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The economic impacts of gas development in the Northern Territory

Gas development has few economic benefits beyond those that flow to the gas industry itself. The industry is a small employer, systematic non-payer of tax and crowds out other industries.

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INTRODUCTION

The Northern Territory is facing a wave of gas mega-projects.

While the Northern Territory Government and gas companies talk up the potential economic benefits of gas development for the region, little mention is made of the negative impacts.

Large gas projects have a short, intensive construction period that disrupts existing industries, driving up costs and crowding out jobs in existing businesses.

Beyond the construction phase, gas projects provide a relatively small number of ongoing jobs, and the benefits of these projects flow largely to the owners of the gas companies rather than the wider economy and community.

NEW GAS DEVELOPMENT IN THE NT

Major gas projects proposed and under development in the Northern Territory include:

Onshore unconventional gas development (fracking): The gas field developments closest to production are in the Beetaloo Basin, an area of 28,000,000 ha between

Katherine and Tennant Creek.[1] However, there are petroleum exploration licenses (including exploration permits and applications) covering almost the entire Northern Territory.[2]

Middle Arm petrochemical hub: This industrial precinct on Middle Arm Peninsula in Darwin Harbour will potentially have a mixture of petrochemical and other facilities. The petrochemical facilities include:

- **NTLNG**: Tamboran Resources have been allocated land at Middle Arm for their proposed LNG facility to export unconventional gas from the Beetaloo Basin with an initial capacity of 6.6 million tonnes per annum (Mtpa) of LNG, potentially rising to 20 Mtpa.[3] At its proposed full capacity, this would be the largest LNG facility in Australia and would export gas with over 80 million tonnes of emissions annually in Australia and overseas;[4] and
- Facilities for the conversion of fossil gas into hydrogen, methanol, ammonia, urea and ethylene.[5]

Barossa Gas Project: A project in Santos' offshore gas field in Commonwealth waters approximately 285 km north of Darwin. It includes a floating production storage and offloading facility (FPSO) and pipeline infrastructure to feed the existing LNG train at Darwin LNG.[6] The Barossa gas field has the second highest level of CO_2 reservoir emissions—and, as such, the second highest emissions intensity—of any new gas project proposed in Australia.[7]

Evans Shoal gas field: ENI are reportedly planning to develop their offshore Evans Shoal gas field, located approximately 300 km north-west of Darwin in Commonwealth

[1] DISER (2023) *Beetaloo Sub-Basin*, https://www.industry.gov.au/publications/beetaloo-strategic-basin-plan/beetaloo-sub-basin

[2] Northern Territory Government, Department of Environment Parks and Water Security (2023) *POINT Petroleum Onshore Information Northern Territory*, https://depws.nt.gov.au/onshore-gas/onshore-gas-in-the-northern-territory/petroleum-onshore-information-northern-territory

[3] Tamboran Resources (14 June 2023) *AusbizTV interview*, https://twitter.com/tamboran_tbn/status/1668800685402468354?s=46&t=yuyMG_q8mDL1QYjsp_mMA

[4] Ogge (2023) *Emissions from the Tamboran NT LNG facility*, https://australiainstitute.org.au/report/emissions-from-the-tamboran-nt-lng-facility/

[5] Northern Territory Government (2023) *Middle Arm Sustainable Development Precinct: Industries*, https://middlearmprecinct.nt.gov.au/Industries

[6] Santos (2023) *Barossa Gas Project*, https://www.santos.com/barossa/

[7] Morrison and Ng (2023) *Eni's Verus not so true on net zero*, Appendix 1 p.23, https://ieefa.org/resources/enis-verus-not-so-true-net-zero

waters.[8] The gas would feed a new LNG processing train at Santos' Darwin LNG facility. The Evans shoal gas field has the highest level of CO_2 reservoir emissions—and, as such, the highest emissions intensity—of any new gas project proposed in Australia.[9]

Carbon capture and storage (CCS): There are two large CCS projects proposed for the Northern Territory:

> **INPEX-led Bonoparte CCS Assessment**: A joint venture between INPEX, Woodside and Total to pipe CO_2 from a CCS hub at the proposed Middle Arm petrochemical precinct to inject it into the Bonaparte Basin.[10]
>
> **Santos Bayu Undan CCS:** A proposal to pipe reservoir gas from Santos' Barossa gas field, and potentially other sources, via Darwin to the depleted Baya Undan gas fields in Timor Leste waters.[11]

CCS has a long history of failure[12] and its use is widely considered greenwashing to enable new fossil projects that would otherwise be unacceptable.[13] The UN Secretary general recently called out CCS as greenwashing, noting that many have been "far too many [people] willing to bet it all on wishful thinking, unproven technologies and silver bullet solutions."[14]

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[8] Fitzgerald (2023*) Italian energy company Eni to develop Evans Shoal gas field described as 'carbon bomb'*, https://www.abc.net.au/news/rural/2023-05-11/eni-verus-evans-shoal-gas-field-carbon-emissions/102331674

[9] Morrison and Ng (2023) *Eni's Verus not so true on net zero*, Appendix 1 p.23, https://ieefa.org/resources/enis-verus-not-so-true-net-zero

[10] INPEX (2023) *INPEX-Led Bonaparte CCS Assessment Joint Venture Awarded Acreage Offshore Northem Territory in Australia*. https://www.inpex.com.au/news-and-updates/media-centre/media-releases/inpex-led-bonaparte-ccs-assessment-joint-venture-awarded-acreage-offshore-northern-territory-in-australia/

[11] Santos (2022) *Globally Significant Carbon Capture and Storage Project A Step Closer*, https://www.santos.com/news/globally-significant-carbon-capture-and-storage-project-a-step-closer/

[12] Robertson (2022) *Carbon capture has a long history. Of failure*. https://ieefa.org/resources/carbon-capture-has-long-history-failure#:~:text=Apart%20from%20the%20poor%20performance,stage%20or%20was%20suspended%20early.

[13] Milne (2023) *Chevron's troubled carbon capture and storage at Gorgon set to worsen in 2023*, https://www.watoday.com.au/national/western-australia/chevron-s-troubled-carbon-capture-and-storage-at-gorgon-set-to-worsen-in-2023-20230711-p5dngj.html

[14] Jones (2023) *UN secretary-general calls out carbon capture as greenwashing*, https://www.offshore-technology.com/news/un-secretary-general-calls-out-carbon-capture-as-greenwashing/?cf-view

GAS PROJECTS CROWD OUT OTHER BUSINESSES

Jobs and economic activity from large gas projects come largely at the expense of jobs and economic activity in other industries.

Large gas projects a involve a short, intense construction phase. This phase requires a large workforce for a short amount of time, but once it is complete, these projects require few workers in the operational phase.

Gas projects require a predominantly skilled workforce. This means that, to the extent that they employ local people at all, they tend to draw skilled workers away from existing industries with high wages, rather than training local unemployed people.

This is disruptive to businesses in these industries. Such businesses often invest significant time and resources into training staff, and the arrival of a large gas project means that, in order to retain those employees and/or recruit further staff, they are forced to compete with the wages offered by multinational oil and gas companies.

Gas projects also increase other costs to local businesses and the community in general: servicing vehicles and machinery becomes more difficult and expensive, and rents increase.

A detailed resource industry-funded study into the impacts of onshore unconventional gas and coal development in Queensland's Darling Downs includes the following description by a local business stakeholder of the impacts of the construction phase:

> What [gas projects are] paying [local workers] for wages [in some towns] is two and half times what the wage should be—just to hold men. That's forcing [the cost of] consumer goods up, to try to cover the costs of those wages… So it's all spinning down the line… [For example] from a hardware perspective [for]anyone doing renovations to their home, even just the little bits are all getting more expensive because these guys are trying to cover the increase in wages that they've had to pay to retain men. And the [resources] companies are walking into businesses and offering staff—mainly mechanics … huge wages."[15]

[15] Everingham et al (2013) *Energy resources from the food bowl: an uneasy co-existence. Identifying and managing cumulative impacts of mining and agriculture*, https://www.csrm.uq.edu.au/publications/energy-resources-from-the-food-bowl-an-uneasy-co-existence-identifying-and-managing-cumulative-impacts-of-mining-and-agriculture

These increased costs and disruptions can affect the viability of existing businesses, forcing some to close. They also make it harder to establish new businesses outside of the gas industry.

The gas industry itself acknowledges these crowding-out impacts, although these acknowledgements are generally buried hundreds of pages into projects' environmental impact assessments.

For example, Arrow Energy applied for a large export gas project in Queensland in 2011, including an LNG facility and an onshore gas field called the Surat Gas Project. The project is similar to the projects currently proposed in the Northern Territory with onshore gas development in the Beetaloo Basin and the NTLNG gas export facility proposed for Middle Arm in Darwin Harbour.

Arrow's economic impact assessment for the LNG part of the project alone found that it would have had the following impacts:[16]

- The loss of 1,600 jobs across Queensland and Australia, including 1,000 in manufacturing;
- The loss of $441.5 million of manufacturing activity;
- Upward pressure on inflation;
- Increased costs for small- and medium-sized businesses, possibly leading to some of these businesses shutting down;
- A decline in housing affordability for those not employed in the proposed LNG plant; and
- More upward pressure on exchange rates, adding to existing skill shortages.

Arrow's Surat Gas Project[17] (which was additional to the LNG facility component discussed above) was the subject of a separate Environmental Impact Statement. The Statement, prepared by consultants AEC, included modelling of the project's employment impacts. This modelling shows that while Arrow estimated an increase in mining and construction jobs, it also anticipated significant losses in manufacturing, agriculture and electricity and water.

[16] Grudnoff (2012) *An analysis of the economic impacts of Arrow Energy's Gladstone LNG Plant*, https://australiainstitute.org.au/wp-content/uploads/2020/12/Arrow-energy-LNG-plant_4.pdf, Arrow Energy (2021) *Economic Impact Assessment, Arrow LNG Plant, Appendix 21*, https://eisdocs.dsdip.qld.gov.au/Shell%20Australia%20LNG%20(aka%20Arrow%20LNG%20Plant)/EIS/EIS%20Appendices/appendix-21-economic-impact-assessment.pdf

[17] AEC Group (2011) *Economic Impact Assessment: Surat Gas Project Final Report*, https://www.arrowenergy.com.au/__data/assets/pdf_file/0004/28750/Appendix20O20-20Economic20Impact20Assessment.pdf

The table in Figure 1 below summarises the modelled employment impacts of the project. The positive numbers are the modelled additional jobs resulting from the project, and the negative numbers are job losses resulting from the project. The figures are broken down by industry and time period.

Figure 1: Modelled employment impacts of Arrow Energy's Surat Gas Project.

Table 5.2. Average Annual Impact on Employment in the Darling Downs and Queensland, Deviation from the Baseline (Without Project) Scenario

Industry	Darling Downs		Queensland	
	2013-14 to 2018-19	2019-20 to 2027-28	2013-14 to 2018-19	2019-20 to 2027-28
Agriculture, forestry and fishing	-56	-52	-68	-66
Mining	180	431	209	494
Manufacturing	-112	-226	-457	-680
Electricity and water	-14	-19	-148	-130
Construction	315	160	334	197
Trade	53	81	36	59
Transport and storage	-9	-18	-34	-47
Business, finance and insurance services	88	39	299	242
Public administration, defence, health and education	-50	-47	-6	34
Recreation and other services	-11	-18	-5	-11
Ownership of dwellings	0	0	-1	-1
Total Change in Employment (FTEs)	**384**	**332**	**158**	**92**

Source: Prime Research (unpublished).

Adverse impacts on employment in the industries of manufacturing, agriculture and transport and storage are estimated to be higher in Queensland than in the Darling Downs, driven by a draw of labour to the Darling Downs from these industries in rest of Queensland to support the Surat Gas Project. Skills available in these three industries are typically similar to the skills required of the Surat Gas Project.

Source: AEC (2011)

The experience of onshore gas in Queensland

State and territory governments considering whether to allow onshore gas development have the benefit of being able to reflect on the experience of coal seam gas development in local communities in Queensland, particularly the Darling Downs.

The resource industry-funded Sustainable Minerals Institute (SMI), based at the University of Queensland, carried out a detailed study of the local economic impacts of unconventional gas and coal development in the Darling Downs. The study was carried out between 2008 and 2013, during the construction phase of the region's coal seam gas (CSG) industry. [18]

[18] Everingham et al 92013) *Energy resources from the food bowl: an uneasy co-existence. Identifying and managing cumulative impacts of mining and agriculture*,

The study surveyed stakeholders from different sectors in the local community — including local businesses, agriculture, local government, advocacy groups and environmental consultants — as well as from the mining and unconventional gas industries. It asked stakeholders to assess the effect of unconventional gas and mining in the region over a five-year period, by reference to the following key indicators:

1. **Financial capital**: Available revenue streams and economic resources;

2. **Built capital**: Physical infrastructure such as buildings, transport, and equipment;

3. **Social capital**: The degree to which people know and collaborate with each other, and the level of trust people have in local organisations and institutions;

4. **Human capital**: Assets such as skills, knowledge, abilities, and good health possessed by individuals that enable them to work, earn a living, contribute to society, and thereby build other forms of capital; and

5. **Natural capital**: Key natural resources, such as water, land, clean air, wildlife, and forests that people can access for lifestyle or livelihood purposes.

Table 1 below summarises the survey responses. All stakeholder groups other than those representing mining and unconventional gas believed that the development of mining and unconventional gas had a negative impact on all or most types of capital. Even the mining and unconventional gas industry stakeholders thought that local infrastructure (built capital) had deteriorated because of mining and unconventional gas development in the region.

The local business community, which is typically very supportive of proposed gas development prior to projects' commencement, felt that mining and CSG development had had a negative impact on all forms of capital.

https://www.csrm.uq.edu.au/publications/energy-resources-from-the-food-bowl-an-uneasy-co-existence-identifying-and-managing-cumulative-impacts-of-mining-and-agriculture

Table 1: Stakeholder responses assessing the change in different types of capital because of CSG and coal development.

Stakeholder group	Natural capital	Financial capital	Social capital	Built capital	Hunan capital
Mining	Better	Better	Better	Worse	Better
CSG	Better	Better	Better	Worse	Better
Advocacy	Worse	Worse	Worse	Worse	Worse
Environment	Worse	Better	Better	Worse	Worse
Business	Worse	Worse	Worse	Worse	Worse
Community	Worse	Worse	Worse	Worse	Better
Government	Same	Worse	Same	Worse	Better
Agriculture	Worse	Worse	Worse	Worse	Worse

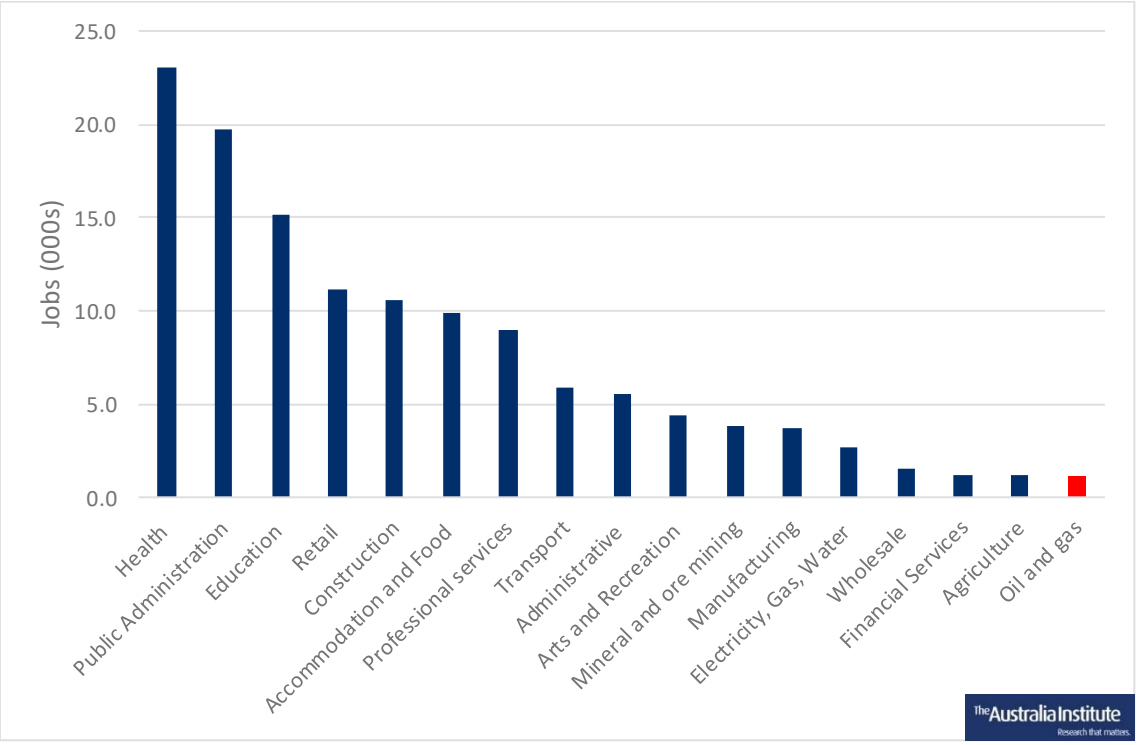
Source: Australia Institute table summarising the results of Everingham et al (2013)

GAS IS A SMALL EMPLOYER

Following the disruptive construction phase, large gas projects supply few ongoing jobs.

Despite the presence of two large LNG facilities in Darwin (Santos's Darwin LNG and INPEX's Ichthys), only around 1,000 people are employed by the gas industry in the Northern Territory. This is only around 0.7% of the workforce. Put another way, 99.3% of Territorians work in industries other than the gas industry. Figure 2 below compares employment in different industries in the Northern Territory.

Figure 2 Employment by selected industry, Northern Territory



Source: ABS (May 2023) Labour Force, Australia, Detailed, Table EQ06, https://www.abs.gov.au/statistics/labour/employment-and-unemployment/labour-force-australia-detailed/latest-release. Oil and gas employment figures are averaged over 12 months and include half Exploration and Other Mining Services.

SOCIAL IMPACTS

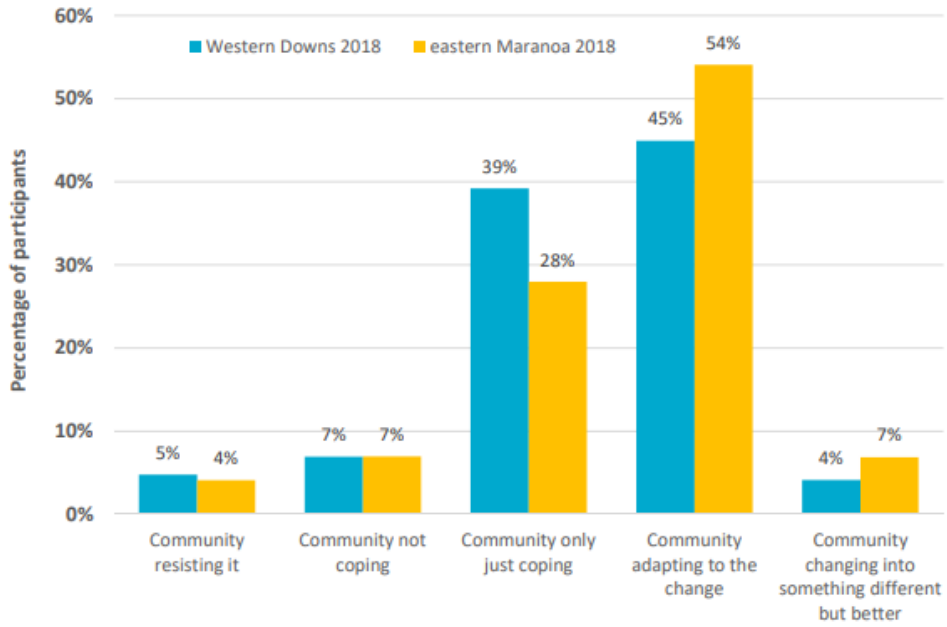
In 2021, the gas industry dominated GISERA alliance[19] surveyed community attitudes to CSG development in Queensland's Darling Downs.[20]

The results in Figure 3 below show that only between 4% and 7% of people (depending on the region) believed CSG development would change the community for the better. In the Western Downs, half the population said that they were only just coping with, not coping with, or actively resisting CSG development. 45% were "adapting to the change", which does not imply a positive view of CSG development.

[19] GISERA (2021) *National GISERA Agreement*, https://gisera.csiro.au/wp-content/uploads/2021/07/GISERA-Alliance-Agreement_fully-executed-30-June-2021_web-version.pdf

[20] Walton and McCrae (2018) *Trends in community wellbeing and local attitudes to coal seam gas development, 2014-2016-2018 Western Downs and eastern Maranoa regions, Queensland, Survey report*, https://gisera.csiro.au/wp-content/uploads/2018/12/GISE45% RA-Social-10-Final-Report.pdf

Figure 3: GISERA survey of community perceptions of adapting to CSG development: Western Downs and eastern Maranoa 2018



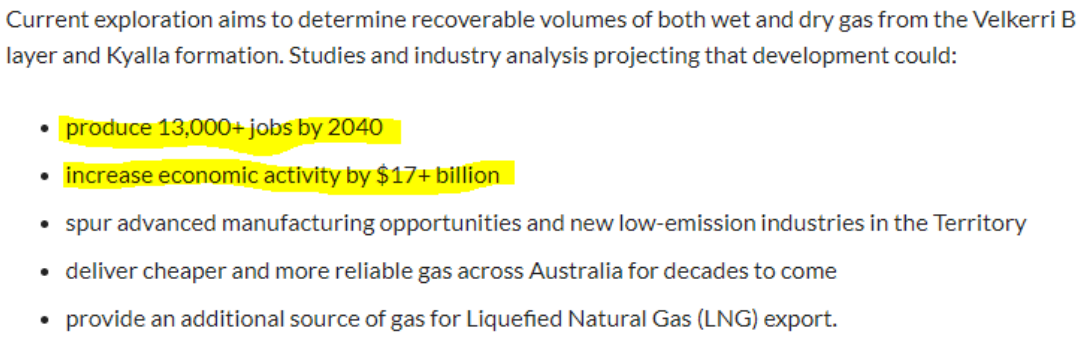
Source: Walton and McCrae (2018)

NORTHERN TERRITORY GOVERNMENT MISREPRESENTATION OF HEADLINE ECONOMIC FIGURES

The Northern Territory government claims that fracking in the Beetaloo Basin will create over 13,000 jobs and increase economic activity by over $17 billion over the period to 2040.[21]

[21] Northern Territory Government (2023) *Our Territory Gas Strategy*, https://territorygas.nt.gov.au/projects/beetaloo-sub-basin

Figure 4: Northern Territory government headline economic claims.



Current exploration aims to determine recoverable volumes of both wet and dry gas from the Velkerri B layer and Kyalla formation. Studies and industry analysis projecting that development could:

- produce 13,000+ jobs by 2040
- increase economic activity by $17+ billion
- spur advanced manufacturing opportunities and new low-emission industries in the Territory
- deliver cheaper and more reliable gas across Australia for decades to come
- provide an additional source of gas for Liquefied Natural Gas (LNG) export.

Source: Northern Territory government (2023)

These figures are presented in a way that grossly inflates the benefits presented in the modelling to which they refer.

The modelling in question was undertaken in 2017 by consultants ACIL Allen for the Northern Territory government's *Scientific Inquiry into Hydraulic Fracturing in the Northern Territory* ("the Fracking Inquiry").[22] The modelling presents a number of potential scenarios based on various levels of production.

The job and economic activity figures cited by the Northern Territory government come from the most optimistic scenario, the "Gale" scenario. This scenario is based on production of 225 PJ a year, an outcome that the ACIL Allen report itself considers "unlikely".

The job estimates cited by the Northern Territory government are in fact job-years, not the number of jobs created. This metric re-counts jobs for each and every year in which they exist. As an example, if a mining project creates ten new full-time mining positions for ten years, this creates 100 job-years of employment—but clearly only creates ten actual jobs.

The modelling report makes clear that the impacts are for full-time equivalent job-years. They should not be presented as "jobs." The Australia Institute has previously published research outlining the misuse of the ACIL Allen modelling in this way.[23]

[22] ACIL Allen (2017) *The Economic Impacts of A Potential Shale Gas Development in The Northern Territory,* https://frackinginquiry.nt.gov.au/news?a=456788

[23] 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*

When presented accurately, the “Gale” scenario predicts an increase of 524 jobs in the Northern Territory on average over the life of the project, reaching a brief peak of 1,080 jobs at the height of the construction period. As noted above, the modelling considers the Gale scenario "unlikely”, and the most likely scenario results in an increase of just 90 jobs on average. The difference between this number and the “13,000+" touted in the NT government’s claims goes to show just how spurious those claims are.

The claim that the project will “increase economic activity by $17+ billion” claim is similarly misleading. This figure refers to gross state product (GSP) over 40 years. GSP is an annual measure, and when presented as a cumulative figure over time, it should be subject to a *discount rate* to discount future cash flows back to their present values. This gives a significantly lower “net present value (NPV) estimate of GSP. The ACIL Allen modelling includes NPV estimates of the GSP impacts but the NT government has chosen to use the misleading and inflated undiscounted results.

More importantly, GSP (whether discounted or not) is a measure of economic output not welfare. The GSP impacts include the entire value of the sale of the gas produced by fracking. However, much of this money never reaches the NT—it goes straight to the owners of the gas companies, a fact that the ACIL Allen report acknowledges:

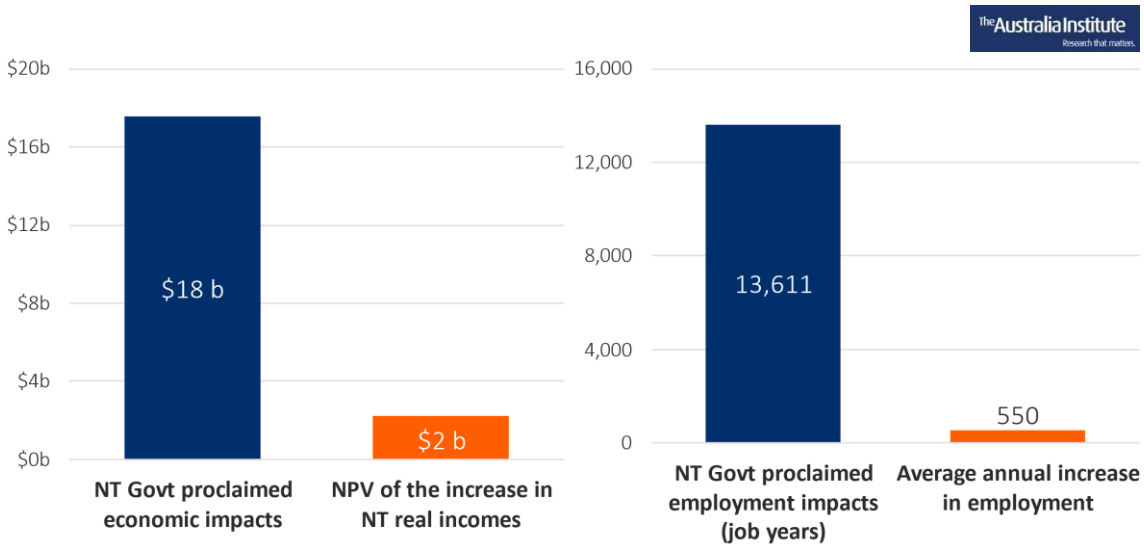
> The real output impact of the [gas] industry is different to the real income impact because, in an output sense, the value of the gas exported is realised in the Territory, whereas in an income sense, the value of the gas exported is realised through profits generated and taxation payments, which largely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

A more accurate measure of the economic and welfare impacts for the NT of such projects, according to ACIL Allen, are changes to real incomes. The ACIL Allen modelling suggests that real income impacts in the NT are around one third of the impact on real GSP.

Correctly stated, the Gale scenario’s estimate is that over the entire 30-year period of fracking in the Beetaloo region, real incomes in the NT could be $2.2 billion higher than they would be otherwise. This is an average of $85 million a year.

Figure 5 shows how enormously overstated the NT government’s claims about the economic benefits as of the project are when compared to the actual, correctly presented modelled benefits.

Figure 5: Claimed vs modelled economic impacts.



Source: Analysis of ACIL Allen (2017)

NET ZERO JOBS

However, it turns out that even the benefits outlined in the previous section are overstated. This is because fracking jobs in the NT would come at the expense of jobs elsewhere in the Territory and in the rest of Australia.

In fact, as the ACIL Allen report points out, the Beetaloo Basin project's net impact on jobs Australia-wide is zero:

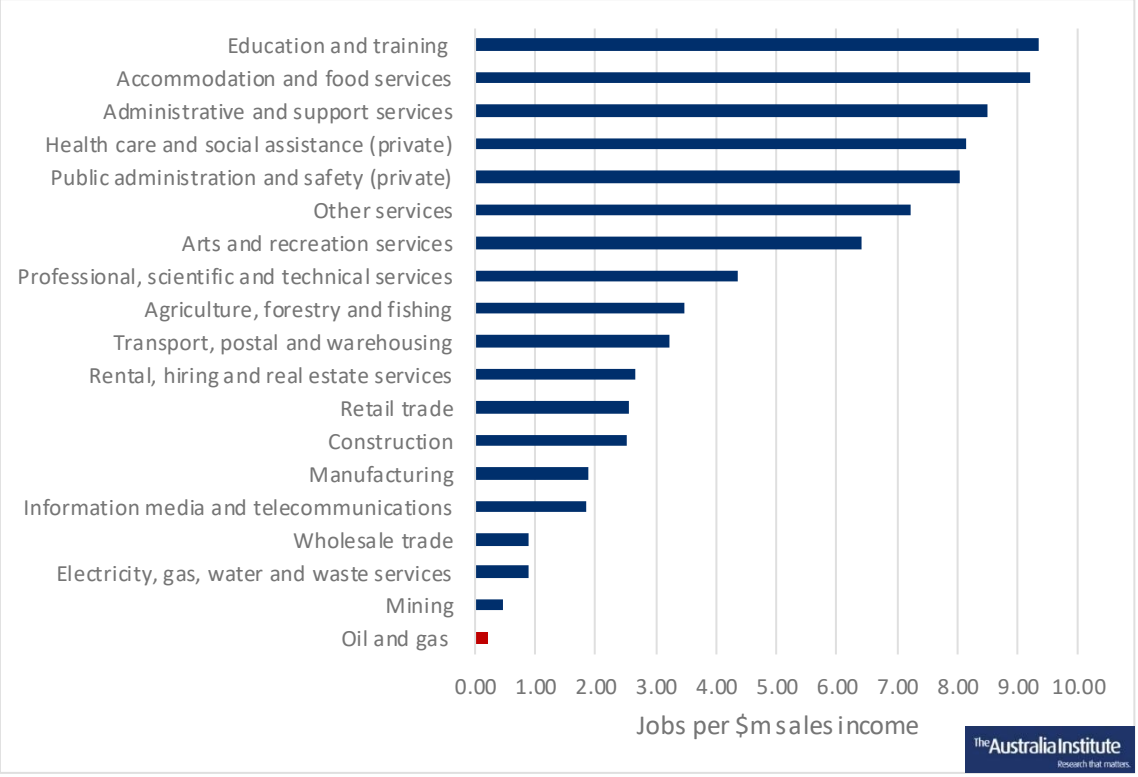
> However, the total employment impact of the industry development under the GALE scenario is minimal, due to the resulting draw on labour from other industries in the Territory and other parts of Australia.
>
> Over the study period, the industry is estimated to create 13,611 FTE direct and indirect FTE jobs at an average of 524 FTE jobs per annum in the Territory. **However, ACIL Allen estimates that these positive impacts will be completely offset by the reallocation of employment from the rest of Australia to the Territory.** [Emphasis added]

GAS IS A LOW JOBS INTENSITY INDUSTRY

As shown in Figure 6 below, the oil and gas industry is one of the least jobs intensive industries in Australia, providing 0.2 jobs per million dollars of output. By comparison, education and training provides over eight jobs per million dollars of output.

If creating jobs is the aim of industry support, supporting virtually any other industry would be more efective than supporting oil and gas development.

Figure 6: Job intensity of selected Australian industries (jobs per $m sales income)



Source: ABS (May 2023) Australian Industry, 81550DO001_202122 Australian Industry, 2021-22 and 81550DO002_202122 Australian Industry, 2021-22, https://www.abs.gov.au/statistics/industry/industry-overview/australian-industry/latest-release#data-downloads

TAXES AND ROYALTIES

Ichthys and Darwin LNG

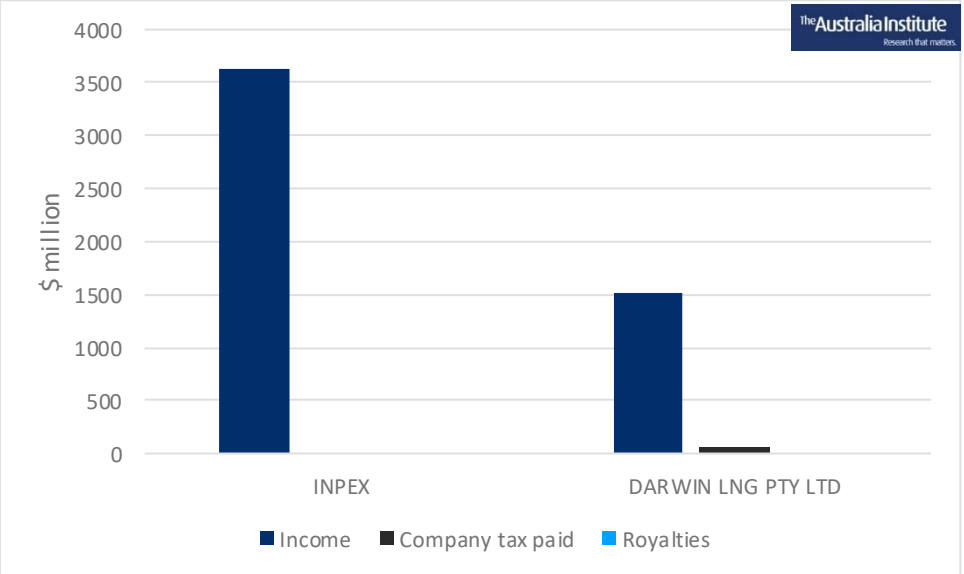
Gas resources are ultimately owned by the community, and as such, companies make payments to governments for the exploitation of these resources. These payments are referred to as “royalties”. If royalties are not paid, the companies are receiving the gas for free. The Northern Territory budget does not disclose how much revenue it receives in royalties from oil and gas activities.

INPEX’s Ichthys LNG project and the Santos-operated Darwin LNG project are the two largest oil and gas projects in the Northern Territory. Both have large LNG processing and export facilities in Darwin. However, neither pay royalties to the Northern Territory Government because the gas supplying these facilities is extracted outside of

Northern Territory coastal waters: the gas that feeds Darwin LNG is extracted in Timore Leste's waters, while Ichthys LNG is fed by gas from the Ichthys gas field, which is in Commonwealth waters (specifically, in the Browse Basin off the Western Australian coast). The Commonwealth Government could impose royalties on the latter—but does not.

In 2020–21, the most recent year for which the Australian Tax Office (ATO) has data available for individual companies, INPEX's Ichthys project paid no company tax or Petroleum Resource Rent Tax (PPRT) on $3.6 billion of income.[24] Santos's Darwin LNG paid just $70 million in company tax, around 4.6% of its $1.5 billion income in that year.[25] It is unclear if the PRRT paid by Santos in that year includes any contribution from Darwin LNG. Figure 7 below summarizes the income, company income tax and royalty contributions of these two projects.

Figure 7: INPEX and Darwin LNG company tax and royalties 2020–21.



Source: ATO (November 2022) *Corporate tax transparency: report of entity tax information,* https://www.ato.gov.au/Business/Large-business/In-detail/Tax-transparency/Corporate-tax-transparency-report-for-the-2020-21-income-year/

[24] ATO (November 2022) *Corporate tax transparency: report of entity tax information,* https://www.ato.gov.au/Business/Large-business/In-detail/Tax-transparency/Corporate-tax-transparency-report-for-the-2020-21-income-year/

[25] ATO (November 2022) Ibid.

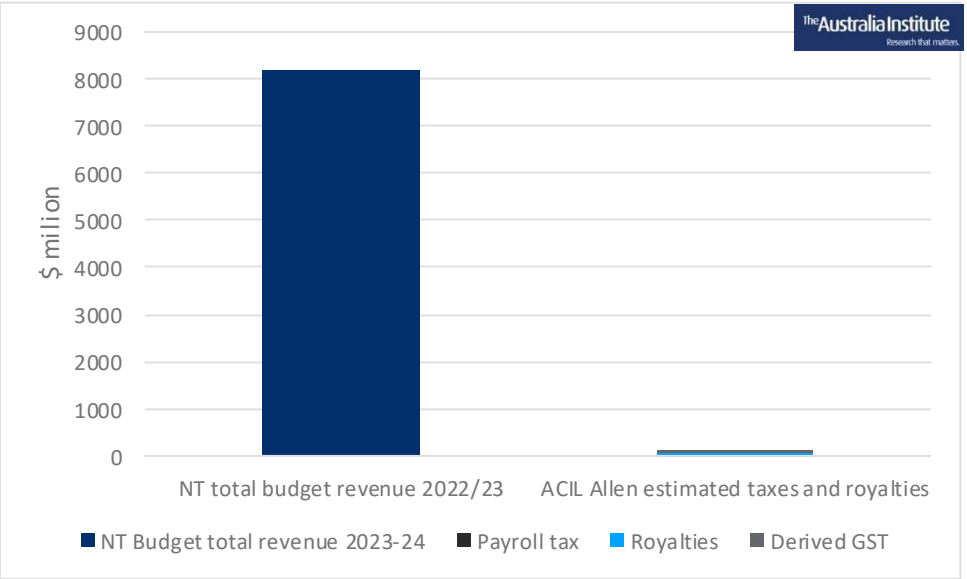
Potential revenue from fracking

Northern Territory revenue

Since Beetaloo gas is extracted onshore in the Northern Territory, it would provide some revenue to the Northern Territory Government through royalties—unlike the LNG projects fed by offshore gas developments in Commonwealth or international waters, which pay none.

However, even under the most optimistic "Gale" scenario in ACIL Allen's modelling for the Fracking Inquiry, royalties would be $69 million annually on average. This is less than 1% of the NT Government's total revenue in 2023–24.[26] Even with the modelled revenue from payroll tax and derived GST from fracking added, the revenues from the project would comprise less 2% of the Territory's budget.

Figure 8: ACIL Allen modelled potential fracking revenue compared to total NT budget



Source: ACIL Allen (2017), Northern Territory Government (2023)

Commonwealth revenue

The ACIL Allen modelling estimates that the Australian Government would receive $204 million annually under the Gale scenario—around 0.03% of the total revenue collected by the Australian Government in 2022–23.[27]

[26] Northern Territory Government (2023) *Budget 2023-24, Budget Paper No. 2 Budget Strategy and Outlook*, Table 2.6, p.18, https://budget.nt.gov.au/__data/assets/pdf_file/0010/1224100/2023-24-bp2-budget-strategy-outlook.pdf

[27] Australian Government (2023) *Budget 2023-24, Budget paper No.1, Statement 5*, https://budget.gov.au/content/bp1/download/bp1_bs-5.pdf

However, even this may be optimistic. The Deputy Commissioner of the Australian Taxation Office (ATO) has labelled the oil and gas industry "systemic non-payers" of tax.[28] By far the largest onshore gas projects in Australia are the CSG LNG projects in Queensland. To 2020–21 (the most recent year for which ATO data on individual companies' tax contribution is available), none of these projects' operators have paid any company tax and onshore gas projects are not subject to PRRT.

Figure 9 below summarises these projects' contribution—such as it is—to Australia's revenue base. The revenue estimates in the second column from the left are from another ACIL Allen report, in this case commissioned by the gas industry lobby group Australian Energy Producers (APE), formerly known the Australian Petroleum Production and Export Association (APPEA).

Figure 9: APPEA estimate of company income tax revenue from Queensland CSG LNG projects compared to actual

Year	APPEA estimate	Arrow (Shell/ PetroChina)	BG Group (Owners QGC prior to Shell acquisition in 2016)	APLNG (Origin/ ConocoPhillips/ Sinopec)	Santos (Operators and 20% share of GLNG)	Petronas (27.5% share of GLNG)	Total (25 per cent share of GLNG)	Kogas (15 % share of GLNG)
	$ million	$ million	$ million	$ million	$ million	$ million	$ million	$ million
2014	400	0	0	0	0	N/A	N/A	N/A
2015	800	0	0	0	0	N/A	N/A	N/A
2016	1,600	0	N/A	0	0	N/A	N/A	N/A
2017	2,000	0	N/A	0	0	0	0	N/A
2018	2,000	0	N/A	0	0	0	0	0
2019	2,200	0	N/A	0	3	0	0	0
2020	2,200	0	N/A	0	0	0	0	0
2021	2,300	0	N/A	0	0	0	0	0
Total	13,500	0	0	0	3	0	0	0

Source: Australian Petroleum Production & Exploration Association (2012) *Economic significance of Coal Seam Gas in Queensland*, https://www.appea.com.au/wpcontent/uploads/2013/05/120606_ACIL-qld-csg-final-report.pdf, Australian Taxation Office (2022) Corporate Tax Transparency, https://data.gov.au/dataset/ds-dgac2524c87-cea4-4636-acac-599a82048a26/details

SUBSIDIES

The lack of return to the Australian community, including Territorians, has not deterred the Australian and Northern Territory Government providing large subsidies to the gas industry.

[28] McIlroy (2019) *Oil, gas 'systemic non-payers' of tax*, https://www.afr.com/politics/federal/oil-gas-systemic-non-payers-of-tax-20191211-p53iys#:~:text=The%20ATO%20has%20labelled%20102,the%20mining%20and%20energy%20sector.

Australia Institute analysis of fossil fuel subsidies by federal, state and territory governments in 2023[29] found the Federal Government is subsidising a range of measures that assist the oil and gas industry in the Northern Territory including:

- $1.9 billion to assist a petrochemical hub at Middle Arm that will provide demand for NT gas projects;
- $217 million to build roads explicitly for the onshore gas industry; and
- Marine infrastructure—including the Northern Australia Infrastructure Facility-supported ship lift—that will partly assist the offshore gas industry.

The same analysis found $3.5 billion in Northern Territory Government subsidies to the oil and gas industry over forward estimates.

BEETALOO GAS WILL NOT ENSURE EAST COAST GAS SUPPLY OR REDUCE PRICES

The gas industry[30] and Australian governments[31] regularly claim gas from the Northern Territory is required to ensure the supply of gas on the east coast of Australia, and/or reduce gas prices.

This is untrue. Gas development in the Northern Territory is driven by the export market. However, if Beetaloo gas was to reach the Australian east coast market, there is no reason that the equivalent amount of gas currently supplying the domestic market could not be redirected for export.

In 2021–22, the latest year for which published data is available, 82% of gas produced in Australia was either exported directly or used by gas export companies to process the gas for export as LNG.

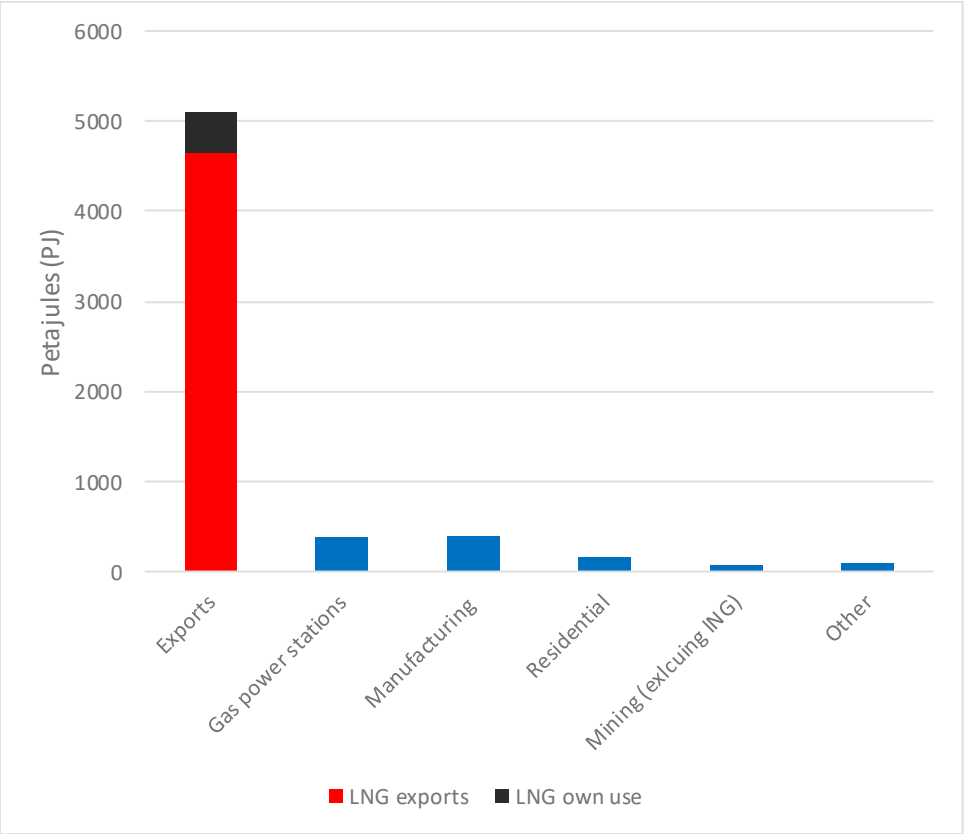
Figure 10 below compares gas used by the LNG industry for exports (red) and processing the gas for export (black), with gas used by various sectors of the Australian economy shown in blue.

[29] Campbell et al (2023) Fossil fuel subsidies in Australia 2023, https://australiainstitute.org.au/report/fossil-fuel-subsidies-in-australia-2023/

[30] Australian Energy Producers (2023) Media Release: Beetaloo green light ushers in economic prosperity and east coast energy security, https://energyproducers.au/all_news/media-release-beetaloo-green-light-ushers-in-economic-prosperity-and-east-coast-energy-security/

[31] Northern Territory Government (2023) Our Territory Gas Strategy, Beetaloo Sub-basin, https://territorygas.nt.gov.au/projects/beetaloo-sub-basin

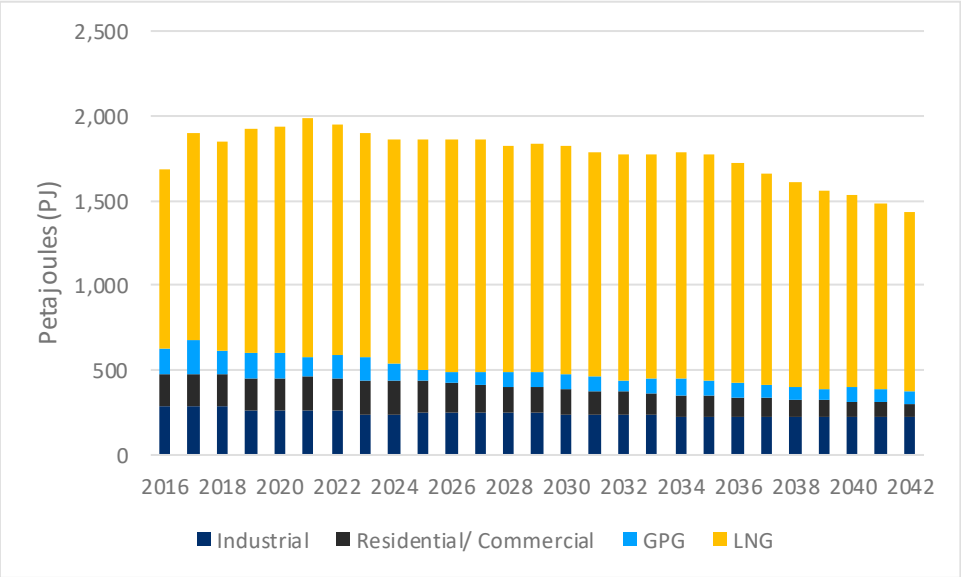
Figure 10: Australian gas use by sector 2012-22



Source: Australian Energy Update (2023)

Similarly, Figure 11 below shows actual and projected gas exports (in yellow) compared with gas used domestically for industry, residential and commercial, and electricity generation (GPG) on the east coast of Australia. Australia does not have a gas supply problem; we have a gas export problem.

Figure 11: Actual and forecast total annual gas consumption, all sectors, Orchestrated Step Change (1.8°C)



AEMO (2023) Gas Statement of Opportunities 2023, https://aemo.com.au/en/energy-systems/gas/gas-forecasting-and-planning/gas-statement-of-opportunities-gsoo

The Australian Competition and Consumer Commission (ACCC) has noted that LNG producers have influence over 90% of east coast gas reserves, placing them in a position to influence the supply and development of gas across the entire east coast.[32]

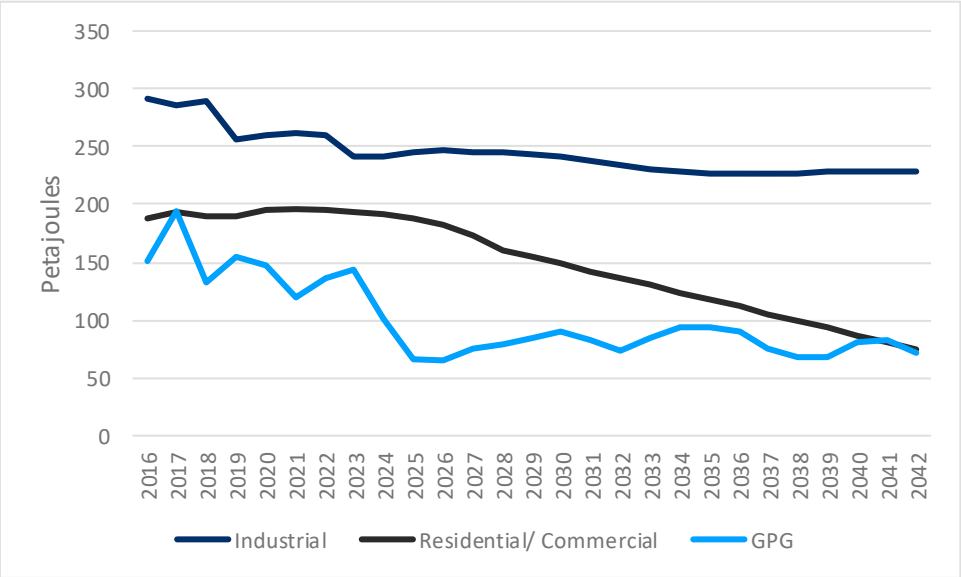
LNG producers are also net takers from the domestic market, in that they export more gas than they produce. This means that they are exporting gas from fields developed for the domestic market.[33]

As shown in Figure 10 below, domestic gas demand in eastern Australia is falling, particularly gas for electricity use which has fallen 30% since 2017 and is expected to halve again by the mid-2020s before rising slightly towards the end of the decade. Residential and commercial demand is forecast to fall by 60% by the end of the forecast period (2042).

[32] ACCC (January 2023) *Gas Inquiry 2017-2030, Interim report*, https://www.accc.gov.au/system/files/Gas%20Inquiry%20-%20January%202023%20interim%20report%20-%20FINAL_0.pdf

[33] ACCC (January 2023) ibid.

Figure 12: Domestic gas demand in eastern Australia, actual and forecast, Orchestrated Step Change Scenario.



Source: AEMO (2023) Gas Statement of Opportunities 2023, https://aemo.com.au/en/energy-systems/gas/gas-forecasting-and-planning/gas-statement-of-opportunities-gsoo

POTENTIAL EMISSIONS FROM BEETALOO BASIN GAS

The amount of emissions from Beetaloo Basin gas will depend on the level of production. Because gas production has not commenced yet, estimates of emissions are based on production scenarios.

The Fracking Inquiry estimated that under a high production scenario (1240 PJ/year), gas in the Beetaloo Basin could add up to 39 Mt CO_2 equivalent (CO_2-e) to Australia's emissions annually, and close to 100 Mt CO_2-e globally.[34] A more recent report by Reputex using a similar production scenario found emissions in Australia would be 34 Mt CO_2-e per year, and 89 Mtpa CO_2-e globally.[35]

Since then, one proponent of the Beetaloo development—Tamboran Energy—has proposed an LNG export facility, so emissions estimates can be based on their stated production capacity.

[34] The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (2018) *Final Report, Chapter 9, Table 9.4 p.228*, https://frackinginquiry.nt.gov.au/__data/assets/pdf_file/0006/494295/Chapter-9_Greenhouse-Gas-emissions.pdf

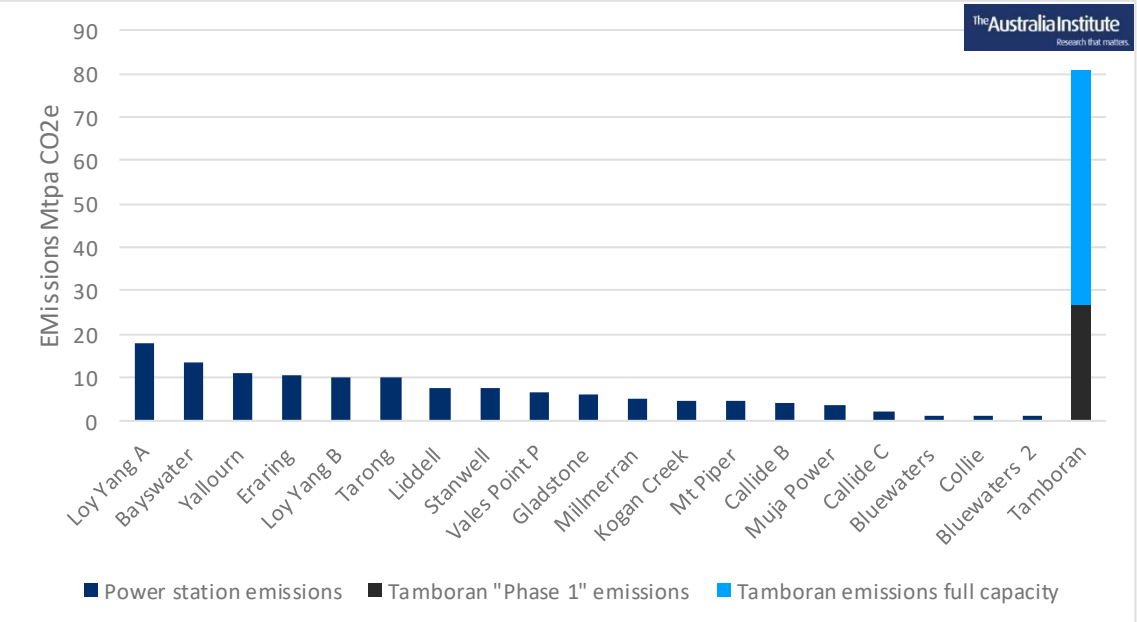
[35] Reputex (2021) *Analysis of Beetaloo Gas Basin Emissions & Carbon Costs, Figure 6, p.11,* https://www.reputex.com/wp-content/uploads/2021/10/REPUTEX_Analysis-of-Beetaloo-Gas-Basin-Emissions-and-Carbon-Costs_Oct21F.pdf

The amount of gas produced in the Fracking Inquiry and Reputex scenarios is expressed in energy units, petajoules (PJ), because it refers to the potential amount of gas produced prior to export. When gas is liquefied for export, it is usually expressed in million tonnes (Mt) and the capacity of export facilities is expressed in million tonnes per annum of LNG (Mtpa LNG). The volume of LNG can still also be expressed as its energy content in petajoules.

Tamboran have said their NTLNG export facility at Middle Arm would initially export up to 6.6 Mtpa LNG (366 PJ) of fracked gas from the Beetaloo Basin, potentially rising to 20 Mtpa LNG (1108 PJ).[36]

Australia Institute analysis found that at full capacity (20 Mtpa LNG/ 1108 PJ), the gas exported from this project would add around 80 Mt of CO_2-e to the atmosphere annually—the equivalent of twelve coal power stations.[37] Figure 11 below compares the full life cycle emissions of gas from Tamboran's project to the emissions of coal power stations currently operating in Australia.

Figure 13: Annual emissions from coal power stations v Tamboran



Source: Clean Energy Regulator (2023) *Electricity sector emissions and generation data 2021–22:* Tamboran (2023), Interview AusbizTV, first published in Ogge (2023) *Emissions from the*

[36] Tamboran Resources (14 June 2023*) AusbizTV interview,* https://twitter.com/tamboran_tbn/status/1668800685402468354?s=46&t=yuyMG_q8m-DL1QYjsp_mMA

[37] Ogge (2023) Emissions from the Tamboran NT LNG facility, https://australiainstitute.org.au/report/emissions-from-the-tamboran-nt-lng-facility/

Tamboran NT LNG facility, https://australiainstitute.org.au/wp-content/uploads/2023/08/Report-Emissions-from-the-Tamboran-NT-LNG-facility-WEB.pdf

CONCLUSION

The idea that jobs and economic activity from large gas projects can simply be added to existing jobs and economic activity is a naïve misunderstanding of how these projects interact with the exiting economy.

In reality, much of the employment and economic activity of these projects comes at the expense of jobs and economic activity in existing industries. The benefits of gas development are largely captured by the gas companies themselves, while the costs are carried by existing businesses and the wider community.

The oil and gas industry are also systematic non-payers of tax. Most offshore gas is royalty-free, and royalties to the Northern Territory Government from onshore gas are unlikely to significantly increase the Territory's revenue.

Arguments that the gas is needed for the east coast market are disingenuous attempts to justify export projects. East coast gas demand is falling and any additional gas injected into the east coast market will simply mean the export of the equivalent amount of gas currently supplying the east coast from elsewhere.

At the same time, the environmental costs are potentially enormous. Building twelve new coal power stations would be considered entirely unacceptable in Australia—and yet the emissions resulting from fracked gas exported from a single project, Tamboran Energy's export facility planned for the Middle Arm precinct in Darwin Harbour, would produce the equivalent amount of CO_2-e.

In a rapidly heating world, pumping such huge amounts of greenhouse gases into the atmosphere is simply not acceptable. Instead of presenting wildly inflated estimates of jobs and economic benefits to justify these projects, the NT government needs heed the calls of the IEA, United Nations, the UNFCCC and scientists around the world, to end all new fossil fuel production.