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National Greenhouse Accounts
Department of Climate Change, Energy, the Environment and Water (**DCCEEW**)
GPO Box 3090
Canberra ACT 2601

Submission via DCCEEW's Consultation Hub

To Whom It May Concern

Submission – National Greenhouse and Energy Reporting Scheme (NGER Scheme) - 2025 Public Consultation

Woodside Energy Ltd (**Woodside**) welcomes the opportunity to provide feedback on the proposed amendment to the *National Greenhouse and Energy Reporting (Measurement) Amendment (2025 Update) Determination 2025* (**2025 Amendment**). Woodside appreciates the ongoing efforts of DCCEEW in ensuring that the *National Greenhouse and Energy Reporting Act 2007* (Cth) **(NGER Act)** and subsidiary legislation are fit for purpose.

Woodside supports the NGER Scheme and recognises the significant contribution it makes to the integrity and confidence in Australia's greenhouse gas emissions inventories. Central to this support are the review processes that enhance the accuracy and reliability of data reported under the NGER Scheme. It is within this frame that Woodside provides the following recommendations:

- Adoption of assumptions as set out in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories for Method 1 emissions factors for gas flaring - but adopt both destruction efficiency and composition assumptions to preserve internal consistency.
- Refinement of the application of the Australia-wide residual mix factors (**RMF**) for the generation associated with large-scale generation certificates (**LGC**) to more granular state or grid based RMF as suggested in the NGER Scheme 2023 Amendments Consultation Outcomes Paper.
- Adoption of a market-based, certificate-backed approach for the reporting emissions from renewable gaseous fuels, and not retaining aspects of physical consumption reporting, such as requiring physical connection and receival of renewable gas for certificate use.
- Removal of the east coast/west coast divide for Australian renewable gas certificates to encourage investment and not constrain the market.

Additional detail regarding the above recommendations is outlined in **Table 1 – Woodside's Recommendations** (attached). We value collaboration with DCCEEW and appreciate the opportunity to provide our views. We are available to meet with DCCEEW to discuss this submission.

Yours sincerely,

[redacted]

Tony Cudmore
EVP Sustainability, Policy & External Affairs

Attached: Table 1 – Woodside's Recommendations

Table 1: Woodside's Recommendations

Recommendation/observation	Suggested implementation
Fugitive emissions from oil and natural gas operations Woodside supports having transparent assumptions behind Method 1 factors and the adoption of *destruction efficiencies* from the 2006 IPCC Guidelines. However, the internally consistent *gas composition* provided in the 2006 IPCC Guidelines has not been used. Woodside recommends adopting both *destruction efficiency* and *composition* assumptions to preserve internal consistency.	Woodside recommends that the Department assume a composition linked to the IPCC definition, with an assumed CO_2, N_2, CH_4 and non-methane hydrocarbon profile. Table 4.2.4 footnote (e) references a typical gas composition associated with a 98% destruction efficiency for the derivation of Tier 1 factors. The inclusion of a default composition (conservative or otherwise) for the gas flaring has implications for energy reporting. We suggest that the flared gas stream should be given an energy content factor to ensure consistency with the assumption associated with composition. We suggest consideration be given to the activity basis used for the flaring emission factor. Standard practice for flare metering is to measure volumetric flow of gas flared and convert to mass using a molecular weight measurement. To improve the accuracy in the emission estimation we suggest using the volumetric flow of gas flared as the activity for application of stoichiometric derived emission factor, rather than mass. The impact of activity basis is demonstrated in Table 1. Woodside recommends that destruction efficiency or oxidation factor is not applied to N_2O, as N_2O is not a fuel being oxidised in the combustion process, but a side reaction resultant from the presence of N_2 and O_2 in the presence of high temperature. Equation 4.2.8 in the IPCC guidelines does not include a destruction efficiency (FE) factor in the emission calculation. Woodside recommends that any changes in reporting basis be reflected where relevant with an adjustment to Safeguard Mechanism emissions intensities. The Department should consider how to do this efficiently across the safeguard sector, without the need for resubmission of onerous Emissions-intensity determination (EID) applications.
Scope 2 emissions from consumption of electricity Woodside recommends further progressing the disaggregation of the Australia-wide RMF for the generation associated with LGCs to more granular state or grid based as suggested in the NGERS 2023 Proposed Amendments.	Woodside recommends that DCCEEW expands the proposed Scope 2 emissions work to include review of the potential to use state and territory or grid-based RMFs, similar to the location-based factors under the NGER Scheme, to better reflect the significant differences between the emissions intensity of generation in different locations and improve market-based Scope 2 emissions estimates.

Recommendation/observation	Suggested implementation
Renewable Fuels Recommend the full adoption of a market-based, certificate-backed approach for reporting emissions from gaseous fuels, and not retain aspects of physical consumption reporting, specifically the proposed "reasonable physical link requirement". Restricting the application of the market-based approach by instituting an east coast/west coast divide may reduce liquidity and the incentive for investment in renewable gas projects. This restriction may lead to less renewable gas supplied to domestic gas networks, less progress towards Australia's emissions reduction targets, less future energy security, and higher energy prices. While there are two types of certificates proposed to be recognised by the NGER Scheme, it is recommended that each type of certificate should be permitted to be used in accordance with its respective scheme design. That is, GreenPower Scheme is designed as a fully book and claim mechanism, whereas the GO Scheme links certificates to a specific batch. It appears that both schemes, as designed, have the potential to operate in tandem while being recognised by the NGER Scheme. The introduction of market-based reporting for biomethance could align with the current NGER Scheme in that there are no geographical restrictions on the use of Australian carbon credit units. Where a book and claim mechanism is employed, it can facilitate the joining of the markets between east coast and west coast. For example, the European RED II, renewable gas certificates are traded within the EU using the European Renewable Gas Registry, which states that via the use of national registries, GOs can be traded by following the book and claim principle. This means that the certificates can be traded separately from the physical flow of the gas. The European registry has facilitated the transfer of over five terawatt hours of renewable gas certificates to date (https://www.ergar.org/).	Implementation of these changes could take the form of modifying the exposure draft to remove Section 2.67C(5)(d) which provides "the certificate represents renewable gas that could reasonably pass from its injection point into the natural gas network to the facility". It is recommended that amendments do not limit the use of certificates designed to be separated from a product batch. Allowing this separation has the potential to increase market trading of certificates and promote investment.
Modify the terms of the market-based approach to focus on fuel use, not fuel received from a natural gas network. Focusing on fuel use instead of fuel receival would broaden the demand base for renewable gas certificates, which may lead to more investment. As per the recommendation above, the implementation of a market-based approach should be based on the goal of including as much gaseous fuel use as possible within its remit. This has the potential to produce more renewable gas and further advance Australia's emissions reduction targets.	Implementation of these changes could take the form of removing the mass balance, physical accounting approach which has been retained while attempting to introduce a market-based approach. It is recommended that accounting and use of certificates focus on matching the certificate attributes with gaseous fuel used, not fuel received. Doing so could broaden the applicability of certificate use, resulting in a deeper certificate market, promote investment in renewable gas, and an increased supply of gas in Australia's gas networks.

Table 1 – Demonstration of the improvement by using volume for activity of flared gas in emission factor for hypothetical mixtures of methane and nitrogen gas

Flared Gas Composition		Flared Gas Flow (sm^3)	Flared Gas Mass (t)	Stoichiometric greenhouse gas emissions[1]		Mass based activity factor greenhouse gas emissions[2]			Volume based activity factor greenhouse gas emissions[3]		
N_2 (mol%)	CH_4 (mol%)			CO_2 (t CO_2e)	CH_4 (t CO_2e)	CO_2 (t CO_2e)	CH_4 (t CO_2e)	% error	CO_2 (t CO_2e)	CH_4 (t CO_2e)	% error
0	100	100,000	68	182	38	182	38	0%	182	38	0%
20	80	100,000	78	146	30	209	44	44%	182	38	25%
40	60	100,000	88	109	23	237	49	116%	182	38	67%

1: Based on 98% destruction efficiency

2: Based emissions factors proposed in the consultation document of 2.69 t CO_2-e per t flared gas (CO_2) and 0.56 t CO2e per t flared gas (CH_4)

3: Based emissions factors of 1.82 kg CO_2e per sm^3 flared gas (CO_2) and 0.38 kg CO_2e per sm^3 flared gas (CH_4) derived from the factors proposed in this consultation