Justice and Equity Centre

Opportunities for a renewable fuel industry in NSW

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About the Justice and Equity Centre

The Justice and Equity Centre is a leading, independent law and policy centre. Established in 1982 as the Public Interest Advocacy Centre (PIAC), we work with people and communities who are marginalised and facing disadvantage.

The Centre tackles injustice and inequality through:

- legal advice and representation, specialising in test cases and strategic casework;
- research, analysis and policy development; and
- advocacy for systems change to deliver social justice.

Energy and Water Justice

Our Energy and Water Justice work improves regulation and policy so all people can access the sustainable, dependable and affordable energy and water they need. We ensure consumer protections improve equity and limit disadvantage and support communities to play a meaningful role in decision-making. We help to accelerate a transition away from fossil fuels that also improves outcomes for people. We work collaboratively with community and consumer groups across the country, and our work receives input from a community-based reference group whose members include:

- Affiliated Residential Park Residents Association NSW;
- Anglicare;
- Combined Pensioners and Superannuants Association of NSW;
- Energy and Water Ombudsman NSW;
- Ethnic Communities Council NSW;
- Financial Counsellors Association of NSW;
- NSW Council of Social Service;
- Physical Disability Council of NSW;
- St Vincent de Paul Society of NSW;
- Salvation Army;
- Tenants Union NSW; and
- The Sydney Alliance.

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1. Introduction

The Justice and Equity Centre (the JEC – formerly PIAC) welcomes the opportunity to respond to NSW DCCEEW's discussion paper (the Paper) on opportunities for a renewable fuel industry in NSW. The JEC supports the Department conducting broad analysis, and the development of an evidence and principles-based, strategic approach to the deployment of renewable fuels in NSW.

NSW must plan to affordably meet our future energy and industrial requirements while enabling rapid emissions reduction in line with our responsibilities to address climate change. Decarbonisation of gas and fuel use is a crucial part of this process. Renewable electrification, fuel decarbonisation and efficiency policies and actions must manage a rapid transition and a reduction in demand for and use of fossil gas, both domestically and in export. Anything less is irresponsible in its impacts on the climate, contributes to unacceptable stranded assets risk, and increased inequity and unaffordability of energy for NSW households

A strategic approach to understanding the current use and production of gases and fuels is required. This should form the basis of the development of a principles-based framework to assess and promote alternatives fuel production and deployment that contributes to the objective of rapid decarbonisation and the promotion of efficient and affordable energy for NSW. This process represents a crucial opportunity to implement such an approach.

The JEC consider that a principles-based approach to this process should result in the prioritisation of electrification, particularly of NSW residential gas networks. It should also involve the creation of a robust and holistic framework to consider the 'merit' of any alternative fuel production and match it to efficient deployment which meets the needs of NSW consumers and economy.

In this context, The JEC strongly supports the Department's intent to prioritise the use of renewable fuels and industrial feedstocks in hard-to-abate industry sectors. The use of renewable fuels should be targeted only to energy use requirements where no more efficient and effective decarbonisation alternative (such as electrification) will exist in the short to medium term.

The JEC contends that a strategic approach to renewable fuels must be able to:

- Assess existing gas and fuel uses and consider where alternative gases and fuels will be required, according to a set of robust, principles-based criteria.
- Comprehensively assess the sustainability, efficiency, emissions intensity and economic viability of potential renewable fuel sources in NSW.
- Develop a set of robust merit criteria that match required fuel uses to the 'optimum' fuel source.
- Focus on domestic, NSW requirements and considerations, to develop durable, efficient renewable fuel sources which meet NSW needs, as the most robust basis for exploiting competitive export options.

Our submission provides feedback on the overarching objective and enduring principles that should guide the Department in implementing this approach. We recommend the Department employ a robust definition of renewable fuels, outline considerations for doing this and ensuring that the appropriate emissions reduction response is being deployed for the most effective use.

We provide further feedback on the renewable fuel scheme, ensuring value for NSW communities, and provide a direct response to the consultation questions.

2. Developing policy guided by principles with a clear objective

Objective

The overarching strategic framework guiding NSW Government policy on a renewable fuel industry must be grounded in climate and emissions policy requirements, such as those underpinning the Paris Agreement and the NSW legislated emissions targets, including 50% emissions reduction by 2030, 70% by 2035, and net-zero emissions by 2050.

An overarching policy objective should serve as a coherent and consistent link between climate, energy, industry, economic and social policies and ensure the NSW renewable fuel industry effectively contributes. The four key objectives outlined in the paper should be drawn upon and evolved to devise the overarching objective incorporating crucial aspects of efficiency and community outcomes.

The JEC recommends the following overarching objective:

> Development of a domestic renewable fuel industry that contributes to the most rapid, efficient, equitable and affordable decarbonisation of hard-to-abate industrial sectors, supporting achievement of NSW's emissions reduction targets, while driving sustainable regional economic development and a more resilient NSW economy and community.

Principles

An appropriate objective is not sufficient. Robust principles are required to inform how the objective will be achieved, determine what actions are most aligned with promoting that objective, and provide guidance regarding how to undertake trade-offs between priorities and alternatives. These should be enduring principles that can be applied to the development of an approach delivering optimal outcomes for all New South Wales households, businesses and communities.

The JEC recommends that the following principles shape and inform the development and implementation of a domestic renewable fuel industry:

Principles

- Responses are consistent with, and plausibly respond to the latest evidence on emission reduction requirements, and updated emissions reduction targets.
- Priority of response should be assigned according to the materiality of decarbonisation impact and only policies and actions which lead to material emissions elimination or reduction (when considering all related emission holistically) are supported.

- Acceleration of decarbonisation is prioritised over optionality, with emissions reductions before 2030-2035 prioritised.
- Costs and risks of actions are borne by those most capable of mitigating and managing them efficiently.
- Costs of actions should be incurred by beneficiaries of those costs.
- Consumers should not be unreasonably burdened with costs of actions where they cannot manage and do not benefit from them.
- Best-practice for NSW circumstances and NSW consumers should be prioritised over national consistency.
- Sustainable solutions for NSW community needs are a sustainable basis for potential export industry opportunities.
- Assessment of fuel alternatives should consider whole-of-supply-chain emissions and economic consequences and seek to avoid unintended consequences.
- Only 100% green hydrogen is regarded as clean hydrogen.
- Employment of gas and fuel alternatives should assign the most sustainable and efficient alternative to the use which optimises emissions reduction, efficiency, and affordability.

3. The role of renewable fuels in NSW

NSW's energy future is one of rapid, efficient, renewable electrification, with merit-based, efficient utilisation of genuinely renewable zero/low-emissions alternative gases and fuels where they are required to rapidly decarbonise.

Reducing domestic gas and fossil fuel demand and meeting emissions reduction targets will require rapid electrification of most existing domestic gas uses, including the managed decommissioning of residential gas networks. The International Energy Agency's Pathway to Net Zero by 2050 is unequivocal. There can be no new gas fields approved and existing fossil gas production and use must be urgently phased out. The continued domestic production, use and export of fossil gas critically endangers our health, our future prosperity and is incompatible with our global climate responsibilities.

There is no uncertainty over the future of fossil gases and fuels. What is uncertain, and what this consultation can contribute to resolving, is how to identify and source the most effective and efficient, lowest emissions alternatives and deploy them rapidly and effectively to their most appropriate use.

When considering the role of renewable fuels in NSW, the Department should devise policies and actions based on a merit order that seeks:

- To first **remove or eliminate** the requirement for gas and fuel use through electrification;
- Second, where removal is not possible, **reduce and minimise** the amount of gas and fuel required through efficiency measures;
- Third, **replace remaining** fossil gas and fuel use with the most appropriate, efficient and genuinely lowest emission alternative;
- Finally, capture, use and offset any **residual emissions** to ensure zero or negative-net emissions.

We highlight that carbon capture and utilisation or sequestration (CCUS) and offsets are unreliable, inefficient and prohibitively expensive. Their role should be minimised and only considered as a final step to deal with residual emissions that cannot otherwise be eliminated, reduced or substituted by other means. This approach ensures not only that emissions reduction can be rapid and enduring, but also accomplished with the least cost and risk to households and the NSW community. The JEC contends that if a Remove > Reduce > Replace merit order of action is meaningfully adopted, there should be limited circumstances where capture, use or offsetting of residual emissions is required to meet net zero. Importantly for this process, it should also provide a robust basis to identify and rapidly deploy appropriate renewable fuels where required.

The Department should avoid policies and actions that prioritise investment in and development of a renewable fuel industry in sectors or locations where more effective and efficient decarbonisation alternatives exist, or where efforts to develop a renewable fuel industry will have a negative impact on speed, and efficiency of decarbonisation elsewhere.

For instance, development of biomethane options for replacement of network fossil gas must be targeted to those needs which cannot be efficiently electrified in the medium term, and focussed in areas where long term needs exist, rather than inefficiently injected across the network in a way which may impede more effective electrification (particularly of households), and 'waste' limited biomethane resources that can more be more valuably deployed elsewhere.

The JEC support the Paper's explicit focus on 'hard to electrify or abate' applications and recommend this be strengthened through the application of the objectives and principles set out in this submission. We contend this should appropriately frame the role of renewable fuels as supporting electrification and enabling rapid, efficient emissions reduction.

3.1 Emissions reduction

NSW's 2030, 2035 and 2050 emissions reduction targets are critical enablers of the action NSW must take to meet our international climate obligations and limit warming to 1.5 C degrees.

Alongside NSW and Australian emissions reduction targets, Australia has made related international commitments that should be considered as part of the Department's analysis and planning for a renewable fuel industry. These commitments support employment of a merit-order for decarbonisation options and indicate the minimum levels of action required.

Relevant international commitments include:

- The COP28 Global Renewables and Energy Efficiency Pledge[1] which includes commitments to:
    - Triple the world's installed renewable energy generation capacity to at least 11,000 GW by 2030.
    - Double the global average annual rate of energy efficiency improvements from around 2% to over 4% every year until 2030.
    - Put the principle of energy efficiency as the "first fuel" at the core of policymaking, planning, and major investment decisions.
    - Take comprehensive domestic actions to contribute to the achievement of this pledge, including by adopting ambitious national policies on renewable energy and energy efficiency and reflecting this ambition in NDCs, working with cities and subnational governments, focusing on the key tools and enablers most relevant to national and local circumstances.

- Clean Energy Transition Partnership[2] which includes commitments to:
    - End new direct public support for the international unabated fossil fuel energy sector.
    - Prioritise support fully towards the clean energy transition.

- The Global Methane Pledge[3] which includes commitments to:
    - Reduce global methane emissions by at least 30 per cent from 2020 levels by 2030.

The Department should incorporate achieving these commitments into its policies and actions in supporting any domestic renewable fuel industry.

The National Energy Objectives now also include "achievement of [emissions] targets" as a criterion to be balanced against price, safety, security and reliability of energy systems, when decision makers are determining how efficient investment in, operation of, and use of energy systems promotes the long-term interests of consumers.

Any NSW Government policies and actions on supporting and deploying a domestic renewable fuel industry should be aligned with and support the national energy objectives. This will help to provide a consistent and coherent basis to ensure NSW meets its required emissions reduction targets in a manner that optimises benefits to NSW households and communities, and is efficient, affordable and equitable.

The coming decade is critical for the ambitious action on climate change required to meet this challenge. The next 5-10 years must see significant investment in clean energy sources and infrastructure. The limitations on resources and investment capacity require prioritisation of action that maximises near-term emissions reduction, ensures longevity of emission reduction impact, and optimises the overall efficiency of outcomes. This means prioritisation of improved energy efficiency, renewable electrification of the energy system and economy, decarbonisation of

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1 United Nations Climate Change, 2023, *Global Renewables and Energy Efficiency Pledge.*
2 Clean Energy Transition Partnership, 2022, *Statement on International Public Support for the Clean Energy Transition*
3 Climate & Clean Air Coalition Secretariat, 2021, *Global Methane Pledge*

industry and agriculture, and the rapid retreat of fossil fuels, with an urgent priority to halt new fossil fuel development[4].

3.2 Renewable fuel types

The evidence-based alternatives to the use of fossil gas in the energy sector are, in order of applicability and impact, energy efficiency (including thermal efficiency, appliance efficiency, batteries, household renewables and flexible demand), electrification, and targeted (merit-based) deployment of selectively sourced, lowest-emissions, efficient renewable fuels. These alternatives must be implemented and supported according to each of their merits to ensure the most effective and efficient decarbonisation solutions are pursued.

Beyond the use of renewable fuels as an energy source, any substitute use as an industrial feedstock should equally consider the emissions, efficiency and effectiveness of the substitution, as well as the potential impact on other efficient deployment options. For instance, attempts to broadly deploy green hydrogen in reticulated gas networks as part of a 'blend' would inefficiently 'waste' available green hydrogen production required to more urgently decarbonise existing hydrogen product usage, while having detrimental impact on costs and utility for consumers.

Renewable fuels cannot be assessed as a whole, as each type (and source) has specific characteristics, potential uses, risks and costs. For instance, hydrogen is not a viable option for residential use and its characteristics indicate it should initially be supported as the best solution to the decarbonisation of existing hydrogen related product use. Fuel or technology 'neutrality' is not compatible with the requirement to maximise emissions reduction impact and enable the most efficient and rapid transition that maximises social, economic and ecological benefit. Support for each proposed domestic renewable fuel, and proposed associated industry must be based on the most effective and efficient emissions reduction response for each specific industrial application, according to the principles outlined earlier in this submission.

3.2.1 Definition of renewable fuels

The definition of renewable must be related to the emissions intensity of the fuel and its practical capability to be verifiably zero emissions (or net zero emissions over a defined, short timeframe). As the paper demonstrates 'renewable' may cover wide range of fuels with a significant variability in emissions according to their source and circumstances of their deployment. It is important to recognise that the ability to 'replenish' fuels (ie that they are renewable) should not be the defining factor for any policies and actions aimed at emissions reduction, including supporting a domestic renewable fuel industry or expanding eligibility for the Renewable Fuel Scheme. For instance, many 'renewable fuels' included in Appendix A of the paper:

- Involve continued high-intensity carbon emissions which may exceed or be equivalent to existing fossil fuels. In any case, many of these fuels involve insufficient or immaterial reductions in carbon emissions related to their use.

[4] International Energy Agency, 2021, *Net Zero by 2050: A Roadmap for the Global Energy Sector*

- Rely on long re-growth periods or other circumstances to offset the emissions associated with their use. This introduces significant risk to the assumed emissions reduction value of the fuels because:
    - There is likely to be a material difference between the ongoing emissions associated with the use of the fuel and the emissions drawn down each year through 'regrowth'.
    - The assumed regrowth is subject to bushfires, slower than predicted growth or other losses or uncertainties.
    - Different use cases can change the overall status of the fuel and potentially render them emissions intensive. For instance, Bio-fuels which are transported long distances by truck or ship, or which involve emissions through compression or storage, may involve significant transport emissions.

- Still involve the use and combustion of methane, which is:
    - Subject to leaks and other losses which contribute to methane emissions which are a high priority for emissions reduction policy.
    - Combusted and contributes to carbon dioxide emissions, with difficulty in reliably calculating the actual 'saved' emissions.

- Are inherently less efficient and more emissions-intensive than the electric equivalent. Where emissions reduction is the overarching objective, the employment of emissions-producing fuels must be minimised and regarded as a 'last resort option'.

- Introduce perverse incentives to increase waste products (such as forest and agricultural waste and landfill). In some cases this can increase overall emissions (or other negative consequences), for instance by encouraging land-clearing for bio-fuel crops. There is a strong likelihood of undermining the incentive to minimise waste sources, which is the most robust and enduring means of emissions reduction related to these products. This is crucial where the capacity to offset residual emissions is limited, meaning waste sources must be minimised before any other processes are implemented.

As a result of these factors, a meaningful definition of renewable fuels must be narrow and restricted to those fuels which can be verifiably zero emissions, or verifiably net-zero emissions over a defined short timeframe. When considering fuels to subsidise through the renewable fuel scheme or otherwise provide Government support, this should be further limited to those which are verifiably zero emissions.

The JEC does not support blue hydrogen or methane (including biomethane) being defined as ‘renewable fuels’ nor being actively supported or subsidised by the NSW government as part of our state’s emission reduction policies and actions.

3.2.2 Blending

The JEC does not support any blending of gases in the gas network being supported or promoted by the NSW Government. This is not a meaningful emissions reduction action, is not in the interests of consumers, and poses real risks to rapid action on efficient emissions reduction.

The NSW climate target is to reduce emissions rapidly including achieving a target of 70% emission reductions by 2035. Blending of renewable hydrogen has a limited impact on emissions reduction, and potentially material impact on cost, safety and utility for consumers.

Network and related investment to accommodate and facilitate blends reduces scope to invest in more efficient alternatives (such as electrification). Any investment to accommodate this must consider short and long-term implications and the plausibility and relative efficiency of pathways to emissions reduction and fossil fuel replacement.

3.2.3 Hydrogen

Green hydrogen is a viable potential option for some hard-to-abate industrial uses. Green hydrogen use should be prioritised in sectors which already rely on hydrogen and related products (such as ammonia) derived through emissions-intensive processes. These are sectors for which hydrogen and related products (such as ammonia) are required, and which make significant contributions to greenhouse emissions. Decarbonising these sectors can only be done through green hydrogen and their demand is a substantial and predictable foundation on which to build efficient supply chains which will have value elsewhere.

Assessment of further sectors where green hydrogen may be a material contributor to decarbonisation should be undertaken according to the principles we have outlined, creating a 'merit order' which ensures limited Government resources are most effectively employed, with the greatest likelihood of success.

Importantly, NSW government decisions should not be unreasonably directed by consideration of what strategies are being employed by other jurisdictions. NSW's strategic development of a green hydrogen industry and the employment of green hydrogen for decarbonisation, should be shaped by our own circumstances and the needs of NSW consumers, and what enables rapid decarbonisation and promotes the best interests of NSW.

The JEC agrees with the suggestion in Appendix A that blending green hydrogen into fossil gas network is inefficient and costly, and not an effective emissions reduction response.

3.2.4 Biofuels

In considering supporting a domestic biofuel industry, the Department will need to employ merit order assessment criteria.

The JEC does not support blending biofuels in the existing gas network with fossil fuels. We further recommend that any employment of bio-methane in gas networks is limited in scope and confined to targeted areas and uses where no efficient electrification alternative exists, and a long-term alternative is required.

It is important to note that while technically 'renewable' (in that it can be derived from sources which can be renewed) bio-methane is still methane, the leaking and combustion of which contributes to greenhouse gas emissions.

The value of bio-methane (and other biofuels) as 'lower' emissions fuels is heavily dependent upon their source and the nature of their end-to-end use. It is also predicated on the assumption

their source would otherwise be releasing emissions (methane) which are now captured and utilised as a biofuel with less intense emissions released. In many cases (such as landfill, sewage, forest waste) those sources will themselves need to undergo significant changes as part of implementing a more sustainable circular economy. That is, we will need to drastically reduce our production of landfill waste, sewage and forest and agricultural waste and direct those residual wastes to their highest value (and lowest emissions) use.

Assessments of the role of biofuels will have to consider a range of factors which will materially limit the amount of efficiently accessible (and genuinely low emissions) biofuel available. This is not compatible with moves to inject biofuels into the gas network as a broad-scale, long-term alternative.

The example of ethanol production and blending is cited as a potential example to be followed. We regard this as misguided. Ethanol blending does not materially reduce the emission of the resulting petrol. In many countries subsidising the practice has resulted in the expansion of source crops (such as corn and sugar) at the expense of higher-value, or more sustainable crops and land-uses, while crowding out investment in more effective emissions reduction alternatives. A similar approach to renewable fuels would be at least as problematic.

3.3 Residential decarbonisation

The JEC supports the Department's recognition that renewable fuels should only play a role in emissions reduction in hard-to-electrify-and-abate industry sectors. Biofuels, hydrogen and other renewable fuels will have a role to play in replacing fossil gases and fuels in targeted circumstances where no other solution exists in the short to medium term, and where they are the most efficient, effective and lowest emissions option. Any renewable fuel industry in NSW must be targeted at those circumstances and developed according to the robust principles outlined in this submission. The JEC warn against potential 'scope creep' and less rigorous criteria informing the development and deployment of renewable fuels in NSW.

In particular, large-scale substitution of fossil gas with biogases or hydrogen in the residential gas distribution network is not plausible, efficient or effective and should not be pursued. Residential use of renewable fuels as potential 'alternatives' to the fossil gas residential network either fail to contribute to emissions reduction and improved household health or involve substantial unnecessary cost and risk to households. Broad scale use of either in gas networks would represent an inefficient 'waste' of resources whose economic supply is limited and would be better utilised elsewhere with greater impact. Any deployment of renewable gas in residential gas networks should be implemented according to the principles outlined earlier and targeted to those areas and circumstances where efficient electrification is not possible in the medium term.

3.4 Renewable fuel scheme

The JEC does not support the Renewable Fuel Scheme (RFS) in its current form and strongly recommends it be substantially reformed. The JEC does not support any expansion of the scheme to other gases and strongly disagrees with the RFS involving an effective subsidy by NSW households for the development of alternative gases, and the inefficient deployment of those gases. We submitted a detailed response to the Department's 2023 Renewable Fuel

Scheme discussion paper[5] setting out significant issues with the RFS, its structures and flaws in the assumptions it is base upon.

In our response we recommended cessation of the scheme entirely, or a fundamental review with the intent of determining more effective, efficient and appropriate means to support the replacement of fossil gases and fuels. We recommended a review of the objective, guiding principles and structure of the scheme to ensure it is better focussed on effective emissions reduction and fair and efficient sharing of costs and risks.

We acknowledge that the current consultation reflects the Department's recognition that a broader analysis of renewable fuel use in NSW was warranted prior to proceeding with any expansion to the renewable fuel scheme. We reiterate our position and recommend the Department consider our input in relation to reformation of the RFS to better meet the needs of NSW households.

We strongly recommend the Department strictly limit the fuels which are considered in any renewable fuels scheme and, in the short term only consider genuinely green hydrogen (and its derivatives) as eligible.

Any future inclusion of biofuels or other similar fuels as part of a reformed RFS should only involve sources of biofuels which cannot otherwise be avoided, reduced or employed for higher value elsewhere. For instance, growing biomass as a fuel stock is unlikely to be an emissions neutral proposition from cradle to grave and has serious land use implications. Use of waste biomass as a feedstock for renewable fuels is also not necessarily emissions neutral compared to options for waste reduction, recycling or re-use. There will be instances where a biofuel is a waste product from a process that has already been reduced to its minimum and emissions from that waste product cannot be otherwise avoided. For instance, biofuels from a landfill that is subject to robust structural limitations, and involves remnants that cannot be re-used, re-cycled or re-processed in any other way, could be a valuable and appropriate biofuel source.

Robust criteria recognising these limitations should be applied to qualify assessments of available bio-fuel resources.

4. Value for NSW communities

Community support for the energy transformation will depend on delivering fair and equitable outcomes for NSW households and communities in all energy and climate policies and actions. The Department will need to consider fair sharing of the costs and risks of supporting any renewable fuel industry and how to address any resulting equity concerns, and ensure a fair return on any investment for NSW consumers. Prioritising local workforces and supply chains where possible will further contribute to community support and value for communities.

Consumer engagement observed by the JEC shows consistent, strong support for embedding environmental sustainability and equity considerations into the energy transition. This is particularly important in considering how the (limited) role of renewable fuels is determined, and

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5 Justice and Equity Centre, 2023, Submission to NSW DCCEEW Renewable Fuel Scheme Discussion Paper

how solar, battery and other resource recovery and recycling schemes are integrated with the transition.

4.1 Fair sharing of costs

NSW households and communities are consistently told that the energy transition will result in cheaper energy. However, without measures to ensure fairer recovery of the costs of transitioning the energy system and related industries, the short-medium term experience will likely be one of higher bills as the costs of the transition investments are pushed onto bills.

Historic levels of transmission investment, the NSW energy infrastructure roadmap and other green scheme supports are all adding to NSW household bills in advance of the benefits of cheaper, cleaner renewable energy. These impacts disproportionately hit more vulnerable households (those with inefficient housing, who are renting, or who have low incomes) without the means to defray or mitigate those costs. This presents real equity risks and places greater importance on ensuring consumers are not carrying an unfair share of the costs of developing and deploying renewable fuels.

NSW Government plans to support a renewable fuel industry must abide by the principles we have outlined in this submission. Where possible this should involve measures to shift costs off bills onto more equitable means of recovery, including from the fossil gas industry or Government Budgets. Government budgets may be more suited to dealing with the temporal differences between the incurring of system transition costs, and the realisation of benefits through lower energy prices or more cost-effective alternative fuel sources.

In any case, NSW consumers must not be responsible for subsidising the development of industry, and the arrangements for cost sharing (and exemptions) should abide by robust principles, including:

- Beneficiary pays.
- Costs and risks being borne by those best placed to manage and mitigate them.

4.2 Return on investment to NSW

Any NSW government support for renewable fuel industries must focus on NSW emission reduction and community and industry requirements as the priority considerations for policy and action. The potential development of any export industry should be secondary to domestic needs and founded on first being able to efficiently and affordably meet domestic needs.

If NSW focuses on developing renewable fuel industries that are efficient and effective for NSW, it is likely that this will create the foundation for sustainable and competitive export opportunities. Through focusing on solving the problem of sustainably fuelling our hard-to-abate sectors, NSW is more likely to develop renewable fuel innovations that are sought-after by our trading partners. Importantly, this approach will ensure NSW consumers are not subsidising potentially speculative development in export industries they will not benefit from, and the associated risks of which they cannot manage.

Past government errors in respect of the fossil fuel resources export sector should not be replicated in the development of a renewable fuels export sector. The NSW community should

benefit, through royalties and other revenue, from any renewable fuel-related export industry developed through or enabled by NSW Government support.

4.3 A clean energy workforce

Decarbonisation of NSW's energy sector represents an ongoing economic opportunity to build domestic capacity, resilience, prosperity and employment. Planning, targets, timeframes and collaboration across governments, industry, unions and education providers will be crucial to achieving the necessary supply chain and workforce requirements.

We note the current Commonwealth DCCEEW consultation on a National Energy Workforce Strategy, the outcomes of which will likely provide useful insights and actions for a NSW renewable fuel workforce.

We also highlight a forthcoming publication by the Energy Efficiency Council[6] which will provide further detail and guidance on the workforce requirements necessary for the decarbonisation of Australia's energy sector.

5. Direct response to consultation questions

1. **Do you support these primary objectives? Are there other objectives renewable fuel policies should address?**

   Refer to section 2 of this submission for recommended amendments to objective and principles which should shape renewable fuel policy.

2. **What actions can the NSW Government take to continue support for hydrogen production in NSW?**

   Support for hydrogen production in NSW is best undertaken by ensuring production is 100% green and linked to uses which maximize efficient emissions reduction impact. This will ensure that limited hydrogen resources are used in hard-to-abate sectors with no viable electrification alternatives, where a clear, enduring domestic need exists. As outlined throughout this submission and in our earlier submission on the renewable fuel scheme[7] support for hydrogen production must be undertaken according to robust principles.

3. **What could be implemented or learnt from existing policies and programs?**

   Existing policies and programs should be reviewed and assessed according to alignment with the objectives and principles detailed throughout this submission. This provides a platform to consider which programs can be adapted and reformed and which should be discontinued. The JEC recommend an 'audit' of existing policies and programs be undertaken as a foundation for future work implementing a more strategic approach to decarbonisation action, and better co-ordination between energy, climate and industry policy.

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6 Energy Efficiency Council, 2024, *Residential Energy Upgrades Workforce Mapping Project*

7 Justice and Equity Centre Submission to NSW DCCEEW Renewable Fuel Scheme Discussion Paper

4. **How can the NSW Government support infrastructure reuse and development that delivers efficient, low-cost renewable fuel supply chains across the state?**

   Consumers relying on existing regulated assets, particularly residential gas networks, should not subsidise the conversion of assets to accommodate new fuels.

   Development of new infrastructure, and the re-purposing of existing infrastructure, should be undertaken at the commercial cost and risk of network operators and renewable fuel industry proponents. Any Government decisions to support these efforts should be transparent and undertaken through Government budgets.

   Targeted repurposing of existing gas infrastructure to serve ongoing, localised industrial needs should quarantines consumers and the community from the costs and risks involved. Targeted repurposing of existing gas infrastructure for priority needs should involve:

   - Identification of specific infrastructure relevant to the identified future need, where that need is assessed according to robust, transparent principles,
   - Transparent assessment of the costs of repurposing the relevant infrastructure to serve that need, and
   - Transparent demonstration that the repurposed infrastructure (including related repurposing costs) will be technically and economically viable to serve the identified ongoing need.
   - Ensuring transparent, fair sharing of the costs of retaining repurposed infrastructure according to the principles we have outlined in this submission.

   Any subsequent decision to proceed will then be at the risk of the proponent (and any beneficiary of the repurposed infrastructure), rather than the wider consumer base or the community. Any Government decision to support repurposing should then also be able to demonstrate the purpose and value of that support, as well as the beneficiaries, without risking further cost to NSW consumers or impact on the community.

   Existing gas infrastructure should not be repurposed to facilitate potential use of green hydrogen or biomethane (either in blends or as a pure product). In particular, network connections to households and small businesses should be excluded from any measures to repurpose gas networks for potential hydrogen uses. Domestic heating, water heating and cooking needs are able to be fulfilled more efficiently through electrification with further energy cost reductions flowing from the eventual rationalisation of network costs (ensuring households only pay for maintenance of a single, more efficient energy network).

5. **How can the NSW Government support regional renewable fuel supply? Is there an opportunity to aggregate feedstocks at existing regional facilities such as landfills or wastewater treatment plants to create hubs for renewable fuel production?**

6. **Would support for feasibility and front-end engineering and design studies assist with reaching final investment decisions? If so, how is this best delivered?**

7. **What action would best support investment in these projects or a NSW renewable fuel industry? Are there example projects where this would accelerate development?**

8. **Should the NSW Government establish renewable fuel demonstration projects? If so, what would be the best model to support these projects?**

9. **Are there current regulatory gaps or barriers to establishing renewable fuel facilities? If so, what are they and how could they be addressed?**

10. **How can the NSW Government accelerate the use of renewable fuels?**

11. **Should the NSW Government set, or redesign existing mandates for the use of renewable fuels? If so, what industries or fuels should be prioritised?**

    Mandates should be employed in conjunction with sector-based demand/usage targets. Both targets and mandates should be set in line with evidence-based emissions reductions requirements and merit-based assessments of optimum alternatives. Ensuring rapid, efficient decarbonisation of sectors which can already utilise renewable fuels will help meet our obligations, while efficient solutions for more complicated sectors are developed.

12. **Would renewable fuel purchase requirements for the NSW Government's assets support investment in production facilities?**

    Where the Government has identified a specific renewable fuel(s) is the most effective and efficient emissions reduction response for a specific use or sector, adopting renewable fuel purchase requirements for NSW Government assets would be a useful mechanism to support the renewable fuel industry.

13. **Should the NSW Government set targets for renewable fuel use? If so, should these targets be broad or fuel and industry-specific?**

    The NSW Government should be cautious in adopting broad targets for the production, use and export of renewable fuels. Any targets should be employed according to the principles outlined earlier in this submission and confined to sectors where renewable fuels and related products are already required, and where decarbonisation will necessarily involve the employment of renewable fuels and related products (because it is assessed there are no viable alternatives in the medium term). For instance a target may stipulate that X% of ammonia use in NSW would be locally sourced from 100% renewable means by 2030.

    Accordingly, any targets should be narrowly focussed at an industry or application level, and be derived after robust, principles-based assessment that renewable fuels constitute the most effective emissions reduction alternative.

14. **What incentives can the NSW Government put in place to accelerate the use of renewable fuels?**

15. **What support do asset owners need to refurbish or upgrade existing assets for renewable fuel usage?**

    The JEC does not support existing asset owners receiving any additional support to refurbish or upgrade their assets for new applications. These owners 'benefit' from long term use that

may result from any upgrades to their assets, they should assume the costs associated with those assets. They should also carry the risks that those assets (and applications) will not be required. That is, these assets should be developed on a merchant basis with the proponents assuming market risk and return.

16. What funding mechanisms or support should the NSW Government consider to support research and innovation and improve the commercial viability of renewable fuel production?

17. Should the Renewable Fuel Scheme be expanded to support other renewable fuels?

See Chapter 3.4 of this submission for a response to this question.

18. If the Renewable Fuel Scheme is expanded to include other renewable fuels, who should be the liable parties and why?

The JEC do not support the expansion of the renewable fuel scheme in its current form. Consumers should not be liable for subsidizing the production of fuels they will not benefit from, and which represent a less efficient or effective emissions reduction solution than electrification.

The current liability structure of the scheme does not place liability with the parties best able to manage the costs and risks associated, or the parties who benefit most from the costs of the scheme. Arguably, gas producers themselves may be a more appropriate liable entity because:

- Their production directly contributes to the 'problem' of emissions which needs to be addressed.
- It is their production (and product) which needs to be replaced. Given that the replacement product will vary according to the application, it is reasonable to assume that multiple products will be required. Gas and fuel producers are best placed to manage their exposure to the costs and risks associated with their liability either through developing the most efficient and effective alternatives to their existing production, or by funding the development of those alternatives through their liability to the scheme.
- The cost of gas producer liability will be subject to competition with all other available sources, ensuring only efficient costs are reflected in the costs of their end product.

The JEC recommends this process comprehensively review the renewable fuel scheme, its objectives, and structure. At a minimum the schemes current arrangement for liability must be reassessed, and alternatives which can more effectively (and fairly) incentivise the efficient development of alternatives to fossil fuels without exposing NSW households to unreasonable costs and risk should be considered.

19. Should the Renewable Fuel Scheme incentivise fuels that offer short-term emission reduction, longer-term emission reduction or a combination?

If the renewable fuel scheme is retained, as a scheme which subsidises production at cost to consumers, the scheme must only consider fuels which are verifiably zero emissions, and which offer long-term emissions reduction potential.

An important factor in contribution to actual emissions reduction (and the net zero targets) is how renewable fuels are deployed, and whether they are used in their most impactful and efficient application. Accordingly, any renewable fuel scheme should incentivise renewable fuels for specific use, determined according to where they offer the greatest emissions impact, most efficiently, with longest-term application.

20. How can the NSW Government support feedstock producers for local renewable fuel production (regulatory, research, financial etc.)? What are the potential risks that should be considered?

The NSW Government should consider the risk of encouraging demand for waste-products, that is, creation of perverse incentives to generate waste or otherwise expand or retain the creation of waste products. See section 3.3.3 of this submission for further detail.

21. For feedstock producers and businesses currently exporting biomass crops, tallow and used cooking oils for overseas renewable fuel production, would an incentive scheme support the local sale of these important feedstocks?

22. Should a reservation policy be used to keep feedstock on shore to support the local industry?

Yes, any domestic renewable fuel industry and ancillary services that are supported by the NSW Government should be shaped by and targeted to meet domestic needs and, where necessary, subject to a reservation policy to ensure domestic needs are met prior to any export.

23. In setting guidelines for renewable fuels, what sustainability measures should be considered? Including food availability and affordability, lifecycle emissions calculations, changes in market prices for agricultural and waste products.

See section 3.2 for a response to this question.

24. Should a hierarchy of use for bio-feedstocks be enforced to prioritise feedstocks for applications where there is no available alternative for decarbonisation?

Yes, as outlined throughout our submission in relation to issues with biofuels, development of bio-fuels should explicitly address potential risks, impacts and unintended consequences.

25. Would a NSW Government-sponsored outline of export opportunities and volumes assist with investment?

Any outline of export opportunities and volumes produced and published by the NSW Government should ensure that domestic emissions reductions and fuel transition are prioritised over export markets. See section 4.1 for further detail.

26. Should there be a limit on financial support for renewable fuel export projects? If so, what is that limit and when should it apply?

Government support for the development of a renewable fuel sector should focus on domestic requirements and meeting the needs and promoting the interests of NSW consumers and community. As outlined in section 4.1 of this submission, development of sustainable, efficient renewable fuels to supply domestic needs is a robust basis for further export expansion, and minimises the scope for NSW Government (and community) support for any renewable fuel projects to be wasted or fail to deliver appropriate benefits.

Financial support for renewable fuel projects should be limited to those meeting domestic NSW needs, identified according to the principles we have outlined. Any resulting Government support for domestic renewable fuel projects must:

- Be narrowly targeted to areas where the strategic principles are best served, with clear timeframes and targets for when support will be withdrawn.
- Be clearly merit based rather than 'technology agnostic'.
- Not involve consumer subsidies or other community cross-subsidies which are inherently regressive and result in the community assuming costs and risks they have no ability to manage.
- Not involve the distortion of enduring structures or regulations which are difficult or impossible to unwind in the future. The renewable fuel industry should be subject to the same regulatory, revenue and policy structures as others, rather than being given broad, open-ended exemptions.
- Be transparent, reviewable, and founded on a reasonable expectation of tangible benefit within a reasonable and defined timeframe. This allows support to be time-bounded and assessed against expectations of growth and impact.
- Be focussed on domestic needs, drivers, and circumstances. A renewable fuel industry which meets domestic needs according to the prevailing circumstances of the NSW community will be more amenable to targeted support at a scale which will have an efficient impact.

Governments should not focus broadly on support for the 'development of export industry' as an intrinsic good. The scale of support required to compete internationally is not viable for NSW Governments and risks NSW consumers and community's interests being undermined by international rent-seekers driving competition between governments for their own interests.

A strong domestic sector which meets NSW community needs would serve as a more durable, solid foundation for the development of a competitive export industry which is not unreasonably reliant on Government support. This approach is also more amenable to the renewable fuels industry rapidly transitioning to serving as a source of revenue for the NSW community.

27. How can the NSW Government ensure that the export of renewable fuels benefits NSW communities? Are royalties an appropriate mechanism?

See section 4.2 for a response to this question.

28. How can the NSW Government, education providers and industry best support the development of skills, training and the workforce needed in a renewable fuel industry?

See section 4.3 for a response to this question.

29. How can the NSW Government support companies and industries with cross-border markets to decarbonise?

30. How can the NSW Government encourage a fuel transition that aligns with technological advancement?

The NSW Government can best support transition through evidence and principles-based assessments of renewable fuels and robust consideration of viability and applicability. Providing a robust basis for decision-making that encourages the optimum match of renewable fuels to efficient, high-value application, will best support fuel transition.

Given the timeframes within which action on emissions reductions is required, government responses must not rely on or assume technological advancement and developments to deliver required outcomes. For instance, committing to an electrification-first approach recognises renewable electrification is demonstrated to be the most efficient and effective response in most cases. This approach identifies those areas where renewable fuels are genuinely required, and provides a clear framework for considering what technological development is needed in order to implement appropriate renewable fuel alternatives for those uses, and what government support may help enable this.

31. What information should be provided to industry and the community to build an understanding of renewable fuels? How is this information best delivered?

The NSW Government should work with gas businesses, regulators and other jurisdictions to provide clearer, evidence-based expectations to the community and industry regarding renewable fuels, their best uses, their limitations and how decisions on development and deployment of renewable fuels will be made.

There is a concerning growth in misinformation and potential greenwashing in public communications on ‘renewable gas’ and ‘renewable fuels’ which is having negative impact on consumer choices and understanding of the energy transition. In particular, NSW household consumers should be supported to understand the impacts of fossil gases (such as methane), the costs and limitations of residential gas networks and the evidence-based considerations which mean widescale application of hydrogen and biomethane in residential networks is neither efficient, effective at reducing emissions, nor viable in the medium term.

6. Continued engagement

We welcome the opportunity to meet with the Department and stakeholders to discuss these issues in more depth. Please contact Douglas McCloskey on dmccloskey@piac.asn.au regarding any further follow up.