

Gas Bagging

The case against the Beetaloo Basin gas development

Despite the claims to the contrary by the Northern Territory government, development of the Beetaloo Basin's gas resources will be of little benefit to Territorians.

Modelling used by the NT government itself shows that the development of the Beetaloo Basin will not diversify the NT economy, aid the transition to net zero emissions, provide cheap gas to the east-coast, nor significantly boost government revenues.

The Beetaloo Basin gas development will further entrench the NT economy's petrostate-like reliance on the oil and gas industry, crowding out other industries. It will also increase fossil fuel profits and global greenhouse gas emissions.

Discussion paper

Matt Saunders

Rod Campbell

November 2023

ABOUT THE AUSTRALIA INSTITUTE

The Australia Institute is an independent public policy think tank based in Canberra. It is funded by donations from philanthropic trusts and individuals and commissioned research. We barrack for ideas, not political parties or candidates. Since its launch in 1994, the Institute has carried out highly influential research on a broad range of economic, social and environmental issues.

OUR PHILOSOPHY

As we begin the 21st century, new dilemmas confront our society and our planet. Unprecedented levels of consumption co-exist with extreme poverty. Through new technology we are more connected than we have ever been, yet civic engagement is declining. Environmental neglect continues despite heightened ecological awareness. A better balance is urgently needed.

The Australia Institute's directors, staff and supporters represent a broad range of views and priorities. What unites us is a belief that through a combination of research and creativity we can promote new solutions and ways of thinking.

OUR PURPOSE - 'RESEARCH THAT MATTERS'

The Institute publishes research that contributes to a more just, sustainable and peaceful society. Our goal is to gather, interpret and communicate evidence in order to both diagnose the problems we face and propose new solutions to tackle them.

The Institute is wholly independent and not affiliated with any other organisation. Donations to its Research Fund are tax deductible for the donor. Anyone wishing to donate can do so via the website at <https://www.australiainstitute.org.au> or by calling the Institute on 02 6130 0530. Our secure and user-friendly website allows donors to make either one-off or regular monthly donations and we encourage everyone who can to donate in this way as it assists our research in the most significant manner.

Level 1, Endeavour House, 1 Franklin St
Canberra, ACT 2601

Tel: (02) 61300530

Email: mail@australiainstitute.org.au

Website: www.australiainstitute.org.au

ISSN: 1836-9014

Contents

Summary.....	1
Introduction.....	4
Background.....	5
Economic impacts.....	8
Headline economic impacts	8
Wider economic consequences.....	11
Diversifying the NT economy	11
Support the transition to net zero.....	14
Displacing more emissions intensive fuels and technologies like coal-fired generation	15
Spurring advanced manufacturing and new low-emission industries in the Territory.....	16
Supporting the east coast of Australia with cheaper gas.....	17
Supporting the NT’s major trading partners	17
Fiscal impacts.....	18
How much gas and how much LNG?	18
Revenue impacts	20
Government revenue vs emissions costs	24
Emissions impacts.....	26
Estimating emission impacts	26
Emissions estimates.....	27
Comparison to emissions reduction from Australia’s climate policies	29
Conclusion	31

Summary

In August 2023, the Albanese government announced its intention to “plan for gas to 2050.” This plan involves the development of a “Future Gas Strategy” for Australia, that will notionally assist the government to “plan for the future and support Australia, and our region’s, transition to net zero.”

An effective way for governments and the private sector to support Australia’s transition to net zero, of course, is to stop expanding the gas industry. Instead, both politicians and gas executives have developed a narrative that suggests, contrary to science, producing more gas will not only help to reduce emissions it will bring an array of economic benefits with it.

Perhaps the most egregious example of this, and a cautionary tale for Australia, is the situation in the Top End.

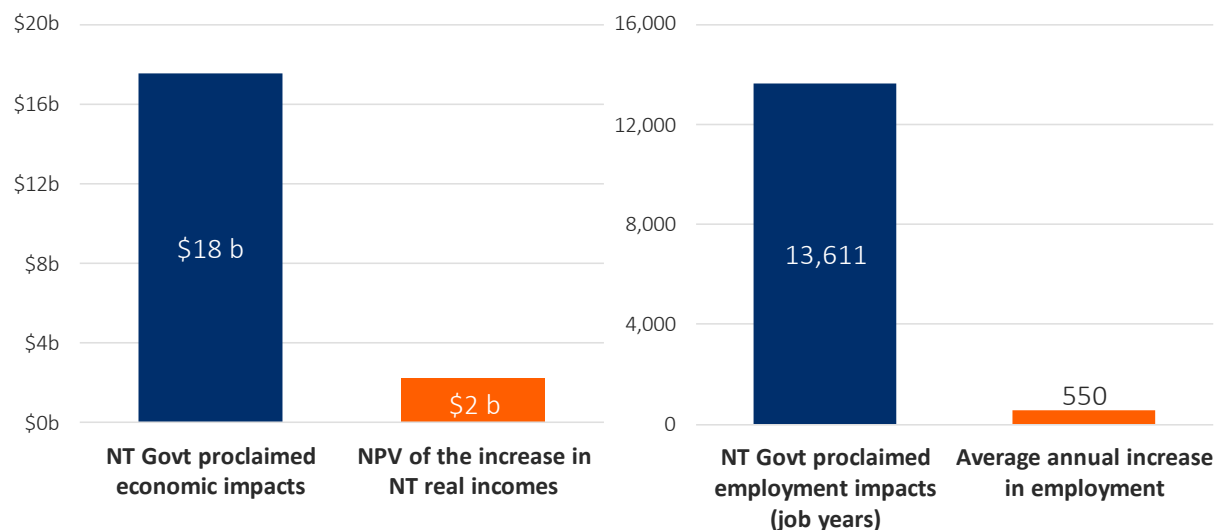
While the fossil fuel industry has found a welcome home in the Northern Territory (NT) over decades, recent policies have amounted to an unprecedented doubling down on its political and ideological support for oil and gas industries.

In May 2023 the NT Government announced that it would overturn a moratorium on hydraulic fracturing (“fracking”) that had been in place in the Territory since 2016, and allow fracking to go ahead in the Beetaloo Basin. This was followed a month later by the announcement of a new liquefied natural gas (LNG) facility in the Middle Arm Peninsula of Darwin Harbor. The plant’s development is being facilitated by a \$1.5 billion subsidy from the Australian Government, and one of its main purposes will be to export gas produced by... fracking in the Beetaloo Basin.

In announcing the overturning of the ban, the NT Government made a number of claims about the benefits of developing the gas resources in the Beetaloo Basin, namely that developing the resource would diversify the NT economy, deliver an economic and taxation windfall the Territory, create many jobs, and help address climate change.

However, a close examination of the economic modelling conducted by consultants ACIL Allen—on which the NT Government is relying to sell the project—reveals that the headline economic impacts are grossly overstated. Figure A below shows the difference between the figures cited by the NT Government and the figures generated when the modelling is interpreted correctly.

Figure A: NT Government proclaimed vs modelled economic impacts over 25 years



Note: NPV = Net Present Value

Source: Analysis of ACIL Allen (2017)

It is perhaps not surprising that the NT Government has had to cite vastly inflated figures to justify its support for the Beetaloo Basin development and the Middle Arm precinct. Given that the need to transition away from fossil fuels is a scientific fait accompli, fossil fuel development is a dead end in both an environmental sense and a business sense—a fact demonstrated amply by an accurate interpretation of the ACIL Allen modelling.

The modelling shows the development of the Beetaloo will further entrench the NT economy’s creating a petrostate-like reliance on the oil and gas industry. Instead of providing opportunities to diversify the economy by supporting other industries like agriculture or recreational fishing, or spurring on advanced manufacturing and low emissions industries, massive fossil fuel projects will simply serve to drive those industries elsewhere.

Developing Beetaloo gas will also do little to generate sizeable windfalls that could be used to fund major infrastructure projects. Only under the highest production scenario—the scenario that the modelling considers least likely to occur—would the NT Government revenue impact exceed current average projected budget surpluses. The windfall also remains tiny compared to the GST revenues received from the Australian Government, and under any current carbon price, the NT Government’s revenue impacts would be swamped by the emissions cost.

Finally, it almost goes without saying that developing the resources would also be an environmental disaster. Even under a relatively low-production scenario, their emissions would be the equivalent of opening two new large-scale coal fired generators. And, of course, the companies planning on operating in the Beetaloo Basin have no interest in low-production scenarios. The higher production levels envisaged by the proponents of the Middle Arm LNG facility, Tamboran Resources, would result in emissions impacts equivalent to opening over 13 new large coal-fired generators. They would also be greater than the

total emissions cuts likely to be achieved under the Australian Government's Safeguard Mechanism to 2030.

In short, the data, the analysis and the modelling all show that a continued reliance on fossil fuel industries, let alone the increased reliance demonstrated by developing Beetaloo and Middle Arm, amount to a lose, lose, lose scenario—for residents of the Northern Territory and for global climate outcomes.

The first priority of any future gas strategy should be ensuring an accurate understanding of the actual economic consequences of such projects, and ensuring that the industry's inflated claims are seen for what they are: yet more hot air in a world that already has far too much of it.

Introduction

The recent overturning of the ban on fracking in the Northern Territory, combined with a plan for a new LNG facility in Darwin's Middle Harbor—facilitated by \$1.5 a billion subsidy from the Albanese Government again—reinforces Australia's ever-increasing reliance on fossil fuels, despite its commitment to net zero by 2050.

In announcing the overturning of the ban, the NT Government made a number of claims about the benefits of developing the Basin's gas resources. The general theme of those claims was that developing the resource would deliver an economic windfall to both the NT and Australian economies, create many jobs, and help address climate change:

“We appreciate that a strong economy relies on a healthy environment, and our unique environment here in the Northern Territory needs a specific approach along with our world class renewable resources.

Our highly prospective onshore gas resources will support the energy transition to renewables, not only for the Northern Territory but for Australia and the world.”

Natasha Fyles, May 2023¹

This paper examines those claims, along with the actual likely outcomes of Beetaloo gas resource development. The analysis shows that developing Beetaloo gas resources will neither provide an economic windfall for the NT and Australian economies, nor help address climate change.

In fact, they will do the opposite.

While NT fracking would certainly deliver an increase in the profits of the multinational resource companies operating the fracking projects, very little benefit will accrue to Territorians in terms of economic welfare or employment.

In addition, developing the Beetaloo basin and the Middle Arm LNG facility would further concentrate the NT economy's reliance on an industry that already dominates Gross State/Territory Product (GSP) via huge export revenues, but that employs few people, pays little tax and prevents diversification of the Territory's economy.

Despite claims to the contrary, these developments will do nothing to address climate change or facilitate the transition to renewable energy. Again, they will in fact do the opposite: either or both projects going ahead would result in an enormous increase in emissions and maintain future reliance on gas.

¹ Press Conference, NT Government, 3 May 2023.

Background

The Beetaloo Basin is located 500 km southeast of Darwin and covers some 28,000 square kilometres. It likely contains significant reserves of natural gas: according to Geoscience Australia, they are in the region of 178,200 PJ.² Gas industry estimates are much higher, at up to 527,527 PJ of gas.³

Importantly, unlike most of the gas that is mined in Australia, which is known as conventional gas, the gas in the Beetaloo Basin is shale gas. Extracting this unconventional gas requires the use of controversial mining techniques—hydraulic fracturing, or “fracking”—to allow the gas to flow to the surface. Such techniques are outlawed in parts of Australia and in many countries around the world.

Until recently, they were also outlawed in the Northern Territory. Then Chief Minister Michael Gunner announced a moratorium on fracking in September 2016, pending investigation of its potential impacts and risks. Gunner appointed Justice Rachel Pepper to lead the *Scientific Inquiry into Hydraulic Fracturing in the Northern Territory*, now often known as “the Pepper Inquiry.”⁴

A key input into the Pepper Inquiry was the economic and financial modelling of outcomes of Beetaloo gas development. The Inquiry engaged consultants ACIL Allen to investigate the financial consequences of a range of potential fracking production scenarios.⁵ It is this modelling on which the NT Government relies to sell the economic benefits of Beetaloo gas development. The modelling is also referenced extensively throughout this paper.

The Pepper Inquiry’s final report, published in 2018, made 135 recommendations that it suggested would, if fully implemented, allow the risks of fracking to be managed and thus allow for potentially ending the moratorium on the practice.

In May 2023, Chief Minister Natasha Fyles announced via press conference that she was satisfied that the recommendation of the Pepper Inquiry had been met, and that her government was thus overturning the ban on fracking, allowing mining companies to apply for production licenses and undertake environmental impact statements.

This bombshell was followed a month later by another headline announcement: Tamboran Resources, a company with large gas resources in the Beetaloo basin, announced plans to build a LNG export facility in Darwin’s Middle Arm precinct. The facility’s initial planned

² Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (2018) *Summary of the Final Report*, <https://frackinginquiry.nt.gov.au/inquiry-reports/final-report>, p 13.

³ NT Government (2023) *Our Territory Gas Strategy – Beetaloo Sub-basin*, <https://territorygas.nt.gov.au/projects/beetaloo-sub-basin>

⁴ The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (2018)

⁵ ACIL Allen (2017) *The Economic Impacts of a Potential Shale Gas Development in the Northern Territory* <https://frackinginquiry.nt.gov.au/news?a=456788>

capacity of 6.6 million tonnes annually (Mtpa), to be achieved by 2030.^{6,7} Tamboran Resources Managing Director and CEO Joel Riddle describes this as the “first phase” of an eventual 20 Mtpa LNG development.⁸

The Middle Arm “Sustainable Development Precinct” is located on the Middle Arm Peninsula of Darwin Harbour. According to the NT Government, the aim of the precinct is to create “a ‘development-ready’ location for investment—especially renewables and low-emission energy and fuels, advanced manufacturing, and low-emissions minerals processing.”⁹ Instead, it is already home to two large, high-emissions LNG processing facilities: Santos’s Darwin facility and the INPEX Ichthys.

In April 2022, Barnaby Joyce—then Minister for Infrastructure, Transport and Regional Development—announced a \$1.5 billion federal subsidy for the precinct. This represents an amount roughly equal to the current level of non-GST revenue the NT receives from the Australian Government each year, and over four times the annual royalties the NT Government levies on the mining industry.¹⁰ Joyce explained the subsidy’s aim as “deliver[ing] the infrastructure needed to export more gas, including hydrogen, and critical minerals.”¹¹ Freedom of Information (FOI) documents confirmed that the Morrison government saw Middle Arm as a “key enabler” for the export of gas from the Beetaloo basin.¹²

Despite this, the Albanese government re-announced the \$1.5 billion subsidy after its election victory, this time with the aim of “providing a pathway to a decarbonised economy by helping emerging clean energy industries.”¹³

So far, those industries remain conspicuous by their absence from the precinct, and the Middle Arm development is now the focus of a Senate inquiry (two previous attempts at establishing such an inquiry were voted down by both the Government and the

⁶ Tamboran Resources (2022) *Resources and Reserves Statement*, <https://www.tamboran.com/resources-and-reserves-statement/>

⁷ Tamboran Resources (2023) *Tamboran secures land at Middle Arm Sustainable Development Precinct for proposed Northern Territory LNG (NTLNG) Development*, <https://www.investi.com.au/api/announcements/tbn/c2224152-5fb.pdf>

⁸ Tamboran Resources (2023) *AusbizTV interview*, https://twitter.com/tamboran_tbn/status/1668800685402468354?s=46&t=yuyMG_q8m-DL1QYjsp_mMA

⁹ NT Government (2023) *Middle Arm Sustainable Development Precinct*, <https://middlearmprecinct.nt.gov.au/about-the-precinct>

¹⁰ NT Treasury (2023) *Budget 2023-24 – Budget Paper 2*, <https://budget.nt.gov.au/budget-papers>, p 9, 96

¹¹ Joyce (2022) *Transforming Middle Arm into an Export Powerhouse – Media release*, <https://nationals.org.au/transforming-middle-arm-into-an-export-powerhouse/>

¹² DCCEEW (2023) *Freedom of Information #72786*, <https://www.dcceew.gov.au/about/reporting/freedom-of-information/disclosure-log>

¹³ King (2022) *\$2.5 billion infrastructure boost for the NT*, <https://minister.infrastructure.gov.au/c-king/media-release/25-billion-infrastructure-boost-northern-territory>

Opposition).¹⁴ The inquiry will focus on a broad range of issues including the climate and environmental impacts of developing the harbour.¹⁵

¹⁴ Cox (2023) 'Senate to Investigate Controversial Middle Arm Development Amid Calls for 'Closer Scrutiny'', *The Guardian*, <https://www.theguardian.com/environment/2023/sep/05/senate-to-investigate-controversial-middle-arm-development-amid-calls-for-closer-scrutiny>

¹⁵ Senate Environment and Communications References Committee (2023) *Middle Arm Industrial Precinct*, https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/MiddleArm

Economic impacts

“The onshore gas industry will also be good for the Territory's economy. It is another way which we are diversifying the economy here in the Northern Territory.”

- NT Deputy Chief Minister Nicole Manison, May 2023¹⁶

The NT Government's claimed economic benefits of the Beetaloo gas development can be grouped into two broad areas:

1. Headline economic impacts on NT employment and economic activity, and;
2. Wider economic consequences, such as supporting the transition to renewables, diversify the NT economy, and increase gas supply to east coast of Australia.

The claims are based on one of the five scenarios modelled by ACIL Allen for the Pepper Report. This is the “Gale scenario”, wherein the moratorium on fracking is lifted and 1000 TJ per day (or 365 PJ per annum) of gas is extracted from the Basin.¹⁷ (The scenarios' titles all allude to wind speeds as a metaphor for the speed of gas extraction: along with the baseline scenario, they are “Calm”, “Breeze”, “Wind” and “Gale”.) Notably the Gale scenario is the one the modellers thought least likely to eventuate.

The four ACIL Allen scenarios are summarised in Table 1, along with ACIL Allen's opinion on the likelihood of each. The table shows the economic (GSP) and employment impacts at a mature production phase in 2037, along with peak construction phase employment impacts in the mid to late 2020s.

Table 1: ACIL Allen modelling scenarios, impacts in 2037, steady state production

Scenario	Output	Probability	GSP (\$m)	Income (\$m)	Employment (FTE)	Peak Employment*
Calm	Exploration	Very High	NA	NA	NA	0
Breeze	36 PJ	High	\$295	\$45	90	190
Wind	150 PJ	Moderate	\$646	\$130	260	800
Gale	365 PJ	Low	\$900	\$267	550	1,650

Note: *Peak employment occurs in the construction phase and varies by scenario

Source: ACIL Allen (2017)

HEADLINE ECONOMIC IMPACTS

The advertised headline economic impacts of the Beetaloo gas development are that it will create over 13,000 jobs and increase economic activity by over \$17 billion over the period to

¹⁶ Press Conference, NT Government, 3 May 2023

¹⁷ Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (2018) *Final Report*, https://frackinginquiry.nt.gov.au/__data/assets/pdf_file/0006/494286/Complete-Final-Report_Web.pdf, p 348

2040.¹⁸ The NT Government has made these claims on various websites and publications, including the “Our Territory Gas Strategy” website. They are well summarised in the *NT Onshore Natural Gas Extraction Factsheet*, and have been repeated often in the media, including during the press conference announcing the overturning of the fracking ban.¹⁹

It should be immediately obvious that Table 1 (above) does not feature the advertised headline economic impacts sold by the NT Government and proponents of the Beetaloo project. And, indeed, the advertised economic benefits are presented in a way to grossly inflate the impacts. This is discussed in more detail below.

Even under the most optimistic scenario (‘Gale’), which ACIL Allen considers to be unlikely, the economic impact in the mature production phase is to lift GSP by less than \$1 billion a year, and employment by around 550, with a peak employment of just under 1,700 during the construction phase. Under the most likely scenario (‘Breeze’) the economic impacts are much lower, falling to an employment impact of just 90 in production, and a peak of 190 new jobs in the construction phase.

The link between the ACIL Allen modelling and the advertised headline economic impacts is to incorrectly aggregate, or add up, the impacts across time. This is done in two ways:

- The reported job impacts are for job-years, *not* the number of jobs created. The job-year is a measure of how many years of employment something creates, not how many jobs. To calculate job-years, each job created is recounted for each and every year in which it exists. For example, if a mining project creates ten new full-time mining positions for 10 years, 100 job-years are created, but clearly only ten jobs. Nevertheless, the NT Government’s headline claims have repeatedly used the job-year figures to claim vastly inflated job creation. The modelling report makes clear the impacts are for full-time equivalent positions, and The Australia Institute has previously published research outlining the misuse of the ACIL Allen modelling in this way.²⁰
- For GSP, which is an annual measure of economic activity, the summing overtime of the GSP impacts inflates what is usually an annual figure into a much larger 40-year figure, grossly overstating the impacts.

If the annual GSP impacts are to be aggregated across time they should be presented as a Net Present Value (NPV) using an appropriate discount factor to account for the time value of money. Concerningly, the ACIL Allen report does publish NPV results, deep in the report, but these are not reported as the headline economic impacts by either ACIL Allen or the NT Government. It is one thing to ‘forget’ to publish slightly more accurate estimates of the economic impacts. It is another level of model misuse entirely to publish such estimates and

¹⁸ NT Government (2023) *Our Territory Gas Strategy*, <https://territorygas.nt.gov.au/projects/beetaloo-sub-basin>

¹⁹ NT Government (2023) *Some Facts... about onshore natural gas extraction in the Northern Territory*, <https://territorygas.nt.gov.au/Knowledge-Centre/resources/onshore-gas-extraction-printable-booklet>

²⁰ Campbell (2018) *Economies of Shale: Submission on the Draft Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory*, <https://australiainstitute.org.au/report/economies-of-shale>

then ignore them in the executive summary, knowing full well they are the more accurate estimates of the impacts. The NPV results are well less than half of the headline results.

The NT Government goes one step further in using the incorrect variable for the headline economic impacts for the NT. The ACIL Allen report favours *net real income* as its headline economic welfare impact, rather than GSP, or *real output*. According to ACIL Allen, *net real income* “is a measure of the economic welfare (or standard of living) improvement as a result of the developments.”²¹ The ACIL Allen report goes on to say:

The real output impact of the Industry is different to the real income impact because, in an output sense, the value of the gas exported is realised in the Territory, whereas in an income sense, the value of the gas exported is realised through profits generated and taxation payments, which largely accrue on the east coast of Australia.²²

In short, many of the economic impacts of a Beetaloo gas development would not stay in the NT. They would be realised in other parts of the county or overseas. This means that that changes in real incomes in the NT is a better measure of the economic and welfare impacts of such projects than GSP. In the ACIL Allen modelling the *real income* impacts are around one third of the GSP, or real output, impacts.

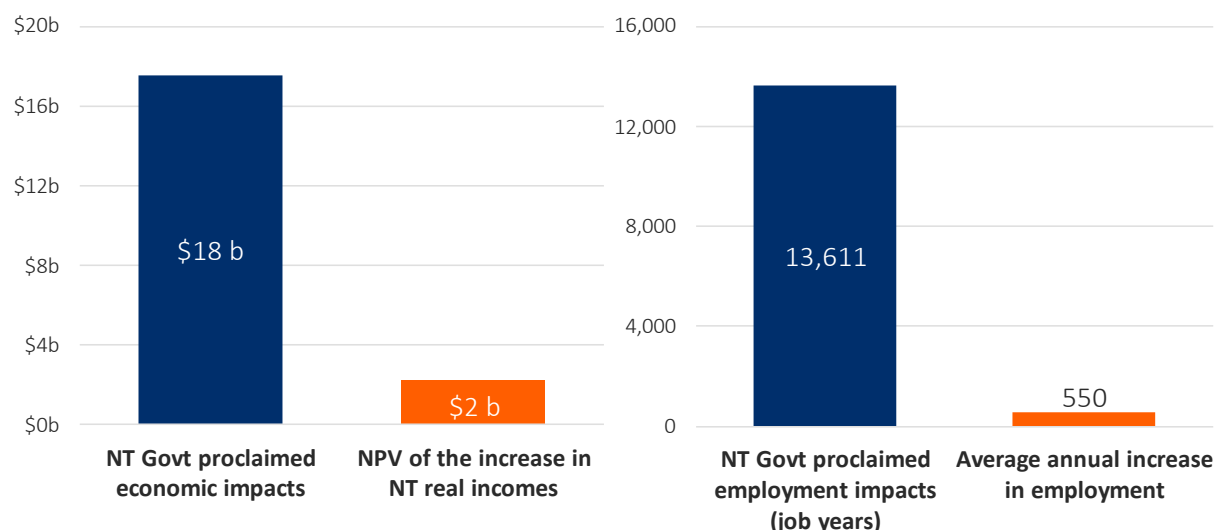
Correctly stated, the ACIL Allen modelling scenario used by the NT Government to justify Beetaloo development says that at mature production levels, in the mid-2030s, economic activity would be around \$900 million a year higher, supporting 550-600 jobs and lifting real incomes in the NT by \$267 million compared to a scenario without the project. Over the entire course of the project, 25 years, real incomes in the NT could be \$2.2 billion higher, or on average just \$88 million a year, with an average employment impact of 550 extra jobs.

Figure 1 below shows how enormously the NT Government is overstating the economic benefits of the project.

²¹ ACIL Allen (2017) p 122

²² ACIL Allen (2017) p 123

Figure 1: NT Government proclaimed vs modelled economic impacts over 25 years



Note: NPV = Net Present Value

Source: Analysis of ACIL Allen (2017)

WIDER ECONOMIC CONSEQUENCES

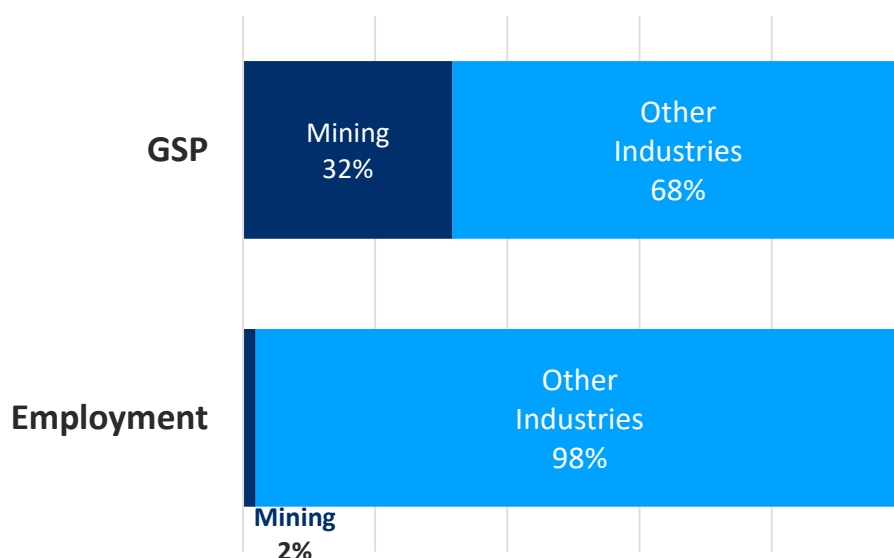
This section examines some of the wider economic benefits claimed by proponents of the Beetaloo project.

From the outset it is important to note that most of these wider economic consequences are not captured by the ACIL Allen modelling. In fact, as discussed in more detail below, the modelling contradicts some of the claims made by development proponents. Other claims are based on the model’s assumptions, not its predictions.

Diversifying the NT economy

The mining industry, which includes gas and LNG, represents 32% of Gross State/Territory Product (GSP) on 2021–22 data, making it the biggest industry in the Territory’s economy by a large margin. Despite this, the industry employs only 1.9% of the Territory’s employed workforce (Figure 2). The next largest industry is Government and Community Services, which contributes 23% in value added to GSP and over 44% in employment.

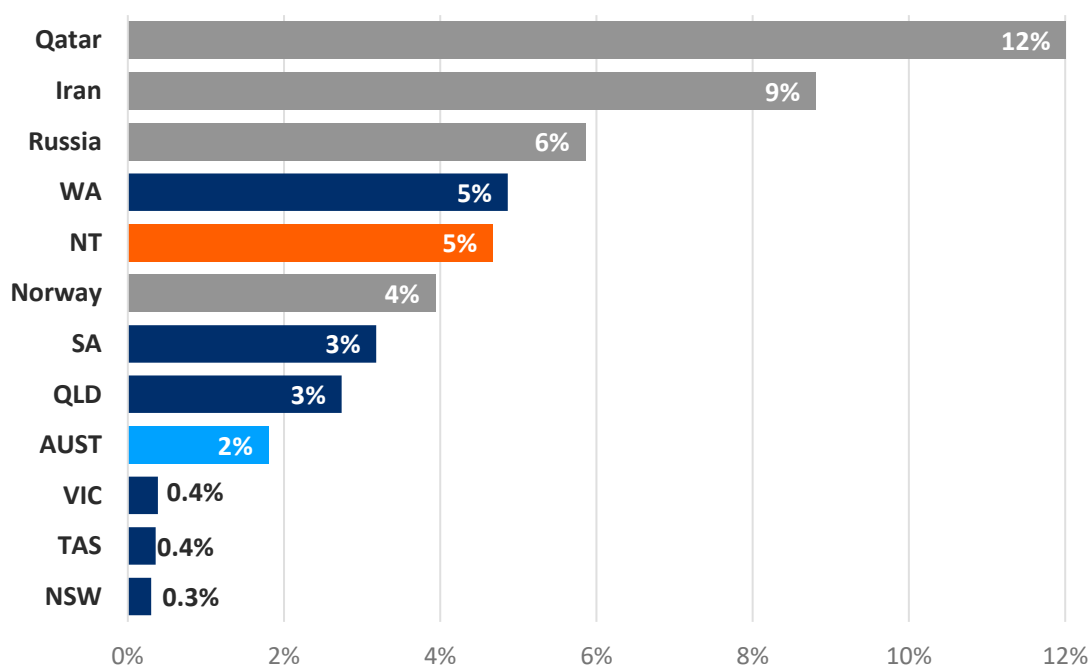
Figure 2: Mining Industry in the NT economy, 2021-22



Source: ABS (2023) *Australian National Accounts: State Accounts*, <https://www.abs.gov.au/statistics/economy/national-accounts/australian-national-accounts-state-accounts> and ABS (2023a) *Labour Force, Australia, Detailed*, <https://www.abs.gov.au/statistics/labour/employment-and-unemployment/labour-force-australia-detailed>

Compared to other Australian states and territories, the NT is already more heavily concentrated in the gas industry than any other, apart from WA. Figure 3 shows the estimated share of the gas industry in each state and territory economy, along with similar data for selected petrostates and Norway. The data highlights how petrostate-like the concentration of economic activity in the NT could become if Beetaloo gas developed.

Figure 3: Estimated of gas in GDP, Australia and selected countries, 2021



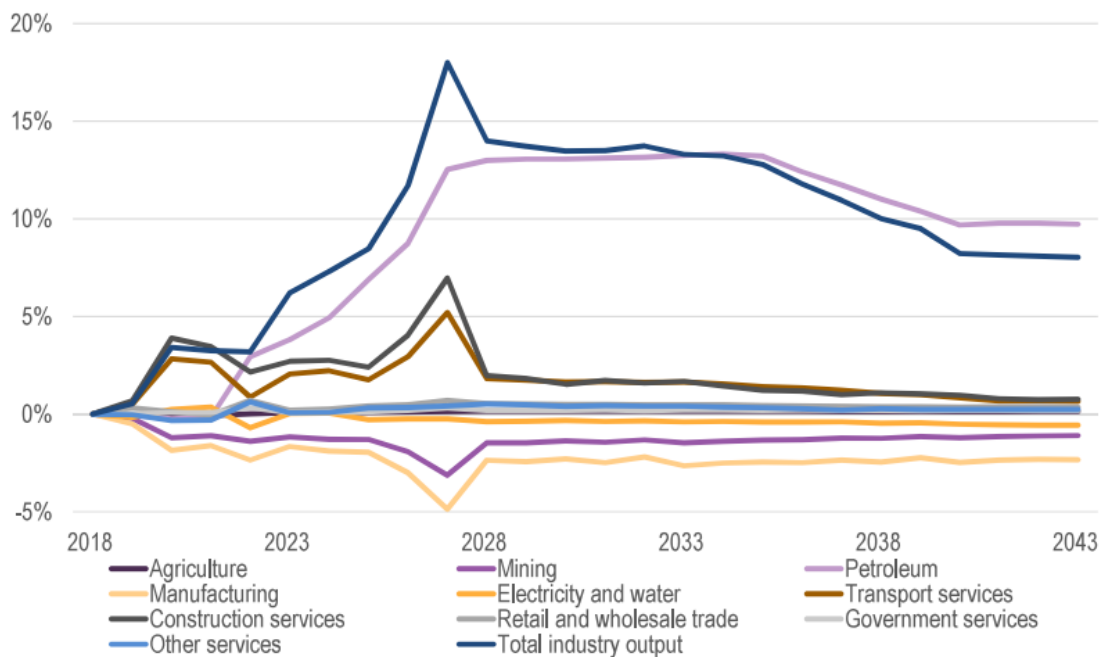
Note: Data for petrostates and Norway is for the gas industry only

Source: Author calculations using ABS (2023), ABS (2023a), ABS (2023b) *Input-Output Tables*, <https://www.abs.gov.au/statistics/economy/national-accounts/australian-national-accounts-input-output-tables> and [theglobaleconomy.com](https://www.theglobaleconomy.com/rankings/Natural_gas_revenue/) (2023)

It gets worse. If the primary purpose of Beetaloo gas is for LNG exports, then an expansion in the LNG industry will further concentrate the NT economy in the gas industry since LNG is part of the gas industry. This effectively constitutes a doubling-down on concentrating economic activity into a single industry. With all the Beetaloo gas likely to be used for LNG exports there is no scope for further diversification of the NT economy.

The ACIL Allen modelling used for the Pepper Inquiry confirms that Beetaloo development will lead to a less diversified NT economy. Typically, when an industry expands rapidly, the resultant demand for inputs and workers leads to higher input prices and wages in other industries. These higher input costs and wages represent cost pressures to all other industries in the economy, and the expanding industry is said to be ‘crowding out’ other economic activity. Figure 4 below clearly shows this effect: at peak production in the mid-2030s, the only industry with significant growth is the industry that includes Beetaloo gas development: the petroleum industry.²³

Figure 4: Output by industry, ACIL Allen Gale Scenario, % change from without Beetaloo scenario



Source: ACIL Allen (2017) p 126

The only other industries showing any growth at all are those that provide key inputs into gas production: construction services (in the construction phase) and transport services (mainly pipeline services). Output from industries cited as those that could benefit from Beetaloo development—for example, agriculture and recreational fishing (represented in other services) remains mostly unchanged over the course of the project. Most telling,

²³ Strangely, the ACIL Allen models the project within the petroleum industry, not the gas industry.

however, is the sharp decline in output for other key, less emissions intensive NT industries like manufacturing.

Increasing the size of the mining industry through developing Beetaloo gas resources will only serve to increase the share of the gas and mining industries in the NT economy, thereby making the NT more concentrated in those industries. This is the exact opposite of diversifying the NT economy.

An example of the dangers of being so reliant on a single industry can be found in the Territory's 2023–24 budget (published in May 2023). The economic outlook estimated a 5.1% reduction in GSP for 2022-23, which it attributes primarily to maintenance activity at the Ichthys LNG facility that led to much lower LNG exports.²⁴ Similarly, the GSP forecast for the financial year 2025–26 is described solely in terms of the expected level of economic activity in the Barossa gas project.²⁵ Allowing development of Beetaloo gas resources will mean that the trajectory of the NT economy will be even more dependent on the maintenance and construction schedules of the gas industry. This is the exact opposite of diversifying the NT economy.

Support the transition to net zero

Another claimed justification for the Beetaloo development is the idea that it will somehow aid the transition to net zero emissions by 2050.

Again, the development will do the complete opposite of this. If Beetaloo mining proceeds, the NT's emissions will increase significantly—and, as a result, so will Australia's total national emissions. The increases will come from both extraction of the gas—via increased fugitive methane emissions and higher combustion emissions from converting the gas to LNG—and from its consumption, when it is used to generate electricity or in other uses. Increasing emissions over the next 20 to 30 years is the exact opposite to the path needed to achieve net zero.

The oft-repeated claim that more gas-fired generation is necessary for the transition to net zero is not supported by the data. A 2022 report from the Institute for Energy Economics and Financial Analysis found that demand for gas to drive electricity generation has collapsed 47% from 2014 to 2022.²⁶ The Australian Energy Market Operator's (AEMO) forecasts predict that this trend will continue, with demand falling a further 34% by 2030.²⁷

AEMO does project a need for more gas peaking capacity from 7GW now to 10GW by 2050—another reason that gas proponents often cite to justify the idea of further exploration and developments. However, this increase in peaking capacity does not increase

²⁴ NT Treasury (2023) *Budget 2023-24 - Northern Territory Economy*, https://budget.nt.gov.au/__data/assets/pdf_file/0015/1224105/2023-24-nt-economy-book.pdf, p 4

²⁵ NT Treasury (2023) *Budget 2023-24 - Northern Territory Economy*

²⁶ Robertson (2023) *Gas' Role in the Transition - A Fuel Transitioning Out of the Energy System*, <https://ieefa.org/resources/gass-role-transition>

²⁷ *ibid*

the demand for gas since peaking plants are used infrequently, while gas baseload plants, which use large volumes of gas, are expected to shut.²⁸

Displacing more emissions intensive fuels and technologies like coal-fired generation

The only way Beetaloo gas could aid the transition to net zero is if the new gas displaces more emissions intensive energy sources like coal and oil. Is this a possibility? Based on current data and forecasts, the answer is no.

It appears that there will be little opportunity for gas to replace coal. The AEMO is not forecasting any new coal-fired capacity in Australian over the period to 2032, and no existing coal-fired generators have announced a speed-up in their closure time frames since the ban on fracking was lifted.²⁹ Similarly, on a global level it is highly unlikely that one gas development, relative to global supply, would change the course of the construction or the shutdown of coal fired generation capacity.

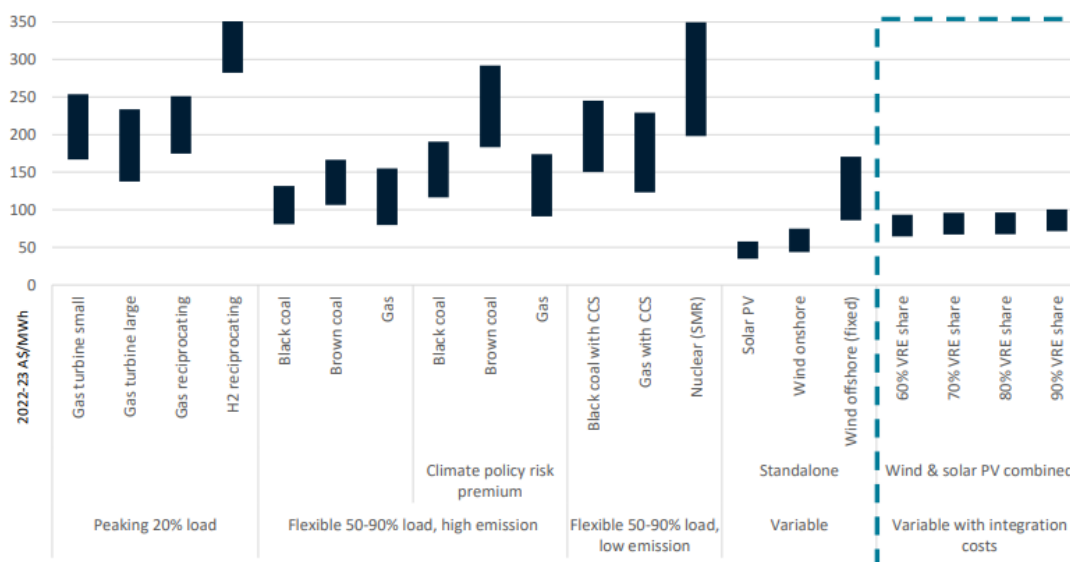
More importantly, as Figure 5 below shows, renewables are already cheaper to build and run than gas-fired generation, so any immediate competitive threat to existing coal and oil-fired generation comes from greater renewable generation. It is highly improbable that Beetaloo gas-fired could compete with renewables on price—especially as the necessity for complex mining techniques, along with the remote location, means that Beetaloo gas is unlikely to be cheap compared to other natural gas reserves in Australia.³⁰

²⁸ Robertson (2023) *Gas' Role in the Transition - A Fuel Transitioning Out of the Energy System*

²⁹ AEMO (2023) *NEM Electricity Statement of Opportunities*, <https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/nem-forecasting-and-planning/forecasting-and-reliability/nem-electricity-statement-of-opportunities-esoo>

³⁰ RepuTex Energy (2021) *Analysis of Northern Territory gas basin emissions and carbon costs* <https://www.reputex.com/research-insights/report-analysis-of-northern-territory-gas-basin-ghg-emissions-and-carbon-costs/>

Figure 5: Relative costs of electricity generation technology to 2030



Source: CSIRO (2023) *GenCost 2022–23 – Final report*, <https://www.csiro.au/en/research/technology-space/energy/energy-data-modelling/gencost>

Spurring advanced manufacturing and new low-emission industries in the Territory

As discussed above, rapid production growth in one industry drags in resources from other industries, undermining the ability of those industries to expand, and the likelihood that this ‘crowding out’ effect would occur in the case of Beetaloo development is confirmed by ACIL Allen’s modelling. Importantly, Figure 4 above shows the biggest fall in output is likely to be in the manufacturing industry—yet again directly contradicting a claimed benefit of the development, in this case that Middle Arm “will help the Northern Territory and northern Australia to capitalise on the energy transition and unlock new market opportunities for a range of sustainable industries... [including] advanced manufacturing.”³¹

The gas from Beetaloo is also unlikely to help manufacturing—the majority will go straight to the new Tamboran Resources LNG facility at Middle Arm for export, leaving little for advanced manufacturing or other industries. Previous research by Campbell for The Australia Institute provides further details on how onshore gas mining in the NT would not help manufacturing.³²

³¹ Cox (2023) ‘Darwin’s ‘sustainable’ Middle Arm development is key to huge fossil fuel projects, documents show’, *The Guardian*, <https://www.theguardian.com/environment/2023/may/18/darwins-sustainable-middle-arm-development-is-key-to-huge-fossil-fuel-projects-documents-show>

³² Campbell (2020) *Why onshore gas will not help manufacturing in the NT*, <https://australiainstitute.org.au/report/why-onshore-gas-will-not-help-manufacturing-in-the-nt/>

Supporting the east coast of Australia with cheaper gas

As noted previously, Beetaloo gas is unlikely to be cheap gas due to the complex mining methods used to bring the gas to the surface, along with the geographical isolation of the Beetaloo Basin and the resultant high costs of bringing the gas to market. This does not bode well for its competitiveness in the east coast gas market, especially as that market will remain connected to international gas markets, meaning that global gas price trends will continue to determine the price of gas on the east coast. The only way Beetaloo gas would lower east coast prices is if its arrival lowered global prices. This is highly unlikely since global gas prices are closely linked to oil prices, which in turn are heavily influenced by middle eastern oil supply and wider geo-political issues.

Most importantly, the east coast gas market simply does not need more gas. According to AEMO, the demand for gas in electricity production is expected to fall over the period 2032.³³ Previous research by The Australia Institute shows that the east coast's requirements only account for a tiny and falling fraction of Australia's total gas production, with most gas used by the gas industry itself for LNG production.³⁴ The announcement of the new Tamboran Resources LNG facility makes it clear that this will be true of Beetaloo gas: the vast majority will be used for LNG exporting. Yet again, a claimed benefit of Beetaloo development is directly contradicted by the facts.

While ACIL Allen's Gale scenario includes the export of Beetaloo gas via pipeline to the eastern states, it does so because of a scenario design decision. The economics represented in the model's code has not determined that the most economically beneficial outcome is for gas to be piped to the east coast. It means that any claims that Beetaloo gas will end up on the east coast because the experts said so is ignorant of how the modellers hard-wired this outcome into their advice.

Supporting the NT's major trading partners

The NT government's claims here may well reflect with reality—unfortunately, it is in a case where they *should* do the opposite. It should go without saying that the NT Government should be more concerned about the welfare of its own citizens than its trading partners, who are perfectly capable of looking after themselves. Beetaloo development may well serve the interests of the NT's trading partners, but this is not a desirable outcome if it comes at the expense of the welfare of the Territory's citizens—and further entrenching the NT economy's dependence on a polluting industry that employs so few people, delivers so few local benefits, and does very little to improve the welfare of residents of the NT.

³³ Robertson (2023)

³⁴ Ogg and Hemming (2023) *In the future we'll need less gas than we currently use*, <https://australiainstitute.org.au/post/ignore-those-spruiking-for-gas-companies-australias-demand-for-gas-is-falling/>

Fiscal impacts

“Those royalties from those projects will be paid to the Territory Government. It will help to fund things like schools, hospitals, services, roads, housing, the things that Territorians need each and every day. But there'll also be further economic flow on benefits such as more jobs, more businesses, more development in our remote regions of the Northern Territory.”

- Nicole Manison, May 2023³⁵

Since the Beetaloo development would be an onshore gas project, it would pay royalties to the NT Government. (By contrast, offshore gas developments generate no royalties for the state or territory in whose waters they operate.)

In that sense, it is true that the development of the Beetaloo gas resources would create a new revenue stream for the NT Government. However, the amount of money involved would be relatively small. In general, mining generates very little revenue income. Despite the prominence of the mining industry in the NT economy, the royalties paid by the industry account for only 4% of the NT government's total revenues.³⁶ Of the 4% only a fraction would come from the oil and gas industry, from small onshore operations in Central Australia.

The development of Beetaloo gas resources project will do little to change this fact. As the analysis in this section shows, the royalties paid would be unable to fund any social infrastructure that is not already possible under current fiscal settings and projections. The government revenue benefits are also tiny when compared to the huge costs associated with the increase in emissions increases under any practical carbon price.

HOW MUCH GAS AND HOW MUCH LNG?

The amount of royalty revenue generated by any Beetaloo development—and thus the likelihood that this revenue could be used to fund any major upgrades to public infrastructure like hospitals, schools, and roads—will depend on the level of gas production achieved. A key consideration in judging the economic and environmental impacts of Beetaloo gas development is therefore to establish a likely level of gas production in the sub-basin.

While it is highly probable that there are significant gas reserves in the Beetaloo Basin—with estimates ranging between 257,276 PJ and 527,527 PJ—the level of economically feasible

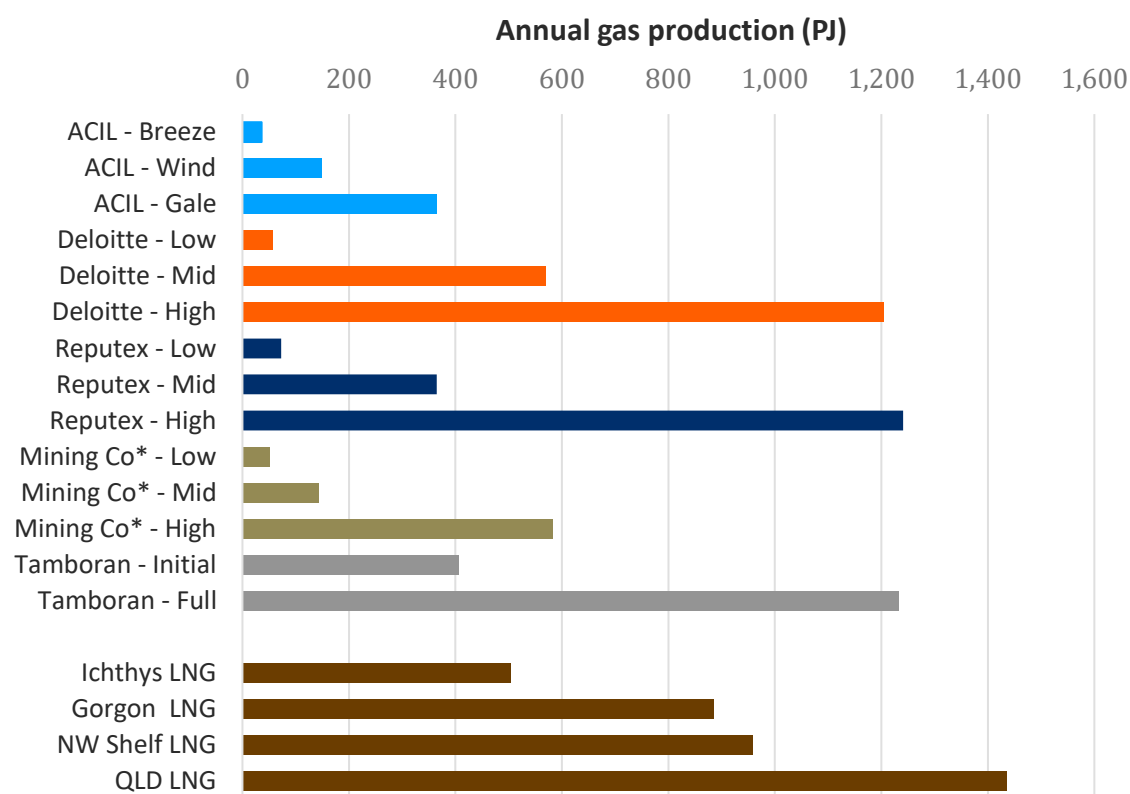
³⁵ Press Conference, NT Government, 3 May 2023

³⁶ NT Treasury (2023) p 21

production remains uncertain.^{37,38} For any fossil fuel development the amount of gas that can be extracted is much less than the total available resource for a range of economic, engineering, geological and environmental reasons. It means the eventual volume of production in the Beetaloo Basin could range from very low to very high, relative to other gas fields in Australia.

Reports from ACIL Allen (for the Pepper Inquiry), Deloitte³⁹ and RepuTex⁴⁰ all model production levels ranging from zero PJ to 1,241 PJ per year. **Error! Reference source not found.** summarises these various production scenarios, including aggregated estimates submitted by the mining companies to the Pepper Inquiry. For comparison purposes, the nameplate capacities of the existing major LNG facilities, converted to PJ, are also listed.

Figure 6: The broad range of Beetaloo gas production scenarios



* Sum of production estimates from mining companies, published in the Pepper Inquiry
 Source: ACIL Allen (2017), Deloitte, RepuTex (2021), Pepper Inquiry (2018), DISER (2023)

Figure 6 makes clear just how diverse the estimates of production are. The various reports' evaluations of the likelihood of various levels of production also vary significantly. For

³⁷ Scientific Inquiry into Hydraulic Fracturing of Onshore Unconventional Reservoirs in the Northern Territory (2018) *Summary of the Final Report*, <https://frackinginquiry.nt.gov.au/inquiry-reports/final-report>

³⁸ NT Government (2023) *Our Territory Gas Strategy – Beetaloo Sub-basin*, <https://territorygas.nt.gov.au/projects/beetaloo-sub-basin>

³⁹ Deloitte (2021) *Report on the Development of the Beetaloo Subbasin – For Commonwealth Department of Industry, Science, Energy and Resources*, <https://www.industry.gov.au/publications/beetaloo-sub-basin-gas-development-study>

⁴⁰ RepuTex (2021) *Analysis of Beetaloo Gas Basin Emissions and Carbon Costs* https://www.reputex.com/wp-content/uploads/2021/10/REPUTEX_Analysis-of-Beetaloo-Gas-Basin-Emissions-and-Carbon-Costs_Oct21F.pdf

example, while ACIL Allen found their highest-production scenario (the Gale scenario) least likely to eventuate, that scenario's output level corresponds roughly with the middle output scenarios from Deloitte and RepuTex, and is well below those reports' highest output scenarios.⁴¹ Also of interest is how the maximum estimates from the mining companies are well below the high scenarios from Deloitte and RepuTex. This suggests that the companies that actually mine gas are less confident in the potential of Beetaloo than consultants who do not.

ACIL Allen also notes that the level of production in their highest scenario was at a scale where LNG becomes viable.⁴² Presumably this means production at lower levels would confine the gas to being either piped to the east coast—where, as set out above, its price is unlikely to be competitive—or finding a use for it within the NT.

The announcement of the Tamboran LNG project adds complexity to the question of how much gas will be mined from the Beetaloo subbasin. The initial Tamboran LNG investment of 6.6 Mtpa of LNG—or approximately 407 PJ annually—is well beyond ACIL Allen's more likely scenarios (Breeze and Wind), and marginally above the Gale scenario on which the NT Government has been reliant for its claims about the project's economic benefits. The 20 Mtpa LNG envisaged by Tamboran's Joel Riddle—around 1,233 PJ of gas annually—aligns closely with the highest scenarios from Deloitte and RepuTex.

It is also important to note that regarding levels since the ban on fracking was lifted, no other potential miners in the Beetaloo region have made announcements about possible production levels. But if Tamboran's 20 Mtpa proves a reality, then the addition of even small-scale developments from other miners could easily make the Beetaloo Basin the biggest gas and LNG development in Australia's history—one that would commence operations *after* Australia has committed to net zero by 2050.

On the other hand, it could also prove a small and likely expensive increment to the east coast gas market, a market that—as discussed above—does not require additional gas for domestic usage. Neither of these possibilities is good: either the Beetaloo development would carry a massive emissions cost, or it would simply not be needed.

REVENUE IMPACTS

Sizeable revenue impacts look possible only under the highest production scenarios. Under more realistic production scenarios the revenue impacts are projected to be comparatively small.

To examine a range of possibilities for the economic, emissions and fiscal impacts of the project, this section looks at three scenarios from previous research undertaken by ACIL Allen, Deloitte and RepuTex.

⁴¹ ACIL Allen (2017) p 46

⁴² ACIL Allen (2017) p 120

The three scenarios, in order of gas production levels from lowest to highest, are:

1. **ACIL Allen’s Gale scenario:** This is the scenario on which the NT Government has drawn heavily in its justifications for the Beetaloo gas development. It estimates 365 PJ of production per year, a level that ACIL Allen considered the least likely of the possibilities it examined. Under this scenario approximately half of the gas produced is converted to LNG at the existing Darwin LNG facility, and the remainder is piped to the east coast gas market. (The scenario makes no evaluation of the latter’s economic feasibility.)
2. **Tamboran initial phase:** This estimates 407 PJ of gas a year from Beetaloo, a level only moderately higher than the Gale scenario. The key difference is that 100% of the gas goes to a 6.6 Mtpa LNG facility built in Middle Arm. Apart from the gas used at the facility itself, this is used exclusively for LNG exports.
3. **Tamboran full capacity/Deloitte/RepuTex:** This assumes a 20 Mtpa LNG facility built in Middle Arm, which would require around 1,233 PJ of gas a year from Beetaloo. This output aligns broadly with the highest production scenarios modelled by Deloitte and RepuTex. For analysis purposes it is assumed that 100% of the gas is exported, similar to the Deloitte scenario which assumes a ‘majority share’ of the gas is exported as LNG.⁴³ This level of production would mean Beetaloo would produce more gas than the North-West Shelf and not significantly less than the entire Queensland LNG industry.

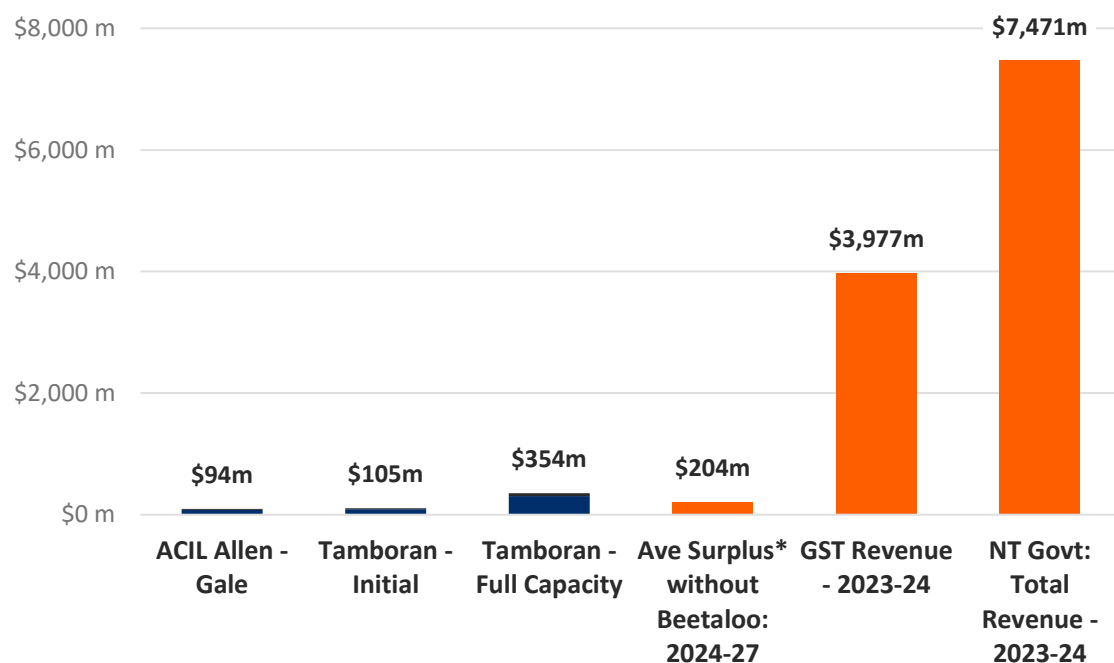
It should be noted that ACIL Allen considers all three of these scenarios to be at the very high to extreme end of production possibilities, and that they all have a low probability of taking place. This means that the economic and fiscal impacts are likely to be even smaller in reality.

Figure 7 below shows the modelled NT Government’s average annual own-revenue impacts, comprising royalties and payroll taxation, for ACIL Allen’s Gale scenario and the pro-rated estimates for Tamboran’s initial phase and full capacity scenarios. For comparison purposes, the projected NT General Government Sector Operating Surplus for the period 2024 –27 (without Beetaloo gas development), along with forecast GST revenue and total NT Government revenue for 2023–24, are also shown.⁴⁴

⁴³ Deloitte (2020), p 88

⁴⁴ NT Treasury (2023)

Figure 7: Average annual NT government own-revenue tax impacts of Beetaloo gas development, \$ million



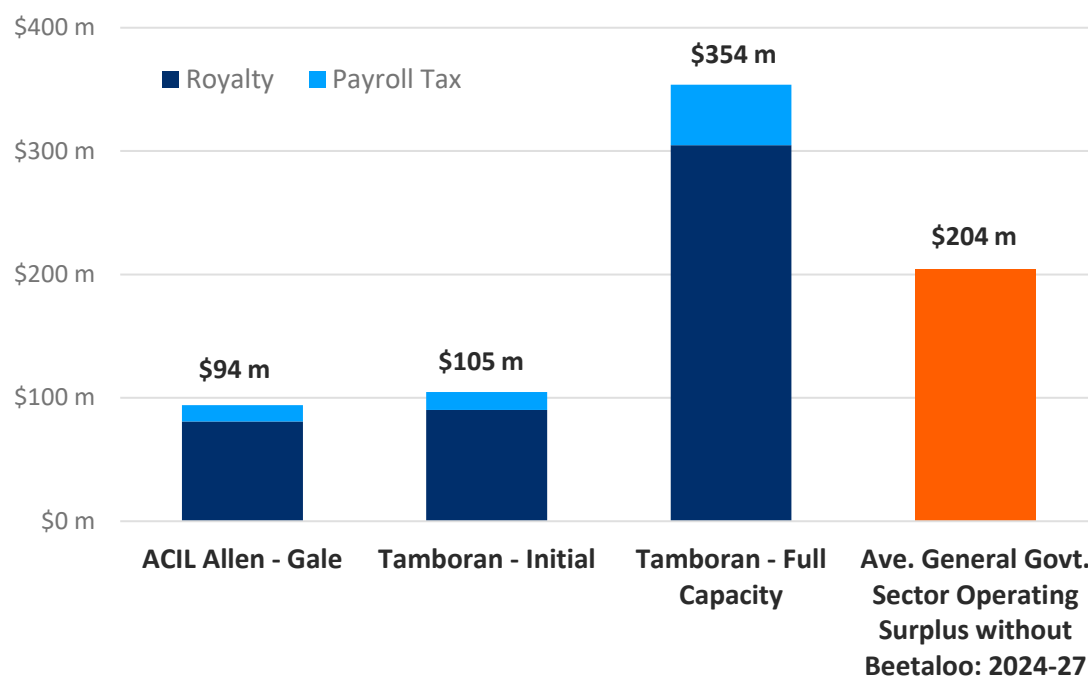
Note: *Surplus as measured by the General Government Sector Operating Surplus

Source: Analysis of ACIL Allen (2017), NT Treasury (2023)

The tiny size of the Beetaloo revenue, even in the highest production scenarios, is strikingly clear. As with all Australian state and territory budgets, the NT’s budget is massively dependent on GST and other revenue sources, and will likely remain that way. Adding the Beetaloo revenue impacts to the NT budget would do next to nothing to increase the total revenue collected by the Territory, especially as by the time Beetaloo is developed, GST and total revenues will be even higher.

Figure 8 examines the first four columns of Figure 7 in more detail, breaking down the revenue impacts into payroll taxes and mining royalties.

Figure 8: Average annual NT Government own-revenue tax impacts of Beetaloo gas development, \$ million



Source: Analysis of ACIL Allen (2017) and NT Treasury (2023)

It is only for the very high (and unlikely) production level in Tamboran’s full capacity scenario that the NT Government’s revenues from Beetaloo gas development exceed its forecast operating surpluses. This means that for the more realistic production scenarios, the construction of any schools, hospitals, and roads that Beetaloo royalties might fund could be achieved much sooner while still maintaining an operating surplus for the general government sector. This clearly debunks the claims that Beetaloo gas, through the establishment of a new own-revenue source, will fund all sorts of public infrastructure projects.

Over the medium term and longer terms, the NT Government is projecting even higher operating surpluses and public sector fiscal balances—all without Beetaloo gas development. By 2030 the projection is for an approximately \$300–400 million non-financial public sector surplus, a figure that exceeds the own-revenue benefits of Tamboran’s full capacity scenario.⁴⁵

The analysis makes clear that the desire for better public infrastructure in the NT can be achieved by making spending decisions today. The NT budget papers are clear that on current forecasts the projected operating surpluses are greater than most estimates of Beetaloo royalty income, and all estimates over the medium and longer term. It means the decision to fund better public infrastructure is a political choice that can be made today, and is not constrained by a requirement for greater fossil fuel royalty income.

⁴⁵ NT Treasury (2023) p 13

GOVERNMENT REVENUE VS EMISSIONS COSTS

If a carbon price is applied to the emissions estimates of Beetaloo gas production, the overall financial outcomes are drastically worse.

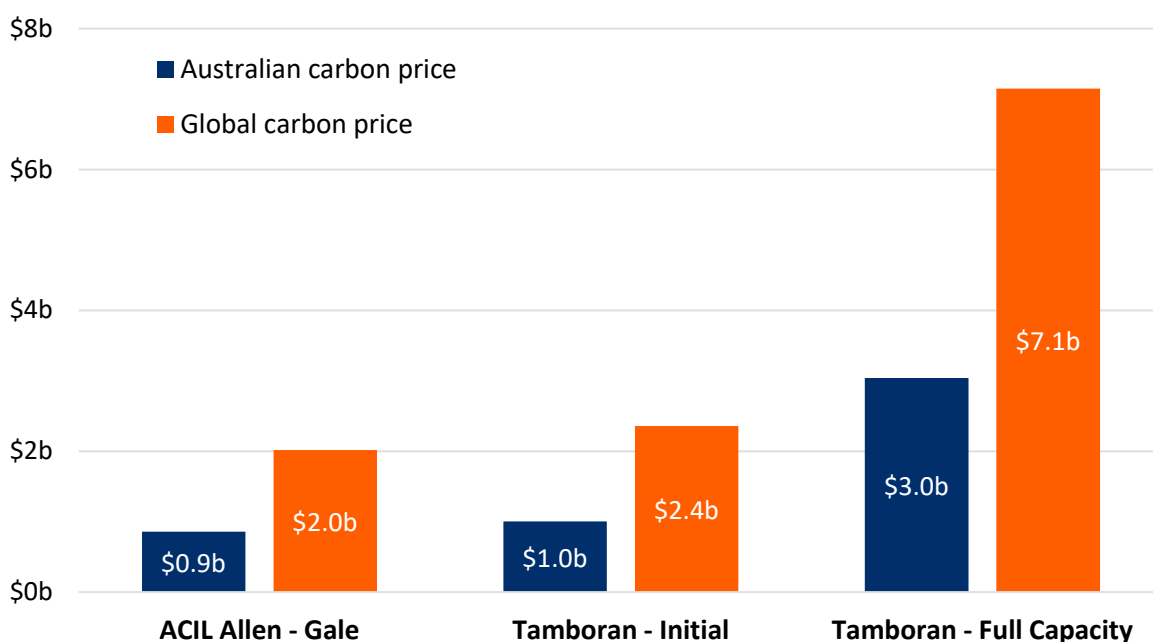
While it is not expected that the NT Government would ‘pay’ the entire carbon price impact, including a carbon price into the analysis more fully, though not perfectly, accounts for the social and environmental costs of developing the Beetaloo gas resources.

Moreover, including a carbon price highlights the scale of the costs incurred to achieve a relatively small increase in royalty revenue. It also reinforces just how closely emissions costs and royalty revenues are linked to production levels: while there may be dreams of high royalty revenues, they can only be achieved alongside an enormous emissions cost.

For the analysis two carbon prices are used. The first, \$33.80 per tonne, comes from the price of Australian Carbon Credit Units in December 2022. The second, \$79.55 per tonne, is an average global carbon price based on data from the World Bank Dashboard using a methodology from NAB.^{46,47}

Figure 9 outlines the emissions costs of the three production scenarios for all emissions while Figure 10 shows the domestic emissions only, compared to NT Government own revenue impacts.

Figure 9: Estimated cost of annual Beetaloo emissions, steady state production, \$ billion

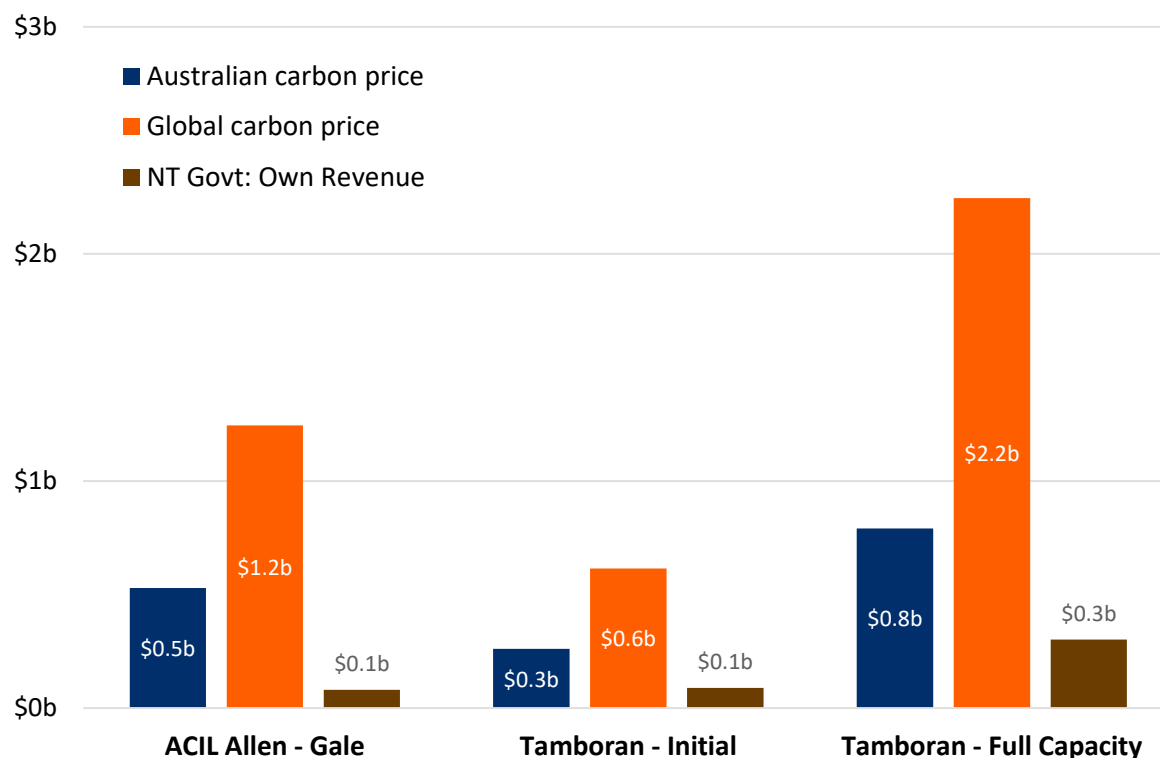


Source: Analysis of ACIL Allen (2017) and authors estimates

⁴⁶ NAB (2023) *NAB Carbon Research: ACCU prices set to soar*, <https://business.nab.com.au/nab-carbon-research-accu-prices-set-tp-57768/>

⁴⁷ Average carbon price in early 2023 of EU, Korea, UK, California, and New Zealand from the World Bank (2023) *Carbon Pricing Dashboard*, <https://carbonpricingdashboard.worldbank.org/>

Figure 10: Cost of annual domestic Beetaloo emissions, steady state production, compared to NT Government revenue impacts, \$ billion



Source: Analysis of ACIL Allen (2017) and authors estimates

The overall costs of the Beetaloo emissions range from \$860 million to over \$7 billion a year. Domestic emissions alone range from \$260 million to over \$2 billion a year, dwarfing the NT Government revenue impacts and the broader economic impacts.

Overall, these estimates highlight the massive emissions costs for which the NT Government should be accounting when estimating the fiscal benefits—or lack thereof—from any potential Beetaloo development. When these costs are factored into such analyses, they clearly demonstrate yet another bad cost-benefit outcome of developing the Beetaloo gas resources.

Emissions impacts

“The onshore gas development in the Northern Territory will be safe. It will be sustainable and that we have the best regulation in place and most importantly, that this body of work is based on scientific evidence. I have to say that again, this is based on scientific evidence.”

Nicole Manison, May 2023⁴⁸

The Beetaloo development would be a major catastrophe for Australian and global greenhouse gas emissions: it significantly increase Australia’s emissions just as the heavy lifting of reaching net zero by 2050 should be taking place.

As with the fiscal impacts, the emissions impacts are also highly sensitive to the assumed level of gas and LNG production achieved in the Beetaloo-sub basin. Higher gas extraction levels and a greater share of the gas directed to LNG exports means higher emissions. The process of converting gas to LNG uses a significant amount of gas itself, and is a significant source of emissions.

The emissions from Beetaloo gas will not be restricted to emissions growth in Australia. As the LNG is exported to foreign markets the burning of the fossil fuels is a significant source of emissions. These emissions are not classified as Australia’s emissions, a fact on which Australia has relied for decades to minimise its overall emissions impact. But wherever the gas produced in the Beetaloo Basin is burned, it will increase global emissions, undermining the Paris Agreement’s commitment to limiting global warming to 1.5°C.

The rest of this section looks at the Beetaloo gas scenarios to estimate the enormous emissions impacts the project will have even at smaller levels of gas extraction.

ESTIMATING EMISSION IMPACTS

The emissions impacts are estimated using an earlier study by Reputex.⁴⁹

Reputex estimated the total emissions of extracting, processing and using gas from the Beetaloo Basin at 72.9 grams of CO₂ equivalent per megajoule of energy produced (gCO₂-e/MJ). This includes upstream production emissions (mining energy use and methane

⁴⁸ Press Conference, NT Government, [day?] May 2023

⁴⁹ Reputex (2021) *Analysis of Beetaloo Gas Basin Emissions & Carbon Costs*, https://www.reputex.com/wp-content/uploads/2021/10/REPUTEX_Analysis-of-Beetaloo-Gas-Basin-Emissions-and-Carbon-Costs_Oct21F.pdf

emissions) and downstream combustion (from use by gas customers), as well as LNG processing, transport emissions and regasification at its destination.

Table 2: RepuTex estimates of Beetaloo Basin gas emissions

Stage	Emissions (gCO ₂ -e/MJ)
Upstream (production)	13.0
Downstream (combustion)	51.5
LNG processing	6.0
Export domestic emissions	19.0
Transport emissions (derived)	1.6
Regasification emissions (derived)	0.8
Export lifecycle emissions	72.9

Source: RepuTex (2021)

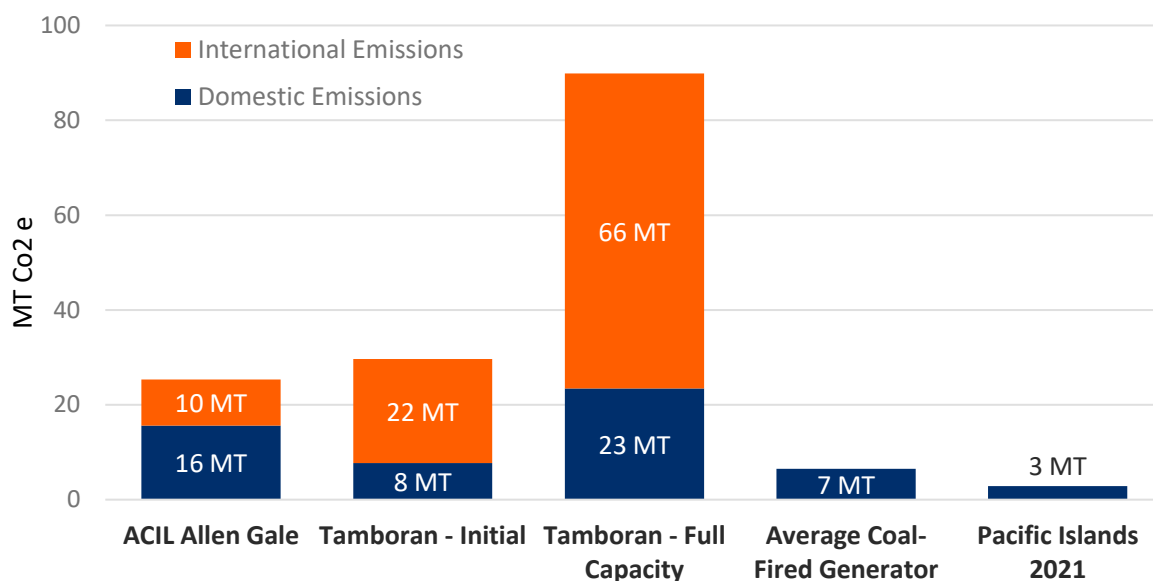
The figures shown in **Error! Reference source not found.** can be used to estimate the emissions impact for three Beetaloo production scenarios analysed in this report. It is worth noting that the Tamboran full capacity scenario is close to the highest production scenario in RepuTex’s own work.

EMISSIONS ESTIMATES

Figure 11 below shows the estimated emissions under the three production scenarios used in this report. To help gauge the size of the emissions impacts the average emissions of Australia’s five largest coal-fired electricity generators are also included, along with the total emissions of the Pacific Islands for 2021.⁵⁰

⁵⁰ Total emissions of Tuvalu, Nauru, Kiribati, Micronesia, Marshall Islands, Vanuatu, Tonga, Samoa, Solomon Islands, and Fiji.

Figure 11: Annual emissions for each Beetaloo scenario, steady state production, and the average coal fired generator, MT CO₂-e



Source: Clean Energy Regulator (2023) *Electricity sector emissions and generation data 2021-22*, Tamboran Resources (2023) *Interview AusbizTV*.

Reflecting similar scales of production, the ASIL Allen Gale scenario and the Tamboran initial phase scenario show comparable emission impacts, but the distribution between domestic and international emissions is significantly different owing to the greater share of LNG production and exports in the latter. No matter the distribution of the emissions, however, they add to roughly the same global warming potential, representing the annual emissions of between four and five coal-fired power stations—and both are in the region of an order of magnitude higher than the total emissions of the Pacific Islands.

Under Tamboran’s full production scenario, the emissions estimates are much higher, reflecting a level of production from Beetaloo several times higher than either the Gale or Tamboran initial scenarios. In this case, the total emissions exceed those that would be generated by building 13 new coal-fired power stations. The domestic emissions alone of such a high level of gas production represents the building of around three to four new coal-fired power stations, and eight times the annual emissions of the Pacific Islands.

Given Australia’s current climate conditions and its commitment to achieving net zero emissions by 2050, building a single new coal-fired power station would be ridiculous. But as this analysis shows, developing Beetaloo—even at a small scale of production—would be as bad for global warming as building multiple new stations. This is a stark demonstration of the emissions catastrophe that Beetaloo development would be.

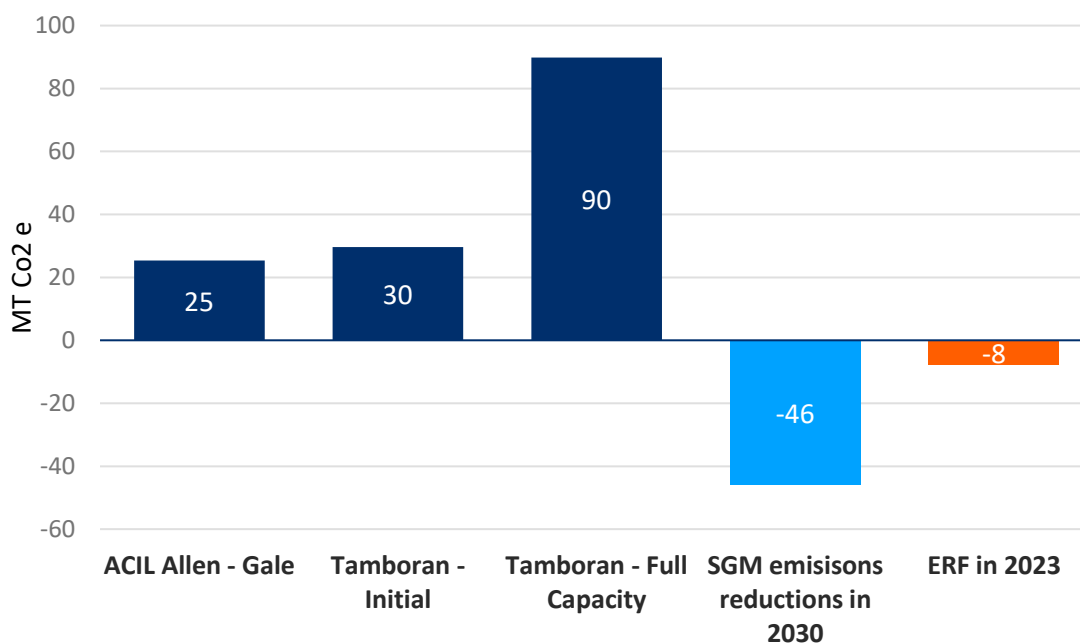
COMPARISON TO EMISSIONS REDUCTION FROM AUSTRALIA'S CLIMATE POLICIES

An additional way to understand the scale of the potential emissions from Beetaloo is to compare them to the planned emissions abatement under Australia climate policies.

The Australian Government claims that its signature climate policy, the Safeguard Mechanism, will reduce emissions by 205 million tonnes cumulatively to 2030.⁵¹ This is a theoretical amount, because it includes the controversial use of unlimited offsets which are thought to be largely fraudulent,⁵² but if these offsets proved 100% genuine, the policy's 4.9% annual reduction target out around 46 million tonnes of abatement in 2030. Figure 12 below compares this 46 million tonnes of annual abatement to Beetaloo's annual emissions under the various scenarios described above.

Figure 12 also highlights how one year of Tamboran's operation at full capacity is equivalent to over ten times the (claimed) 7.9 million tonnes of abatement of Australia's Emissions Reduction Fund (ERF) in its annual 2023 auction.^{53,54}

Figure 12: Annual emissions for each Beetaloo scenario vs abatement under Australia's emissions reduction policies, MT CO₂-e



Source: Bowen (2023) and CER (2023)

⁵¹ Bowen (2023) *Safeguard Mechanism one step closer to Parliamentary passage*, <https://minister.dcceew.gov.au/bowen/media-releases/safeguard-mechanism-one-step-closer-parliamentary-passage>

⁵² ANU College of Law (2022) *Australia's carbon market a 'fraud on the environment'*, <https://law.anu.edu.au/news-and-events/news/australia%E2%80%99s-carbon-market-fraud-environment>

⁵³ *ibid*

⁵⁴ CER (2023) *Auction March 2023*, <https://www.cleanenergyregulator.gov.au/ERF/auctions-results/march-2023>

It is clear to see in **Error! Reference source not found.** just how much developing Beetaloo gas resources would undermine Australia's emissions abatement policies. Even at low production levels, more than half of the absolute maximum abatement under the Safeguard Mechanism is erased by the emissions from a Beetaloo gas development. At higher production levels, it would become silly to pretend Australia is even trying to cut emissions, given how comprehensively the Beetaloo emissions would swamp the impacts of the current policies in place.

Conclusion

It should be obvious to everyone that gas—and fossil fuels generally—are a dying industry. Even if their catastrophic impact on our environment is ignored—something both the Australian and NT Governments appear determined to do—gas extraction is a poor business decision in comparison to investing in renewable energy sources.

There can be fewer more comprehensive demonstrations of this fact than the proposed Beetaloo Basin gas development. From each point of view examined in this report—economic, fiscal and environmental—development of the Beetaloo region’s unconventional gas resources proves a terrible decision, delivering poor outcomes for the residents of the NT, Australia and the global commitment to limiting the impacts of climate change to 1.5°C.

Concerningly, this analysis has shown that in most cases, the alleged benefits of Beetaloo gas development being touted by the NT Government and subsidised by the Australian Government are in direct conflict with observable, publicly-available economic data, and also with much of the economic, emissions and fiscal modelling undertaken to date.

Instead of diversifying the NT economy, the development of Beetaloo gas resource will further concentrate economic activity into a single sector in which projected activity is the already sole focus of the NT Government’s economic growth forecasts. Given the fact that a fossil fuel phase-out is essentially compulsory for the future of the world, making the NT’s economic future even more reliant on fossil fuel industries is remarkably negligent from an economic point of view, as well as being disastrous from an environmental standpoint.

Such a decision would be more egregious given that the industry employs relatively few Territorians and will be reliant on equipment, skills, and expertise that, to date, barely exist in the NT, let alone Australia. Any increase in royalty payments and NT Government revenues would not be relatively insignificant—they would not fund anything that could not already be funded, today or in the very near future, under current fiscal settings while maintaining the outlook for fiscal surpluses over short and medium term.

Most damningly, the development of Beetaloo gas and the resultant increase in LNG exports would drive a large increase in NT, Australian and global emissions, long after the deepest and most urgent reductions in emissions should be taking place. All up, the data, the analysis and the modelling are clear: the development of Beetaloo gas resources is a lose, lose, lose outcome for the residents of the Northern Territory, Australia, and the world.