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For the attention of the Electricity and Energy Sector Plan Taskforce

Electricity and Energy Sector Plan Consultation

Chevron appreciates the opportunity to provide comment to the Department of Climate Change, Energy, the Environment and Water (the Department) on the Electricity and Energy Sector Plan discussion paper. Chevron broadly supports the Department's plans to set out a credible pathway to decarbonise Australia's electricity and energy sector while ensuring reliable, secure and affordable energy supply as each and every one of those elements is critical to an equitable, timely and reliable energy transition.

Chevron Australia's business

Chevron Corporation is one of the world's leading integrated energy companies and has been present in Australia, via its Australian subsidiaries, for over 70 years. The Chevron Australia group of companies is headed by Chevron Australia Holdings Pty Ltd (Chevron Australia).

Chevron Australia is the operator of the Gorgon and Wheatstone LNG and domestic natural gas projects in the north-west of Western Australia. In addition, Chevron Australia holds a one-sixth share of the North West Shelf LNG Project. Through its share of these preeminent Australia LNG and domestic natural gas projects, Chevron Australia is a major exporter of LNG and major provider of domestic natural gas to the Western Australian market.

The Chevron-operated Gorgon CCS system is currently the largest integrated CCS project of its kind in the world. Chevron Australia is committed to safely injecting and sequestering CO₂ as part of its emissions reduction strategy. Since commencement of the CCS system, Chevron Australia has:

- Injected/stored or offset more than 15 million tonnes of GHG (including more than 9.4 million tonnes of actual abatement and more than 7.5 million verifiable offsets acquired and surrendered); and
- Invested more than \$3.2 billion AUD in the Gorgon CCS System with further investment in the coming years to improve system performance and increase injection/storage rates.

Chevron Australia Downstream, another Australian subsidiary of the Chevron Corporation, delivers quality fuel and lubricant products and services, including via its national network of Caltex service stations. Caltex – a brand owned by Chevron globally – has been present in Australia for more than 70 years.

Chevron Australia Downstream also owns and operates three product import terminals. We deliver products and services to a range of industries including mining, resources, agriculture, transport, marine and aviation. We offer services such as bulk fuel supply, oils and lubricants, fuel equipment solutions, customised fleet fuel card solutions and expert advice on fuel management and health and safety.

Chevron New Energies (CNE) was launched in 2021 to accelerate Chevron's energy transition strategy by growing lower carbon businesses. CNE is targeting harder-to-abate sectors where competitive advantages can be built over time and is focused on growing key businesses consistent with its strategy:

- Hydrogen;
- Carbon capture, utilisation, and storage (CCUS);
- Offsets and other emerging lower carbon opportunities; and
- Renewable Fuels.

With the specific purpose of assisting Chevron in achieving its lower carbon ambitions and recognising Australia's potential to be a significant supplier of lower carbon energy, Chevron Australia New Energies Pty Ltd (CANE) was established in 2022. We are also part of three consortia that have been granted three separate greenhouse gas assessment permits off the coast of northern Australia.

The entities described above are collectively referred to as Chevron for the purposes of this submission.

Chevron's position on carbon

Chevron's strategy is to leverage our strengths to safely deliver lower carbon energy to a growing and industrialising global population. Globally, we are investing to grow our traditional oil and gas business, lower the carbon intensity of our operations and grow new lower carbon businesses in renewable fuels, carbon capture and offsets, hydrogen, and other emerging technologies.

Adopting intensity metrics provides Chevron with the flexibility to grow our upstream and downstream businesses while aiming to become an increasingly carbon-efficient operator. We focus on the lifecycle carbon intensity of products and identifying the best solutions for our partners and customers' energy needs.

Chevron supports the goals of the Paris Agreement and is committed to helping address climate change while continuing to deliver energy that supports society. Chevron believes climate policy should achieve emissions reductions as efficiently and effectively as possible, at the least cost to economies, paired with natural and technological emissions removals. Chevron believes broad economy-wide solutions are able to incentivise the most efficient and cost-effective reductions.

Chevron supports a well-designed price on carbon, applied as widely and broadly as possible, as the best approach to reduce GHG emissions and we encourage national policies that support international linkages (for example, through Article 6 of the Paris Agreement), with the goal of ultimately building up to a liquid and integrated global carbon market.

For more details regarding Chevron Corporation's perspective on climate change, please refer to our 2023 Chevron Climate Change Resilience Report¹.

Context for Chevron Australia's submission

Chevron Australia is a member of Australian Energy Producers (AEP), the Australian Industry Greenhouse Network (AIGN) and the Australian Hydrogen Council (AHC). Chevron Australia Downstream is a member of Bioenergy Australia (BA) and Australasian Convenience and Petroleum Marketers Association (ACAPMA) and an associate member of the Australian Institute of Petroleum (AIP). We would like to provide the following points on the Electricity and Energy Sector Plan consultation to the Department. Note that this submission represents views of Chevron and not necessarily those of our Joint Venture Participants.

General Comments

¹ climate-change-resilience-report.pdf (chevron.com)

Chevron believes stable, efficient and effective policies are essential to ensure ongoing investment in Australia's economy. By combining the Safeguard Mechanism reforms with other appropriately designed policies, Australia can attract investment to provide the capital necessary to support both economic growth and the most cost-efficient emissions abatement across the economy. As noted on page 24 of the Department's consultation paper, natural gas is and will remain an important energy source for the electricity sector for standby generation and to balance renewable electricity supply.

We believe the Government should undertake key actions to support the energy transition, including:

- It is critical for Government to support the continued role of natural gas by sequencing the review and support for ongoing natural gas investment to avoid structural shortages while electrification increases.²
- Planning and streamlined permitting of all lower carbon energy sources, including natural gas, and their associated infrastructure will be essential to meeting Government targets on decarbonisation of the electricity grid.
- Promoting a market-based approach to decarbonisation that accounts for full life-cycle emissions profiles of various energy technologies, which will allow different technology solutions to compete on a level playing field. Support for technological development and lower carbon initiatives should be based on a carbon intensity approach instead of limiting support to selected technologies only.
- Enabling competitive development and commercialisation of all lower carbon solutions and products to reduce GHG emissions through colour and technology agnostic tax incentives, research and development grant programs and public/private partnerships to build robust carbon operations and products markets.
- Supporting lower carbon intensity hydrogen as a nascent industry to create a colour-agnostic lower carbon hydrogen market. To enable the scaled deployment of lower carbon intensity H₂, well-designed policies and incentives to accelerate the buildout of H₂ infrastructure (pipelines, port facilities etc.) as well as infrastructure for natural gas, CO₂ transport to sequestration or utilisation sites, water and electricity that supports the production of lower GHG intensity H₂ are critical to make Australia globally competitive.

² in the near term to avoid gaps in electricity generation at a fair price and address gaps in network capacity while storage capacity is improved.

- CCS hubs to support a decarbonised energy sector, such as those identified by Australian Energy Producers (AEP) in their Net Zero Zones should be considered by the Government – nine regional industrial and manufacturing hubs around Australia based on shared infrastructure including CCUS technology, renewables and natural gas aimed at accelerating the energy transition and attracting investment. A CCUS roadmap is required at the national level to provide a framework for the development of the CCUS industry as part of the energy transition solution.
- Lower carbon intensity liquid fuels (LCLF) will play a critical role in any meaningful attempts to reduce greenhouse gas emissions from hard-to-abate sectors such as transport, aviation, marine and construction. As noted on pages 27 and 28 of the Department’s consultation paper, while development of a domestic LCLF industry would create new economic opportunities in Australia, imported renewable fuels must be equally encouraged to ensure a robust, sustainable, globally competitive LCLF market is established in Australia. In the short-term, import of LCLF is the most economic and efficient way to establish a large-scale renewable fuels market in Australia which would give investors and users the confidence to transition to these types of fuels.

Responses to the survey questions

1. What actions are needed to attract the required large scale private capital and household investment in the energy transformation, with or without government intervention?

Australia is a safe and politically stable country at both State and Federal levels, which supports the reliability of energy supply both within Australia and to the region. However, as recognised in the Electricity and Energy Sector Plan consultation (p 13), global competition for clean energy investment is high and more is needed to grow Australia’s clean energy sector. Much of the capital required for Australia’s energy transition is expected to come from international investors in partnership with Australian businesses and governments, and this investment will be driven by both domestic and export opportunities.

Increasing Australia’s investment attractiveness through a range of government-supported initiatives and incentives will be required. There is intense global competition for energy investment capital. Australia’s transition to a net-zero economy is expected to require “at least a USD\$1.9 trillion investment”³ (AUD\$2.4 trillion) in the country’s energy system by 2050.

³ New Energy Outlook: Australia Bloomberg NEF pg 3.

Investment attractiveness could be improved by enabling shared infrastructure, enacting more efficient and streamlined approvals processes, and having bi-partisan political support for the regulatory framework to increase confidence that regulatory requirements will be stable into the future. Being an attractive, globally competitive investment destination will enable ongoing economic benefits and jobs for Australia.

Government policies should not impose direct costs on one sector to fund a competing sector; all solutions should be supported with a focus on reducing emissions on a market-based approach. That said, many of the solutions essential to enabling a lower carbon future are currently technically and / or commercially challenged and require incentives to become scalable and competitive. Chevron aligns with the view shared by many economists that the most efficient and effective way to enable lower carbon solutions and achieve economy-wide emissions reduction is through a well-designed price on carbon. In areas lacking sufficient carbon markets, investment in lower carbon solutions could be accelerated with the support of targeted government policies including incentives. Tax incentives, grant programs, and public/private partnerships can be effective policy tools to enable lower carbon operations and products, if designed properly. Government policy should include quantifiable metrics that drive performance outcomes.

Incentives for lower GHG intensity energy should be reassessed on a routine basis. Incentives should focus on research and development of scalable solutions, driving down costs, and improving performance. Chevron supports policy incentives for promising, pre-commercial technologies to help deliver scalable solutions to climate change. We also support supply-side, demand-side and infrastructure incentives including but not limited to production and infrastructure investment tax credits, incentives and grants, vehicle rebates and contracts for difference.

Competitive grant programs, public-private partnerships or co-investments in lower carbon technologies can be valuable tools for driving investment if designed to be competitive, results oriented, transparent and incorporate appropriate investment terms. Innovation policy grants should focus on advancing emerging and pre-commercial technologies. Grants for existing commercial opportunities that distort markets and create unfair competition should be avoided. Government policies should enable competitive development and commercialization of transformative lower carbon solutions and products by allowing all solutions to compete without penalizing one sector to build another. The development of pre-commercial early-stage abatement projects can be accelerated if allowed to take advantage of the full range of relevant

incentives. Policies that restrict the applicable use of otherwise relevant incentives slow advancement towards scalable technologies.

To assist Australia's emerging clean energy sector, targeted government policies, including incentives, should be considered until either true cost competitiveness emerges in the market or consumer preferences support market prices that drive demand for lower carbon energy. Incentives should be transparent for taxpayers to understand their role in enabling a lower carbon future and should be designed with the goal of ultimately enabling technologies and products to compete without government support.

Well-crafted policies that support and enable competitive development and commercialisation of lower carbon solutions and products without picking early 'winners' to ensure all viable solutions remain on the table to reduce GHG emissions along with tax incentives, research and development grant programs and public/private partnerships will work together to build robust carbon operations and products markets. We support the reassessment of programs, including incorporation of established sunset dates, that enable policymakers to evaluate whether customer preferences and cost competitiveness warrant continued government support.

2. What actions are required to ensure Australia's energy systems can enable increased electrification, while maintaining equity, reliability and security?

Key immediate actions required from the Australian Government to support the equity, reliability and security of the transition include:

- **Recognition of the continued role of natural gas:** We believe that all technologies and energy sources should be available to support Australia's energy transition. Policies which exclude, or limit, certain technologies or energy sources should be avoided as these reduce the range of potential pathways to achieve net zero emissions globally. Many published outlooks conclude that natural gas and liquid fuels will remain a significant part of the energy system for years to come and that the energy mix will increasingly include lower carbon intensity sources, including natural gas supported by CCS. Australia-wide analysis such as the How to Make Net Zero Happen report by Net Zero Australia⁴ released in July 2023, found that by 2030 Australia would need to "plan and build a large fleet of gas-fired peaking generation to help accelerate renewable growth, and close coal power on time." The risk of not adopting this approach is a failure to enable lower carbon energies to

⁴ How to make net zero happen - Net Zero Australia final report 12 July (netzeroaustralia.net.au).

develop with sufficient economies of scale, reliability, economic certainty, and security to support Australia's Net Zero 2050.

As stated in Chevron Australia's submission to the Future Gas Strategy, natural gas will be critical for providing baseload power and grid stability in Australia's energy system as the mix of renewable energy sources increases and coal's share of baseload power decreases. Additional gas-fired power generation will be required⁵ while increased network capacity and energy storage is built to manage the fluctuations in renewable generation. Gas-fired power generation can provide grid stability and ensure baseload power when renewable energy production is intermittent by quickly flexing production up or down as required to ensure safe and reliable energy to our communities.

- In the Australian Energy Market Operator's 2024 Gas Statement of Opportunities (GSOO) report⁶ (p20), modelling from its Step Change scenario showed "Gas for generation of electricity is forecast to increase in the long term, due to electricity demand growth, coal retirements, and to firm renewable energy generation in the NEM. Peak demand for GPG (gas-fired power generation) is forecast to experience significant growth, particularly in winter when renewable generation is naturally lower." This underscores that many different forms of energy will be needed with scale, diversity and affordability driving the transition to lower carbon future in order to maintain equity, reliability and security.
- **Clear policy and regulation:** Bi-partisan political support for regulations and policy settings, where possible, would assure investors of longer-term stability of the policy and regulatory framework.
- **Streamlining permitting and approvals:** Emissions reduction technologies, projects and associated infrastructure need to be developed at unprecedented levels to reach net zero in the committed timeframe. The Net Zero Australia study showed that Australia's entire current renewable energy capacity will need to be implemented every two to six months until 2050, between 3 to 30 large scale CCUS projects will need to commence operation each year and natural gas production may need to double over current levels. To reach these massive levels of deployment, current permitting processes will need to be significantly abridged and

⁵ SWIS Demand Assessment 2023 to 2042 (wa.gov.au).

⁶ https://aemo.com.au/-/media/files/gas/national_planning_and_forecasting/gsoo/2024/aemo-2024-gas-statement-of-opportunities-gsoo-report.pdf?la=en

streamlined without compromising the environmental and social integrity and acceptance of projects.

To support reliable and affordable electricity for households, businesses and industrial users of natural gas; stable, clear and efficient permitting and approvals will be needed to facilitate future investment in energy project development, including investing in the development of new natural gas reserves that can be developed for the benefit of the Australian economy. As such, we support requirements that provide oversight and transparency to hold jurisdictions accountable for timely decision-making. Development of complex and remote offshore gas resources requires substantial technical, commercial, and engineering work over long timeframes. These resources depend on major infrastructure investments to enable access to markets. Security of tenure and confidence in the regulatory approvals process is essential to enabling these long-term investments.

To support investor confidence, transparency and efficiency, we recommend that governments consolidate the authority to permit or issue approvals into the smallest number of governmental entities possible, with appropriate resourcing, and seek to align local, regional and national permitting requirements to expedite project evaluation and decision-making while maintaining appropriate regulatory oversight.

5. What policy settings and certainty are required to support a fair, equitable and orderly transition for the decarbonisation of both natural gas and liquid fuels?

Policies should be designed to create a market that is sustainable, economic and creates jobs. Australia must ensure it has a stable, clear, and efficient policy and regulatory framework to assist in deploying lower carbon energy technologies at scale in the decades ahead while ensuring energy stability and encouraging large scale private capital investment in the energy transformation.

The long life of existing assets in the capital intensive hard-to-abate sectors such as mining, manufacturing, transportation, marine and agriculture must be considered when developing policy, ensuring retrofit solutions are supported to offer cost-neutral alternatives while longer term solutions are developed.

Fuel security is as much about domestic production as it is about strengthening the resilience of the supply chains for lower carbon fuels to be imported into Australia. This is especially important in the initial stages of the new market developing to ensure reliable, predictable and diversified supplies are established giving customers confidence to invest.

Chevron supports the responsible use of feedstocks for lower-carbon, cost-effective fuels, lubricants, and chemicals to reduce lifecycle greenhouse gas emissions intensity. Feedstock policies related to biomass-based fuels should incentivise globally competitive, reliable, affordable, and ongoing access to feedstocks using a technology-neutral approach. We support regulatory changes and policies that incentivise investments in new and innovative crops considering all the associated benefits, including overall yields, decreased soil erosion and reduced runoff, and land rehabilitation. Regulatory frameworks that certify and approve new feedstocks should be designed to be efficient, allow for expedient resolution of challenges, and enable approval utilizing certified third-party support as quickly as reasonably possible.

As noted in Chevron Australia's submission for the Future Gas Strategy, some actions required on the part of the Australian Government to set the regulatory framework include:

- Provide a pathway to prioritise projects and developments critical to energy security and decarbonisation⁷ of energy in Australia and the region for government and regulator assessments and processes.
- Increase the investment attractiveness of Australia for all activities required to support the energy transition including natural gas developments, lower carbon energy projects, and carbon abatement projects, particularly given international investment will be needed for large-scale lower carbon energy projects.
- Promote a market-based approach to decarbonisation that accounts for full life-cycle emissions profiles of various energy technologies, allowing different technology solutions to compete on a level playing field. Support for technological development and lower carbon initiatives should be based on lifecycle carbon intensity instead of being limited to selected technologies only. Policies should support collaboration between public and private sectors to drive reliable, affordable, ever-cleaner market-based solutions at scale.

Until jurisdictions can align on a globally recognized approach for assessing lifecycle emissions, the Federal Government should enable the use of the most widely accepted models and methodologies (e.g. GREET or ISO) to assess GHG intensity and establish approval acceptance criteria and procedures and acceptance criteria for the use of company-specific models and methodologies where appropriate.

⁷ 'Decarbonise' or 'decarbonisation' generally refers to the process of stopping or reducing release of greenhouse gases, especially carbon dioxide, into the atmosphere as the result of a process. For Chevron, decarbonisation can refer to reducing absolute emissions or reducing the carbon intensity of a process or asset.

Regardless of the model or methodology used, the regulatory environment must allow flexibility for companies to utilize primary data to replace default assumptions (e.g. emissions factors based on industry averages).

- Maintain access to high quality, verifiable carbon offsets for hard-to-abate industries to use in order to support net-zero emission targets of sectors such as energy, mining and manufacturing. Enabling access to verifiable and cost-effective offsets (including international offsets) will be important for reducing costs of products produced by emissions intensive industries which in turn will reduce the cost to the consumer.
- Promote policies that incentivise investment in energy supply and infrastructure, including common user infrastructure; energy system reliability; and measures that promote energy efficiency. Governments should avoid market interventions or policies that discourage investment in Australia's energy system as this will lead to further supply challenges and domestic price volatility. Chevron supports policies designed to support the alignment of CCUS and H₂ hubs, common-user infrastructure, including the development and expansion of transport and export infrastructure for hydrogen and ammonia products to cost-effectively accelerate at-scale deployment.

6. What actions are required to establish low carbon fuel industries in Australia, including enabling supply and demand, and what are the most prospective production pathways?

As noted earlier in this submission, many of the solutions essential to enabling a lower carbon future require some form of support or incentives to become scalable and competitive. In addition, turnover of existing power assets will take time until they near or come to the end of their operational life, and grid infrastructure investment will be needed to enable alternative technologies, especially those that are decentralised or distributed.

In terms of the future opportunities for some alternative lower carbon fuels, there are challenges that need to be overcome for them to make a substantive contribution to Australia's energy mix, for example biomethane is difficult to secure in sufficient volume to be material without incentives or pricing mechanisms. Although it could have some niche applications to reduce GHG intensity, it is unlikely to be at scale.

Renewable Fuels

Chevron supports policies to incentivise a globally competitive renewable fuels market in Australia, that includes renewable diesel, biodiesel, sustainable aviation fuel (SAF), etc. Incentive oriented biofuel policies should focus on maximum abatement per dollar spent.

Incentives intended to advance specific sectoral performance targets should be designed to properly enable lower carbon solutions and be commensurate with technology maturity. We note that volumetric mandates for fuels as a form of incentive can create distortions in the market, limit competition, and discourage innovation. New low carbon liquid fuels regulations should encourage all affordable and effective alternatives to compete in the marketplace.

Lower carbon fuels can be enabled through a combination of a lifecycle-based market policy, such as a low carbon fuel standard, and infrastructure grants, tax credits, excise exemption for lower carbon-intensity fuels, and demand-side incentivisation. This would encourage competition with conventional fuels and stimulate market demand, giving confidence to investors and incentivising local production by addressing the economic differential between renewable and traditional fuels.

Policy that drives demand and incentivises supply of renewable fuels will stimulate the business case for lower carbon alternatives, particularly SAF and renewable diesel. Our experience in other markets shows capital flows to policy-enabled markets. Ready-now imports are necessary to support the acceleration of demand in Australia, to incentivise and complement the development of a competitive domestic manufacturing market and ensure that the renewables market in Australia is sustainable and globally competitive.

Hydrogen

Chevron believes that hydrogen has a role to play in supplementing domestic gas in Australia's hard-to-abate industries. Hydrogen is most appropriate for use in hard-to-abate industries such as steel, ammonia and cement, and the first uses of hydrogen in power generation will likely be in co-firing with natural gas. There is also the possibility to produce hydrogen from renewables at times of excess renewables generation, store it, and then use that hydrogen to produce energy when renewable generation wanes. Chevron's investment in the Advance Clean Energy Storage (ACES) project in the US is an example of this concept.

Lower carbon intensity hydrogen is a nascent industry and government support will be critical to create a lower carbon intensity hydrogen market. Policy should recognise that all methods of producing lower carbon intensity hydrogen will be necessary to cost-effectively create and scale this industry to support Australia's emissions reduction targets. Policies that prohibit project approval or exclude/limit H₂ from the market based on the use of certain technologies or feedstocks should be avoided as these arbitrarily limit opportunities for reducing GHG emissions. Similarly, efforts to define H₂ production into types (e.g. green, blue, renewable, etc.)

distract from the goal of supporting lower carbon intensity fuel industries. Instead, we believe policies should utilize an approach that enables all forms of lower GHG intensity H₂ by designing incentive and regulatory programs in a manner that provides credit or value based on the product's specific lifecycle GHG intensity.

We believe to enable the scaled deployment of lower carbon intensity H₂, well-designed policies and incentives to accelerate the buildout of H₂ infrastructure (pipelines, port facilities etc.) as well as infrastructure for natural gas, CO₂ transport to sequestration or utilisation sites, water and electricity that supports the production of lower GHG intensity H₂ are critical to make Australia globally competitive. Policies to scale the full value chain of hydrogen infrastructure will also be needed, including transport (delivery) to end use markets and storage at the point of use or in regional centers, as well as stimulating the domestic use of lower carbon intensity hydrogen in diverse applications.

Adoption of hydrogen paired with CCS, that can be produced with lower carbon intensity, can also facilitate early investment and infrastructure necessary to help Australia meet its hydrogen ambitions.

CCS / CCUS

State and federal support to accelerate implementation of both offshore and onshore CCS regulations will provide cost effective access for existing industries to reduce emissions with CCS and enable lower carbon hydrogen projects. Natural Gas utilisation in combination with CCS will also play an important role in the development of hydrogen, ammonia, and methanol markets, where emissions are reduced through CCS. This is true for both the Australian market and countries in the Asia Pacific region where customers are seeking these products for their own emissions reduction efforts.

CCS hubs such as those identified by Australian Energy Producers (AEP) in their Net Zero Zones⁸ should be supported by the Government – nine regional industrial and manufacturing hubs around Australia based on shared infrastructure including CCUS technology, renewables and natural gas aimed at accelerating emissions reduction and attracting investment. A CCUS roadmap is required at the national level to provide a framework for the development of the CCUS industry as part of the energy transition solution.

⁸ [Media Release: 'Carpooling carbon': Net Zero Zones to boost climate action, jobs and investment | Australian Energy Producers](#)

7. **Are the proposed policy focus areas for managing the liquid fuels transition (outlined in Section 4 of the discussion paper) the correct areas to focus on, and what is missing?**

Policy focus areas	1. Decarbonise our liquid fuel mix	2. Reduce fossil based liquid fuel demand	3. Ensure fuel security and reliability	4. Manage supply chain vulnerabilities
Reason:	Driving LCLF supports decarbonisation efforts and de-risks fuel supply through diversification	Improving energy efficiency and promoting behavioural change reduces emissions and fuel demand	Enhancing and extending fuel security actions will ensure climate and energy objectives are met through the transition	Preparing for disruptions ensures government and industry can quickly respond to emerging fuel supply chain risks

The future role of natural gas in Australia's electricity and energy sector

In Australia, a significant amount of investment is required to support the energy transition. Australian natural gas can ensure sufficient supports are in place to maintain Australia's energy security via affordable and reliable energy with CCS helping to reduce emissions intensity. Under all energy transition scenarios presented in the IEA Energy Outlook 2023, there will be continued need for natural gas. In the short to mid-term, there may be a need for increased natural gas consumption to replace coal-fired power generation as seen in the AEMO 2023 WA GSOO forecast for natural gas use in WA.

Natural gas is an important feedstock or energy source in numerous chemical and industrial processes such as steel, aluminium, petrochemicals, and cement. It is expected to play a critical role for decades⁹ due to the significant investment required to replace gas-fired equipment and challenges in electrifying industrial processes requiring high heat temperatures achieved conventionally by hydrocarbon fuels. Transitioning to alternative feedstocks or energy sources will take time, so reducing the carbon intensity of existing plants (via CCS for example) will likely happen in parallel with building new plants incorporating the alternative technology.

In addition to its role in decarbonising the electricity sector, stable supplies of natural gas are needed to support emissions reduction activities by other sectors in Australia and encourage continued investment in developments that support the energy transition. Gas consumers such as Wesfarmers detailed in their submission to the 2023 Parliamentary Inquiry into the WA domestic gas policy how stability of supply is crucial for WA's ability to participate in downstream processing of critical minerals to support global decarbonisation¹⁰.

⁹ Net-Zero Industry Requires Exponential Growth From Carbon Capture, Hydrogen and Clean Power | BloombergNEF (bnef.com)

¹⁰ 20230811 - Submission 12 - DomGas - Wesfarmers Chemicals Energy Fertilisers_Redacted.pdf (parliament.wa.gov.au)

Liquid fuels policy focus

Australia's long reliance on liquid fuel imports should not be seen as a vulnerability. Rather, the import market has proven to be a secure, reliable and stable source of the vast majority of traditional liquid fuel in this country over many decades.

For a country like Australia, a mix of local manufacturing, geographically diverse onshore storage and varied import sources strikes the right fuel security balance.

Fuel security and reliability is about maintaining a diversity of sources, local and imported, which in turn drives real competition. To be secure and reliable in the long-term, local manufacturing must be able to compete internationally. It relies on robust global competition to drive innovation and resilience.

Good policy should incentivise demand for lower carbon liquid fuels, rather than simply penalising the use of traditional fuels by giving consumers clear and transparent choices of lower carbon products.

Government policies must maintain a level playing field across sectors by not imposing direct costs on one sector to fund another.

Federal and State Governments should work together to remove conflicting policy to the extent possible and consider opportunities to work together to incentivise consumer uptake of renewable or other lower carbon fuels to help stimulate the decarbonising of the economy.

Market competition and consumer choice should drive energy transformation to reduce the risk of consumers being disadvantaged. If the market is not encouraged to choose the most efficient and cost effective technology, consumers will often pay higher price than would be necessary.

Lower Carbon Fuel supply chain barriers

To develop and maintain the supply chains needed to enable Australia's lower carbon energy industry, Australia will need a clear vision, aligned to economic, technological and societal realities and feasibility that is:

- Implemented through transparent and consistent policy;
- Supported by long-term planning; and
- Matched by appropriate market-based incentives.

From a project specific perspective, supply chain risks include:

- Forecast labour shortage (including engineering consultants);
- Availability challenges of critical equipment such as wind turbines, electrolyzers and other electrical equipment; and
- Appropriate land availability and infrastructure (for the project site, laydown area, construction camp, port access etc).

The abovementioned supply chain risks impact the cost (both capital and operational costs), execution (both quality and schedule) and productivity (e.g., time lost in transit if land and infrastructure are not well matched) for Australian lower carbon energies projects, making them potentially less competitive than global counterparts.

9. What actions are required to ensure better energy outcomes for people and businesses, and maximise their benefit from the energy transformation?

Regional Australia faces unique challenges attracting and retaining the skilled workforce needed to support an emerging lower carbon energy industry. These challenges include isolated geographical locations and a corresponding lack of social infrastructure, housing, training capacity and other worker mobility impacts. These challenges may impede project cost and efficiency, including supporting local content, and achieving and maintaining a social licence to operate, which risks increasing over time as projects develop scale.

Local content is a key priority within Chevron and our vision is to partner with local communities and contribute to a sustainable and diverse local economy that supports long-term project needs through employment and training opportunities, local infrastructure, supply chain opportunities as well as increasing technical knowledge and expertise in the new energies sector.

However, even with Chevron's best efforts to support local communities through local content, the unique challenges will require a high level of collaboration and cooperation across federal, state, local governments and communities.

10. What social licence and circular economy aspects should be considered as part of the pathway for the energy transformation?

Significant social and institutional support will be required to support the emerging lower carbon energy industries.

Chevron acknowledges Aboriginal and Torres Strait Islander peoples as the First Peoples of Australia and respects their ongoing connection to, and care for, the places in which we operate. We strive to engage meaningfully with First Peoples and consider their history, traditions, and aspirations in our business activities. This commitment extends to the development of any lower carbon projects that Chevron may progress in the future. Chevron commends the Australian Government on its funding support for the resourcing of First Nations communities to effectively participate and benefit from the energy transition.

We support early and ongoing engagement with communities to identify potential impacts and develop mitigations where appropriate. Recent concerns raised regarding the impact of transmission and wind energy infrastructure highlight the sensitivity of the energy transition for everyday Australians and the need for meaningful community engagement. Providing useful and accurate information and responding timely to community concerns, in a way that meets both legislative requirements and community expectations, is important to gain community support for lower carbon energy projects and other energy transition-related initiatives.

Chevron places great importance on being a good community partner and remains focused on working in partnership with local communities to achieve better outcomes. We strive to provide opportunities for information sharing with the community and to seek their feedback. Building relationships in the communities where we operate is at the core of Chevron's values. Chevron is committed to working with governments and local communities to help the community understand and benefit from the development of lower carbon energies projects. The benefits, costs and trade-offs for Australia's net zero policies should be transparently communicated to the public, be based on verifiable data and accompanied by rigorous analysis.

Policies need to account for and routinely assess economic, technological and societal realities and feasibility to ensure policies balance economic, environmental and energy-security needs to enabling increased ambition. Net zero policies must be achievable using technologies expected to be available at scale within the applicable timeframe to achieve Australia's net zero 2050 goal. Additionally, federal and state jurisdictional permitting and approval processes must support the necessary levels of construction, manufacturing and associated infrastructure to achieve their goals.

11. What are other gaps in Australia's energy sector decarbonisation policy and what actions are required to address them?

Chevron recommends the most efficient, cost-effective pathway to net zero, that takes advantage of the least-cost emissions reductions opportunities wherever they may occur. The disaggregation of emissions reductions targets e.g., by sector, risks undermining this principle.

While sectoral pathways are an important consideration to identify the specific technologies and approaches needed for each sector, sectoral targets, where one sector is ring-fenced from emissions reduction opportunities in other sectors and elsewhere in the economy (and globally), risks ultimately making the task of reaching net zero more difficult.

For these reasons, it is critical that the different, but interlinked, sectoral reviews being undertaken to support Australia's Net Zero 2050 plan address the cross-cutting issues raised by the energy transition. In particular, this includes the measurement and reporting required in respect of emissions, which should occur on a life-cycle basis as outlined in response to Question 5 in this submission.

Regards

