

Dear Madam, Sir,

We're Climate Analytics - the Australia and Pacific office based in Perth. We're a global climate science and policy institute working on all aspects of climate change, from science to diplomacy and policy. We deliver cutting-edge science, analysis and support to accelerate climate action to limit warming below 1.5°C.

Recommendation 9.8 of the Pepper Inquiry into Hydraulic Fracking requires the Northern Territory government to obtain the Federal government's support to ensure there is no net increase to Australia's emissions from onshore gas development. Over [60 leading scientists and experts](#) have called on the Northern Territory Government to honour its commitment.

In February 2023, the controversial gas industry-funded research arm of the CSIRO, the GISERA, published a report saying that it was possible, from an engineering perspective, to align with the Recommendation 9.8 of the Pepper Inquiry, meaning that it would be possible to frack the Beetaloo, transport to and process its gas in Middle Arm without increasing Australia's emissions.

As a result, the NT government leant on the GISERA report to help justify a claim that it has done all it needed to do to sign off on the recommendations of the Pepper Inquiry.

Many experts criticised the report when it was published, as evidenced by quotes cited in major media outlets. In this context, the Nurrdalinji Native Title Aboriginal Corporation, which represents native title holders from the Beetaloo Basin who wish to protect country, commissioned Climate Analytic to provide a third-party, transparent analysis of the CSIRO GISERA report and to evaluate the emissions from the proposed Middle Arm and Beetaloo projects, to better understand the climate impacts.

We published our final report in October 2023, which we submitted to this Inquiry. I hope you have had time to read it.

We thought that there might be issues with the CSIRO GISERA's report, but what we found went beyond our expectations - and we thank the Nurrdalinji Aboriginal Corporation for their patience because it took us a lot of time to get to the bottom of this.

We found the CSIRO GISERA significantly underestimated the emissions of fracking in the Beetaloo and its subsequent use in Middle Arm. Those underestimations occur across the board.

I'll give you an example of the kind of underestimations we're talking about. Before exporting gas from Australia, you need to cool it down to liquefy it in order to put it on LNG carriers. This is an emissions-intensive process. Ambient temperature impacts the energy efficiency of this gas liquefaction process. Colder temperatures make the process more energy-efficient, and therefore less carbon-intensive.

The Snohvit LNG plant in Norway, located off the coast of Hammerfest, the northernmost city in the world, has the lowest liquefaction emissions intensity in the world, which makes sense because of the colder temperatures there.

But the GISERA assumed that the gas liquefaction process in Middle Arm would produce less emissions than in Snohvit, in spite of the 25-degree difference in mean temperature between Hammerfest and the capital of the Northern Territory. They came up with a total of 1.4 MtCO_{2e} per year. But our figure, transparently derived from the literature, was 50 to 80% higher. And this is just one example.

This is a taste of the kind of underestimation that we found across the GISERA report. But overall, the major source of underestimation were the methane emissions, with the CSIRO GISERA underestimating the amount of methane that leaks throughout the lifecycle of the gas, even compared to what's in the Pepper Inquiry.

The methane leakage rate was underestimated by close to 60%.

Aggregating all this, annual domestic emissions were underestimated by up to 84%, depending on the scenario we're looking at. As a result, cumulative total emissions over 25 years, including those occurring overseas, were underestimated by close to 1.5 times Australia's 2021 emissions.

GISERA also overestimated how emissions from the Beetaloo could be offset, when there are ongoing concerns about the integrity of offsets abroad, and in Australia. We found that whenever possible, the GISERA took the most liberal assumptions on the potential offset supply. It also assumed up to close to half of offsets would need to be sourced overseas, which is not possible under the Safeguard Mechanism regulations.

As we concluded in the report, "Assuming the systematic deployment of mitigation options, good implementation of carbon capture and storage infrastructure, and unlimited access to domestic and international offsets, any conceivable project can be rendered net-zero on paper."

Beyond this investigative work, we also studied the emissions of the development of the Beetaloo Basin. With current plans, the Beetaloo and Middle Arm projects alone would produce annual domestic lifecycle greenhouse gas emissions equivalent to 3% of Australia's total 2021 emissions.

And none of these numbers take into account exported emissions. Cumulatively, over the 25-year life of the project and including exported emissions, we found that the plans to frack the Beetaloo and produce LNG would generate between 0.8 and 3.2 GtCO₂e. That's between 2 and 7 times Australia's 2021 emissions.

You'll find the unpacking of these numbers in our report.

In the meantime, the IPCC makes it clear that existing fossil fuel infrastructure is setting us on track to exceed the remaining 1.5°C compatible carbon budget, an objective the Australian government committed to by signing the Paris Agreement.

The International Energy Agency also shows that no new upstream oil and gas projects are needed to meet demand in a scenario that aligns with the 1.5°C goal.

The world doesn't need our gas: it needs to transition away from it. The Beetaloo and Middle Arm project will lock-in gas production for decades. The idea of taxpayers having to foot the bill for a climate bomb like this makes little sense.

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