



Committee Secretary  
Senate Standing Committees on Environment and Communications  
PO Box 6100  
Parliament House  
Canberra ACT 2600

07 July 2021

Dear Committee Chair

**SUBMISSION TO THE SENATE INQUIRY INTO OIL AND GAS EXPLORATION AND PRODUCTION IN THE BEETALOO BASIN**

Thank you for the opportunity to make a submission on Oil and gas exploration and production in the Beetaloo Basin, with reference to the Industry Research and Development (Beetaloo Cooperative Drilling Program) Instrument 2021, which provides public money for oil and gas corporations.

**About the Australian Institute of Landscape Architects**

The Australian Institute of Landscape Architects (AILA) is the peak national body for Landscape Architecture and represents nearly 3,000 members Australia wide. AILA champions quality design for the public realm and environmental stewardship of our Australian landscapes.

AILA is currently asking its members to pursue not just a net zero target, but a climate positive target for their projects. This is where our projects sequester more greenhouse gases than they emit over their lifetimes. See our [Climate positive design position statement](#).

**OBJECTION TO OIL AND GAS EXPLORATION, EXTRACTION IN THE BEETALOO BASIN**

The Australian Institute of Landscape Architects opposes the development of the Beetaloo basin, and the use of any public money for unconventional gas drilling in the Beetaloo Basin, including the \$50 million made under the Industry Research and Development (Beetaloo Cooperative Drilling Program) Instrument 2021.

There are seven key areas where we object to the use of public money for oil and gas exploration and the development of the Beetaloo Basin more broadly.



1. *The objective of the Act is to fund innovation and not to provide subsidies to fossil fuel companies.*
2. *The development of the Beetaloo Basin is incompatible with the Paris Agreement, and Australia's remaining carbon budget to keep the global temperatures below 1.5 degrees.*
3. *The hydraulic fracking that will be required will use substantial quantities of water in a semi-arid environment, and greatly impact not just the environment, but pastoral uses of the land, and potentially tourist attractions that are connected to the water table, such as Mataranka springs.*
4. *The development of vast numbers of well heads, access tracks, pipelines and extraction of water over a 28,000km<sup>2</sup> basin will adversely impact Indigenous cultural heritage and values.*
5. *The development will have significant environmental impacts from well construction, access roads, pipelines and water extraction that will be to the detriment of the land and primary industries that rely on healthy land and water resources.*
6. *We do not believe that it will deliver cheaper energy prices to Australians nor a stronger manufacturing sector.*
7. *Intergenerational duty of care. The Gas when burnt in Australia or overseas will have significant emissions of CO<sub>2</sub> which is incompatible with the Paris Agreement and will severely impact the future generations of younger Australians.*

**Objection 1. The objective of the Act is to fund innovation and not to provide subsidies to fossil fuel companies.**

The primary objective of the Act is to facilitate innovation not to subsidise well heads for oil and gas exploration. The proposed funding does not support innovation and is in fact propping up old technology that is rapidly being shed from investment portfolios around the world.

Funding for innovation in energy would be more appropriately spent on new solar and alternative energies for remote areas such as those encompassed by the Beetaloo Basin. This area comprises of many indigenous communities, primary industries and mining operations that would benefit directly from clean energy supplied locally through integrated solar/ battery systems.



There is little by way of transparency in allocation of the money, competitive requirements or merit in particular regarding the \$7.5m subsidy per well head. There is no evidence that investing public money will support cheaper energy.

It is poor value for taxpayer money to subsidise energy companies that pay little or no tax. Australia has lost out heavily to gas extraction by primarily overseas based companies who have paid very minimal to no Petroleum Rent Resource Tax. Of particular note, Shell in their annual report have promoted the fact they believe they will never have to pay tax on their Gorgon facility [1].

**Objection 2. The development of the Beetaloo Basin is incompatible with the Paris Agreement, and the remaining carbon budget to keep the world below 1.5degrees.**

Development of the Beetaloo Basin will make it virtually impossible for Australia to "Meet and Beat" our Paris targets and commitments. The Climate Council in their recent document "Aim High Go Fast" [2] calculate that Australia's remaining carbon budget to 2050 as 4.7Gt, or only 164.9Mt/pa.

Internal government documents obtained by the ABC under the freedom of information act indicate that the projected fugitive Australian emissions for the Beetaloo Basin could be between 39-117MtCO<sub>2e</sub> per Annum [3].

This means that the estimated upper limit of extraction emissions up to 117MtCO<sub>2e</sub> per annum would consume 70% of Australia's remaining emissions budget between a start date of 2025 up to 2050.

The lower end of fugitive emissions of 39Mt /Pa is still 23% of Australia's remaining carbon budget, making it also extremely difficult to achieve our Paris Target.

AILA members are working with various state governments on tree canopy targets including helping to deliver 5 million trees for Sydney. The Beetaloo basin emissions easily wipes out all these gains, and all of those accrued by the Governments Emissions Reduction Fund [3].

**The emissions are far too large to easily offset.** Assuming a 30yr old tree can sequester 50/kg CO<sub>2E</sub> per year, 117Mt/Pa would require planting a biodiverse forest of 2.34 billion trees just to be neutral. Given such a large forest could not be planted overnight, it would need approximately double that amount (4.6 billion trees) planted at a rate of approximately 450,000 trees per day to 2050. At say \$5 per tree this is a \$23.4 Billion investment, let alone the cost of purchasing the 64.5 million hectares of land this would require (@100 trees per ha) [4].



The international Energy Agency (IEA) has unequivocally stated in its net zero roadmap issued last month that there should be **no new oil and gas exploration** [6].

The IEA has also noted that international carbon prices are likely to range from \$130/tonne to \$250/tonne by 2050 [6. Page 52]. This would equate to \$15-29 Billion in carbon prices for the fugitive emissions.

Climate change poses an existential threat to humanity and yet the Beetaloo basin strategic plan [9] makes no mention of climate change impacts at all.

**Objection 3. The hydraulic fracking that will be required will use substantial quantities of water in a semi-arid environment, and greatly impact not just the environment, but pastoral uses of the land.**

Given a basin the size of Belgium it is likely that substantial amounts of water will be required to hydraulically frack the shale. These impacts on valuable water resources will result in severe impacts on ground water resources. No estimates are provided of total likely water extraction.

The discovery of Stygofauna *Parisia unguis* in the artesian water and genomic testing of these invertebrates indicates that aquifers are interconnected. Therefore extraction from one part of the aquifer could have impacts and ramifications in distant parts of the aquifer [7].

This has ramifications not just for the ecology, but for farmers through to tourism attractions such as Mataranka Springs.

**Objection 4. The development of vast numbers of well heads, access tracks, pipelines and extraction of water over a 28,000km<sup>2</sup> basin will impact Indigenous cultural heritage and values.**

Indigenous land holders do not want fracking on their land. We support the position of indigenous people to have inputs to what happens on their land. Self-determination is central to finally closing the gap.

The Traditional Owners across the Northern Territory, with Gudanji, Yanyuwa, Garrwa, Jingili, Mudburra and Alawa Traditional Owners are all opposed to the expansion of fracking in the Basin. The Traditional Owners noted the lack of respect shown to them by gas corporations, saying they have failed to "follow proper process in consultation with us, failed to acquire consent, failed to provide transparency in their dealings with us, and have systemically excluded our voices from the decision-making process for activities on our Country" [8].



**Objection 5. The development will have significant environmental impacts from well construction, access roads and pipelines.**

The development of the infrastructure including roads, wellheads and pipelines will have significant impact on the exceptional terrestrial biodiversity and ecosystem value of the Northern Territory, along with the potential loss of terrestrial biodiversity, ecosystem function. Critical issues include:

- Habitat fragmentation
- Risks and damage of primary industries – livestock and agriculture
- Negative impacts on tourism and visitor experiences
- Introduction of weeds, erosion and reduced water quality

**Objection 6. It will not deliver cheaper energy prices to Australians nor a stronger manufacturing sector.**

The Beetaloo basin strategic plan [9] states that the basin will:

- *provide more reliable and cheaper energy,*
- *deliver a stronger manufacturing sector*

We cannot see how the basin gas will deliver cheaper energy when the current estimates appear to place the well head price of gas well above what is considered low.

The Australia Institute advises that the gas from these basins is expensive, with the estimates for extraction ranging from \$7.28-9.87 per gigajoule (GJ), well above the Government's target of \$4-6 per GJ [10].

Deloitte note in their study that "If the cost is at or above AU\$7/GJ ex field processing plant, it is unlikely that it will be a competitive source of supply without some form of government subsidy or incentive" [11].

We also fail to see from the strategic plan report how this will deliver a stronger manufacturing sector, when currently only 1% of Australian gas is used as an industrial feedstock for manufacturing [12]. Particularly so with an ex well head price of \$7.28-9.87 per gigajoule. It is also assumed that the bulk of gas will be exported overseas.



**Objection 7. Intergenerational duty of care. The Gas when burnt in Australia or overseas will have significant emissions of CO<sub>2</sub> which is incompatible with the Paris Agreement and will severely impact the future generations of younger Australians.**

In the recent case of *Sharma v Minister for the Environment*, [13] the Federal Court held that the Commonwealth Environment Minister, Sussan Ley, owes all Australian Children a duty of care when she decides whether to approve or refuse an extension to an existing coal mine under Australia's Commonwealth environmental law.

While the Vickery Coal mine extension will emit a substantial 100Mt of CO<sub>2</sub>e, the Beetaloo Basin emissions are Likely to be in the billions of tonnes. The DIPNR total emissions estimate for 124OPj production per year is 988Mt Coe<sub>2</sub>/pa [14 page 228]. Over a 25year timeframe this is 24.7GT CO<sub>2</sub>e.

The climate science of global warming presented to the court is dire and was undisputed. The court accepted the testimony of Will Steffan on the impact of additional CO<sub>2</sub> in the atmosphere.

The burning of the Beetaloo Basin gas overseas is a clearly foreseeable danger to future Australian generations and a duty of care is owed by the Government to protect these future generations of Australian over the short-term gains.

**Attending the inquiry**

The Australian Institute of Landscape Architects would be happy to make a representation to the committee. Thank you again for the opportunity to submit and if you have any questions or queries about our submission, feel free to call me to discuss.

Yours faithfully

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<https://www.theguardian.com/business/2021/jun/03/shell-believes-it-will-never-pay-resource-tax-on-gas-from-its-55bn-gorgon-project-hearing-told>

[2] Australia's 4.7Gt carbon budget. The Climate Council 2021. Aim high go fast. Why emission need to plummet this decade. Page 11

<https://www.climatecouncil.org.au/wp-content/uploads/2021/04/aim-high-go-fast-why-emissions-must-plummet-climate-council-report.pdf>

[3] 117Mt/Per annum emissions. Jane Bardon. 2020. How the Beetaloo gas field could jeopardise Australia's emissions target.

<https://www.abc.net.au/news/2020-02-29/beetaloo-basin-gas-field-could-jeopardise-paris-targets/12002164>

[4] Calculations for tree sequestration offsets. 117Mt = 117,000,000 tonnes, or 117,000,000,000kg. Divide by 50Kg per tree, per year = 2,340,000,000 trees to offset. Assuming these are planted daily between now and 2050 (28.5 years) we will have trees ranging from 30 years old to 1 day old. Assuming a simplified straight line sequestration rate we would need to double the number of trees to get the same total sequestration over 28.5 trees. (In reality it would be more as a 500mm high sapling does not sequester 50kg in a year).

Planting density assumes a forest situation at 100 trees per Ha or one every 10m for biodiversity. This is not a pine plantation at 5m centres.

[5] International Energy agency net zero by 2050 report

<https://www.iea.org/reports/net-zero-by-2050>

[7] Bardon, Jane. 2021 Discovery of tiny shrimp in Beetaloo Basin could stall fracking plans, scientists warn. ABC news sourced

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[8] <https://nit.com.au/fracking-inquiry-for-beetaloo-basin/>

[9] Australian Government Department of Industry, Science, Energy and Resources. 2021 Unlocking the Beetaloo; The Beetaloo Strategic Basin Plan.



[10] 350degree. February 2020. GAS-TASTROPHE: the climate impact of the Governments strategic gas basins. <https://350.org.au/gas-tastrophe-the-climate-impact-of-the-governments-strategic-gas-basins/>

[11] Well head prices over \$7Gj will require subsidy. Deloitte. 2020. Report on the Development of the Beetaloo Sub-basin for the Commonwealth Department of Industry, Science, Energy and Resources November 2020

[12] Australia Institute <https://australiainstitute.org.au/post/gas-for-export-12-times-larger-than-gas-for-manufacturing/>

[13] FEDERAL COURT OF AUSTRALIA. Sharma by her litigation representative Sister Marie Brigid Arthur v Minister for the Environment (No 2) [2021] FCA 774. <https://www.judgments.fedcourt.gov.au/judgments/Judgments/fca/singale/2021/2021fca0774>

[14] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory. April 2018. Page 228





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