



3 September 2026

Regulation of shale gas in the Beetaloo Basin, the federal Safeguard Mechanism and Pepper Inquiry recommendation 9.8

Key points

- **The 2018 Pepper Inquiry was unequivocal: Australian lifecycle emissions from development of the shale gas industry in the NT must be fully offset.** Wherever they occur in the country, the firm opinion of the expert panel was that mitigating the risks associated with development of the shale gas industry in the Northern Territory (NT) required the full lifecycle emissions from producing, processing and use of the fossil fuel to be fully offset.
- **Despite their promises to meet this recommendation, it has almost entirely been repudiated by the federal and NT governments.** Notwithstanding past bipartisan commitments made at both the NT and federal level, neither government has taken the necessary steps to deliver against this Inquiry recommendation. The federal Safeguard Mechanism is manifestly insufficient to deliver against recommendation 9.8 in full and is the only relevant scheme in place at either level of government.
- **More than 95% of emissions from the Beetaloo Basin this decade attract no offset requirement.** Aggregate lifecycle emissions across the four most advanced shale gas projects in the NT will reach well over 6 million tonnes across the projects' operating lives: an amount roughly equivalent to the climate pollution created by the NT's power sector every year. Under recommendation 9.8, these emissions should be offset in their entirety. Instead, across the projects' operating lives just 269,000 tonnes will be offset: less than 5%.
- **As poor as this performance already is, even this is a likely overestimate.** The 6 million tonne figure given above does not include end-use emissions from appraisal gas expected to be sold from Santos's Beetaloo operations to the NT Government. While not yet disclosed, these end-use emissions are also likely to be exempt from offsetting requirements in their entirety, pushing the share of emissions that avoid offset requirements higher still.



Offsets expected from the four most advanced projects in Beetaloo Basin

Project (Operator)	On-site emissions (t CO ₂ e)	Downstream emissions (t CO ₂ e)	Total offsets to be surrendered
Shenandoah South (Tamboran)	569,085	2,820,000	268,661 (7.3%)*
Carpentaria (Beetaloo Energy)	180,381	1,880,000	0 (0%)
Beetaloo Basin (Santos)	276,896	Undisclosed	0 (0%)
EP 167/168 (Beetaloo Energy)	227,421	0	0 (0%)
Total	1,253,783	More than 4,700,00	268,661 (less than 4.5%)

** This figure includes both mandatory and voluntary offsets expected to be surrendered. The mandatory offset requirement under the federal Safeguard Mechanism is just 193,066 tonnes, or 5.7%.*

Under the Pepper Inquiry, on-site and downstream emissions in Australia produced as a consequence of the Beetaloo Basin gas development must be fully offset. Across the operating life of the four most advanced onshore gas projects in the Territory, more than 95% of the total emissions are not linked to any offset requirement.

Background

The Beetaloo Basin is a previously undeveloped onshore shale gas resource in the Northern Territory. It is located around 500 km SSE of Darwin, roughly half-way between Katherine and Tennant Creek. The Basin extends across approximately 30,000 km² of remote Indigenous and pastoral lands.

Shale gas reserves like those found in Beetaloo Basin are defined by their low permeability. This means that the methane gas locked in the seam doesn't readily flow through the rock to the wellhead after initial drilling. As a result, exploiting the gas reserves in the Beetaloo Basin requires the use of unconventional gas extraction methods. These include horizontal drilling and hydraulic fracturing (aka 'fracking') to open up the reservoir.

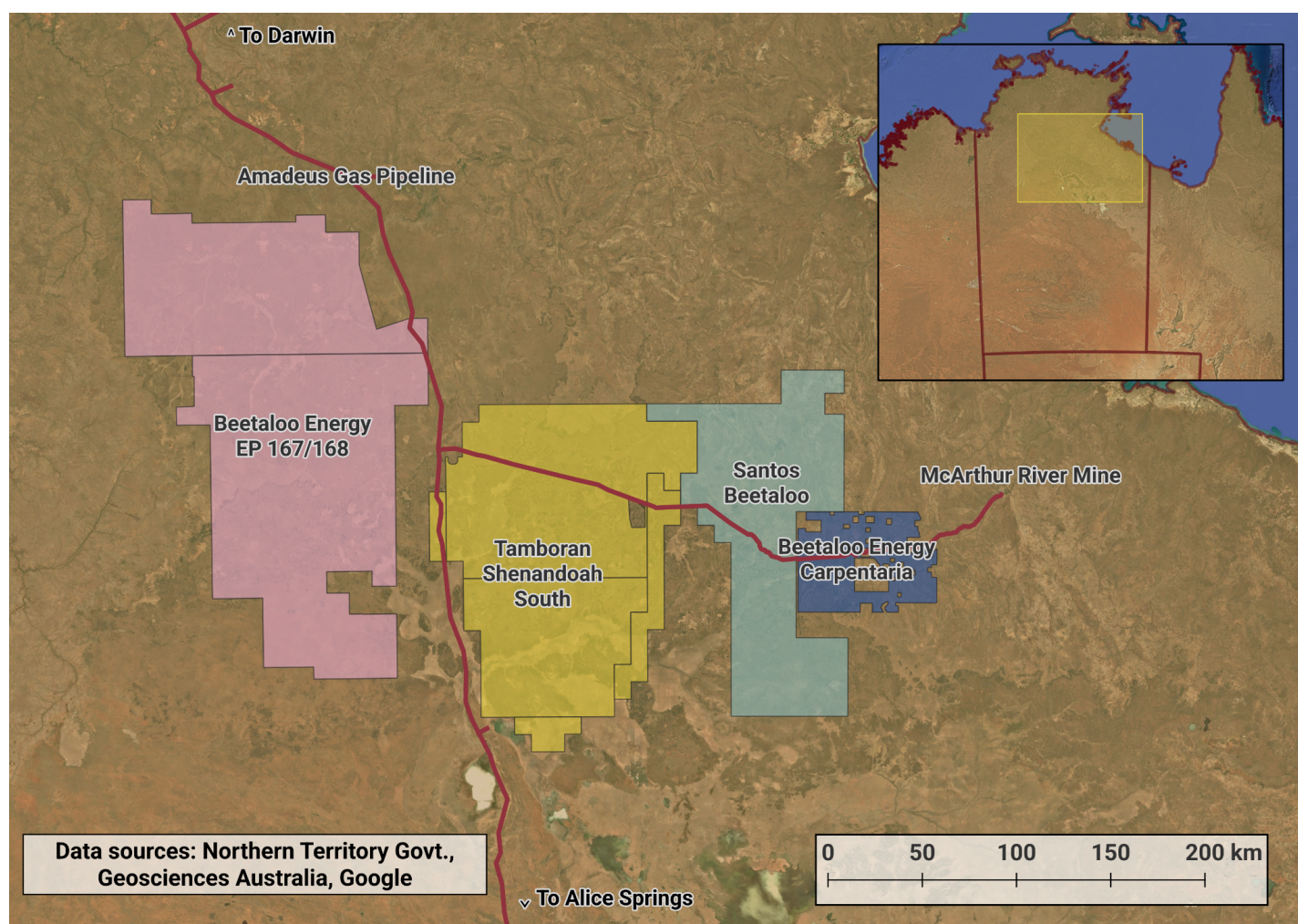
Extensive fracking occurs in Queensland across that state's coal seam gas fields, and limited fracking also occurs in tight and shale gas formations within South Australia's Cooper Basin.

However, the progressive opening up of the Beetaloo Basin represents the first time that fracking has been permitted in the Northern Territory. All past oil and gas production in the Territory has either occurred offshore or in the Amadeus Basin, located further south, and closer to the border with South Australia.

While there are a range of operators and projects under development in the Beetaloo Basin, four stand out as the most advanced. These four are the focus of this analysis. They are:

- Tamboran's Shenandoah South project, and the associated Sturt Plateau Compression Facility
- Beetaloo Energy's Carpentaria project
- Beetaloo Energy's EP 167/168, and
- Santos's Beetaloo Basin Appraisal Project

The relative locations of these four project areas are shown in the map below.



Map of the four most advanced projects in the Beetaloo Basin.



The Pepper Inquiry and recommendation 9.8

In September 2016, the then-ALP-led Northern Territory Government announced a moratorium on hydraulic fracturing of onshore unconventional petroleum reserves in the NT.

Simultaneously, the Government announced that it would establish the Scientific Inquiry into Hydraulic Fracturing of Onshore Unconventional Reservoirs in the Northern Territory, led by Justice Rachel Pepper, a judge of the New South Wales Land and Environment Court. The Inquiry came to be known colloquially as the “Pepper Inquiry” and will be referred to as such throughout this analysis.

That inquiry had a very broad scope. Relevantly for the purposes of this analysis, it extended to consideration of the climate impacts of developing an unconventional gas industry in the Northern Territory. The terms of reference for the inquiry are available [here](#), and its full final report is available [here](#).

Ultimately, in its 2018 final report, the Panel stated (emphasis added):

The recommendations in this Report are a complete package. That is, they must be implemented in their entirety in order to mitigate the risks associated with any onshore shale gas industry in the NT to an acceptable level.

The review made 132 recommendations across a diverse range of domains. Central to this analysis is [Recommendation 9.8](#) (emphasis added):

That the NT and Australian governments seek to ensure that there is no net increase in the life cycle GHG emissions emitted in Australia from any onshore shale gas produced in the NT.

To resolve any possible ambiguity, the expert panel made clear in the [text accompanying this recommendation](#) that it was not simply referring to those emissions created through the production and processing of shale gas in the NT. The emissions that should be offset under this include the full lifecycle emissions created in Australia. This includes:

- Emissions generated from extracting the Northern Territory’s shale gas in Australia, including both the exploration and production stages. For example, emissions from Tamboran’s Shenandoah South drilling program.
- Emissions generated in processing the Northern Territory’s shale gas in Australia. For example, emissions released from converting Beetaloo Basin’s gas at Darwin, Ichthys or Gladstone LNG facilities.
- Emissions generated in using the Northern Territory’s shale gas in Australia. For example, emissions from burning Beetaloo Basin gas in the Territory’s power stations.

The only component of the lifecycle emissions from Northern Territory’s shale gas that the Panel did not consider necessary to ensure were fully offset are those emissions created when exported gas is burned overseas. According to the Panel, offsetting these emissions was ultimately the responsibility of Australia’s export partners.



Notably also, the Panel was not prescriptive with the form that this offsetting should take. It did not – for example – consider it necessary that the offsetting occur through the purchase and surrender of Australian Carbon Credit Units generated under Australia’s offsetting laws.

Implementing the Pepper Review recommendations in full has long been the mantra of both the NT and Federal governments,¹ and this principle has notionally had bipartisan support at both levels of government. This explicitly includes recommendation 9.8 in both cases.

It should be noted that there are long-standing critiques of offsetting as an approach to managing greenhouse gas emissions, both in Australia and overseas. These criticisms are principled, important, and most often simply correct. Even before considering multifarious discrete scientific and bureaucratic integrity issues within individual offset methods, the trade in offsets is at its heart based on a false equivalence that is frequently irredeemable, particularly when those offsets straddle the difficult barrier between fossil fuel emissions sources and land sector carbon sequestration.

However, these issues go further than what was considered by the Pepper Inquiry, and as such will be set aside for the purposes of this analysis. Instead, this analysis will test whether existing policy measures are capable of meeting recommendation 9.8 on the final report’s own terms without applying an additional lens over the top.

The NT Government’s Pepper Inquiry implementation report [has deemed this recommendation “Complete”](#).² However, as will be shown this recommendation has substantively been ignored by the Northern Territory and federal governments, with offsets only required for the smallest component of Beetaloo Basin gas’ lifecycle emissions profile, and only a minor share of this covered.

Brief overview of the federal Safeguard Mechanism

The Safeguard Mechanism is an Australian greenhouse gas emissions trading scheme and the country’s most expansive climate policy. Under the scheme, Australia’s largest industrial facilities are bound to annually-declining emissions limits, formally known as baselines. These limits are production-adjusted, making the Safeguard Mechanism an emissions-intensity scheme, rather than a cap on absolute emissions.

Notably, for the purpose of this analysis the scheme only applies to facilities that emit more than 100,000 tonnes of climate pollution each year ([NGER Act, para 22XJ\(1\)\(b\)](#); [Safeguard Rule, s 8](#)). If

¹ ABC News, “Ahead of the NT Election, where do the parties stand on fracking?”, 20 August 2020: <https://www.abc.net.au/news/2020-08-20/nt-election-fracking-policies-labor-clp-territory-alliance/12573402>. ABC News, “Climate Change Minister says jurisdictions outside NT will help offset Beetaloo gas fracking emissions”, 19 May 2023: <https://www.abc.net.au/news/2023-05-19/chris-bowen-commits-to-beetaloo-basin-emissions-offsets/102368224>

² This determination was at least in part based on the existence of the NT’s since-revoked Large Emitters Policy ([archived here](#)). Notably, this policy did not require project proponents to offset a greater share of emissions compared to the current status quo. That policy has been replaced by the [2025 Regulatory Statement: Regulation of Greenhouse Gas Emissions in the NT](#), which specifies no additional offsetting requirements.



a facility's annual emissions fall below 100,000 tonnes in a given year, it will ordinarily avoid all safeguard liability in that year as it is no longer covered by the scheme.

Most facilities covered by the Safeguard Mechanism have their own individual baseline that is set using complex formulas that reference that facility's own historical emissions intensity, the performance of other facilities in its sector, and its annual production in each year ([Safeguard Rule, s 11](#)). Usually, facility emissions limits decline by 4.9% each year ([Safeguard Rule, s 31](#)). Facilities that commenced production after major reforms to the scheme in 2023 are held to substantially more onerous requirements, with emissions limits as much as 95% lower than an equivalent facility that pre-dates the reforms (compare, for example, [Safeguard Rule, sch 1, sub-ss 26\(5\) and 26\(6\)](#) for oil and gas extraction at existing and new facilities).

The Safeguard Mechanism has special rules that apply exclusively to shale gas extraction facilities, a category within the legislation that includes any large developments producing gas from the Beetaloo Basin ([Safeguard Rule, s 54](#)). Shale gas extraction facilities have their annual emissions limits set permanently at zero ([Safeguard Rule, sub-s 10\(2\)](#)), meaning that these facilities have no free emissions allowance under the scheme. At the time that the Safeguard Mechanism was reformed, this requirement was inserted in an attempt to partially operationalise the Pepper Inquiry's Recommendation 9.8.

Facilities bound by Safeguard baselines can either reduce their reported emissions to below their annual emissions limit in each year or surrender offset credits to bring their annual emissions below the permitted level ([NGER Act, sub-s 22XK\(2\)](#)). In theory, this means that Safeguard facilities producing shale gas must fully offset their emissions. As will be shown however, in the real world the bar is set far lower.

Treatment of Northern Territory's shale gas emissions under the federal Safeguard Mechanism

To reiterate, recommendation 9.8 of the Pepper Inquiry is not limited to just the direct, on-site emissions from shale gas production in the NT. Meeting the unequivocally mandatory minimum standards set out by the Pepper Inquiry would entail fully offsetting: (a) emissions from unconventional gas production in the NT, (b) end-use emissions from burning shale gas produced in the NT, so long as this occurs in Australia, and (c) emissions from processing that gas for export wherever that occurs.

The degree to which current arrangements cover these emissions will be discussed in turn below.

a. Production emissions

As noted above, the Safeguard Mechanism emissions limit for those facilities producing shale gas – which notionally includes all onshore unconventional gas operations in the Northern Territory – is set at zero. In theory, this is at least a partial fulfilment of the Pepper Inquiry's



recommendation 9.8. While that recommendation went substantially further than simply requiring the emissions from production itself to be fully offset, full offsetting of production emissions would represent a very good first step if it were accomplished.

However, as discussed Safeguard Mechanism emissions limits only apply to major emitters when they are emitting more than 100,000 tonnes of carbon dioxide equivalent greenhouse gas per year. Operations emitting less than this each year entirely avoid the obligation to offset their emissions. Far from being a mere hypothetical, as will be shown in the real-world figures below taken from current approved Environmental Management Plans, this means that most gas exploration and production activity occurring this decade in the Northern Territory entirely avoids any obligation to offset its emissions.

Indeed, in a perverse twist limiting annual climate pollution to less than 100,000 tonnes per year to avoid the requirement to purchase offsets is noted as a key goal in Tamboran Resources' Greenhouse Gas Management Plan for Shenandoah South.

As a result, while a shale gas facility operating in the Northern Territory would be required to fully offset its emissions in those years where annual climate pollution exceeds 100,000 tonnes, in most years between now and 2030, no offsetting requirement would be applied to any major player in the Northern Territory.

Estimated on-site greenhouse gas emissions of advanced projects in the Beetaloo Basin and their mandatory offset requirements under the Safeguard Mechanism are shown below. Cumulatively, the operators of these projects expected to produce 1,253,783 tonnes of climate pollution on-site in the next five years. According to the appraisal project EMPs, just 193,066 tonnes, or 15%, of this climate pollution is expected to be subject to mandatory offsetting requirements under federal laws. This represents the emissions from just one of Shenandoah South's five years of operation. with all other projects avoiding offset requirements in all other years.

Operator	Project	On-site emissions (t CO ₂ e)	Mandatory offsetting required
Tamboran	Shenandoah South (FY 2025–2029)	569,085	193,066 (34%)
Santos	Beetaloo Basin Appraisal Project (FY 2026–2031)	276,896	0 (0%)
Beetaloo Energy	EP 167/168 (FY 2025–2029)	227,421	0 (0%)
Beetaloo Energy	Carpentaria (FY 2025–2029)	180,381	0 (0%)
Total		1,253,783	193,066 (15%)



As part of its Greenhouse Gas Management plan submitted to the Northern Territory government, Tamboran has agreed to voluntarily offset a further 75,595 tonnes of climate pollution from its operations at Shenandoah South. Accounting for this brings the total extent of their offsets up to 47% of their cumulative climate pollution over the project life. Notably, they are alone in making this voluntary commitment, and the cumulative total offsetting to be delivered is nonetheless less than half of the project's expected on-site emissions.

Even within the narrow domain of on-site emissions, it is simply not the case that the existence of the Safeguard Mechanism amounts to a complete implementation of recommendation 9.8, which – it must again be reiterated – requires the full offsetting of lifecycle emissions from the Basin's shale gas.

Cumulative mandatory offsetting requirements and voluntary offsetting commitments across these four projects amounts to just 21% of the aggregate climate pollution created. Needless to say, neither 15% nor 21% is 100%.

b. End-use emissions

As noted above, the federal Safeguard Mechanism only places limits on the nation's largest emitters. There is no other federal or NT regulation that would lead to end-use emissions from shale gas produced in the Northern Territory being offset. The Northern Territory's government's current greenhouse gas management policies [now entirely defer the regulation of greenhouse gases to the federal Safeguard Mechanism](#).³

Other than Darwin and Ichthys LNG – emissions from which are considered in the next section – there are just three safeguard facilities that are connected to the NT's gas network: Glencore's McArthur River Mine zinc-lead mine, the McArthur River Power Station and Newmont's Tanami gold mine.

Beetaloo Energy's Carpentaria project will feed its gas into the McArthur River pipeline, connecting Glencore's mine and the power station that supplies it to the north-south Amadeus Gas Pipeline. As a result, this project will necessarily be supplying gas to the mine and power station if it proceeds. However, it is unlikely that this gas supply will lead to increased gas consumption at either. Because there will be no increase in emissions at either, this means that consumption of the gas will attract no additional offsetting requirements beyond those that are already in place.

The Northern Territory has three large, grid-connected gas power stations. These are Pine Creek, Channel Island and Weddell. As each of these three is covered by the Safeguard Mechanism's sectoral baseline for grid-connected power stations, even if the provision of gas from the Beetaloo Basin increased the amount of gas consumed at the facilities, the subsequent

³ It is worth noting that this document refers to the NT's 'Greenhouse Gas Emissions Offsets Policy and Technical Guidelines'. This 2022 document in turn leans on the NT Government's since-revoked Large Emitters Policy ([archived here](#)). Since the revocation of the Large Emitters Policy, there is now no substantive additional offset requirement in place in the Northern Territory.



increase in emissions would not attract any offsetting requirements. Nor would the provision of gas to any of the Territory's smaller power stations emitting under 100,000 tonnes per year.

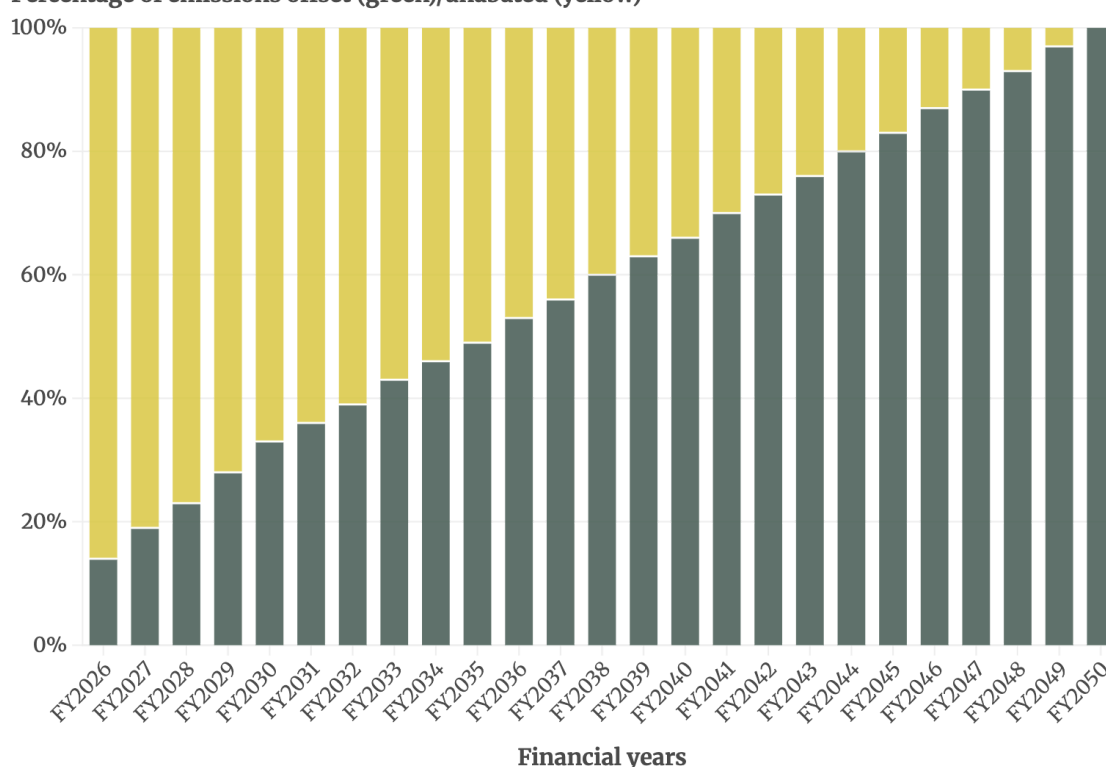
In the unlikely event that the introduction of appraisal gas from Beetaloo Basin into the NT gas network leads to increased gas use at the Territory's existing safeguard facilities – or indeed at any other facility in the country – this would attract additional offset requirements that fall far short of the Pepper Inquiry's full offset requirement.

The nature of production at these Safeguard facilities means that any such increases are unlikely. Where these increases occur, they will be small. Finally, to the extent that they do occur, the offsetting requirement will not cover the full extent of the emissions. As noted previously, the Pepper Inquiry requires all emissions to be offset in full. The offset requirements applied will be substantially lower than 100% of these emissions.

For example, if gas from the Beetaloo Basin led to increased use of electricity at Newmont's Tanami gold mine, the quantum of additional offsets required in each year would follow the curve below.

Share of electricity generation emissions at Newmont's Tanami gold mine required to be offset by year

Percentage of emissions offset (green)/unabated (yellow)



Data source: Original analysis based on Clean Energy Regulator data.



Between now and FY 2031 – the furthest extent of the appraisal gas projects considered in this analysis – an average of just 25% of the additional emissions created in this way would need to be offset under federal laws. That is, for every four tonnes that emissions from generating electricity at the Tanami mine increase, just one would need to be offset. Again, this is certainly not the 100% required to meet the Pepper Inquiry’s recommendation 9.8. This also only applies to the additional emissions. Where gas from Beetaloo displaces gas from other sources, this would attract no additional offset requirement.

It is ultimately far more likely that appraisal gas from the Beetaloo Basin will be burned elsewhere, in places that are not bound to comply with the Safeguard Mechanism. Outside of the Safeguard facilities, there is no offsetting requirement under federal or territory law. These emissions would be released without legal offsetting requirements.

A full worked example will demonstrate the degree to which the Northern Territory and federal governments’ combined approach amounts to a near-total repudiation of the 2018 Pepper Inquiry’s unambiguous recommendation that the full lifecycle emissions from unconventional gas extraction in the Northern Territory should be offset.

Tamboran’s most recent Greenhouse Gas Management Plan for the Shenandoah South project indicates that between FY2025 and FY2029, the combined emissions on-site from the drilling program and the Sturt Plateau Compression Facility will reach 569,085 tonnes of climate pollution. As noted previously, of this only 193,066 tonnes – just over one-third – will be required to be offset under the federal Safeguard Mechanism. A further 75,595 tonnes will be voluntarily offset from the project.

Meanwhile, Tamboran estimates that downstream use of gas by the NT Power and Water Corporation will produce approximately 2.82 million tonnes of climate pollution over the project’s operating life. As the Safeguard Mechanism does not apply to power generation in one of Australia’s five largest grids, this climate pollution is not attached to any offsetting requirement under federal or NT laws.

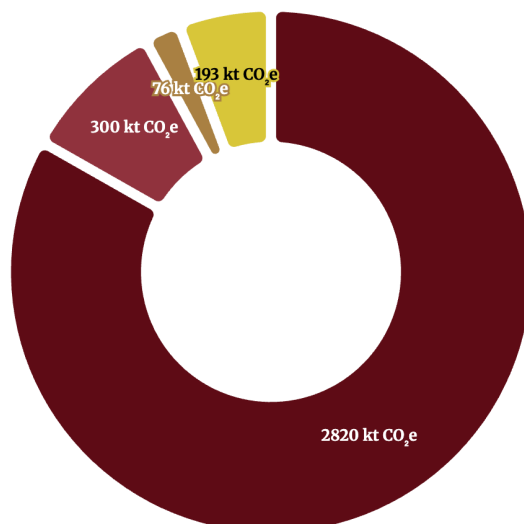
Further, because the Safeguard Mechanism contains no general requirement to avoid or offset climate pollution – just to offset a certain share of the climate pollution produced at the country’s largest industrial emitters – even if these emissions are created elsewhere in the Northern Territory the very vast majority of these emissions would never be offset.

The final outcome is shown below with offset emissions in gold, and unabated emissions attracting no offset requirement in maroon. After accounting for both mandatory and voluntary offsetting, less than 8% of the Australian lifecycle emissions from Tamboran’s shale gas operations will be offset under existing laws. That figure should be 100% to meet recommendation 9.8 of the Pepper Inquiry.



Less than one-twelfth of the climate pollution from Tamboran's Shenandoah South drilling program this decade will be offset under current federal and territory laws

■ Unabated end-use emissions ■ Unabated on-site emissions ■ Voluntary offsets ■ Mandatory offsets



Data source: Tamboran Resources, *Beetaloo Exploration Project Greenhouse Gas Abatement Plan* (2024).

And Shenandoah South is being held to a higher standard than projects from the other major players in the Basin.

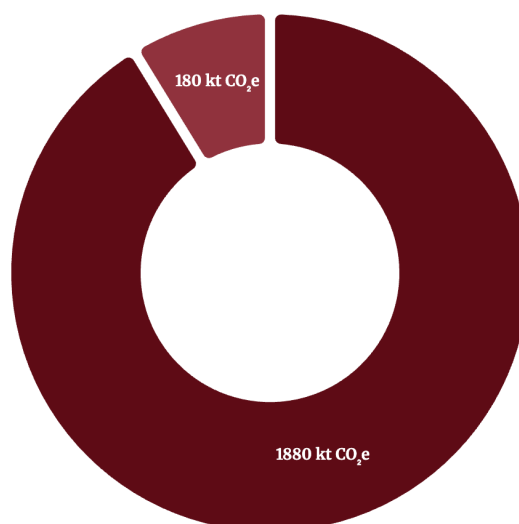
Beetaloo Energy's Carpentaria project meaningfully faces no offset requirements across its full lifecycle, with no mandatory offset requirements, no voluntary commitment, and no meaningful offset requirements placed on downstream emissions from the operation. As noted previously, Beetaloo Energy estimates that its on-site emissions will remain below the 100,000-tonne Safeguard Mechanism threshold in every year of its appraisal program. This means that the entirety of the emissions produced at the facility this decade will avoid any offsetting requirement.

Also as noted previously, appraisal gas from the Carpentaria project is expected to be fed into the McArthur River gas pipeline where some of the gas will likely be burned in the McArthur River power station or at Glencore's McArthur River mine. Neither of these uses of the gas is likely to attract additional offsetting requirements beyond those limited requirements in place at the mine and power station today. As a result of this, none of the 1.88 million tonnes of greenhouse gas expected to be produced by the appraisal project face an additional offset requirement. This means a cumulative total of just over 2 million tonnes worth of offsets have been avoided. Again, this should be offset in its entirety.



None of the climate pollution from Beetaloo Energy's Carpentaria Pilot Project this decade will be offset under current federal and territory laws

■ Unabated end-use emissions ■ Unabated on-site emissions



Data source: Imperial Oil and Gas, *Carpentaria Pilot Project Environmental Management Plan* (2024).

There is no equivalent scope 3 emissions approximation for Santos's Beetaloo Appraisal Project included in that project's EMP, and as-yet no official public estimate of the volume of gas that is expected to be produced. The volume of gas expected to be produced by the appraisal project will be commensurate with the volumes expected from the Tamboran and Beetaloo Energy projects, meaning around 2 million tonnes will be produced and on-sold over the project life. As with Carpentaria, this project is likely to avoid obligations to offset emissions across its full lifecycle and Santos has made no voluntary commitment to purchase additional offsets.

In the absence of a formal estimate of the production volumes from Santos, end-use emissions for this project – while likely to occur and certain to avoid offset requirements under existing rules – have been excluded from the totals given in this analysis. However, with some degree of conjecture, we can expect that over the project lifespan, around 2 million tonnes worth of greenhouse gas emissions will be created by the project. None of these will be offset.

According to the proponent, Beetaloo Energy's EP 167/168 project will flare all produced gas without attempting to on-sell the produced gas to the grid. This means that these emissions are included in the on-site total. None of these attract an offsetting requirement.

c. LNG conversion emissions

The processing of gas for export as liquefied gas represents another very large source of emissions under the range of possible futures for gas from the Beetaloo Basin. And while not all scenarios for the future of the Basin will result in meaningful quantities of gas from the Basin



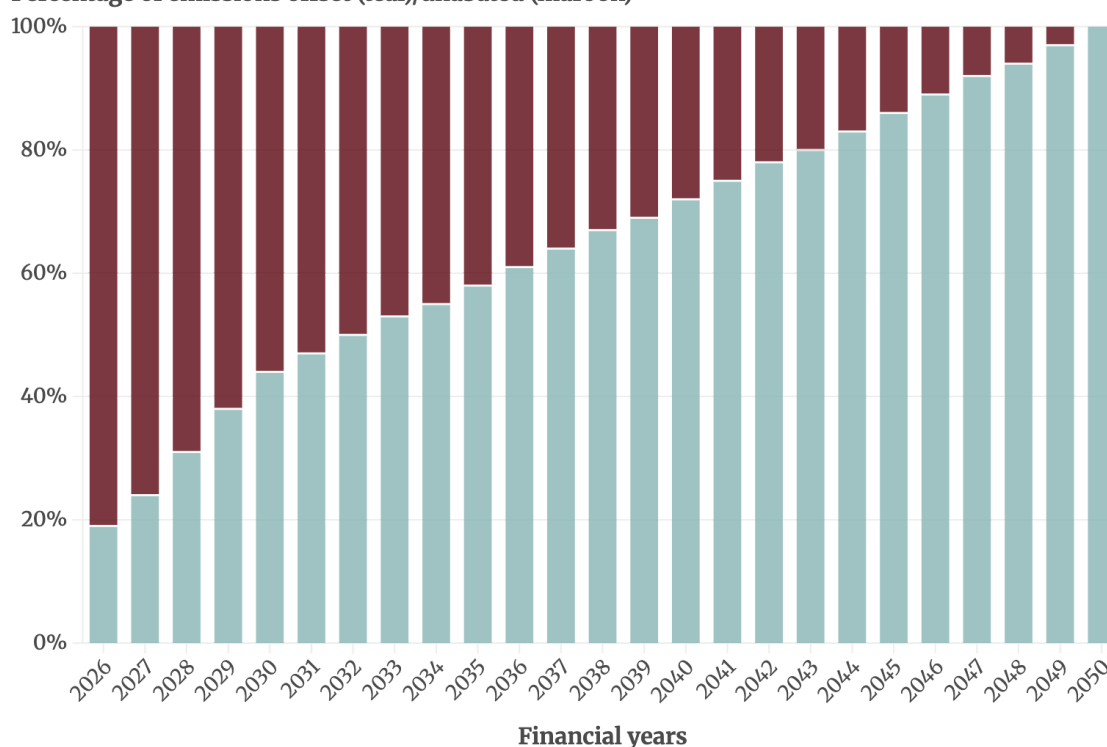
being exported, those that do are invariably the ones that result in the highest volumes of climate pollution.

Australia currently has 10 liquefied gas terminals, all of which rank among Australia's largest annual sources of industrial greenhouse gas emissions. While at least two terminal operators are planning to expand their facilities – Pluto and Ichthys – there are no plans to build a new terminal in Australia. With all existing facilities pre-dating the 2023 Safeguard Mechanism reforms, this means that no matter where gas for Beetaloo Basin is sent for export, the offsetting requirements won't meaningfully differ. Emissions created in the production of liquefied gas will be only partly offset, with the requirement slowly increasing in line with hitting the federal and NT goal of net zero in 2050.

The chart below demonstrates that gradual shift using the example of the Darwin Ichthys LNG facility. Ichthys is a facility with emissions intensity close to industry average that is a plausible recipient of gas from the Beetaloo Basin, [particularly after its planned expansion in 2030](#). If gas from the Beetaloo Basin is sent to an LNG facility anywhere in the country, it will be subject to offsetting requirements that broadly match this curve.

Share of LNG production emissions at Inpex's Ichthys facility required to be offset by year

Percentage of emissions offset (teal)/unabated (maroon)



Data source: Original analysis based on Clean Energy Regulator data.



There are no firm plans to produce LNG from the Northern Territory's onshore reserves today. However, Inpex – the majority owner and operator of Ichthys – [is clear](#) that its operations in the Beetaloo Basin are intended to provide backfill to the LNG facility. This project is not considered in this analysis.

While the offsetting requirements attached to LNG production at Ichthys gradually increase over time, there is no point between now and 2050 at which these emissions would need to be fully offset. The climate pollution generated through the conversion of gas to LNG through the first five years of the 2030s would be subject to an average offsetting requirement of just 52.5%.

Because of this, it is clear that current federal regulations are manifestly insufficient to meet the Pepper Inquiry's requirement that the development of gas in the Beetaloo Basin cause no net increase in the country's emissions. Offsetting 50%, or 75%, or even 90% of the emissions produced by the creation of LNG from the NT's shale gas is not offsetting 100% of them. Therefore, Pepper Inquiry's recommendation cannot be met by the current regulations.

Finally, it is worth noting that in theory, any gas produced from Beetaloo Basin that is sent to an LNG terminal for export would attract the reformed Safeguard Mechanism's requirement to fully offset reservoir carbon dioxide from new gas basins ([Safeguard Rule, sch 1, s 35A](#)). However, this is ultimately a redundant requirement. Gas from Beetaloo Basin could only be piped to one of Australia's Darwin or east coast LNG terminals through the NT's established gas distribution network. Safely injecting produced gas into the network would require acid gas removal at or near the production facility. Regardless of whether the gas will later be converted for export, venting of reservoir carbon dioxide at this point would attract the zero baseline for shale gas facilities described in previous sections. In any event, reservoir carbon dioxide levels in unconventional gas fields are generally low, making this additional requirement of very little overall environmental benefit.

Conclusion

The 2018 final report of the Scientific Inquiry into Hydraulic Fracturing of Onshore Unconventional Reservoirs in the Northern Territory was unequivocal. The panel's recommendations were to be taken as a whole. Partial implementation of the panel's recommendations amounts to a total failure.

This decade, well over 6 million tonnes worth of greenhouse gas will be produced across the four most advanced projects in the Beetaloo Basin. To meet the Pepper Inquiry's recommendation 9.8, every tonne of greenhouse gas released as a consequence of these projects should be offset. However, the only scheme in place at either the federal or the territory level will permit the lion's share of these emissions – well over 95% – to be released without any requirement for offsets.

Despite the NT and federal governments both having paid lip-service to the Inquiry and its recommendations, this failure to implement recommendation 9.8 is so comprehensive as to amount to a repudiation of it.



About Naru Research

Naru Research is a climate and energy research consultancy founded by Tim Baxter, a respected expert in the field with a demonstrated track-record of success working with the Australian NGO sector. Tim prides himself on his willingness to assess climate and energy policy on its raw merits – without fear or favour – and an exclusive commitment to verifiable real-world outcomes and demonstrated benefit.

This analysis was commissioned by Environment Centre NT, in line with the organisation's charitable objects.