fracking only grow stronger amongst scientific, agricultural, health and environmental experts. As such, the NT Greens will continue to campaign for a permanent ban on fracking in the Northern Territory and across the country and will support civil disobedience and direct action to protect the Northern Territory's land, water and people.

The panel should be mindful that notwithstanding a conclusion that risks could be adequately mitigated, environmental and social concerns are unlikely to be resolved and community concern will continue to grow.

Economic

The NT Greens' view of the economic outlook of fracking is consistent with the prevailing economic position, and the conclusion reached by the ACIL Allen report commissioned by the Inquiry; namely, that the industry is unlikely to commercialise, will make only a small difference to the Territory budget and create a small number of jobs (both indirectly and directly).

We share the concerns expressed by the Australia Institute about the apparent misinterpretation and misrepresentation of the ACIL Allen report - both by ACIL Allen and in the Inquiry's Draft Final Report.¹⁵ We particularly note the conclusion of the ACIL Allen Report - as analysed by the Australia Institute - that "there is very high likelihood that shale gas development is not viable in the NT and low to very low probability of the large-scale "shale gale" scenario occurring."¹⁶

We further note that there are a number of potential externalities that will also cause negative social and economic impacts on existing communities. For example, the issues associated with the impact of mining operations on existing town and government services leading to increases in costs or lack of access to housing, health services, public transport, increased insurance and falling real estate values. In the past mining activity has artificially increased the cost of housing in local communities even to those not engaged in that industry. As well it should be noted that a higher demand on health and education services is also an uncounted cost.

As such, the NT Greens consider that the economic evidence supports our position that a complete ban on fracking is the only sensible and viable economic option. The NT Greens support economic development that protects our environment and enables our significant population of First Nations peoples to be partners in building their economy from the ground up.

¹⁵ The Australia Institute, *Economies of Shale - Submission of the Draft Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory*
<<http://www.tai.org.au/sites/default/files/P437%20Submission%20on%20NT%20fracking%20inquiry%20FINAL.pdf>>

¹⁶ Ibid.

Regulations

‘Independent’ Regulator

The Northern Territory already has some of the weakest environmental protections in the country. While NT Greens support calls for stronger laws and regulations protecting our land, water and biodiversity in the Northern Territory; we have grave concerns about the current capacity for the NT Government to establish an effective Independent Regulator given existing deficiencies in regulation and enforcement in the Territory.

Already many environmental disasters have occurred in the NT - for example the McArthur River mine, ERA Jabiru and the Montaro oil spill - under the watch of the mining & environment departments and the Environment Protection Agency. Public trust has been further eroded by the lack of consequences faced by those who breach environmental laws and regulation.

It is not considered necessary to establish a new regulatory body for the petroleum industry alone. Significant environmental regulatory reform is already underway and it is important that capacity is not withdrawn from this process for the establishment of a petroleum regulator. Option 1 is thus the preferred method of regulatory reform for the Greens. Improving capacity and capability for the independent NT EPA is necessary to address the broad range of public concerns that mean there is little confidence in current environmental regulatory processes. A new petroleum regulator is seen as a boutique regulator that could be vulnerable to perceptions of undue influence by developing close relationships between regulatory staff and gas industry employees. By ensuring the NT EPA has complete responsibility for approval, compliance and enforcement, there will be a more holistic and integrated approach to environmental management. The range of expertise and knowledge within the EPA would provide a more integrated approach to the regulation of petroleum projects than if one single body was tasked with it. This would mean it would be better equipped to assess the cumulative impacts of the industry and its relationship with other land uses such as pastoralism and horticulture. Expanding compliance and enforcement powers to the EPA prior to exploration permits and increasing institutional capacity is considered the most effective way of addressing the concerns around regulatory independence.

Regulatory Reforms

The NT Greens recognise and support the Inquiry’s development of additional regulatory reforms and other compliance requirements. We support the recommendation for a preliminary Strategic Regional Baseline Assessment (SREBA). However, we have concerns that the majority of regulatory changes recommended by the Inquiry are recommended to be implemented prior to the granting of any production licences. This misrepresents the very real risks posed by the fracking industry prior to the production licence phase.

Shale gas exploration is distinct from mineral exploration in that it carries a significant level of risk during the exploration phase itself. Production testing and flaring are essential components of the exploration stage. While the risks associated with exploration may be less pronounced than those at the production phase, they are nonetheless significant and the NT Greens therefore support implementation of safeguards such as the requirement to develop baseline studies to take place prior to the granting of exploration licenses, not just production licenses.

Further, we note that the activity undertaken during the exploration phase compromises any future environmental assessments at a production phase. Exploration activity makes it impossible to determine an accurate reading on ambient baseline methane concentrations. Emissions from exploration and appraisal activities could artificially inflate the value of ambient baseline methane concentrations; obscuring the actual increase in fugitive methane emissions above background levels.

Therefore, while the NT Greens support a complete ban on fracking, if fracking were to go ahead we would support regulatory requirements for comprehensive assessments to be undertaken prior to the granting of *exploration* licenses, not simply before the production phase. Legislative reform of the key environmental acts must be a condition precedent to the granting of exploration approvals. This connection should be made as a clear recommendation in the final report. Without explicitly connecting regulatory reform and the commencement of activities, the entire claim of adequate risk through mitigation becomes meaningless.

Conclusions

The NT Greens maintain our long-held position that fracking should be banned in the Northern Territory and right across Australia. Community opposition to fracking is documented and well evidenced (and has been demonstrated throughout this Inquiry process as well as in other fora.) The environmental risks associated with fracking have already been experienced in parts of Australia, as have the social and psychological costs of attempting to protect land and water from the unknown and potentially catastrophic impacts of fracking.

Given that the economic evidence overwhelmingly indicates that fracking will not be viable in the Northern Territory, and that there are cheaper and cleaner energy options readily available, it is the NT Greens view that the only environmentally and economically sensible position is to ban fracking and invest in clean, renewable energy.