

28 November 2019

Climate Change Consultation
Department of Water and Environmental Regulation
Locked Bag 10
Joondalup DC WA 6919

Submitted via email: climate@dwer.wa.gov.au

To whom it may concern

Re: Climate change issues paper - consultation

Thank you for the opportunity to comment on the Climate Change in Western Australia Issues Paper published on 4 September 2019 (Paper). This letter outlines a submission from ATCO Australia (ATCO) covering in particular the following three priority issues and opportunities for Western Australia highlighted in the Paper:

- Transforming energy generation
- Industry innovation
- Future mobility

As an owner and operator of energy and logistics infrastructure in Australia for almost 60 years, ATCO is proud of its ongoing commitment to supporting the communities in which we operate. ATCO is a long-term investor with a clear vision of delivering customer value through sustainable growth, ongoing investment, efficiency initiatives, innovation and investment in employee training.

Across ATCO, we focus on actively reducing our emissions by driving operational efficiencies, lowering fuel consumption, phasing in renewable energy solutions, installing new energy technology and transitioning to lower-emissions fuels. We are actively engaged with industry, governments, regulators and other experts on core issues, including legislative and regulatory policy and strategies to reduce greenhouse gases, air pollutants and methane emissions. To contribute to a lower carbon future, we continue to pursue initiatives looking at integrating lower emissions intensive fuels, such as natural gas, hydrogen, renewables, and other clean energy solutions.

In Australia, ATCO:

- owns and maintains two non-regulated gas distribution networks in Albany (LPG) and Kalgoorlie (natural gas), together with the largest (Mid-West and South-West) gas distribution network in Western Australia, servicing over 760,000 connections through more than 14,000 km of natural gas pipelines and associated infrastructure;
- owns an exempt retailer (Source Energy Co) in the Wholesale Electricity Market that provides electricity to around 500 embedded network customers in strata developments through a combination of solar photovoltaic systems, grid purchases and battery storage;
- owns and operates two power generation facilities (a joint-owned facility in Adelaide and a wholly-owned facility in Karratha) with a combined capacity of 266 MW;

- is drawing on its established expertise in natural gas to explore the future role of hydrogen through the research and development of ATCO's Clean Energy Innovation Hub (an embedded hybrid microgrid system that incorporates renewable solar generation, battery storage, natural gas backup generation); and
- manufactures and delivers modular building solutions to a diverse group of customers.

The long-term nature of our operations underscores the importance of delivering service excellence in a sustainable and environmentally responsible manner. This includes designing and developing forward-thinking, innovative environmental solutions and applications for our customers and our business through a lasting, collaborative approach. Given the long-term nature of our operations, it is essential that the State's Climate Change Policy provides a clear policy framework promoting a stable, orderly transition with appropriate signals for investment.

ATCO recognises that this is an important and challenging time for the Western Australian energy sector, with issues such as energy security, energy costs and the global transition to a low carbon economy. Natural gas is amongst the cleanest traditional source of energy. It is an enabler in this transition and innovation has never been more essential than it is today. Importantly, our customers are telling us that gas will continue to play a role in their energy mix and are looking for innovative and more efficient ways of using gas in the evolving energy supply chain.¹

ATCO is not the type of business that waits for things to happen; that is why we have developed the Clean Energy Innovation Hub (CEIH) at our major depot in Jandakot. The CEIH is an industry leading research and development facility. The CEIH has two key components: the first being the continued research and development of hybrid energy micro-grids leveraging gas technology; the second is exploring the potential role of hydrogen in the future energy mix. The CEIH will also further explore how our gas distribution network can provide security of energy supply, enabling faster uptake of renewable generation and explore the benefits of sector coupling since hydrogen can also be used in the electricity, gas, transport and industrial sectors. The CEIH will provide valuable insights into how our extensive existing gas distribution infrastructure can continue to benefit both gas and electricity consumers as part of optimising the future energy mix.

Transforming energy generation

What are the main challenges for decarbonising Western Australia's electricity supply while ensuring adequate generation capacity, security and reliability?

It is important for the State's Climate Change Policy to recognise the important contribution that gases like biogas and hydrogen will play in a clean energy supply for Western Australia. The focus on energy needs to be broader than just Western Australia's electricity supply.

ATCO recognises that the delivery of stable and affordable energy is critical to Western Australia's (WA's) growth. As noted above, our customers are telling us that gas will continue to play a key role as part of their energy mix. ATCO considers that stable and affordable energy will require the State's Climate Change Policy to support a level playing field across both the electricity and gas sectors to avoid biases towards or against any particular technology.

In 2017, ATCO commissioned independent research: WA's Energy Future report.² The purpose of the report was to help provide policy makers and those in the energy supply chain with modelled energy market scenarios to help stimulate discussion to develop responses to an uncertain energy future. The modelling shows gas remaining integral to WA's energy future. There is a continued need to invest in the existing gas network to ensure it can meet the growth in connections and consumption,

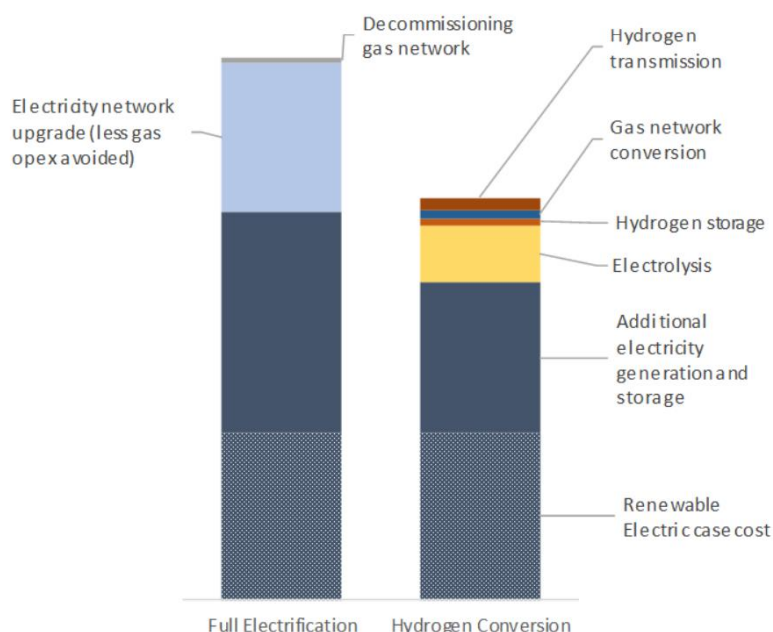
¹ ATCO's Voice of Customer Insights Report is available here: <https://yourgas.com.au/energy-future/customer-consultation/>

² Available from: <https://yourgas.com.au/energy-future/energy-future-report/>

while building the foundation for a clean energy future with a shift to low emission gases like biogas and hydrogen.

ATCO's research is complemented by a study by the Australian Gas Infrastructure Group (AGIG) that demonstrates that using hydrogen to decarbonise natural gas consumption in Victoria is 40% less expensive than full electrification, as shown in the figure below:³

Figure 1: Relative cost comparison of decarbonisation pathways



Source: Australian Gas Infrastructure Group analysis and Deloitte energy market model.

The CSIRO Low Emissions Technology Roadmap⁴ highlighted the potential for natural gas to contribute towards the decarbonisation of electricity generation as well as play an important role as a transition fuel. The CSIRO National Hydrogen Roadmap⁵ also reported on the potential grid firming applications of hydrogen facilitating the transition to a decarbonised electricity supply.

The National Hydrogen Strategy, released in November 2019, sets a vision for a clean, innovative, safe and competitive hydrogen industry.⁶ It recognises that hydrogen provides the opportunity to integrate more low-cost renewable generation, reduce dependence on imported fuels, and help reduce carbon emissions.

The production of renewable hydrogen is already being demonstrated in Canberra and by ATCO in Jandakot. By early-2020, two more projects – in Adelaide and western Sydney – will come online. Across these projects, more than 2 MW of hydrogen production capacity will be installed that can deliver renewable hydrogen. WA has the opportunity to be a leader in the production of renewable hydrogen.

ATCO considers that the State's Climate Change Policy must support the adoption of low emission gases like biogas and hydrogen by incorporating:

- Additional support in the research and development of new technologies to enhance the efficiency of hydrogen production, lower the cost and accelerate the transition to hydrogen.

³ Available from: <https://www.energynetworks.com.au/resources/reports/decarbonising-victorian-gas-consumption-australian-gas-infrastructure-group/>

⁴ Available from: <https://www.csiro.au/en/Do-business/Futures/Reports/Low-Emissions-Technology-Roadmap>

⁵ Available from: <https://www.csiro.au/en/Do-business/Futures/Reports/Hydrogen-Roadmap>

⁶ Available from: <https://www.industry.gov.au/data-and-publications/australias-national-hydrogen-strategy>

- The development of additional incentives for renewable gas, either as a consumer incentive (similar to existing solar incentives) or a certificate scheme (similar to the existing renewable energy certificate scheme), to provide consumers with a lower cost/lower emission source of energy.
- Provide a clear, concise and coordinated regulatory framework so as to avoid duplicated and conflicting requirements under inconsistent federal and/or state policy frameworks.

How fast do you think the transition of the electricity sector should occur?

ATCO considers that the speed at which the transition of the energy sector occurs should be guided by the scale and nature of both the technological and regulatory reforms required to ensure the transition maintains a safe, reliable and affordable energy supply to Western Australians.

Industry innovation

How can the Government of Western Australia foster clean industries and technologies?

ATCO recognises that the WA State Government has an important role to play in supporting innovation in the energy sector in WA. General initiatives such as the new Industry Attraction and Development Fund and energy sector specific initiatives, such as the WA Government's Renewable Hydrogen Council, are welcomed.

ATCO supports the Renewable Hydrogen Strategy released by the WA Government in July 2019. We are well placed to undertake feasibility studies on strategic focus areas of the strategy including:

- hydrogen blending into natural gas networks by 2040 to at least 10% which would equate to up to 1.3 million tonnes reduction in carbon emissions per annum; and
- accelerating large-scale hydrogen production for industrial, transport and gas network usage.

It is important that the regulatory framework applied to ATCO's gas distribution networks supports innovation. Under the present regulatory framework, the National Gas Law (NGL) and the National Gas Rules (NGR), it is challenging for network businesses, such as ATCO, to demonstrate that expenditure on innovation, that could deliver benefits over the longer term, meets the relevant expenditure tests under the NGR. This is typically because the expenditure does not relate to the immediate provision of regulated services (as currently defined), although it may be expected to provide efficiencies in the longer-term. An example of this is the recent Final Decision from the Economic Regulation Authority which determined that the recovery from gas consumers of ATCO's expenditure in the CEIH innovation did not meet the relevant test.⁷

The recent draft decision for Jemena Gas Network's, in which the AER also disallowed hydrogen investment, highlights the need for the regulatory reform to support investment and innovation in hydrogen.⁸

In September 2019, the Australian Energy Market Commission (AEMC) published its Final Report on Regulatory Sandbox Arrangements to Support Proof-Of-Concept Trials, which is seeking to modify

⁷ Economic Regulation Authority, Final decision on proposed revisions to the Mid-West and South-West Gas Distribution Systems access arrangement for 2020 to 2024, 15 November 2019, paras 754-765 & 795

⁸ Available from: <https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/jemena-gas-networks-nsw-access-arrangement-2020-25>

the regulatory framework to better support innovation.⁹ ATCO supports the introduction of a regulatory sandbox framework within which ATCO and others operating in the energy sector could trial innovative business models, products and services in the market under relaxed regulatory requirements. ATCO considers that this framework will support a variety of innovations including those that contribute to the State's Climate Change Policy. As WA has adopted a modified version of the NGL through legislation, the WA Government will need to implement the regulatory sandbox framework in WA through legislation.

Future mobility

What can be done to facilitate the uptake of electric and other low-emission vehicles in Western Australia?

Consistent with the National Hydrogen Strategy, ATCO believes that hydrogen has a significant role to play in reducing emissions of road transport. Hydrogen powered vehicles use fuel cells to convert the hydrogen fuel to electricity, powering an electric motor (FCEVs). Battery electric vehicles (BEVs) on the other hand can be powered by electricity generated from hydrogen, either through hydrogen gas turbines or fuel cells. FCEVs have advantages over BEVs with the ability to travel longer distances without refuelling or charging, an important consideration given the larger travel distances in WA. The uptake of FCEVs are currently limited due to cost and lack of supporting infrastructure, such as refuelling stations.

ATCO considers that options for regulatory reform related to mobility should be explored to increase the number of FCEVs on the road in WA. Options may include:

- Financial incentives to encourage the adoption of FCEVs with changes to vehicle duty schemes and vehicle registration fees for FCEVs
- The introduction of a funding mechanism or grants for vehicle conversions
- Changes to fuel tax could encourage a 'quicker' uptake
- New programs to incorporate FCEVs into public transport, the taxi and riding-sharing industry and Government fleet vehicles.

Transport-related hydrogen demand is dependent on the uptake and usage of hydrogen-fuelled vehicles. Private sector investment in the supply of hydrogen remains challenging whilst there is currently limited demand. Both the EU and Germany are supporting the acceleration of road transport decarbonisation through the promotion of FCEVs by providing refuelling infrastructure for vehicle owners. In WA the adoption of hydrogen use in transport, and the subsequent deep decarbonisation of road transport, will require the coordination of fuel cell vehicle uptake and refuelling stations. Short to medium-term government support will ensure roll out and adoption targets are established and met.

About ATCO

ATCO has been proudly operating in Australia and providing employment opportunities for more than half a century. ATCO is a customer-focussed global company that develops, builds, owns and operates a range of energy infrastructure assets, supporting residential, business and commercial consumers. ATCO is committed to investing in its people, innovation and technology to drive leading-edge application-based research.

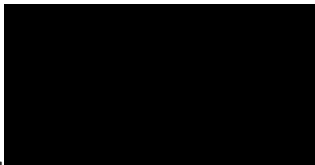
⁹ Available from: <https://www.aemc.gov.au/sites/default/files/2019-09/Regulatory%20sandbox%20toolkit%20-%20Final%20Report.pdf>

ATCO continues to manage climate change-related risks, including preparing for and responding to extreme weather events to ensure the reliable operation of its networks for customers. Our approach covers activities such as proactive site and route selection, asset resilience protection and monitoring, regular maintenance and appropriate insurance.

ATCO's Australian businesses are part of the worldwide ATCO Group with approximately 6,000 employees and assets of \$24 billion. ATCO is a diversified holding corporation with investments in Structures & Logistics (workforce housing, innovative modular facilities, construction, site support services, and logistics and operations management), Energy infrastructure (electricity generation, transmission and distribution; natural gas transmission, distribution and infrastructure development; energy storage and industrial water solutions; and electricity and natural gas retail sales), Transportation (ports and transportation logistics) and Commercial Real Estate.

If you have any questions or would like to discuss any of these issues further please contact me or Amy Stanley, General Manager Human Resources & Corporate Affairs.

Yours sincerely



J.D. Patrick Creaghan
Managing Director & Chief Operating Officer