

NATIONAL GREENHOUSE AND ENERGY REPORTING (NGER) SCHEME | 2025 UPDATES CONSULTATION

Australian Energy Producers | 11 April 2025

Australian Energy Producers welcomes the opportunity to present its views on the Department of Climate Change, Energy, the Environment and Water (DCCEEW) National Greenhouse and Energy Reporting (NGER) Scheme updates and forward work program.

While Australia's emissions measurement and reporting processes are considered world leading,¹ remaining so will require ongoing review and updating.

Key recommendations:

- **The proposed oxidation efficiencies of 98% for production flaring and 99.5% for refinery flaring are supported**, however the assumption that flare gas is 100% methane (CH₄) will lead to an overestimation of CH₄ emissions and should be replaced by an energy-based estimation method that reflects actual gas mixtures.
- **The extension of Method 2B (mass balance-based) to transmission and distribution flaring operations is welcome**. Total flared gas volumes (including inert and hydrocarbon gases) should be reported across all Methods, where not already required.
- **The proposed approach to tracking biogenic carbon and pipeline losses is sound but requires refinements** to ensure they are pragmatic and do not introduce barriers through costly testing requirements.
- **Clarification is requested on the impact of amendments to facility-specific emissions intensity determinations under the Safeguard Mechanism on existing baselines**. Clarification is required to understand whether changes to emissions estimation methodologies, such as those affecting fugitive emissions from gas flaring, could trigger the Clean Energy Regulator to revise or replace existing baselines.
- **The proposed market-based reporting framework for renewable gases (e.g., biomethane, hydrogen) are welcome**. Emissions accounting should allow for contractual attribution (via certificates), rather than being constrained by physical gas composition at the point of use.
- **Reference to “fossil gas” in place of “natural gas” adds no value to the NGER scheme or consultation process**. Australian Energy Producers can see no policy reason for consultation documents to add “fossil” when referring to natural gas and recommend policy makers refer only to “natural gas” and “low-emissions gas”.

Australian Energy Producers looks forward to continuing to work with DCCEEW to continue to improve and update the NGER scheme where it relates to oil and gas emissions reporting.

Further comments and recommendations are provided below.

¹ Minster Chris Bowen, [Climate Change Authority's Carbon Crediting and Emissions Reporting reviews provided to Government media release](#), 2023

COMMENTS AND RECOMMENDATIONS

General comments and recommendations

Clarification is requested on the impact of amendments to facility-specific emissions intensity determinations under the Safeguard Mechanism on existing baselines | Clarification is requested on whether changes to methodologies, including estimates of fugitive emission from gas flaring, will trigger variations to and or replacement of Safeguard facility specific emissions intensity determinations used to establish annual allowable baselines. Further guidance is also requested on the expected timelines for these changes to be given effect.

Reference to “fossil gas” in place of “natural gas” adds no value to the NGER scheme or consultation process | Australian Energy Producers can see no policy reason for consultation documents to add “fossil” when referring to natural gas and recommend policy makers refer to “natural gas” and “low-emissions gas”.

Section A. Market-based reporting of emissions from consumption of biomethane and hydrogen

The proposed introduction of market-based reporting for biomethane, e-methane, and low carbon hydrogen under the NGER framework represents a sound policy-aligned accounting advancement | The adoption of a market-based approach to reporting emissions from renewable gaseous fuels would establish a fully contractual attribution model that decouples emissions accounting from the physical characteristics of gas delivery.

Due to very small volumes of these types of blended gases in the natural gas pipeline stream, the default physical-based accounting approach based on the physical composition of fuel received at a facility dilutes the incentive to procure these gases. For example, if a sampled gas blend received at a facility consists of 95% natural gas and 5% other gases, this could underestimate the facility contracting 90% natural gas and 10% other gases, as verified through contractual arrangements or certificates (Safeguard Crediting Mechanism).

Australian Energy Producers supports the proposed fixed loss factors for renewable gases but requests further clarification on the practical implementation of the proposed accounting approach for pipeline losses associated with renewable gases. Australian Energy Producers supports the proposed fixed loss factors for biomethane (1%) and hydrogen (0.9%) as conservative estimates of the transport losses in pipeline infrastructure in the calculation of renewable gas deemed consumed under the market-based method. However, additional clarification is requested on the practical implementation of the proposed accounting approach for pipeline losses associated with renewable gases. Concerns remain that this methodology may risk double-counting losses already captured in pipeline operators’ existing reporting obligations. This could have unintended financial implications for green gas certification as it could impose an additional cost beyond the losses already accounted for through network tariffs.

A more pragmatic mass balance-based approach to tracking high methane biogenic carbon originating from biological sources through the production system is recommended | In the context of co-processed liquid fuels, it is proposed to reduce scope 1 emissions factors based on the biomass carbon content – assumed to be carbon neutral – of the fuel. As the monitoring and testing of streams for biogenic content is expensive and there is a limited capacity in the number of labs available to undertake the appropriate testing, this approach is likely to introduce a barrier to adoption if required under NGERs. A more pragmatic mass-balanced-based approach is therefore recommended.

Method 1 approaches play an important role in the NGER system and should be maintained and adjusted where required; the removal of Methods reduces the functionality and flexibility of the NGER scheme without necessary improving the accuracy of emissions reporting | The integrity of the NGERs method architecture where Method 1 approaches are deliberately conservative

in nature is critical. Where Method 1 is found to be inadequate as an approach, we would support the quantifying of the identified error and correcting it, rather than the constriction of the Methods available.

Section B. Fugitive emissions from oil and gas operations

The proposed update to CH₄, CO₂, and N₂O emission factors for estimating fugitive emissions from gas flaring in oil and natural gas operations is robust and aligned with the Intergovernmental Panel on Climate Change (IPCC) Inventory Guidelines | Existing emissions factors used in Methods 1 and 2A are based on outdated sources that assume 95% oxidation efficiency (partial combustion of the flared natural gas). The proposed updated emissions factors align the oxidation efficiencies with the 2006 IPCC Inventory Guidelines including 98% for production flaring and 99.5% for refinery flaring.

To support the improvements to ensure Method 1 represents an accurate and conservative approach towards quantification of flared emissions, including the 98% oxidation factor, we suggest using the energy content (GJ) of the flared stream, and energy-based emissions factors derived by assuming 100% of the total energy is attributable to methane. This provides for a conservative estimate of methane slip, as it assumes methane is the only combustible gas in the flared gas stream. Flared energy content is already reported in combination with NGER Method 1, subject to additional validation and assurance as part of the overall facility energy balance, and aligned with the units for combustion of solid, liquid and gaseous fuels (e.g. kgCO₂-e/GJ), and as such, should be relatively straight forward to implement. This will result in more accurate emissions factors when converting CH₄ to CO₂. These updated factors serve to enhance baseline accuracy for facilities relying on Method 1, and in harmonising Method 2A combustion efficiency assumptions with Method 1, help improve consistency across the estimation Methods.

The Method 2A equation for estimating flared methane emissions from natural gas production explicitly includes the effect of an oxidation factor (i.e., $E_{ij} = Q_h \times EF_{hij} \times OF_i$, as per Section 3.87A of the [NGER \(Measurement\) Determination 2008](#)); it is important that there is no additional or separate oxidation factor applied when deriving the relevant emission factor (i.e., EF_{hij}), as is the case with the emission factors listed in Schedule 1, while noting Method 2A will not refer to these emission factors.

The proposed extension of Method 2B to facilities engaged in natural gas transmission and distribution flaring is a practical enhancement | Method 2B was introduced in 2024 for estimating the emissions associated with flaring during natural gas production based on the mass flow of gas, compositional data from standard operations, and engineering-derived estimates of flared gas volumes. The approach utilises existing operational data such as flow meters and routine gas quality assessments reducing measurement burden while enhancing methodological robustness.

Mandating the disclosure of additional “matters to be identified” (MTBIs) when facilities apply Methods 2, 2A, or 3, and requiring them to report the total tonnes of gas flared, inclusive of both hydrocarbon (CH₄, ethane) and inert gas (CO₂, N₂) fractions, further aligns reporting across all Methods noting that it is already mandated for Methods 1 and 2B. This requirement serves to strengthen the robustness, transparency, and comparability of emissions reporting under the NGER scheme for cross-facility analysis, regulatory verification, and inventory alignment.

Section C. Scope 2 emissions from consumption of electricity

Australian Energy Producers recommends transitioning to more granular residual mix factors (RMFs) should be considered in the next NGER review | The market-based method for reporting Scope 2 emissions should adopt state- or grid-specific RMFs, as previously suggested in the 2023 NGER Amendments Consultation Outcomes Paper, rather than retaining a uniform RMF for all jurisdictions (0.81 kgCO₂-e/kWh). There are material variations in grid emissions intensities across states and territories as defined in the location-based emission factors.