NT Greenhouse Gas Emissions Offsets Draft Policy Comments

By Climate Action Darwin
October 2021

This is feedback on the Draft Greenhouse Gas Emissions Offsets -Policy and Technical Guidelines- Northern Territory Offsets Framework SEPTEMBER 2021. Consultation deadline: Friday 15 October 2021.

Formed in 2009, Climate Action Darwin is a thousand strong local grassroots community group. We believe it is our obligation to current and future generations to defend a safe climate for all. We aim to ensure the Northern Territory remains livable.

Thankyou for taking this feedback from Climate Action Darwin into consideration.

Avoid the coming catastrophe

We are still hoping the NT Government can recognise that climate change poses risks to Territorians that are so severe they must be urgently mitigated. With feedback loops, soon it will be too late.

Therefore it is promising to see a clear declaration that prevention is the best option:

> *"Avoiding or mitigating GHG emissions is the preferred approach"* (p4)

Climate Action Darwin are looking forward to observing *avoidance* becoming the dominant method of limiting our pollution, with a swift reduction in approvals and support for fossil fuel mining activities.

The Scientific Inquiry into Hydraulic Fracturing[1] found shale gas development in the NT could result in around 100 million tonnes of emissions *annually*, including 40 million tonnes of Australian emissions, which would *increase* Australia's emissions by 8 percent at current levels. We are all well aware we need to be on a downwards trajectory.

Clearly if we are to decarbonise our economy, mitigation of climate polluting sources is something only acceptable for existing polluting practices, not new projects. By population, we are already the highest emitting jurisdiction in one of the highest emitting countries; we cannot expect to curb the colossal pollution both onshore and offshore fossil fuel projects would bring: it must be avoided.

Recommendation:
In recognition of the dire risk climate change poses, and the fact that Northern Territory fracking is one of the largest potential sources of carbon pollution in the world, avoiding this catastrophe should be the highest priority of government: ban fracking.

[1] Over 60 scientists & experts call on NT Chief Minister Gunner to honour commitment to net-zero fracking emissions

Save offsets for unavoidable pollution

The NT Government accepted the Scientific Inquiry into Hydraulic Fracturing recommendation that - as the greenhouse gas (GHG) emissions from fracking would cause “unacceptable” climate impacts, (even *after* the mitigation of fugitive emissions) - production should not be allowed unless all (Australian) lifecycle emissions, including domestic combustion of the gas, are fully offset.

It is clear there is an understanding:

> *“Offsets provide a mechanism to compensate for emissions that cannot be avoided or mitigated.”* (p4)

While large scale fossil fuel production is unnecessary for the NT, there are already polluting activities on which the NT depends that require mitigation. For example, we are heavily reliant on long distance transport; it will take a while to convert to electric trains, buses, trucks, ships and low emissions flights.

The more our climate warms, the fewer offsetting options we will have. So we must use all our finite options to offset wisely. They cannot be squandered on avoidable extremely polluting industries like fracking or on offshore gas production.

Recommendation:
The NT urgently needs to swiftly cut our carbon pollution by offsetting unavoidable activities. Due to our limited range of offsetting opportunities, we cannot allocate them to new pollution sources.

Options for offsetting are limited

Greenhouse gas emissions offsets are accounting mechanisms to counteract emissions produced by an activity with another activity that reduces emissions. Commonly reported options for offsets currently are: avoided deforestation, reforestation and savanna fire management. Soil carbon is another option however this is not feasible in the NT.[2]

Reforestation is expensive and rare in the NT, most silviculture projects have fallen through, and often have required clear felling of existing native savannah woodland. So reforestation is unlikely to be a viable offset method unless the land already cleared is revegetated.

This leaves the fire abatement projects as the main focus. Much of the suitable savanna forests have already been allocated to carbon farming projects so there is limited scope for expansion. Indeed, many Emission Reduction Fund projects have been revoked.[2]

Once a downwards emissions trajectory is established, the NT may potentially be able to offset unavoidable emissions, but the amount of extant offset options are insufficient to mitigate new large scale fossil fuel projects.

It is possible that research into carbon sequestration can be added to the current carbon farming tally. We have allowed hot-fire-promoting gamba grass to spread across the whole northern savanna and limiting it could possibly be measured as an offset, but to do it thoroughly will be expensive. And if it is done thoroughly, it will be a self-limiting offset with increasingly expensive operations to maintain.

[2] Current options to reduce greenhouse gas production and store more carbon on Northern Territory pastoral land

Similar projects could be made controlling feral buffalo and camels. But these would need to utilize the carcasses as their decomposition is an excellent way to increase carbon emissions. Therefore, these projects will likely be cost prohibitive. Fracking is promoted as an economic boon, so some of these vast profits can be used to control our largest ferals. But similar to weeds, these need eradication plans, so it is a self limiting exercise with increasing costs as the ferals become scarce.

Recommendation:
With the importance of quickly moving to zero net emissions, the need for offsets is increasing. We must ensure the largest proportion of offsettable projects are allocated to unavoidable emissions we have already committed to. There aren't options left over for new fossil fuel projects.

Bringing our emissions down means no new fossil fuels and closing current fossil fuel combustion

The draft Offsets Policy suggests that: "the capacity of the project, proponent and industry to avoid, mitigate or offset emissions" (p8) will contribute to the overall impact on our emissions profile and trajectory towards the NT's (lax) target of net zero emissions by 2050.

Every avoided combustion of fossil fuels helps reduce our emissions. We must simply stop polluting our climate.

Even to bring our climate pollution down by the dawdling -and therefore downright dangerous- "aspirational" net target in twenty-eight years, means we must close all the coal mines and coal plants, *and* not begin any new fossil fuel projects. That includes both onshore and offshore fracking in the NT jurisdiction.

An important 2021 Climate Council report[3] warns that Australia needs to reduce emissions by 75 per cent by 2030 and reach net zero by 2035. Therefore if we are to have a possibility of keeping our lauded Territory lifestyle, the Northern Territory should map a plan to approach zero in 13 years. And ban both onshore and offshore fossil fuel projects.

*"The report '**Aim High, Go Fast: Why Emissions Need to Plummet this Decade**' is the Climate Council's science-backed vision for what Australia's best effort could look like. Australia is a nation of currently high emissions but rich renewable energy resources. The country has been ravaged by unprecedented bushfires, droughts, and floods in recent years, and decision makers should not ignore these warnings."*

Recommendation:
Poorly scoped claims that gas is cleaner than other fossil fuels must not be misunderstood as having any offset value for gas miners.

Offsetting hydraulic fracturing will cost financially

As is made clear in the 2021 RepuTex Energy report: "*Analysis of Northern Territory gas basin emissions and carbon costs*" (2021)[4], the financial cost of offsetting GHG emissions from onshore gas production in the NT would significantly impact production costs:

[3] https://www.climatecouncil.org.au/wp-content/uploads/2021/04/aim-high-go-fast-why-emissions-must-plummet-climate-council-report-210421.pdf
[4] https://www.lockthegate.org.au/reputex_analysis?fbclid=IwAR1cZFyD-_4xbM6QiOIo8-3D2avTSKBEXyDeagc8J1WuHhtb1ECpEbNq-6c

> *[...] The inclusion of carbon costs is likely to have significant implications for the commercial viability of Northern Territory gas basin projects, with potential for emissions liabilities to add between $1 --$2.5 per GJ to the cost of Beetaloo basin gas, varying with the modelled production scenario.*[5]

Analysis by The Australia Institute[6] also suggests the annual offsetting cost could reach AUD4.3 billion in 2030 and the cumulative cost of offsets from 2030-2040 (likely operational life of gas fields) could reach AUD146 billion. Offsetting fracking is much too expensive.

With the global struggle to fulfil international carbon reduction aims, carbon offsets are in increasingly high demand which means their costs are increasing. Finding affordable and readily available gold standard offsets offshore cannot be relied on.

Because gas that is exported is not expected to require any offsetting, Gisera[7] makes it clear domestic consumption is unpalatable due to offsetting costs:

> *…we would be expecting < 200PJ/year domestic consumption in almost every production scenario. Otherwise, the cost of offsetting Australian emissions from consumption of NT gas would be prohibitive.*

Allowing fracking to go ahead in the NT will increase the demand for offsets and price out publicly necessary offsetting.

> The scale of the GHG emissions from production and consumption of gas from the Beetaloo sub-basin could be many tens of megatonnes (Mt) of CO2-e annually. This quantity implies the GHG offsets required could shift the market price of land-based offsets and carbon farming.[8]

Recommendation:
Disallow fracking in the NT to protect the price of necessary and much needed offsets.

Tangential R&D projects labelled 'indirect offsets' are not offsets

It is vital that all offsets are accredited and tradeable offsets. The proposed loophole of up to 50% indirect offsets do not guarantee any mitigation. Allocating some of the much needed offsets to the alternative of investigating new ways to find offsets, known as research and development, are neither tradable nor guaranteed.

> *Indirect emissions offsets are offsets delivered by contributing funding towards research and development (R&D) that will support emissions abatement in the Territory and contribute to the 2050 net zero target. For example, this could include research that results in new carbon abatement methodologies that apply in the Territory context.* (p10)

Research should not replace offsets. It appears there are insufficient offsets to compensate for the anticipated levels of climate pollution from on and offshore gas production. That doesn't mean we should resort to trusting industry-funded research to alleviate the climate burden. In this case avoidance is the sensible approach.

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[5] "Analysis of Northern Territory gas basin emissions and carbon costs". RepuTex Energy report (2021). p. 20.
[6] https://australiainstitute.org.au/wp-content/uploads/2020/12/P637-NT-offset-paper-WEB_0.pdf
[7] https://gisera.csiro.au/wp-content/uploads/2021/09/GHG-07-website-progress-August-2021.pdf
[8] https://gisera.csiro.au/wp-content/uploads/2020/07/GISERA_NT_G7_Offsets-for-Life-Cycle-GHG-Emissions-of-Onshore-Gas-in-NT.pdf

It appears there has been a brainstorming of ideas within CSIRO[9] to resolve these issues:

> *We understand there is potential for industrial chemical consumption of shale gas methane in the plans for industrial development in Darwin's Middle Arm. This suggests accompanying consumption scenarios for the non-combustion consumption of methane and/or industrial use coupled with geological CCS in the Petrel Basin.*
>
> *As part of the exploration of offset options, the project will investigate scenarios of developing hydrogen production in the NT, for example, use of syngas from SMR for manufacturing fertilizers. The use of methane in this way allows more control over carbon capture and storage than the onshore gas industry could perhaps achieve, operating by itself.*
>
> *The CSIRO Land Use Trade-Offs (LUTO) model has been used in recent scenarios on carbon sequestration with vegetation …would be used to assess the land-use economics of offsets from vegetation in Australia.*
>
> *There is also potential for reducing emissions through steam methane reforming (SMR) in a scenario that would involve hydrogen production in the NT.*

But while these concepts remain scenarios and potentials, they should not be mistaken for actual offsets. Setting up a hydrogen plant is a significant new untrialled and at least partially experimental project that is unlikely to be successfully tacked on to another as a feint to emissions offsets.

Recommendation:
As indirect offsets are not offsetting any pollution they are not offsets and so should be omitted as an option. Research and development is not an offset.

Carbon capture and storage is unproven so cannot be counted as offsets

The GISERA alliance has reviewed the carbon capture and storage (CCS) experience globally and nationally.[9] Despite studies demonstrating how expensive and ineffectual CCS has been,[10] GISERA reports there are suitable storage basins close to potential NT onshore gas extraction.

As CCS remains unproven or even increasing CO2 in the atmosphere[11], it is concerning that carbon capture and storage methods are planned to be counted as offsets. As the draft Offsets Policy states:

> *There must be reasonable confidence that the R&D will achieve the proposed benefits.* (p11)

Further R&D of carbon capture and storage is implausible in light of persistent failure of CCS deployment. "*Australian governments have now promised about $4bn to CCS over the years with very little to show for it*." [10] Carbon capture and storage remains a fraud we cannot continue to pretend to fall for.

Recommendation:
Remove carbon capture and storage as an option for both research and development and as a pseudo-offset.

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[9] https://gisera.csiro.au/wp-content/uploads/2020/07/GISERA_NT_G7_Offsets-for-Life-Cycle-GHG-Emissions-of-Onshore-Gas-in-NT.pdf
[10] Can Australia's path to net-zero really be fuelled by carbon capture and LNG?
[11] Sunk costs

Do we know how much pollution is planned?

It is worth questioning why if the 2018 Fracking Inquiry's ACIL Allen report found the largest "Gale Scenario" least likely to happen, the GISERA alliance are currently contrarily reporting it as the minimum scenario they perceive as likely:

> *The consensus of industry, government and CSIRO researchers was that the "Gale Scenario" defined in the ACIL Allen submission with ~645 wells and 365PJ/year be chosen as the Baseline (minimum) scenario in this project. We will explore a few scenarios that diverge from that possibly up to 4,000 TJ/day but the main outcome of those will likely be the increase in emissions, and subsequently offsets, for LNG production for export.* [12]

The scale of potential gas extraction currently proposed will make the NTG's aim of attaining net zero emissions significantly more difficult: at the higher end of production scenarios, Australia's potential carbon footprint from prospective fossil gas resources is equal to around three times the annual emissions from the entire world.[13]

An offset policy that truely aims to enable a net zero carbon target would recognise that if a proposed project's emissions may not be feasibly offset, such projects could be rejected.

Recommendation:
Ensure there are local direct offsets available for the whole of a project's emissions before approval is granted.

All the GHG emissions from the fossil fuel industry must be accounted for

The 2018 Pepper NT Hydraulic Fracturing Inquiry and related studies focused on the *shale* portion of the NTs fossil fuel resources[14]. There seems to be no accounting for potential release or extraction of "higher value hydrocarbons" such as butane, ethane, propane or crude oil.

Yet, if new fossil fuel projects are allowed to happen, there is likely to be a range of hydrocarbons extracted or released, and the industry seems aware that a liquids rich development would improve total project economics[14]. Consequently it is vital that all pollution released is accounted for and offset.

If this draft Offsets Policy aims[15] to fulfil NT Hydraulic Fracturing Inquiry Recommendation 9.8 "*That the NT and Australian governments seek to ensure that there is no net increase in the lifecycle GHG emissions emitted in Australia from any onshore shale gas produced in the NT*", it must contend with offsetting other sources of pollution from on and offshore gas production. Getting to zero means everything must be accounted for.

Recommendation:
Ensure there are no qualifiers that limit accounting for the true scope of potential pollution.

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[12] https://gisera.csiro.au/wp-content/uploads/2021/09/GHG-07-website-progress-August-2021.pdf
[13] https://australiainstitute.org.au/wp-content/uploads/2020/12/Weapons-of-Gas-Destruction-WEB.pdf
[14] Acil Allen Report
[15] Although the Scientific Hydraulic Fracturing Inquiry is not mentioned in the draft Offsets Policy, it is explicitly reported that that is the purpose of the Gisera offsets research.

All the GHG emissions from the fossil fuel industry must be offset

If we consider Santos' proposed Barossa Project extracting high CO2 gas in the Timor Sea, it seems clear gas companies plan to emit huge quantities of greenhouse gases which is not commensurate with the NT Government's expressed goal of getting to net zero emissions.

Under the current iteration of the Offsets Policy, it appears to be optional whether any or all of the pollution from such projects will be required to be offset. It is unacceptable not to mandate offsetting.

Recommendation:
Ensure all types and sources of greenhouse gas emissions for the whole lifecycle are mandatorily set for offsetting as a prerequisite before approval of a project or activity.

Licences for fossil fuel export need to be 100% offset for approval

Fossil gas is not useful as a transition fuel. There is no acknowledgement that dirty Australian gas is used to replace dirtier fuels. The world needs to move to zero and that means the world needs to wean itself from fossil fuels. Even fossil fuels from the Northern Territory.

If the NT is to persist with producing more climate pollution for export, there should be a demand that our gas is fully offset. There was a time when Australia insisted uranium customers promise not to use it for weapons. Now we try to get our live cattle customers to treat them more humanely. We can similarly insist our gas is not used outside of a credible framework to reduce fossil fuel pollution.

Recommendation:
Ensure full offsets are required for all our exported gas.

Decommission existing fossil fuel projects above offsetting future ones

The alarming August 2021 Code Red alert from the Intergovernmental Panel on Climate Change (IPCC)[16] must not be ignored. It is much too late for humanity to endure any new gas projects. This draft Offsets Policy effectively provides large fossil fuel project proponents a permit to pollute, inevitably hastening the stark reality of climate chaos that is making the Northern Territory increasingly unlivable.

The International Energy Agency recognises that if the world is to reach net zero emissions by 2050, in line with the NT Government's aspirational emissions reduction target, then

> *"as of 2021, there are no new ... gas fields approved for development … the unwavering policy focus on climate change in the net zero pathway results in a sharp decline in fossil fuel demand, meaning that the focus for ... gas producers switches entirely to output – and emissions reductions – from the operation of existing assets."*[17]

So clearly: net zero means no new (coal or) gas, even if we lean over the edge of the cliff with a 2050 goal. To get to 2050, we must phase out our fossil fuel consumption quickly and conserve our offsets to cover pollution already generated.

[16] IPCC report: 'Code red' for human driven global heating, warns UN chief
[17] https://www.iea.org/reports/net-zero-by-2050

A clean future

Let’s move our policies so we can achieve a vision for a clean future. A place where we can live comfortably and securely and not feel anxious for our children's future and enjoy our breathtakingly beautiful natural environment.

Recommendations:

Ban all new fossil fuel extraction.

Ensure that there is no net increase in emissions from the Territory’s existing onshore and offshore fossil fuel industry.

Insist on full life-cycle offsets for all exported fossil fuels.

Regularly report expected Scope 3 emissions from the Territory’s onshore and offshore fossil fuel industry.

Retain genuine carbon offsets for pollution we have already emitted or are already committed to releasing.
