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NSW Renewable Fuel Scheme – Discussion paper on scheme expansion – 13 November 2023

EnergyAustralia is one of Australia’s largest energy companies with around 2.4 million electricity and gas accounts across eastern Australia. We also own, operate and contract a diversified energy generation portfolio across Australia, including coal, gas, battery storage, demand response, wind and solar assets, with control of over 5,000MW of generation capacity.

We appreciate the opportunity to comment on the Office of Energy and Climate Change’s (OECC) proposed expansion of the Renewable Fuel Scheme, as well as the further details on the Scheme’s commencement.

We support the development of renewable fuels and have consistently highlighted¹ that large scale electrification needs to be accompanied by credible alternatives for customers that require fuels for high heat applications or as a chemical feedstock. We also see the need for government support for producers of renewable fuels, to enable them to achieve sufficient scale and so drive down costs of supply, such that economy-wide emissions reductions can be achieved at least cost. We therefore support the Scheme’s expansion and appreciate the OECC setting out further steps to publicly consult in mid 2024. We do, however, have concerns about how the NSW Government has designed the scheme and its reliance on selective stakeholder consultation to date.

In summary, our responses to the OECC’s discussion paper are:

- the Scheme’s development to date has not been based on a robust public discussion on its objectives, nor of its expected costs and benefits
- commencement of the Scheme should be delayed another year
- we support expansion of the Scheme to renewable fuels that are readily available as a by-product of existing processes, as other fuels may not be sustainably sourced



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¹ See for example, our views on the Commonwealth Government’s Future Gas Strategy: [Commonwealth Future Gas Strategy - consultation paper 13 November 2023 \(1\).pdf \(energyaustralia.com.au\)](#)

- we strongly support the OECC setting out and strictly adhering to Scheme design principles of 'beneficiary pays', and of balancing the costs of liable entities against the need for production support
- initially we support having separate fuel production targets. Once the Scheme is established, any 'multiplier' or conversion value of certificates across fuel types should reflect their net contribution to emissions reduction, and in this way should be consistent with Guarantee of Origin (GO) certification which is still itself in development.

These points are expanded below.

The Scheme's development has not reflected a robust and transparent process

The Scheme's development so far has suffered from a lack of transparency, with no published analysis on its expected costs and benefits, and limited explanation of how the Scheme's design parameters have been determined. We strongly recommend the OECC publish this information, including analysis of the specific targets already set for hydrogen, and those now being contemplated for other renewable fuels.

The Scheme was identified in the NSW Hydrogen Strategy in October 2021 as an additional limb of the Energy Security Safeguard. Amendments to the Electricity Supply Act were made in December 2021 following targeted consultation with industry in November that year. We provided feedback at this stage, however our views were not published and the Government has not indicated how they were taken into account. Our feedback was that the Scheme inappropriately apportions costs to gas users who will not directly benefit from hydrogen production and substitution. Gas retailers and users are not well placed to underpin multi-year offtakes for hydrogen in the face of uncertain and declining gas demand. We also requested the Government to release modelling how the 8PJ hydrogen target and penalty rates are expected to affect gas user charges.

The amendments made in December 2021 nevertheless set ambitious hydrogen production targets and a framework for liabilities. These have now been in place for two years, without any government statements or regulations regarding the supply of certificates or penalty prices.

We appreciate the OECC has had to deal with a change in government this year as well as competing energy market reform priorities. OECC staff have been responsive to our requests for further information on the Scheme and questions regarding how regulations would apply. We are also appreciative the OECC has now indicated that the Scheme will not be enforced with respect to the 2024 Scheme target. We still note that this announcement is contained in its discussion paper that was emailed to selected stakeholders less than 2 months from the commencement of the 2024 compliance period.

The OECC has now commenced consultation on fundamental design changes to the Scheme, including altering fuel production targets, such that certificate liabilities could be met from a range of fuel sources and with varying costs. As discussed below, these changes will require careful consideration in relation to emission reduction objectives and support for emerging fuel types.

The Scheme commencement should be delayed another year

Our understanding of the Scheme's administrative timelines is that liable gas usage is calculated relative to Scheme targets with a one year lag. For example, retailers will be required to procure and surrender certificates for the 2025 compliance year in proportion to gas usage over 2024. While we appreciate this is due to reporting of settlement data, it adds further lead times in relation to product development and cost recovery from customers. That is, in order to manage liabilities for the 2025 target value, retailers would need to make decisions on incentives and gas pricing, including encouraging renewable fuel substitution, from 1 January 2024. As the OECC would be aware, energy retailers typically make pricing decisions on a financial year basis, in line with regulated network price changes, rather than a calendar year, which is the premise of the Scheme.

Given the change of government and the OECC not meeting its intended consultation timeframes over 2023, we anticipated the Scheme's delay. However the current state of regulations still does not feasibly allow for retailers and customers to take appropriate actions for any forthcoming compliance years. The OECC conducted targeted consultation on eligible source of hydrogen certificates in December 2022, suggesting there would be public consultation on associated rules in Q2:2023, however there are no regulations in place that provide for certificate creation. Liable entities will be forced to pay the penalty price in relation to the 2025 compliance period. The OECC has now released a proposed certificate penalty price, and expects to set this in regulations in December, giving limited time to elicit and genuinely accommodate stakeholder feedback. As noted above, even if retailers were now making pricing decisions for 1 January, there has been insufficient time to accommodate the proposed penalty price.

The timelines in the recent discussion paper indicate that the OECC will set regulations for hydrogen producers in Q1:2024, separately to scheme expansion in Q4. It is not clear how these decisions can be separately made, for example determining the eligibility of fuel sources will materially alter overall certificate supply, while the scope of liable entities (including exemptions) will alter certificate demand. These decisions across multiple industries will be complex and have important feedbacks into the amount of financial support available as well as price impacts for affected products.

The discussion paper suggests the hydrogen industry has had two years of planning against the Scheme and NSW has an advanced pipeline of hydrogen projects, with several developments expecting to make investment decisions by mid 2024.² Assuming this is correct, there will still be several years before production and certificate creation takes place. Hydrogen projects will have been unable to make firm commitments in the absence of knowing the extent of Scheme support, which is now fundamentally altered by its proposed expansion. As an active participant seeking to procure hydrogen for our local gas power stations, we observe first hand a lack of certainty around the hydrogen supply chain and the difficulty in forecasting timing of availability and quantities hydrogen into the future. We have kept OECC updated separately in relation to this.

Overall it is unreasonable for the OECC to expect liable entities to progress with compliance for the 2025 period. The Scheme's commencement should be delayed by one more year to allow for decisions on the whole of the Scheme's design to be made in a single review process. Retailers, users and fuel producers require this certainty before being able to work within the Scheme and deliver its intended objectives. For the avoidance of doubt, we are not suggesting that a further delay to the Scheme require initial targets being set at a low level i.e. Scheme commencement from the 2026

² OECC, *NSW Renewable Fuel Scheme - Discussion paper on scheme expansion*, 13 November 2023, p. 20.

compliance year could still reflect the 890,000 GJ of hydrogen as currently stated in the Act. That said, the OECC may wish to provide flexibility in certificate expiry i.e. allow for certificates to last more than the current three years from registration, in order to provide more certainty for initial projects and liable entities relative to unpredictable production levels.

Only sustainable renewable fuels should be encouraged

We support extension of Scheme to include other renewable fuels but generally only where they reflect a by-product of waste and other cycles, such as logging and agricultural residues, landfill waste etc, where that source would have otherwise been released into the environment. That is, we do not support the inclusion of agriculture-based methane or other gas production for fuels where there are likely to be material and unaccounted externalities. This would include:

- where fuel production leads to competition with land use, including traditional agriculture, that has a higher value for economy-wide decarbonisation e.g. carbon farming, restoration, nature repair and offset creation
- negative bio and nature impacts e.g. water stress, increased use of fertilisers, lowered biodiversity, soil degradation
- a lack of measurement and accounting for full supply chain and life cycle emissions. Biomethane and other gases, if leaked during production, could ultimately increase emissions even if they displace fossil fuel combustion and associated CO₂ release. For similar reasons the OECC should ensure there is appropriate monitoring of leakage in any hydrogen production and transport
- in addition to physical constraints, there may be insufficient commercial prospects of upscaling to meet required fuel demand, for example given low conversion and process efficiency as noted by the OECC.

Further considerations relating to the Scheme's expansion and setting of fuel targets generally should be illustrated by the modelling of sectoral emissions reduction pathways and of associated costs and benefits. We expect to see such modelling released in the OECC's planned public consultation in 2024, which should also justify the existing or potentially revised hydrogen targets. Modelling would help identify the following, for example:

- longer- versus shorter-term implications of expected production scale-up and learning rate implications
- the need to accommodate emissions reduction pathways and legislated targets for affected and adjacent sectors (e.g. transport, agriculture and electrification)
- the extent to which different fuels are complementary or substitutes. As noted in the OECC's discussion paper, green hydrogen seems to be an input for other renewable fuels, and itself will depend on the prevalence of cheap renewable electricity.

The Scheme's expansion should reflect beneficiary pays and transparent modelling of customer impacts

The OECC's discussion paper lists two guiding principles when considering options for liable entities, which we strongly support:

- ensuring those who benefit from the scheme contribute to the cost of the scheme
- delivering the necessary scale of investment in the desired activity while keeping costs to liable parties at a reasonable level.³

It would be useful for the OECC to systematically list other guiding principles which are implicit in its discussion paper. For example, in the context of determining exemptions, the OECC notes that including liable entities who have options to electrify will provide them an incentive to switch away from fuel-based consumption.⁴ In this way the Scheme could effectively function as a price on carbon, with affected entities incentivised to seek out emissions reduction at least cost and in proportion to their emissions contributions. The objective of the Scheme as set in the Act, however, is to incentivise the production of green hydrogen and other renewable fuels.⁵ This objective is unhelpfully narrow and when read in isolation could justify an unreasonably high cost being passed onto liable entities in order to meet fuel production targets. It also contrasts to the objects of the NSW Energy Savings Scheme which include "complementing any national scheme for carbon pollution reduction by making the reduction of greenhouse gas emissions achievable at a lower cost."⁶ Such an objective appears ideally directed at renewable fuels, as it would help guide decisions on which fuels to include (as discussed previously) and how, including integration with the Guarantee of Origin arrangements (discussed further below). In any case, having full clarity on the Government's intentions will be necessary in reviewing the Scheme's performance in 2026.

The principle of beneficiary pays and identifying liable entities would presumably follow an analysis of the supply chain for each prospective renewable fuel.

We provided feedback at the time of the Scheme's inception that mass market retail customers would not benefit from green hydrogen production. This is primarily because of the limited prospects of hydrogen blending in gas distribution networks and that hydrogen would be more likely used in other intermediate processes. This will undermine the credibility of the Scheme in that customers are solely being viewed as a means for cost recovery rather than in terms of the value they derive. In addition to adhering to the principle of beneficiary pays, gas demand from mass market customers will progressively decline as they electrify, while consumption for gas powered generation is highly variable, creating challenges in ensuring Scheme costs are reasonably allocated to remaining gas users.

Beneath these principles, the OECC has posed a comprehensive range of design questions including the apportionment of liability, setting of targets, choice of target metric and extent of exemptions. Stakeholders would benefit from viewing the range of responses from across different industries, and we encourage the OECC to publish these, along with all those on the Scheme's design to date.

³ OECC, p. 14.

⁴ OECC, p. 23.

⁵ See section 150 of Schedule 4A the Electricity Supply Act. [Electricity Supply Act 1995 No 94 - NSW Legislation.](#)

⁶ See section 1 of Schedule 4A the Electricity Supply Act. [Electricity Supply Act 1995 No 94 - NSW Legislation.](#)

By suggesting a single, fuel-agnostic target, the Scheme's current application for hydrogen and natural gas consumers is subject to fundamental change. We would not support this change, right at the time the Scheme is expected to commence, even with an additional year of delay as we have requested above. We also support retaining the volume-based targets set in the Act, subject to the Scheme's scheduled review in 2026. After this timeframe, we would expect to see increasing electrification and the potential need to revisit targets, including moving away from a volume measure to a percentage target to accommodate higher levels of demand uncertainty.

We do not have specific suggestions on other fuel types as they are beyond the immediate scope of our business and our customers. However we strongly recommend the OECC produce modelling of the expected cost per customer of the different design options it is proposing. The capacity of customers to pay across different fuel types and industries will be affected by a range of factors including their ability to pass on costs into different downstream markets, other government support⁷ and other avenues they can employ to reduce emissions. Any customer impact analysis would correspond to the total pool of funding support available for each renewable fuel, which would provide investment certainty to prospective developers and ultimately enable fuel production in line with the OECC's policy objectives.

Modelling of hydrogen production and gas customer impacts would have been conducted ahead of hydrogen targets being set in 2021, and there would still be value in the OECC publishing this. Notably, the discussion paper does not justify the proposed penalty price of \$25/GJ for 2025. We support a low penalty price given there will be no certificates available in the near term, hence this price will be passed directly through to customers yet with no associated incentive for producers. In future years, we expect necessary levels of hydrogen production will be materially subsidised via a range of other government mechanisms. The extent of this support should be surveyed and published by the OECC in its forthcoming consultation on penalty rates for 2026 and beyond.

Certification rates should reflect emissions content per Guarantee of Origin

The OECC's prior consultation paper highlighted it was investigating ways in which the Scheme could integrate with the GO in relation to certificate creation for hydrogen production. It is not yet clear how GO and Scheme certificates would be fungible, or if the OECC simply intends to 'piggy-back' off the Clean Energy Regulator's administrative GO arrangements. The different bases for certificate creation will be important to work through with affected stakeholders. As the OECC is aware, GO certificates reflect the 'emissionality' of the underlying product. Thus far the Renewable Fuel Scheme proposes to create one certificate in relation to each GJ of renewable hydrogen that is produced. While this has the benefit of being administratively simple, the value ascribed to certificates should have some regard to any emissions impacts, including in production (e.g. road transport or leakage) or if renewable hydrogen is used to displace fossil fuels.

The discussion paper lists the merits of a single fuel agnostic target, leading to questions around potential multipliers or conversion factors across fuel types and associated certificates. We do not support this approach. Fuel-specific targets and cost recovery arrangements should be applied in order to prevent unintended cross-subsidies between liable entities in different industries. Having this level of clarity and certainty is likely necessary at least for the initial years of the Scheme's life where production and consumption will take time to normalise, and greater control over individual target

⁷ Including specifically designed concessions, such as [Green hydrogen electricity concessions | NSW Climate and Energy Action](#)

parameters to ensure stable certificate pricing may be warranted. As the Scheme is established and subject to legislative review in 2026, emissionality factors across the GO Scheme should also have been well-established and could form the basis for integrating individual Renewable Fuel Scheme targets and certificate conversion. Such timing would also coincide with substantial increases in fuel targets and so the need for more flexibility in creating certificates from least cost sources.

If you would like to discuss this submission, please contact me on 03 9060 0612 or Lawrence.irlam@energyaustralia.com.au.

Regards

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