

September 15, 2021

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(via email:

Dear Sir/Madam,

**RE: 'FOUNDATIONS FOR A STRONGER TOMORROW' – STATE INFRASTRUCTURE STRATEGY
DRAFT FOR PUBLIC COMMENT**

The Australian Petroleum Production & Exploration Association (APPEA) appreciates the opportunity to provide comment on Infrastructure WA's (IWA) draft State Infrastructure Strategy 'Foundations for a stronger tomorrow' (the draft strategy).

APPEA is the peak national body representing upstream oil and gas explorers and producers with interests in Australia. APPEA's member companies account for more than 95 per cent of Australia's petroleum production, the majority of which is produced from facilities located in, or in waters adjacent to, Western Australia (WA). The oil and gas industry in WA is a major contributor to the state and national economies creating jobs and business opportunities whilst providing oil and gas to domestic and international consumers. Further information about APPEA and the Australian oil and gas industry can be found at www.appea.com.au.

APPEA would like to commend IWA on the draft strategy and the extensive effort that has gone into the report. The report and its recommendations will be of significant use in determining the State's future infrastructure investments and priorities and will greatly assist State Government agencies and Government Trading Enterprises (GTE) in terms of guiding infrastructure processes in the areas such as strategic planning, legislation and regulation, policy and decision-making.

As the peak industry body for the upstream oil and gas industry, APPEA would like to focus its comments on the draft strategy to the following sections of the report, cross-cutting themes, and sectors:

- Sections:
 - Strategy vision and infrastructure outlook
- Cross-cutting themes:
 - Climate change and sustainability
 - Regional development
 - State planning and coordination
- Sectors:
 - Energy

Section: Strategy vision and infrastructure outlook

For context, WA has the highest natural gas consumption of all Australian states, consuming 669 petajoules (PJ) of gas in 2018-19, approximately 42% of Australia's total domestic gas consumption.¹ Given our relatively small population, the bulk of consumption is from mining (for example, iron ore, gold and nickel mines), minerals processing (for example, alumina refineries, nickel smelters), and large industrial users (for example, brickworks, cement manufacturers, chemical plants such as ammonia production).

For the next 20 years to 2042, the time frame covered by this draft strategy, APPEA agrees that WA needs to diversify its economy. This will ensure that WA's economic activity and therefore our community and environment remain strong and resilient into the future. This diversification will also need a reliable and affordable energy supply. Infrastructure will be a key part to realising WA's economic opportunities over the next 20 years, because as stated in the draft strategy "Infrastructure is crucial to supporting and growing existing industries and serves as a catalyst to unlock emerging industries".

Although the oil and gas sector is critical to the State's current economy, it can also assist in facilitating a more diversified economy in WA in coming decades in the following ways:

- Enable new downstream industries to be established in WA, such as urea, methanol, and ammonia, through using natural gas as a reliable and affordable supply of energy²;
- Provide ongoing energy supply to the mining and minerals processing sectors, including the development of critical minerals such lithium, required for lower-carbon energy technologies;
- Use the skills, technology and expertise of natural gas production and export to develop a hydrogen industry in WA, including as a major new export industry for the State;
- Support increased renewable energy uptake for electricity generation by providing gas-fired power when renewable energy is insufficient or cannot be generated due to environmental factors; and,
- Development of decarbonisation technologies, such as greenhouse gas storage technologies, to assist in meeting targets of net zero greenhouse gas emissions by 2050 for all industries needing to abate their emissions.

The oil and gas industry believes its activities in the next 20 years will particularly support objectives 1, 2, and 4 outlined in the 10 key objectives in the draft strategy (that is, support a strong, resilient and diversified economy; maximise regional strengths to unlock strategic opportunities for Western Australia; and enable environmental sustainability and resilience, and address climate change; respectively). However, it should be noted that by supporting these objectives directly that other key objectives will also be enabled, for example, robust economic activity will also support provision of important social services for the wider community, such as funding social housing and health services.

In the draft strategy's 'vision for 2042' APPEA believes that in addition to the existing expectations of what WA should achieve by this time that it should be noted that technologies to decarbonise existing and future energy supplies and industrial activities will also be evident in the fabric of the WA economy by 2042. On page 21 of the strategy, it says that by 2042 we should expect that WA "carbon emissions have reduced markedly as a result of the transition to green

¹ Australian Energy Market Operator [WA Gas Statement of Opportunities - December 2020](#)

² ACIL Allen's 2021 [Western Australian Gas and Downstream Opportunities Study](#)

energy, increased energy efficiency and a strong uptake in the low and zero emission vehicles market”. APPEA believes that another way we will have reduced carbon emissions by 2042 is through ongoing development and successful deployment of technologies such as greenhouse gas sequestration or carbon, capture and storage. These technologies will be required in addition to carbon farming initiatives referred to in the draft strategy if in 2042 we are to be on track to meet the aspiration of net zero emissions by 2050.

Cross-cutting theme: Climate change and sustainability

APPEA supports a national climate change policy that delivers greenhouse gas emissions reductions, consistent with the objectives of the Paris Agreement, and applies a broad-based price signal on emissions to facilitate investment decisions at the lowest cost to the economy. Climate change policy should work cohesively with other policies—including energy, international trade, taxation, economic growth, population, and environmental and social responsibility.

In February 2021 APPEA released its third edition of its climate change policy principles³, where it is stated that policies should achieve emissions reductions consistent to achieving net zero emissions across the Australian economy by 2050 as part of a contribution to a goal of global net zero emissions by 2050.

APPEA notes that one of the outcomes of the Government’s ‘WA Climate Policy’, released in November 2020, is that the Government would pursue sectoral emission reduction strategies (SERS). This is referred to in Recommendation 11(c). APPEA has committed to participate in the SERS covering ‘heavy industries’, with the first consultations due before the end of 2021. APPEA understands that other sectors will be developing their own SERS simultaneously, therefore the timeframe for this action should be in the near-term 2022-2027 timeframe of the strategy, and not the mid-term 2027-2032 timeframe indicated in the draft report.

This section also talks at length about carbon farming in Recommendation 12. Although carbon farming is one tool in relation to carbon sequestration, it is not the only opportunity in this area. APPEA recommends that the draft strategy references other carbon sequestration opportunities and does not narrow it to carbon farming alone which is unfortunately unlikely to be a market sufficiently deep and liquid enough to meet the demand for emissions offsets needed to achieve net zero emissions by 2050. APPEA’s feedback is that an additional recommendation should be included as Recommendation 12(d) that references non carbon farming sequestration methods such as greenhouse gas storage or carbon capture and storage.

Cross-cutting theme: Regional development

APPEA supports comments made in page 95 in the draft strategy that enabling infrastructure is required for hydrogen to grow and support the industry.

In addition to hydrogen, infrastructure to support conversion of shipping routes to Liquefied Natural Gas (LNG) and other low-carbon fuel bunkering (marine fuels) would also be needed to meet the State Government’s aspiration to build an international fuelling hub in WA, encouraging vessels to refuel with LNG and other low-carbon fuels off the coast of the Pilbara than use heavy fuel oil. Establishing an LNG or low-carbon fuelling hub requires infrastructure support.

³ <https://www.appea.com.au/wp-content/uploads/2021/02/2021-APPEA-Climate-Change-Policy-Principles.pdf>

Cross-cutting theme: State planning and coordination

APPEA supports Recommendation 20 that the State works towards a single digital approval process. An efficient and effective regulatory process for project developments is critical to WA's competitiveness as a jurisdiction in which to invest⁴, and we encourage more focus by Government on improving regulatory efficiency. Within this, assigning a lead agency is important in ensuring accountability and focus for delivering efficient regulatory outcomes. APPEA's experience is that when this is not clear, or responsibility is shared between agencies, that this results in unnecessary delays and unclear approvals processes for proponents.

APPEA notes several recommendations (Recommendations 27, 28 and 29) concerning strategic land use, and the establishment of multiuse zones for industry and supports these recommendations.

Sector: Energy

The demand outlook for LNG, particularly in Asia, remains strong. Demand for gas is forecast to double by 2040⁵ and Australia, particularly WA, is well placed to meet this demand. Australian LNG export volumes are forecast to increase by 5.3 per cent to 83 million tonnes in 2021-22. Australian LNG exports earnings are forecast to increase from an estimated \$33 billion in 2020-21 to \$49 billion in 2021-22.⁶ Ongoing demand for WA's LNG will be supported by importing countries deploying emissions reduction initiatives, which should favour natural gas given it produces lower emissions than alternatives such as coal. In short, WA exports of LNG can assist in lowering global emissions and can contribute to a cleaner energy sector in Asia.

On page 149 of the draft strategy it says "As a major international supplier of energy sources, there will also be increasing pressure on WA to transition to cleaner energy to remain competitive, as global customers commit to substantial interim and long-term emission reduction targets. While gas-fired power is used as a transition fuel in the medium term, longer-term reliance on gas would mean the State will find it harder to achieve emission reduction targets."

APPEA's feedback on this point is that emission reduction targets are feasible with proven emissions mitigation technologies such as greenhouse gas storage, and so use of gas in the decades to come does not automatically mean that "the State will find it harder to achieve emission reduction targets" when these emissions mitigation technologies can be deployed.

The State Government has made it clear that development of a renewable hydrogen industry, and from that an export hydrogen industry, is a key plank in its plan to diversify the WA economy. APPEA's view is that it the Government should be supporting the development of hydrogen along with other low-carbon fuels, no matter how it is produced as long as any resulting carbon emissions can be abated. In particular, the production of hydrogen using natural gas, with any carbon emissions sequestered, known as "blue" hydrogen, can provide a very low emission energy source and is currently much cheaper to produce than the renewable hydrogen alternative. Therefore, new markets, distributions networks and exports of hydrogen could in the early years be established by hydrogen produced through "blue" means thereby enabling future exports of "green" or "renewable" hydrogen once it becomes economically viable.

⁴ Wood Mackenzie's [Australian Oil & Gas Industry Outlook Report](#) released in March 2020

⁵ EY report – [Australia's oil and gas industry: kickstarting recovery from COVID-19](#)

⁶ Australian Government's [Resources and Energy Quarterly: June 2021](#)

As noted on page 150 of the strategy, “WA is well positioned to become a global leader in the international supply of renewable hydrogen. The State has demonstrated capability in mass production through its LNG projects.” APPEA believes that the strategy should not only restrict opportunities to “renewable” hydrogen, and therefore in the statement above should acknowledge that WA is well positioned to become a global leader in the export of hydrogen, and that the method by which the hydrogen is produced does not need to be specified. In addition,

Indeed, further on in this section of the draft strategy, on page 157, it acknowledges this as follows: “As a zero emission energy source, green hydrogen is expected to experience high international and domestic demand, as countries seek to decarbonise energy-intensive industries and infrastructure sectors. However, blue hydrogen (produced from natural gas, coupled with carbon capture and storage) is likely to play a role as a transitional energy source using the State’s existing LNG capability, production and distribution infrastructure, and customer base from which to generate initial growth. This is reflective of the forecasts which suggest it will take ten to 15 years for green hydrogen to achieve price parity with blue hydrogen. If WA is to get an early foothold on hydrogen supply and demand, then it is important to consider blue hydrogen as an interim step towards establishing the green hydrogen industry.”

APPEA is also supportive of the following statement in the draft strategy on page 159, as follows: “Hand in hand with industry, the State Government should continue to prepare for legislation and policy amendments, and plan for a pipeline of enabling infrastructure for the hydrogen industry, including ports, roads, water and energy transmission.”

APPEA is committed to working with Government to ensure that the appropriate legislative framework is in place to enable WA to be a successful hydrogen producer and exporter.

In addition to hydrogen, APPEA also believes that WA is well placed to be a global leader in the export of other low-carbon fuels.

Related to this, modifications of the existing gas pipeline network may be required in order to enable the intake of alternative gas energy sources like hydrogen. For example, as the State transitions towards net zero emissions, there may be a need to modify the Dampier to Bunbury Natural Gas Pipeline (DBNGP) and associated laterals, and the Parmelia Gas Pipeline (PGP) to enable the transmission of energy sources like hydrogen. Government support for modification of this infrastructure could be required.

Similarly, the State Government can play a role as a market maker for low-emissions energy technologies by transitioning Government vehicle fleets. For example, hydrogen fuel cell electric vehicles can provide a low emissions transport option, especially for heavy transport (freight, buses). However, infrastructure, such as refuelling stations, is needed to assist in the adoption and take up. This could be facilitated by a commitment from Government in terms of setting targets in take up of a zero-emission vehicle fleet. The State Government could also support mechanisms to encourage the conversion of heavy transport fleets to hydrogen.

Looking at other requirements for the State to reach net zero emissions by 2050, infrastructure to support carbon capture, utilisation and storage, or greenhouse gas storage would also assist in facilitating successful deployment of these critical technologies.

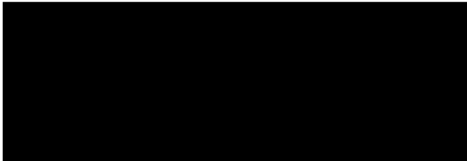


Conclusion

APPEA would once again like to thank Infrastructure WA for the opportunity to provide a submission on the draft strategy. We look forward to ongoing consultation with IWA and to seeing the final version of WA's State Infrastructure Strategy in 2022.

Should IWA have any questions on any of the information in this submission, please do not hesitate to contact me on 0417 192111, or cwilkinson@appea.com.au.

Yours faithfully,



Claire Wilkinson
Director – Western Australia