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Liquid Fuel Security Review  
Consultation on Interim Report  
Department of Environment and Energy

By email: [energysecurity@environment.gov.au](mailto:energysecurity@environment.gov.au)

Dear Sir or Madam

## **SUBMISSION ON THE GOVERNMENT'S LIQUID FUEL SECURITY REVIEW INTERIM REPORT**

Woodside Energy Limited ('Woodside') thanks the Department of the Environment and Energy ('the Department') for the opportunity to provide comment upon the Liquid Fuel Security Review interim report. In offering our response, Woodside hopes to inform the Department's final report by drawing on our learnings as the pioneer of Australia's liquified natural gas (LNG) industry and largest Australian natural gas producer. Woodside notes that the term "energy security" can be viewed through different lenses, including short term supply reliability, medium term security of trading routes, and economic security (for example through the Balance of Payments effect of net energy trade). In Woodside's view, greater use of Australia's indigenous gas resources in place of imported liquid fuels, such as in remote power generation or as a transport fuel, makes sense through all of these lenses.

**About Woodside:** Woodside is recognised for its world-class capabilities as an integrated upstream supplier of energy. We deliver energy solutions domestically and internationally that provide sustainable value for our shareholders, partners and the communities where we are active. Our operated assets are renowned for their safety, reliability and efficiency and we have a strong track record in project development. As Australia's premier LNG operator, we produced 6% of global LNG supply in 2018. The natural gas we produce is a low-emissions and economically viable fuel for markets domestically and around the world.

The Department's interim report identifies our nation's competitive advantages and associated flow-on opportunities that could improve Australia's liquid fuel security. As a proud Australian company, Woodside recognises this potential, and encourages government to provide clear and stable policies which form the basis for industry participation.

**Natural resources:** The interim report highlights Australia's abundant reserves of natural gas, noting Australia has over 128.3 trillion cubic feet of proven natural gas reserves and is set to become the world's largest exporter of LNG by 2020.

Woodside is the largest Australian producer of LNG with more than 30 years' experience as an LNG producer and operator and 35 years of supplying pipeline gas to Western Australian utilities and buyers. Since 1984, we have been providing cost effective and reliable domestic gas for Western Australian customers. This secure local supply has benefited Western Australian residents and industry, reducing their vulnerability to fluctuations in supply and pricing of imported fuels.

Woodside is now working to deliver our vision for the Burrup Hub in Western Australia's Pilbara region. The vision involves the proposed development of some 20 to 25 trillion cubic feet of gross dry gas resources principally from the Scarborough and Browse fields, through our established LNG facilities at Pluto LNG and the Karratha Gas Plant. If realised, the Burrup Hub vision could deliver LNG to global markets and domestic gas to Western Australia for decades to come. This has the potential to improve energy security in Australia and deliver other significant benefits in the form of jobs, royalties and taxes.

Based on the foundation of a stable supply of natural gas from existing and new projects, including the Burrup Hub, Australia has the potential to further diversify from its reliance on liquid fuels by using natural gas for power generation in remote areas and for fuelling our transport sector.

**Natural gas for power generation:** Natural gas is used widely in Australia for power generation via gas pipeline networks. However, for remote areas distant from gas pipelines, the main baseload fuel in use today is diesel. Natural gas delivered by truck (in the form of LNG or compressed natural gas (CNG)) can replace diesel in these locations. In fact, LNG delivered by truck is already used in Australia for remote area power generation. For example, the towns of Broome, Derby, Fitzroy Crossing and Halls Creek in Western Australia's Kimberley region have used power generated via LNG trucked from Karratha since 2008.

**Natural gas for trucks:** Natural gas (LNG or CNG) is a feasible substitute for diesel use in heavy road vehicles. Across the USA, EU and China there are extensive fleets of trucks operating on LNG and CNG. For example, UPS (the world's largest delivery company) operates more than 5000 LNG and CNG fuelled trucks in the USA. The EU, via its 'TEN-T' initiative, is mandating and supporting the roll-out of alternative fuelling stations, including LNG and CNG, across core transport routes in Europe. It aims to break the 'chicken-and-egg' infrastructure challenge and facilitate uptake of alternative fuels, with the stated aim of reducing the EU's dependence on imported oil and reducing emissions.

Australia does not offer the same support for LNG or CNG as a transport fuel and industry uptake has flagged accordingly. While there were a reported<sup>1</sup> 200 LNG-fuelled trucks in operation in Western Australia in 2010, today there are none. Woodside believes the introduction of federal excise on natural gas fuels in 2011 effectively ended a nascent industry by reducing the incentive for converting from diesel to natural gas. This action resulted in halting of the development of the LNG fuelling networks that could have supported further uptake of LNG-fuelled trucks.

Despite the challenges, Woodside is building its capability in new markets for LNG supply and offering integrated energy solutions across the entire supply chain. Woodside's newly commissioned LNG truck loading facility at Pluto LNG will make LNG available in north western Australia and thus provide an alternative to diesel for heavy mining equipment, including trucks and trains, and power generation. Woodside has already signed a deal to provide trucked LNG to a new mine project in the Kimberley, which we estimate will displace around 50 million litres of diesel per annum.

**Natural gas for ships:** Woodside operates the first LNG-fuelled ship in Australia, a platform supply vessel named *Siem Thiima*. Since 2017 the use of LNG fuel on this vessel has avoided the consumption of 5 million litres of diesel. Based on this success, Woodside is planning to convert other vessels in our support fleet from diesel to LNG to reduce cost and emissions and reduce the exposure of our operations to interruptions in liquid fuel supply chains.

Woodside also already delivers LNG overseas in tankers fuelled by LNG, and other types of ocean-going ships are starting to be built to operate using LNG as a fuel as well, including 32 large cruise ships and 20 container ships. There is an opportunity for large ships trading to and from Australia to be fuelled by LNG. Specifically, Woodside sees an opportunity for the bulk carriers which carry Australia's two largest products, iron ore and coal, to be fuelled by LNG. Presently they are fuelled almost exclusively in Asia with heavy fuel oil.

Working with BHP, FMG and Rio Tinto since 2017, the 'Green Corridor' project has designed LNG-fuelled ships to carry iron ore and coal. By using LNG produced in Australia rather than fuel oil purchased in Asia, these ships could operate at lower cost, with reduced emissions, and provide revenue security to the nation by enabling our key export commodities to get to market by using a fuel produced in Australia.

Following the investment we have made to provide natural gas for on-land uses such as power generation and trucking, Woodside is also considering an investment to support the uptake of LNG in shipping. This would take the form of an LNG bunker vessel (essentially a mobile refuelling ship) which would allow ships operating from northern Western Australia, such as iron ore carriers, to operate on Australian LNG. This outcome is not guaranteed, as Australia faces significant competition from other countries (e.g. Singapore) where commitments to LNG bunkering infrastructure have already been made, often with government backing.

**Hydrogen:** The Department's interim report also highlights the potential for Australia to reduce its reliance on traditional liquid fuels through the use of hydrogen. Woodside views hydrogen production and export as a

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<sup>1</sup> <https://aogexpo.com.au/wp-content/uploads/2019/04/Session-2-Nick-Rea.pdf>

potential adjacent activity to our core LNG business and is currently exploring how our capabilities in the production and transport of gas could be used to support future hydrogen. We support the development of a National Hydrogen Strategy by the COAG Energy Council Hydrogen Working Group.

While Woodside's LNG exports are already being converted to hydrogen in Japan and South Korea for manufacturing industrial chemicals, power generation, and public and private transport, Woodside believes a domestic hydrogen industry in Australia could generate cheaper and cleaner energy, as well as improve Australia's liquid fuel security. We believe hydrogen has the potential to make a significant contribution to dispatchable renewable energy in Australia, which could help to support domestic manufacturing, deliver jobs and assist Australia in meeting its Paris Agreement emissions reduction targets.

**Role for the Commonwealth Government:** Woodside believes the government has an important role to play in signalling expectations to stimulate demand for natural gas for power generation, natural gas for transport and hydrogen for fuel. Specifically, the government could explore opportunities to:

- Work through AMSA to have the International Maritime Organisation (IMO) commit to an Emissions Control Area in the Commonwealth Marine Area and adjacent state and territory waters, to send a clear signal to ship builders and buyers about the need to transition cleaner fuels (such as LNG);
- Work with the States and Territories to provide Port fee incentives for low emission marine fuels consistent with other jurisdictions;
- Ensure that the development of LNG and hydrogen refuelling infrastructure has access to financial support through bodies such as the Northern Australia Infrastructure Facility or Clean Energy Finance Corporation;
- Develop consistent national hydrogen codes and standards;
- Use the Commonwealth procurement power to support hydrogen and LNG fleet purchasing and encourage the States and Territories to make commitments to zero-emission fleets (including targets for public transport);
- Ensure that the availability of LNG for remote power generation is considered as an alternative to Diesel when assessing environmental approvals for new mines;
- Implement incentives to overcome new technology premiums (including luxury car tax concessions);
- Consider transitioning from Fuel Excise towards road user charging as a way of equalising treatment between traditional, Battery and Hydrogen Fuel Cell Electric Vehicles (BEV and HFCEVs), and LNG fuelled road transport. In the meantime, consider temporary excise relief and/or infrastructure grants for emerging technologies such as LNG, CNG and Hydrogen fuel; and
- Provide general public and consumer education.

Woodside would be happy to discuss these matters with the Department, but otherwise looks forward to the further development of the Liquid Fuel Security Review.

Yours faithfully

