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Andrew McConville
Chief Executive, APPEA
appea
Gas in the future energy mix
25 March 2021

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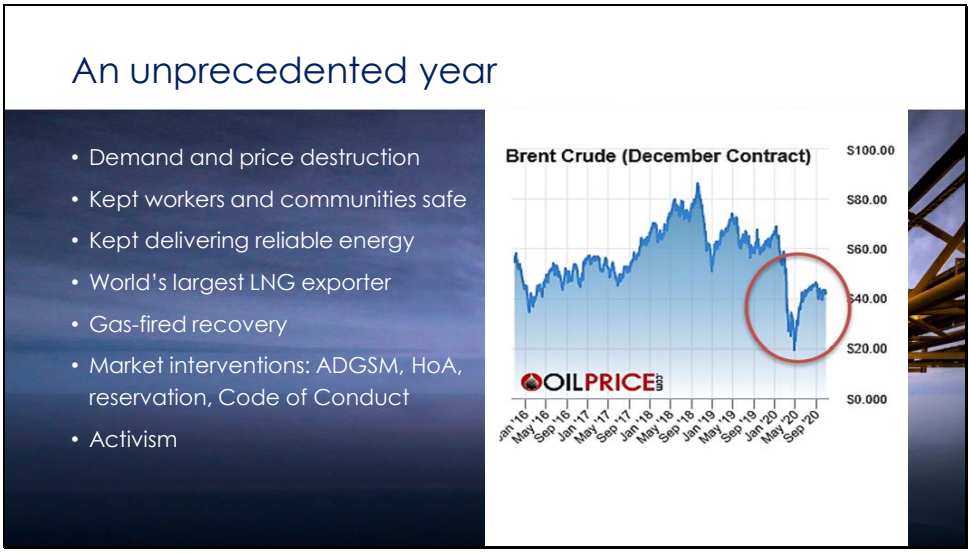

- Ladies and gentlemen – we are all here with the common aim of continuing to build a strong domestic gas industry
- Like many industries, the last 12 months have been unprecedented for the oil and gas sector – last week marked one year since the Governor-General authorised the Biosecurity Emergency Declaration in response to the COVID-19 pandemic - Australia was heading into full lock down and oil prices were in free fall
- At APPEA we working daily with Federal and state government to establish safety protocols that would allow the industry to continue operating and deliver gas
- Looking back, the industry can be proud of its record protecting the health and safety our workers while also continuing to supply gas to households and businesses across Australia
- In September the industry was thrust into the spotlight with the PM's announcement of a gas-fired recovery
- While the debate around the gas-fired recovery has zeroed in on gas' role in manufacturing, the real benefits of a strong domestic gas industry are much broader
- Our industry has a central role to play in Australia's prosperity - as a supplier of reliable, cleaner energy, a driver of investment and jobs in our regions and a pivotal source of competitive advantage
- But we are facing headwinds
    - Increasing intervention – HoA, gas reservation, Code of Conduct, ADGSM
    - Rising levels of misinformation spread by professional activists aimed at demonising & driving investment away from industry – a clear, emerging threat is the prospect of capital drying up

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- As an industry we need to be better at dispelling the misinformation spread by activists
- Professional activists – often parading as think tanks – have set their sights on the gas sector, not unlike the coal industry before us.
- Many are well-resourced, funded by international activist groups
- They have a stated aim to end fossil fuel use and prevent responsible development of Australia's reserves
- Traditional tactics have been grassroots fear campaigns aimed at turning the community and political decision-makers against the industry and its role.
- Increasingly they are targeting shareholders and their advisers; and commentators and media – using economic and sustainable development arguments to delegitimise our members' activities and divert investment away from the sector.
- Organisations like ACCR and Market Forces have been putting forward shareholder resolutions with APPEA member companies with demands ranging from improved disclosure through to fundamental changes in business model.
- Over the last three years ACCR has lodged resolutions with Origin, Woodside, Santos and BHP requesting that they disclose an analysis of climate and energy policy lobbying, advertising and advocacy activities undertaken by their industry associations and evaluate whether or not they are "positively in line with the Paris Agreement" and suspend memberships where they are not.
- Activists are attempting to build momentum away from the industry by publishing data on institutions withdrawing from the industry – take a look at the gofossilfree website which claims more than 1,000 institutions have fully or partially left the sector

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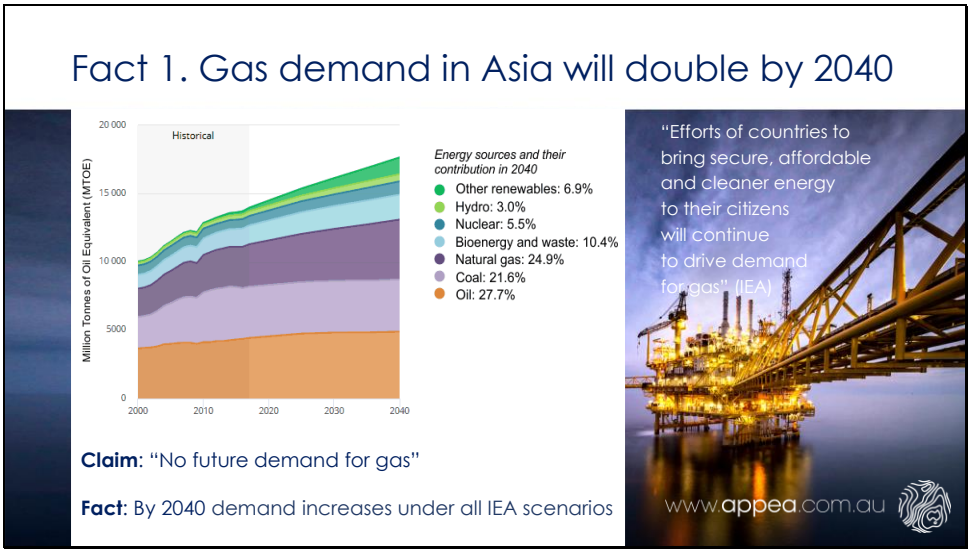

- The central claim by activists seeking to influence investors is "no future demand for gas"
- The reality couldn't be more different
- The recent World Energy Outlook by the International Energy Agency shows natural gas demand increasing under all its scenarios, with particularly strong growth in India, China and other Asia Pacific economies
- In the Sustainable Development Scenario (SDS), demand for natural gas in the Asia-Pacific grows by 52 per cent to 2040,
- Even under the most aspirational Net Zero Emissions by 2050 Scenario, growth in gas consumption still occurs in Asia.
- The driver of growth is simple: a third of world's population is living without any form of secure energy. As India, China continue developing, gas will take on multiple roles to provide secure energy to citizens, lower emissions and support renewables

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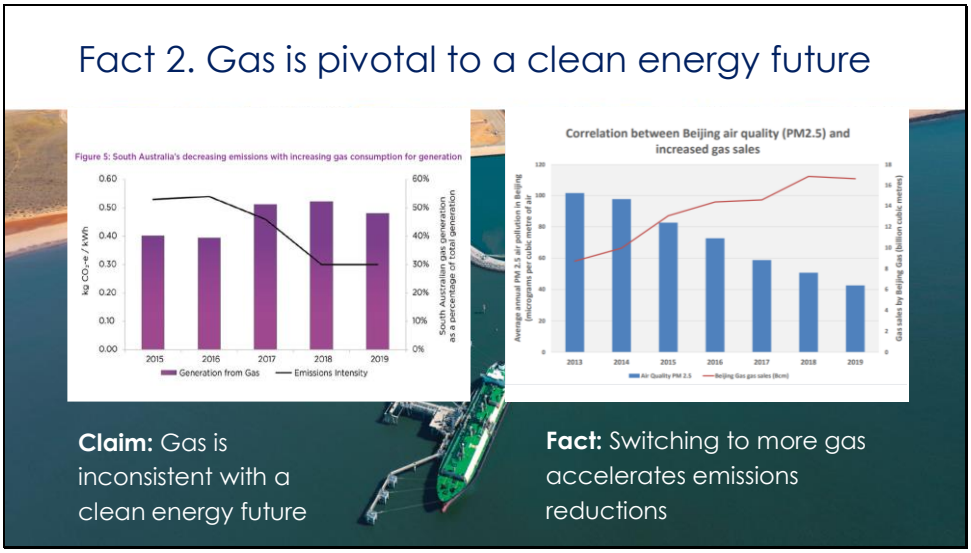

FACT: With 50% of the emissions of coal, switching to more gas accelerates emissions reductions

- Coal-to-gas switching is already saving emissions.
- South Australia is often spoken of as Australia's renewables capital; but it's with increased use of gas that emissions are coming down.
- Using more natural gas in Australia's power generation and resource processing can further reduce emissions.
- Natural gas plants also use much less water than coal-fired power and produce much lower levels of noxious substances such as sulphur dioxide, nitrogen oxides and fine particle emissions. Burning gas instead of coal improves urban air quality. See chart
- Australian LNG is helping to improve air quality, reduce greenhouse gas emissions and improve energy security for our trading partners.
- In Vietnam 46 gigawatts of new coal fired electricity is either planned or under construction. But what if Vietnam could have greater access to natural gas in the form of LNG imports? Coal to gas switching globally could result in 5 gigatonnes of emissions reduction. Offset against 2.1 gigatonnes of emissions from LNG production and the overall net benefit globally would be 2.9 gigatonnes of emissions reduction within the space of the next five years or so. That's about 6 times the total emissions Australia produces annually

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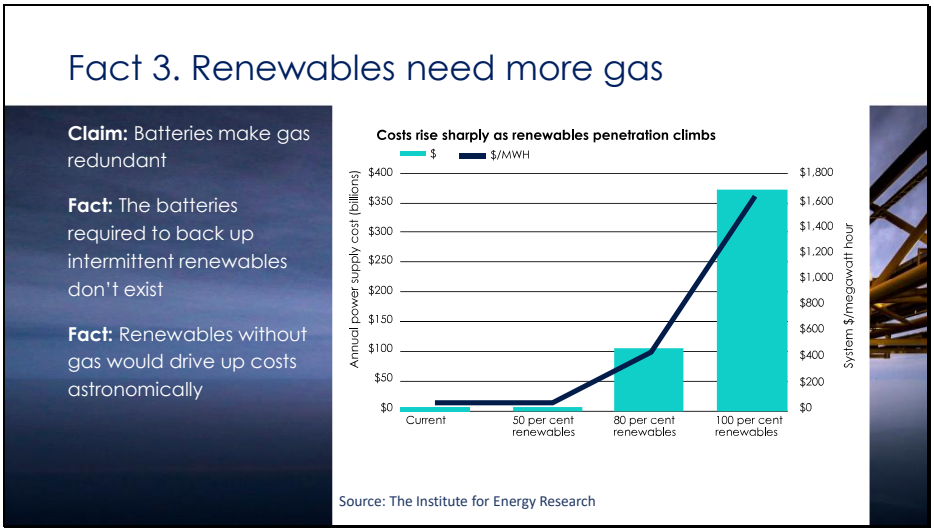

- Another claim of opponents is that batteries will make gas redundant in supporting renewables
- This claim has been debunked time and time again
  - When Tesla built its battery in South Australia in 2017 it created capacity to deliver 100 megawatts of stored electricity into the grid. The battery proposed for Yallourn will deliver around 360 MW. Both are crucial in helping to provide grid stability and security.
  - But we need to also understand the Tesla battery can provide around 6 minutes of electricity to the state, while the Yallourn battery will provide around 4 hours of capacity. This is crucial and technology will continue to see further improvements, but let's not forget that blackouts in South Australia, or Texas, or many other places have on occasion run for days, not hours.
  - It is not only the limited life of batteries that challenges the viability of a grid based on renewables plus batteries. It is also the sheer expense.
  - Battery storage is not a substitute for natural-gas plants that can operate at any time, run continuously, and vary output levels to meet shifting demand throughout the day. Just this week, Dr Alan Finkel wrote that "if Australia is prepared to continue to use natural gas for 'firming', we can be 'confident of using solar and wind to replace coal generators when they close', like Victoria's Yallourn in 2028."
- Pause to consider how renewable are renewables? By 2050 scenario there could be up to 1.2 billion electric vehicles on the road. Recognising there is the equivalent of around 7,000 lithium-ion batteries in each Tesla Model S, this means we will need 8.4 trillion batteries. Less than 5% of these batteries are currently recycled and the key ingredients in every lithium-ion battery are mined from the earth, with the energy for that mining sourced almost universally from oil and natural gas because of the energy efficiency it provides.
- Finally, the 'redundancy' claim by activists also fails in its underlying assumption that gas consumption is solely for generating electricity, cooking and heating. The reality is in Australia more than 50% of gas is used in mining and manufacturing and electricity generation accounts for less than one quarter of gas consumption.

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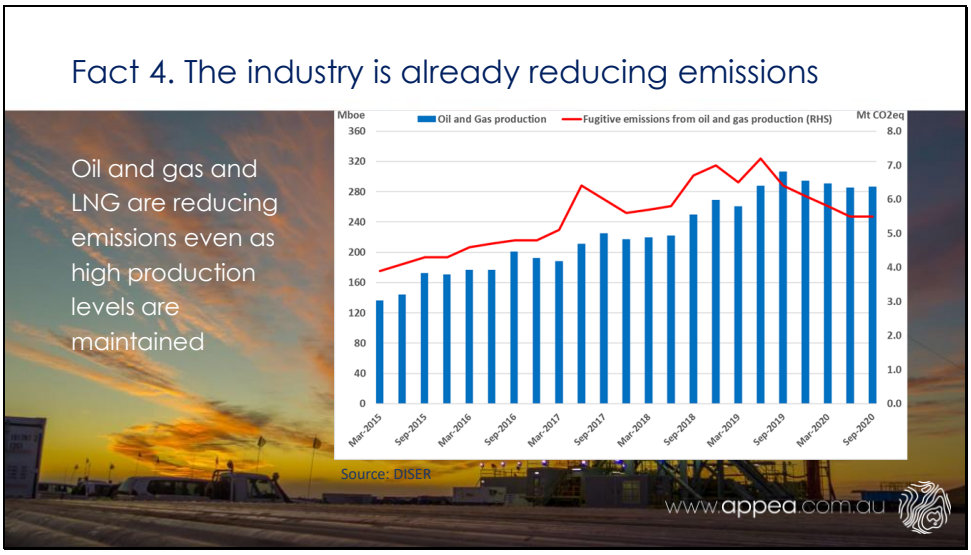

Government data from the National Greenhouse Gas Inventory shows:

- In the last 12 months emissions from oil and gas and LNG decreased by 7% or 3.4 million tonnes even as overall production increased.

The sector is leading on emissions reduction technologies and initiatives:

- Few industries show as much technological innovation and environmental commitment as the oil and gas industry.
- CCS and Hydrogen are both priorities in the Government's Technology Investment Roadmap – selected on the basis of their large-scale commercial viability
- Australia already has the largest operating CCS venture in the world
- The industry is continuously improving operations to reduce emissions. A number of our members have joined with the World Bank in an initiative to eliminate routine flaring by 2030; and the use of gas compressors in LNG plants means more gas that would have been flared is captured and re-injected
- We welcome recent policy support – including the new $50m Carbon Capture, Use and Storage Development Fund; and support for a local hydrogen industry
- While APPEA recently announced our support for policies and efforts that target net-zero emissions by 2050, it's our members' track record on — and plans for — emissions reduction technology that we are most proud of.

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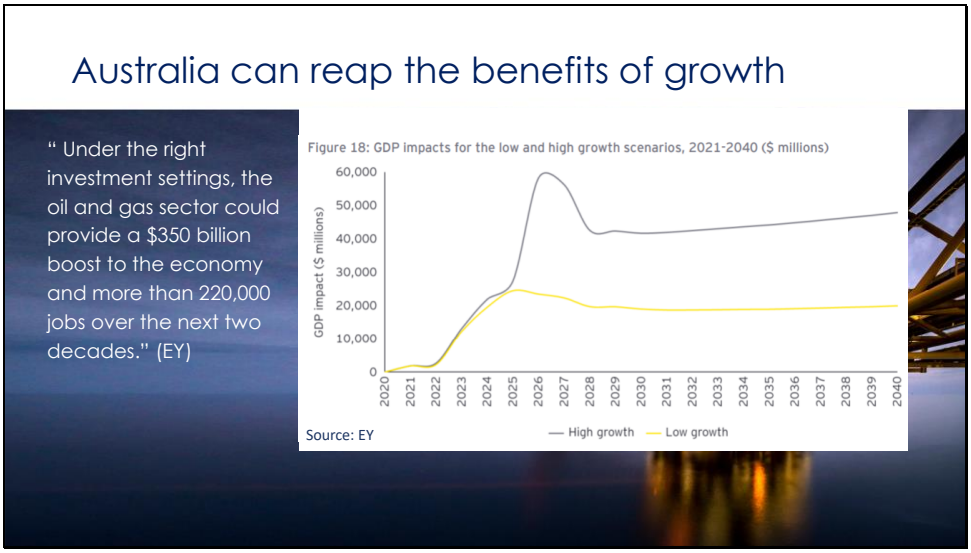

- The Australian oil and gas industry is well placed to take advantage of the increased natural gas demand from the Asia-Pacific region.
- The industry has invested nearly $450 billion in projects over the last decade and has around $137 billion worth of projects in the pipeline.
- A recharged gas sector will stimulate growth in other industries and every additional person employed in oil and gas will support 10 other additional jobs and innumerable small businesses.
- A recent EY report, commissioned by APPEA, showed under the right investment settings, the oil and gas sector could provide a $350 billion boost to the economy and more than 220,000 jobs over the next two decades.
- The challenge is how to restore confidence and attract capital to kickstart a new phase of investment and growth

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- In Australia reliable energy is immediately available to us.
- Technology innovations to make our energy sources cleaner are a real option with established projects, a well-capitalised industry, strong policy frameworks, skilled labour, and existing infrastructure.
- But the story is very different for other nations that are at different points in their energy journey. More than 2.6 billion people live without adequate energy security, where cooking with dung or wood is the norm and there is inadequate access to clean cooking fuel or to reliable electricity.
- Without reliable electricity it is very difficult to keep lights on so children can study, or keep refrigerators running to preserve food or medicines.
- Australia is surrounded by countries with severe energy poverty – reliant on coal and biomass. Australian gas is playing a key role in the decarbonisation and sustainable development of our trading partner economies - bringing energy security which in turn brings economic security and geopolitical stability.
- The Australian government estimates our exports of liquified natural gas helps reduce emissions in importing countries by around 170 million tonnes each year – the equivalent of almost one-third of Australia's total annual emissions.
- Our members are committed to responsible and sustainable business, and a growing number of members have committed to NZ2050 or even sooner.

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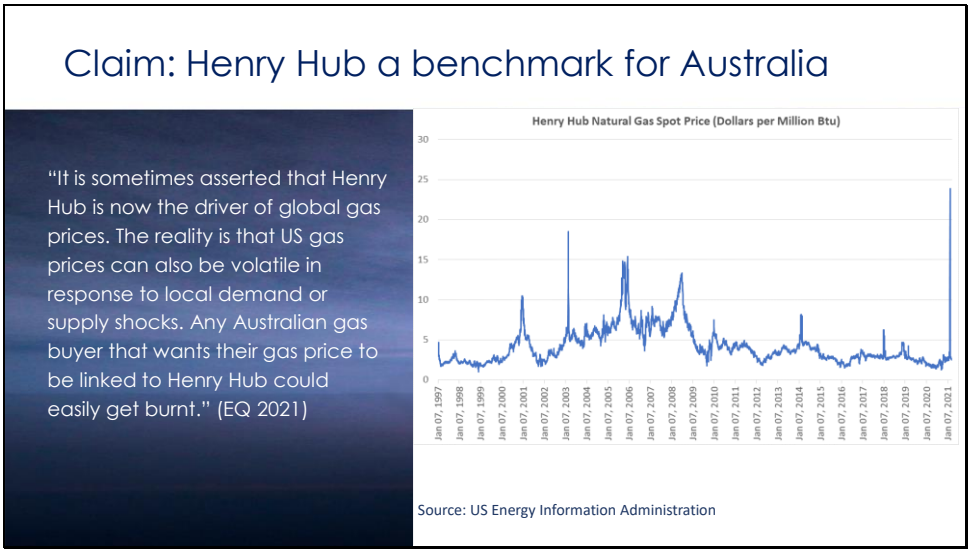

- It is asserted by some that the Henry Hub gas price in the US is an appropriate benchmark for Australia
- Fact: The Henry Hub is located more than 14,000km away from Australia, on the other side of the Pacific Ocean.
- Fact: Australian producers are not connected to the Henry Hub. Australian manufacturers are not connected to the Henry Hub.
- Fact: The Henry Hub services a population of 330.1m people at 34 people/km2 (US Census), compared to Australia's population of 25.7m at 3.3 people/km2 (ABS).
- Fact: The US is serviced by more than 485,000 kilometres of pipeline compared to Australia's less than 40,000km of pipelines (APGA).
- Energy Quest's latest report cautioned that 'Australian gas buyers wanting their gas price to be linked to Henry Hub could easily get burnt.'
- In the recent unprecedented cold snap experienced by Texas the market proved to be far from perfect with spot gas prices soaring and diverging between different regions.
- The image highlights the divergence between prices east and west of the Mississippi River (shown by the dashed line) on 13-16 February. In a perfect market prices would be uniform across regions, with gas flowing seamlessly to Texas from the east coast across the Mississippi. Instead, spot prices ranged from US$4/MMBtu to US$368/MMBtu.
- Industrial users also experience large regional differences in delivered gas prices. The latest data from November 2020, showed the average price for industrial users ranged from US$2.83/MMBtu in Louisiana to US$7.96/MMBtu in California, the equivalent of A$10.16/GJ.

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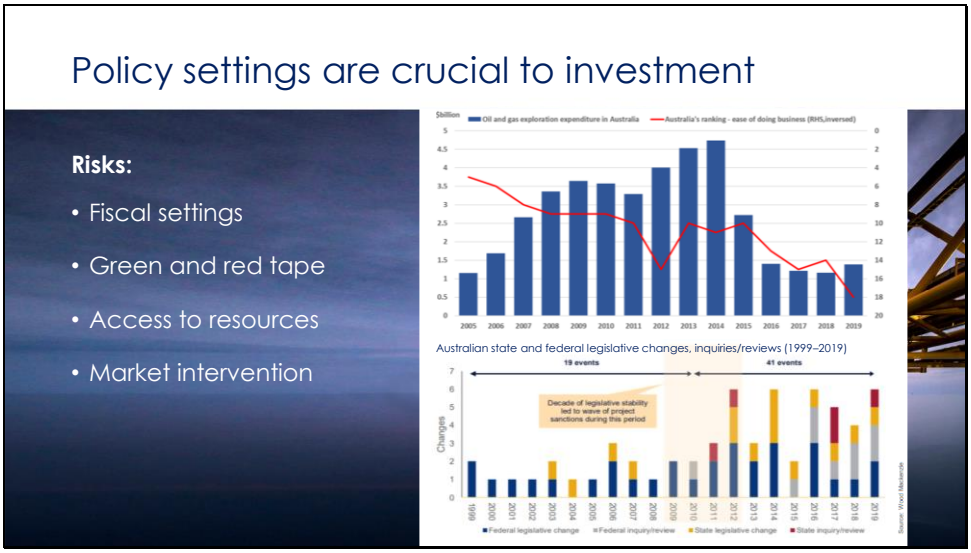

- Charts show the correlation between policy instability; competitiveness; investment expenditure
- It's no surprise that the unprecedented wave of investment in Australia's oil and gas industry – more than $450b – happened during a period when Australia was ranked in the world's top ten countries for doing business. It also coincided with a period of policy stability
- Securing capital for investment depends on getting the settings right for investment – particularly crucial now when the pandemic has intensified the uncertainties facing the industry

FISCAL SETTINGS

- APPEA is calling for the Government to make a number of reforms in this year's Federal Budget to improve the investment environment:
    - Make it clear that salary and wage costs are immediately deductible .
    - Improve investment allowances to attract investment.
    - Remove barriers to business project restructuring through providing tax asset rollover relief.
    - Amend the Petroleum Resource Rent Tax (PRRT) Assessment Act to link a petroleum project to a production licence where a production licence may revert to a retention lease.
    - Close out the PRRT Gas Transfer Pricing Review without change.

GREEN AND RED TAPE

- The work that's been done by the Productivity Commission and Samuel's Review of the EPBC Act is valuable start to improving the regulatory environment. We are urging the

government to get on with implementing the recommendations and make a real difference in reducing duplication, costs and delays

ACCESS TO RESOURCES

- Fundamental to future domestic supply
- Encouraged by the Federal Government's support through its strategic basins plan and the announcement last week of a further $50m in grants for exploration in the Beetaloo
- Looking forward to the NSW Government releasing its Gas Plan and the resumption of conventional onshore gas in Victoria from July
- Best gas is that which is developed closest to market

INTERVENTION

- Intervention is not the answer to increasing supply, nor does it guarantee lower prices
- There's an inverse correlation between government intervention in gas markets and investment.
- Allowing prices to be set by the market is a sign of market / government maturity. No other OECD gas-producers (USA, Canada, Netherlands, Norway and the UK) have governments that intervene in domestic gas markets – prices are set by the market and these counties enjoy the lowest wholesale gas prices.
- Conversely in non-OECD countries domestic reservation policies or price controls coincide with declining investment in exploration and new supply, leading to gas shortages, imports from other countries at high prices, and upward pressure on domestic gas prices.
- Clearly, the most effective solution for ensuring adequate gas supply at sustainable prices is to maintain an open and competitive market that attracts investment in new projects.
- Our members are fully committed to ensuring there is a secure, sustainable and competitive natural gas supply for households and businesses – and the sector takes its obligations to the domestic gas market very seriously.

Telling the facts; dispelling the activists claims

- Natural gas is a fuel for the future
- As an industry we must be proactive in making our case, communicating the facts and pushing back on the misinformation.
- In our community, opposition to the industry is at an all time low. Our latest research found that 75% Australians agree there is a role for gas and almost half support the gas sector. Compare this with just 16% opposing the industry
- We need to work together to build awareness, not just among our communities, but with investors, shareholders, decision-makers and influencers.

Concluding remarks:

- The industry welcomes the emerging political consensus in support of the future role of natural gas in Australia's energy mix.
- We should not and do not need to make choices between different energy sources. Last year, former Chief Scientist Alan Finkel spoke about an energy highway — different vehicles in different lanes representing various energy types — all moving towards delivering the world's energy needs.

- Uniquely, natural gas does not just drive us forward because it is cleaner; but because it can be made even cleaner, and because it can bring other energy types along with it by boosting renewables uptake and feeding new fuels such as hydrogen.
- The strength of the contribution our industry makes to Australia's economy depends on the actions that government takes now to put in place the conditions that encourage, rather than discourage, investment.
- If we get this right, then the prize for Australia is immense.

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