

27 June 2022

### **SUBMISSION: NT EPA Draft guidance - Atmospheric processes**

Lock the Gate Alliance welcomes the opportunity to comment on the Northern Territory Environment Protection Authority's draft Guidance on the 'Atmospheric processes' environmental factor ('Guidance').

Lock the Gate Alliance is a national collection of grassroots organisations made up of over 120,000 supporters and hundreds of local groups who are concerned about risky coal mining, coal seam gas and fracking. These groups are located in Alice Springs, Darwin, NT rural and remote areas, and around Australia, and include farmers, traditional custodians, conservationists and urban residents. The Lock the Gate Alliance has a vision of healthy, empowered communities that have fair, democratic processes available to them to protect their land and water and deliver sustainable solutions to food and energy needs.

**Lock the Gate Alliance strongly supports the rigorous assessment of proposed projects' contribution to climate change by the NT EPA.**

Climate change is already threatening the safety of Territory communities and ecosystems. The EPA has a vital role to play in providing independent, evidence-based advice to the NT Government, industry and the community about the contribution to climate change of proposed developments.

**However, there are several aspects of the current draft Guidance which we are concerned will undermine the effectiveness of climate impact assessments.**

- 1. *The 'Net Zero' objective.*** Framing the environmental objective around 'Net Zero' obscures the need for urgent emissions reduction (as opposed to offsetting).
- 2. *Inappropriate and unscientific referral guidance.*** The 100kt threshold is ultimately derived from the Commonwealth Safeguard Mechanism, a federal economic tool that bears no relevance to Territory-level impact assessment, while there is no sound justification for the exclusion of land-clearing emissions in this context.
- 3. *No reference to cumulative emissions.*** The Guidance does not indicate how the EPA will assess the additional or incremental emissions impact of projects.
- 4. *Excessive deference to NT Government policy.*** The Guidance refers at key points to NT Government policy objectives which should not influence environmental impact assessment, undermining the independence of the EPA.

We support the decision-making hierarchy and the list of emissions information required to be provided by proponents in section 7 of the draft, but consider that this section would be more effective if proponents were also required to set out the uncertainties and assumptions within their emissions estimates, and a comparison to emissions from analogous projects.

## **Environmental objective - “Net Zero”**

Currently, the environmental objective for the atmospheric processes environmental factor is tied to the Northern Territory Government’s target of achieving net zero greenhouse gas emissions by 2050. The urgent need for *absolute* emissions reductions - through avoidance and mitigation - is not apparent from the current drafting of the objective, despite being acknowledged earlier in the Guidance.<sup>1</sup> It appears that a proponent could, as it stands, successfully contend that the objective has been achieved if it commits to purchase carbon credits to offset the emissions from its project or, alternatively, to undertake ‘negative emissions’ activities in future (e.g., reforestation).

This is problematic because while the emissions from approved projects are guaranteed, the success of offsetting or removing those emissions is not. Reliance on ‘net zero by 2050’ targets that do not distinguish between emissions *avoidance* and emissions *offsetting* allow risky reliance on potential future emissions removal or offsetting, and undermine the need for immediate emissions avoidance.<sup>2</sup> It appears that a large fraction of the Australian Carbon Credit Units issued by the Clean Energy Regulator and commonly used as offsets by a variety of emitters may not, in fact, reflect genuinely avoided or negative emissions.<sup>3</sup> Technologies to create ‘negative’ emissions are very unlikely to be capable of delivering the massive emissions reductions required to balance out current or future levels in a sustainable, financially viable or equitable way. For example, Bioenergy Carbon Capture and Storage (‘BECCS’), a key technology in many models targeting net zero by 2050, would demand between 0.4 to 1.2 billion hectares of land to achieve required emissions reduction levels - equivalent to 25-80% of all land currently used for food production.<sup>4</sup>

Although other sections of the Guidance refer to the decision-making and waste-management hierarchies, the current drafting of the objective does not make it clear that emissions must be *avoided and reduced* to the greatest extent possible before any reliance should be placed on offsets and/or future emissions removal.

We submit that the objective should be redrafted to:

- a. distinguish emissions avoidance and absolute reductions from emissions offsetting or ‘negative emissions’, and
- b. clearly prioritise emissions reductions over emissions offsetting or ‘negative emissions’ technologies.

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<sup>1</sup> See p 4: ‘The IPCC advised that it will only be with immediate and large-scale reductions in greenhouse gas emissions that global warming will be limited...’.

<sup>2</sup> Ibid; Professor Duncan McLaren, ‘The problem with net-zero emissions targets’ (30 September 2019) *Carbon Brief* <<https://www.carbonbrief.org/guest-post-the-problem-with-net-zero-emissions-targets/>>;

<sup>3</sup> Stephen Long and Alex McDonald, ‘Insider blows whistle on Australia’s greenhouse gas reduction schemes’ (24 March 2022) *ABC News* <<https://www.abc.net.au/news/2022-03-24/insider-blows-whistle-on-greenhouse-gas-reduction-schemes/100933186>>.

<sup>4</sup> James Dyke, Robert Watson and Wolfgang Knorr, ‘Climate scientists: concept of net zero is a dangerous trap’ (22 April 2022) *The Conversation* <<https://theconversation.com/climate-scientists-concept-of-net-zero-is-a-dangerous-trap-157368>>.

## ***'Significance' referral guidance and threshold for unconventional gas***

### Referral threshold imported from an irrelevant policy context

The draft Guidance does not provide any scientific analysis to support the choice of 100,000t CO<sub>2</sub>-e/yr as the threshold for referral to the EPA. There is no justification of why the EPA considers this quantity of emissions to be 'significant' in the context of the Northern Territory's contribution and vulnerability to climate change, and a project having the 'potential to have a significant environmental impact' in that context.

The only justification is that it was the threshold adopted by the NT Government in the Large Emitters Policy.

The Large Emitters Policy imported the threshold from the Federal Government's 'Safeguard Mechanism' under the National Greenhouse and Energy Reporting scheme. The Safeguard Mechanism was introduced to ensure that emissions from Australia's largest polluters could not outweigh emissions reductions created through the generation of carbon credits in other parts of the economy.

This is a completely different policy context and rationale to the question of the 'significance' of projects' environmental impacts in the context of the Northern Territory's environmental values and objectives. The Commonwealth Government's attempt to balance economy-wide emissions is irrelevant to assessment by a Territory-level environmental regulator, whose responsibility lies in considering the acceptability of environmental impacts in the Territory context.

The problematic consequences of uncritically importing the Safeguard Mechanism to this context are clear. Australia's nation-wide emissions were 497.7Mt in 2020; the Territory's were 17.3Mt.<sup>5</sup> A 'largest emitter' in the context of a 497.7Mt emissions economy is completely different to a 'significant' environmental impact in a 17.3Mt economy. As it stands, the EPA is proposing that only projects equivalent in emissions profile to Australia's 212 largest emitters would generally be considered as having the potential to have a 'significant' impact on climate change in the Territory context, despite the emissions profile of the Territory economy being much lower than Australia's.

Independent assessment by the EPA should be a critical input to decision-making about developing the Territory's economy, but under the current drafting, many projects - with individually and cumulatively substantial greenhouse gas impacts - would be excluded from the scope of this assessment, for no clear or evidence-based reason.

### Application of referral threshold in the unconventional gas context

The climate change implications of developing an onshore unconventional gas industry in the Northern Territory are highly concerning, and were a key risk identified by the Pepper Inquiry. The Inquiry found that even after the application of all available and practicable mitigation measures it recommended, the residual risk of lifecycle greenhouse gas emissions from onshore gas was 'unacceptable'.<sup>6</sup>

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<sup>5</sup> See the latest UNFCCC emissions inventory at <<https://ageis.climatechange.gov.au/>>.

<sup>6</sup> *Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory* (2018), section 9.10.

We are concerned that the referral threshold for industrial projects, when applied in the unconventional gas context, is too low and also fails to recognise the fact that emissions from exploration activity are regularly dispersed across multiple projects.

The latter issue is actually recognised in the Large Emitters Policy, which applies to the cumulative emissions from a petroleum interest-holder's interests in any one financial year, not to each individual project. This goes some way towards acknowledging that a) small quantities of emissions dispersed across multiple tenements can accumulate to substantial pollution, and b) each of these small quantities should fairly be considered the responsibility of the interest-holder benefiting from the polluting activity.

Despite adopting the threshold from the Large Emitters Policy, the draft Guidance does not recognise this issue or take an equivalent approach to assessing emissions totals. This is concerning.

We also submit that the 100kt emissions threshold is too low in the unconventional gas context given that:

- Most emissions associated with the natural gas industry are methane, which is an extremely potent greenhouse gas;
- Fugitive methane emissions, and emissions resulting from venting or flaring, are an inherent part of gas extraction, and are exacerbated by the use of hydraulic fracturing;
- The threshold currently only captures scope 1 emissions, but a large fraction of the actual climate impact of the natural gas industry results from the end-use of the gas, meaning that the use of this threshold belies the actual scale of unconventional gas production in terms of climate change.<sup>7</sup>

#### Exclusion of land-clearing emissions

The rationale for excluding emissions associated with land clearing from the threshold for industrial projects is very unclear in the context of environmental impact assessment.

While it may be appropriate for projects whose emissions are predominantly derived from land-clearing (such as the agricultural and horticultural projects referred to in the Large Emitters Policy<sup>8</sup>) to have a different threshold to avoid excessively onerous burdens on small-scale agriculture (assuming this is the rationale), there does not appear to be any valid reason for excluding these emissions from other types of industrial project. The Large Emitters Policy states that the land use threshold 'has been determined in consideration of historical and predicted land clearing activities in the Territory, and in recognition of the potential avoidance and mitigation techniques available to different types of projects and the timeframes over which emissions are generated by a project.'<sup>9</sup> It is unclear how any of this applies in the context of the holistic environmental impact assessment of an industrial project for which ancillary vegetation clearing is required.

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<sup>7</sup> See the discussion in section 9.6 of the *Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory* (2018).

<sup>8</sup> See p 6 of the Large Emitters Policy.

<sup>9</sup> See Large Emitters Policy, p 6.

The accompanying text to the draft Guidance asserts that the different thresholds for industrial projects and land-clearing projects (100kt and 500kt respectively) corresponds to the lower global warming potential of carbon dioxide compared to other greenhouse gases. It is true that methane has a much higher GWP than CO<sub>2</sub>, but it also has a much shorter lifespan in the atmosphere than CO<sub>2</sub>, which persists for hundreds of years.<sup>10</sup> Carbon dioxide is still the major contributor to global warming and it is extremely alarming to see an environmental regulator implying that it is somehow less serious than other types of greenhouse gas pollution. Further, the different GWPs of various greenhouse gases are also already reflected in the equations that underlie figures given in 'CO<sub>2</sub>-e' so this does not need to be also accounted for in different thresholds for land-clearing vs other project types.

Finally, it is unclear why and how the origin of greenhouse gas emissions is relevant to their 'significance' in terms of having an impact on climate change. If the carbon dioxide was emitted by a coal-fired power plant, rather than arising from land-clearing, the 100kt threshold would apply. The reasoning behind this aspect of the Guidance is questionable.

The emissions from vegetation clearing associated with industrial projects can be substantial - for two unconventional gas work programmes recently put forward in two EMPs, vegetation clearing accounted for 3-5% of the programme's total expected emissions.<sup>11</sup> The outcome of the decision to exclude these emissions from industrial project, which could be significant but are unlikely to reach the very high 500kt threshold on their own, appears to be that this component of a project's emissions profile will just be omitted from the EPA's consideration of whether a project's emissions profile is significant, for no real reason, giving a distorted view of the project's impact on climate change.

#### Scope 2 emissions should be included in referral threshold

The draft Guidance has included a discussion of scope 2 and 3 emissions (in addition to scope 1 emissions) in section 7.1 on the information the EPA will require projects to provide.<sup>12</sup> This is a positive inclusion in the policy which will serve to give government decision-makers and the community a more fulsome picture of the climate impacts of proposed projects.

However, we submit that a project's scope 2 emissions should also be encompassed in the decision on the project's referral. Any on-site power generation (whether electricity or in vehicles) is critical to the project's operation, so resulting emissions should be considered part of its direct emissions impact. Further, scope 2 emissions are within the direct control of the project proponent, and including these emissions within the referral threshold should encourage proponents to take steps to lower them.

We submit that:

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<sup>10</sup> Climate Analytics, 'Why using 20-year Global Warming Potentials (GWPs) for emission targets is a very bad idea for climate policy' (November 2017)

<[https://climateanalytics.org/media/20-year\\_gwps\\_bad\\_idea\\_for\\_climate\\_policy\\_16112017.pdf](https://climateanalytics.org/media/20-year_gwps_bad_idea_for_climate_policy_16112017.pdf)>.

<sup>11</sup> See the EMPs submitted recently by Imperial Oil and Gas for EP 187 and EPs 167 and 168.

<sup>12</sup> We note that section 7.1 refers to 'proposed actions and expanding actions that meet the thresholds in this guideline', but presumably the EPA also intends to include projects that fall short of the threshold but which it calls in.

- a. The EPA should develop its own, scientific and evidence-based assessment of a 'significant' greenhouse gas impact in the context of the Territory's economy, emissions and environmental values and objectives.
- b. The referral threshold for unconventional gas projects should be amended, whether to a lower figure or to a range, and should recognise both the serious impacts of life-cycle greenhouse gas emissions from natural gas extraction and the cumulative impacts of dispersed gas industry activity.
- c. Emissions arising from land-clearing undertaken as part of a proposed industrial project should be included in the assessment of the 'significance' of a project's climate impacts.
- d. The scope 2 emissions of a project should form part of the consideration of whether its greenhouse gas impacts have the potential to be 'significant'.

### **Cumulative impacts**

The draft Guidance does not indicate how the EPA will approach the assessment - whether at referral stage or during the EIA process - of a project's cumulative greenhouse gas impacts and contribution to climate change. Under section 10 of the *Environment Protection Act 2019*, an impact 'may be a cumulative impact and may occur over time'.

No one project or activity is the main cause of global warming. Climate change is the result of the atmospheric accumulation of anthropogenic greenhouse gas emissions originating from activities and developments around the world and across almost all spheres of human life.

This makes the assessment of the acceptability of an individual project's additional contribution to climate change a challenging task - yet given the level of danger to the environment posed by continued emissions and the changing climate, it must form part of the assessment process.

A generic approach often adopted is to require a comparison of the project's emissions to the national and/or Territory emissions, but this runs the obvious risk of creating a 'death by a thousand cuts' situation, where numerous projects all contributing '0.5%' or an equivalently tiny fraction are approved on the basis of their impacts being insignificant, and suddenly annual emissions increase by 20%.

There are several alternative approaches that could be taken, such as:

- Considering the greenhouse gas impacts of a project against Australia's Nationally Determined Contribution targets and interim targets;
- Considering the project's emissions profile in the context of the total emissions of the relevant sector (e.g., energy, food production); or, preferably,
- Comparing the project's emissions to the Northern Territory (or Australia's) share of the remaining carbon budget to keep global warming within 2 or 1.5 degrees Celsius.

We submit that the EPA should develop and include in the Guidance an approach to assessing the cumulative impact of a project's greenhouse gas emissions, preferably entailing a comparison to the remaining carbon budget.

### ***Independence of the EPA***

At multiple points, the draft Guidance is framed around policy decisions made by the NT Government. The environmental objective refers to the NTG's net zero target, and the guidance on referrals adopts thresholds from the Large Emitters Policy because this policy 'provides clear guidance to the NT EPA on when the NT Government believes emissions are significant enough to require assessment and regulation'.<sup>13</sup>

The EPA carries a number of statutory functions and responsibilities under the *Environment Protection Act 2019*. It is supposed to be an independent authority that provides independent evaluation of the impact of projects.<sup>14</sup> This is critical to ensuring that the evaluation of the environmental consequences of projects is impartial and not swayed by improper, political considerations. A crucial component of this independence is that the EPA should, in reliance on the expertise of its members, undertake its own evaluations of the environmental impacts of projects<sup>15</sup> - including greenhouse gas emissions.

The objective of regulatory independence is undermined if the EPA adopts NT Government policy positions as the basis for its assessment apparently without undertaking its own analysis, as occurs in this draft Guidance.

We submit that:

- a. the EPA should undertake its own scientific and evidence-based assessment of the point at which the emissions of a project are likely to have the potential to have a 'significant impact on the environment', and
- b. That this assessment should form the basis of explicit referral thresholds and guidance in this document, rather than reliance on the EPA's discretion to 'call-in' projects.

### ***Additional information and detail***

There are several areas in which we submit the Guidance should require additional information and/or provide more detailed guidance to proponents.

#### Guidance on emissions sources to be included in estimates

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<sup>13</sup> See p 9.

<sup>14</sup> See Allan Hawke, *Review of the Northern Territory Environmental Assessment and Approval Processes* (May 2015) <[https://depws.nt.gov.au/\\_data/assets/pdf\\_file/0011/262919/hawke-review-of-the-northern-territory-environmental-assessment-and-approval-process.pdf](https://depws.nt.gov.au/_data/assets/pdf_file/0011/262919/hawke-review-of-the-northern-territory-environmental-assessment-and-approval-process.pdf)>; NT EPA, *Roadmap for a modern environmental regulatory framework for the Northern Territory* (January 2017) <[https://ntepa.nt.gov.au/\\_data/assets/pdf\\_file/0006/396294/ntepa\\_roadmap\\_hawke.pdf](https://ntepa.nt.gov.au/_data/assets/pdf_file/0006/396294/ntepa_roadmap_hawke.pdf)>.

<sup>15</sup> See Allan Hawke, *Review of the Northern Territory Environmental Assessment and Approval Processes* (May 2015), p 17.

There can be considerable inconsistency in the types of emissions assessed and included by project proponents in environmental approvals. For example, recent EMPs submitted under the have variously omitted emissions arising from venting gas,<sup>16</sup> from fugitive methane escaping from wells,<sup>17</sup> and from diesel used in transport and for camp operations.<sup>18</sup> This leads to an incomplete picture of the emissions impact of proposed projects.

While possibly not appropriate for inclusion in the overarching Guidance on greenhouse gas impacts, we submit that the EPA should consider developing and publishing more detailed information for project proponents about the emissions that should be captured in emissions assessments. This could be based on guidance prepared by the Clean Energy Regulator.

#### Uncertainties and assumptions

Estimating the potential emissions of projects relies on modelling and calculations underpinned by assumptions. As with all modelling, it is an inherently uncertain activity.

To promote robust emissions estimation, and to improve the transparency and reviewability of information provided through the impact assessment process, we submit that the Guidance should require projects to set out the assumptions used in their calculations, as well as an uncertainty analysis. This is standard practice in environmental impact assessments across Australia.

#### Comparison to analogous projects

The current practice for unconventional gas projects (with which we have the most experience) is to include a comparison of the project's expected emissions with the latest annual NT and Australian total emissions. This is a largely meaningless exercise without any parallel discussion of matters like the project's costs or externalities, or its comparative contribution compared to other projects in the same sector.

We submit that the EPA should consider requiring project proponents to include a comparison of their project's expected emissions with those of analogous projects. This would both serve to provide a more meaningful point of comparison for the EPA and the community, and to drive improvements in emissions reduction.

Thank you for considering our submission. Please don't hesitate to get in touch via the email or phone number below should you wish to discuss any of the matters raised above.

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<sup>16</sup> See the original EMP submitted by Sweetpea Petroleum for EP 136.

<sup>17</sup> Ibid.

<sup>18</sup> See the EMP submitted by Imperial Oil & Gas A for EPs 167 & 168 (only diesel fuel combustion for the drilling and fracking equipment is included).