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Productivity Commission
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Re: Investing in cheaper, cleaner energy and the net zero transformation

Dear Commissioners Mr. Barry Sterland and Mr. Martin Stokie,

Jemena appreciates the opportunity to contribute to the Productivity Commission's interim report on *Investing in cheaper, cleaner energy and the net zero transformation*.

Jemena owns and manages a diverse portfolio of energy assets across the northern and eastern regions of Australia. With over \$12 billion invested in major gas and electricity infrastructure, we supply energy daily to millions of households, institutions, and industries. Our assets encompass the Jemena Gas Network in New South Wales, the Jemena Electricity Network in northwest Melbourne, and significant gas transmission pipelines including the Eastern Gas Pipeline, Queensland Gas Pipeline, and Northern Gas Pipeline.

Our group also holds partnerships in the ActewAGL gas and electricity networks within the Australian Capital Territory and maintains a 34 per cent stake in the United Energy electricity network serving southeast Melbourne and the Mornington Peninsula. Additionally, our group includes Zinfra, an energy services company that delivers project management, construction, operations, and maintenance services for both electricity and gas sectors. Combined with Zinfra, Jemena employs approximately 3,500 staff members.

We remain committed to reducing greenhouse gas emissions throughout our networks, with targets to achieve a 30 per cent reduction in Scope 1 and 2 emissions by 2030 (based on a 2021-22 baseline), and an ambition of achieving net-zero emissions by 2050.

Given our experience and involvement in both planning and operating comprehensive energy systems, we possess valuable insights into how the electricity and gas sectors can advance objectives of delivering reliable, low-carbon, and resource-efficient energy services at minimal societal cost. We support further examination of alternative decarbonisation strategies that foster efficient and timely investment, and we welcome continued engagement in this consultation process.

Accordingly, we present the following submission to the Productivity Commission, outlining key messages and recommendations, alongside detailed responses to specific consultation questions with an emphasis on the role energy infrastructure can play, and the need for all forms of renewable energy.

Key messages

- **Support for technology-neutral electricity market reforms.**
Jemena supports a reformed National Electricity Market that incentivises private investment in low-emission energy and reliability services.
- **Supporting Safeguard Mechanism facilities.**
Jemena recognises the Safeguard Mechanism as a tool to drive emissions reduction. However, Long-term support is needed to help gas-reliant industries reduce emissions sustainably (e.g biomethane).
- **Role of renewable gases in decarbonisation.**
Jemena calls for a national policy to activate renewable gas markets, including biomethane. Long-term signals and support are essential to support and prioritise domestic use and attract investment.
- **Sequenced decarbonisation approach.**
Jemena supports the prioritisation of lowest cost technologically neutral emission abatement. This approach aims for faster, cost-effective emissions cuts while protecting vulnerable users.
- **Streamlining infrastructure approvals.**
Jemena urges reforms to simplify gas infrastructure approvals and regulations across jurisdictions and enable the nascent biomethane market. Faster processes are needed to avoid delays and drive emissions reduction.

For more information regarding Jemena's submission or to arrange a discussion please contact Joeb Northey, Manager of Policy and Government Relations .

Yours sincerely,

David Gillespie
Managing Director

Reducing the cost of meeting emissions targets

PC Draft recommendation 1.1 – Reducing emissions in the electricity sector after 2030

Jemena supports prioritising long-term, broad-based market reforms in the electricity sector beyond 2030. We support, in principle, the Commission's preference for nationally uniform mechanisms designed to incentivise the most cost-effective low-emission energy sources, regardless of generation technology or location.

A technology-agnostic approach is critical to ensuring the electricity market delivers decarbonisation at least cost. This principle is reflected in the draft National Electricity Market Wholesale Market Settings Review ('the Review'), chaired by Tim Nelson, which advocates for standardised contracts for energy *services* (e.g. bulk energy, shaping, and firming). Jemena supports this shift away from technology-specific government support towards mechanisms that promote competition and efficiency through market-led investment.

Equally, Jemena agrees with the recommendation of the Review to embed investment incentives that value reliability and system security—two attributes that are currently undervalued in the National Electricity Market's (NEM) energy-only design. The Review identifies this as a critical gap and proposes the Electricity Services Entry Mechanism (ESEM) as a targeted solution. Jemena considers ESEM to be a practical and effective vehicle for enabling a centralised market body to procure long-term contracts for essential services such as firming and reserves. This would enhance project bankability while maintaining system reliability throughout the transition.

Importantly, the Review to date has garnered generally broad industry support, following extensive consultation. Jemena views the Review as a credible and well-supported roadmap to implement the very recommendation outlined by the Productivity Commission—namely, technology neutrality and embedded reliability incentives—through mechanisms that are both market-aligned and policy-responsive.

PC Draft recommendation 1.2 – The Safeguard Mechanism should cover more industrial facilities and carbon leakage provisions should be improved

Jemena acknowledges the Productivity Commission's recommendation to lower the Safeguard Mechanism baseline to include a broader range of industrial facilities. While we support the intent to drive deeper emissions reductions across the economy, we strongly encourage any such reform to be accompanied with robust and practical policy support that enables industry to achieve genuine scope 1 emission reductions. Tailored policy support—such as incentives for renewable gas development—will be essential to help covered entities decarbonise in a way that is both practical and economically sustainable.

Natural gas continues to play a vital role for many Australian businesses—whether as a feedstock, a cost-effective energy source, or a lower-emission alternative to coal. However, to remain competitive and aligned with national emissions targets, including those under the Safeguard Mechanism, industrial users must have access to feasible and affordable decarbonisation pathways.

To date, government policy has largely focused on renewable electricity. However, the energy system must be considered as a whole, including the role gas and its infrastructure plays in the transition. While Jemena welcomes efforts to establish a hydrogen market, it is critical that these initiatives form part of a broader, integrated policy framework that includes all renewable gases—particularly biomethane.

Encouragingly, recent statements from the Energy and Climate Change Ministerial Council (ECMC) acknowledge this gap and the need for low-emission gases to support industrial users that cannot easily electrify. The ECMC's commitment to exploring options for a 'national renewable gas policy' is a positive step forward.

At Jemena, we have identified several policy requirements to help stimulate the renewable gas market and deliver real emissions reductions for Australia's largest emitters:

- Provide **long-term market signals** for investors, such as a renewable gas target or ambition.
- **Support project operating expenses** until secondary markets (digestate and biogenic CO₂) are able to generate revenue.
- Offer **capital support** until supply chains scale up, increasing cost efficiency.
- **Limit biomethane exports** to prioritise Australian industry and facilitate a clean energy embodied goods export industry.

PC Draft recommendation 1.4 – Apply frameworks to achieve emissions targets at least cost and improve transparency

Jemena supports the Productivity Commission’s emphasis on creating policies that help Australia reach its climate targets at the lowest possible cost, while building in flexibility and transparency. We believe that the best way to decarbonise is by using a technology-neutral and cost-effective approach, ensuring every government dollar spent delivers the greatest emissions reduction benefit. It is also important to recognise that different regions have bespoke energy needs, infrastructure and resources. Policymakers must work closely with jurisdictional stakeholders to set the right policies that allows their respective region to transition to a cleaner energy system at the lowest total *system* cost.

With over 1.5 million residential and business gas customers across Greater Sydney and regional NSW, Jemena plays a vital role in ensuring energy reliability while supporting emissions reduction targets—aligned with both government policies and our customer expectations.

The gas network is a critical enabler of energy transfer across sectors including the built environment, industry, agriculture, and waste management. It provides the reliable energy supply needed today, while also contributing to long-term decarbonisation.

Case Study: Bluescope Steel Port Kembla Steelworks

BlueScope Steel – Australia’s largest steel manufacturer – is unable to electrify ironmaking at its Port Kembla facility due to the extreme temperatures required. As an alternative, the company intends to replace coal with natural gas via the Direct Reduced Iron process, which has the potential to reduce emissions by 60 per cent annually, and up to 80 per cent as green hydrogen becomes commercially viable. This



initial reduction would represent approximately 25 per cent of NSW’s industrial emissions, or around 3.25 per cent of the state’s total emissions, positioning it as a critical lever in achieving NSW’s emission reduction targets. The scale of these emissions reductions highlight the importance of gas infrastructure in enabling the decarbonisation of heavy industry, and the need to support this with clear long-term policy certainty.

In the absence of a formal carbon pricing mechanism, government climate investments inherently carry an implicit carbon abatement cost. To manage transition expenses, while improving productivity, it is essential that governments direct its limited resources toward the most cost-effective emissions reduction pathways.

In this context, Jemena asserts that substituting natural gas with renewable gases and implementing electrification where economically viable represents the most cost-effective approach to decarbonising the overall system. This involves a practical sequencing of electrification, led by consumers, throughout the economy and accompanied by policy measures that support *all* types of renewable energy. These steps would facilitate the integration of renewable gases, such as biomethane, into the system and provide multiple decarbonisation options for consumers who can then make a decision based on their bespoke energy needs.

Such an approach acknowledges the importance of the marginal supply of renewable electricity and the necessity of deploying it where it delivers the greatest emissions reductions and system cost savings. Evidence shows that prioritising renewable electricity to displace coal-fired generation and liquid fuels yields the highest system-wide benefits¹.

Research by Boston Consulting Group **Error! Bookmark not defined.** (BCG) has found that, from a whole of energy system perspective, emissions can be reduced more quickly and cost-effectively if limited renewable electricity resources are used to replace the most emission-intensive energy sources, such as coal and liquid fuels, before replacing gas end-uses.

Implementing government policies that accelerate the electrification of gas uses before end-of-life could result in a period of fossil-fuelled electrification- compromising the 2030 (and 2035) targets.

In contrast, a strategy that acknowledges the role of gas and its facilitating infrastructure in the transition can lead to a more resilient, secure and lower emission energy system. By repurposing existing gas infrastructure, Australia can enable the development and deployment of low-carbon gases like biomethane and green hydrogen. These are essential for decarbonising industrial feedstocks and ensuring resilience during peak demand or supply electricity disruptions.

Leveraging existing gas infrastructure also puts downward pressure on the need for new infrastructure, avoids premature asset write-offs, and enhances system reliability through greater interconnection and storage options. The optimal energy transition pathway will vary by region,

¹ Boston Consulting Group. (2023, June). The Role of Gas Infrastructure in Australia's Energy Transition. Report for APA Group, Australian Gas Infrastructure Group, and Jemena. Retrieved from <https://www.jemena.com.au/siteassets/asset-folder/documents/gas/the-role-of-gas-infrastrcuture-in-australia-s-energy-transition.pdf>

depending on climate, network capacity, and the availability of low-carbon gases—highlighting the importance of granular, integrated energy system planning.

Decarbonisation cannot be achieved through isolated actions within individual sectors. Whole-of-system approaches, which consider the interplay of different fuel sources, overlapping supply chains, and the sequencing of industry transformations, are crucial. If emissions are considered in isolation, there is a risk of unintended consequences—such as shifting emissions from one sector to another, or increasing system-wide emissions through poorly coordinated interventions.

Speeding up approvals for new energy infrastructure

PC Draft recommendation 2.1 – Reform national environment laws

Major infrastructure planning reforms.

The complexity and uncertainty associated with processes for land access and environmental approvals can introduce additional risk for large, multifaceted, multi-staged infrastructure projects. This risk is particularly relevant to gas infrastructure construction, which often involves significant early investment in long lead items from overseas and complex contracting arrangements. Gas projects may also span multiple jurisdictions, be located in remote areas, and depend on seasonal surveys, resulting in restricted construction periods.

Australia's States and Territories each have distinct, often complex approval processes with limited objective guidance or certainty around time frames for resolution. This lack of clarity creates significant risk for project proponents—particularly when negotiating landholder agreements (e.g. Native Title), where no standard exists for “reasonable compensation,” increasing exposure to delays and legal costs.

The 2020 Independent Review of the Environment Protection and Biodiversity Act found that resource projects take an average of three years (1,012 days) to gain approval. It recommended reforms focused on objective, risk-based regulation to streamline assessments and improve predictability.

Enhancing the efficiency and reliability of government processes represents a significant opportunity to strengthen the gas sector's capacity to deliver new supply. Given that the Australian Energy Market Operator (AEMO) is projecting structural gas supply shortfalls as early as 2028/29, the necessity for effective planning reforms continues to grow in importance. New and abundant supply is also likely to put downward pressure on prices, helping consumers who rely on a gaseous molecule for their operations.

The need for pro-investment economic regulation of gas infrastructure.

Government strategies, including the Future of Gas Strategy, AEMO's Integrated System Plan and guidance from the Climate Change Authority, emphasise gas as a key enabler of renewable electricity expansion, coal phase-out, and the manufacturing sector's shift away from high-emission fuels.

Forecasts from the ACCC and AEMO warn of major gas supply shortfalls on the East Coast by 2028–29 unless new supply is developed. As supply sources move further from demand centres, significant new transmission infrastructure will be required. AEMO projects that a mix of supply and infrastructure solutions will be needed to address gaps through 2043.

Australia's gas transmission sector manages over \$30 billion in pipeline assets across 38,000 km. Given the long lifespan of these assets, investors need long-term policy and regulatory frameworks that do not increase risk and support the necessary private investor confidence to bring forward market led solutions. The Australian Energy Regulator (AER) has powers to self-initiate transmission pipeline form of regulation reviews, a process that can take months or years, and coincides with emerging supply shortfalls. If a review results in regulation the AER then determines tariffs and regulated asset base's altering the pipeline's commercial basis in perpetuity.

While Jemena notes the AER's recent decision to not self-initiate pipeline reviews at this time —the existence of these powers represents significant risk and continues to contribute to market uncertainty.

Planning and regulatory changes for the biomethane market.

The renewable gas industry is still in its infancy, with many regulations and non-tariff market barriers stymieing its growth. To meet government climate targets and support industry in decarbonising its gas usage, Jemena encourages policymakers to look at the inhibiting planning and regulatory barriers impacting renewable gas producers.

Despite recent policy progress in developing the biomethane market – such as the new market-based mechanism under the National Greenhouse and Energy Reporting Scheme (NGERS) for renewable gases ² – there are still key challenges delaying biomethane projects from reaching Final Investment Decision (FID):

Regulatory burdens

A challenge for biomethane project developers is navigating the planning and approvals process. Progressing from the initial concept to FID can involve administrative requirements, costs, and uncertainty. Jemena's experience with various project partners indicates that delays and administrative obligations are common, especially for first-movers, which may affect development timelines.

For example, a recent project partner reported that, in order to reach the commissioning stage for a new biomethane facility, they were required to prepare and submit twenty-nine distinct studies in accordance with the NSW Department of Planning and Environment Secretary's Environmental Assessment Requirements. The associated administrative fees for these documents alone exceeded \$500,000, resulting in a considerable financial commitment prior to the commencement of

² Clean Energy Regulator (2025, Jun 17). NGER legislation amendments for the 2025–26 reporting year. Australian Government <https://cer.gov.au/news-and-media/news/2025/june/nger-legislation-amendments-2025-26-reporting-year>

construction or revenue generation. This extent of regulatory compliance presents notable challenges for innovative projects within emerging sectors.

Planning complexities can influence project viability. Developers may need to allocate significant resources to address regulatory requirements, which can reduce their focus on areas such as innovation, technological development, or stakeholder engagement. For smaller operators or those with limited support, the time and financial commitments required may lead to delays or the discontinuation of initiatives before reaching FID.

The digestate catch-22

An additional complicating factor is the management of digestate, a co-product generated through anaerobic digestion. While digestate offers potential value as a substitute for fossil-based fertilisers, its legal application requires a regulatory exemption that is often difficult to secure.

A project partner noted a regulatory “catch-22” in the sector: Biomethane projects must present a digestate use plan to secure investment, but the Department requires digestate samples to grant an exemption. However, obtaining these samples is only possible after commissioning the facility, which itself depends on having the exemption.

This regulatory circularity forces developers to either take on major financial risk by proceeding without the exemption or delay the project indefinitely, risking both investment and emissions reduction.

For further information on the challenges to and benefits of unlocking the organic digestate and biogenic CO₂ markets, please refer to Jemena’s *Productivity Commission – Circular Economy* submission.