



23 February 2023

Submission: Darwin to Tennant Creek Infrastructure Corridor

Priority Feedback

- APGA commends the Northern Territory government for proposing the Darwin to Tennant Creek Infrastructure Corridor. It is vital that this corridor prioritise multi-user pipeline infrastructure.
- Recent amendments to the National Gas Law (NGL) disincentivise investment in larger, more economically efficient multi-user pipelines in favour of smaller, per-user pipelines which are less economically efficient.
- APGA proposes the Northern Territory Government legislate that any pipeline infrastructure subject to the NGL developed within the corridor be guaranteed to receive both the Greenfield Incentive and Price Protection under the NGL.

The Australian Pipelines and Gas Association (APGA) represents the owners, operators, designers, constructors and service providers of Australia's pipeline infrastructure, connecting natural and renewable gas production to demand centres in cities and other locations across Australia. Offering a wide range of services to gas users, retailers and producers, APGA members ensure the safe and reliable delivery of 28 per cent of the end-use energy consumed in Australia and are at the forefront of Australia's renewable gas industry, helping achieve net-zero as quickly and affordably as possible.

APGA welcomes the opportunity to contribute to the consultation on the Darwin to Tennant Creek Infrastructure Corridor (the **Corridor**). APGA commends the Northern Territory government for proposing the Darwin to Tennant Creek Infrastructure Corridor and flags the risk created by the National Gas Law (via the National Gas (Northern Territory) Act 2008) to common user natural gas and hydrogen pipeline infrastructure.

APGA supports a net zero emission future for Australia by 2050¹. Renewable gases represent a real, technically viable approach to lowest-cost energy decarbonisation in Australia. As set out in Gas Vision 2050², APGA sees renewable gases such as hydrogen and biomethane playing a critical role in decarbonising gas use for both wholesale and retail customers. APGA is the largest industry contributor to the Future Fuels CRC³, which has over 80 research projects dedicated to leveraging the value of Australia's gas infrastructure to deliver decarbonised energy to homes, businesses, and industry throughout Australia.

¹ APGA, *Climate Statement*, available at: <https://www.apga.org.au/apga-climate-statement>

² APGA, 2020, *Gas Vision 2050*, https://www.apga.org.au/sites/default/files/uploaded-content/website-content/gasinnovation_04.pdf

³ Future Fuels CRC: <https://www.futurefuelscrc.com/>

The corridor must prioritise multi-user pipeline infrastructure

APGA fully supports the development of an infrastructure corridor between Darwin and Tennant Creek. This corridor must ensure that infrastructure is developed in a way that genuinely supports multiple uses, and future infrastructure needs are considered. Corridor design will need to be undertaken carefully to ensure greatest value proposition for users of the corridor. This includes users of natural gas or hydrogen pipeline infrastructure developed within this corridor.

Larger, multi-user pipelines are more economically efficient than smaller, per-user pipelines

In 2022 APGA published a report produced by GPA Engineering which considered the relative technoeconomic analysis of pipelines and powerlines.⁴ This study primarily demonstrated that pipelines were a lower cost form of energy transport and storage than powerlines and electricity storage. Data from this study also demonstrates that larger pipelines are more economically efficient than smaller pipelines.

This latter finding is important in the context of the Darwin to Tennant Creek Infrastructure Corridor. The most economically efficient outcome for natural gas or hydrogen pipelines developed in the Corridor is for fewer, larger pipelines to be developed as multi-user infrastructure instead of more, smaller pipelines. This is because pipeline throughput capacity increases with a square proportionality to circumference, providing significant economies of scale when larger pipelines are built.

The alternative to fewer multi-user pipelines has been observed through the Queensland CSG to LNG boom. During this period, three natural gas pipelines were developed to transport gas to the same location, traveling in the same easements for substantial distances. If all three pipelines were developed as multi-user infrastructure, the end result would have been fewer, larger, lower cost pipelines delivering the same energy transport and storage solution.

In order to deliver the least cost energy transport pathway for natural gas or hydrogen customers via the Darwin to Tennant Creek Infrastructure Corridor, the Corridor must avoid the mistakes of the past by developing fewer, larger, multi-user pipelines.

NGL amendments disincentivise investment in larger, multi-user pipelines

The 2022 amendments to the NGL disincentivise building large pipelines that service multiple gas customers. The amendments expose spare 'uncontracted' capacity on all

⁴ GPA Engineering, 2021, *Pipelines vs Powerlines: a technoeconomic analysis in the Australian context*, full report: https://www.apga.org.au/sites/default/files/uploaded-content/field_f_content_file/pipelines_vs_powerlines_-_a_techoeconomic_analysis_in_the_australian_context.pdf; summary: https://www.apga.org.au/sites/default/files/uploaded-content/field_f_content_file/pipelines_vs_powerlines_-_a_summary.pdf; dataset: https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.apga.org.au%2Fsites%2Fdefault%2Ffiles%2Fuploaded-content%2Ffield_f_content_file%2Fappendix_3a_and_3b_results_summary.xlsx&wdOrigin=BROWSELINK

pipelines to binding arbitration under the Non-Scheme form of regulation, or to price setting under the Scheme form of regulation. This introduces revenue risk to pipeline investments if not fully contracted before being built.

Gas Transportation Agreement contracts entered into prior to Final Investment Decision (FID) cannot be impacted by the NGL. This combined with amendments to the NGL means investors are incentivised to address the abovementioned revenue risk by only investing in fully contracted pipelines. However, multi-user pipelines tend to not be fully contracted from day one, picking up additional users once infrastructure is in place. Availability of a multi-user pipeline may even help justify the creation of a new users' business case to proceed, inherently leading to new customers after FID has been reached.

This creation of this disincentive within recent amendments to the NGL imposes an economic efficiency risk to the Darwin to Tennant Creek Infrastructure Corridor. While the best outcome for the Corridor is to have larger, multi-user pipeline infrastructure, the NGL disincentivises such investment.

Renewable gases pipelines becoming subject to the NGL

Additional proposed amendments in 2022 extended the national gas regulatory framework to hydrogen and renewable gases and blends, treating these products as exactly the same as natural gas. This makes hydrogen subject to the revenue risk posed by binding arbitration and price setting as well. This amendment is proceeding despite the market forces necessitating arbitration and price setting for natural gas infrastructure not existing for renewable gas infrastructure.

Unlike natural gas, hydrogen and renewable gases are manufactured products. Because they are not 'extracted' there is much more flexibility in the location of transport and storage infrastructure. This increases competition of the associated renewable gas pipeline services market, in turn placing constraint on any market power possessed by renewable infrastructure owners.

Ultimately, hydrogen and renewable gas markets do not yet exist. Despite this, amendments to the NGL are due to pass through South Australian Parliament this financial year.

The imperfect solution

Recent NGL reforms also firmed the Greenfield Incentive and Price Protection Mechanism – the former protecting against a pipeline transitioning to Scheme regulation, and the latter protecting prices set through foundation contract execution in line with reaching FID. Unfortunately, these protections have two imperfections:

- Neither protection is automatic, having to be applied for with risk of rejection; and
- Neither protection can be put in place until after an investment decision is made.

As such, neither protection addressed the revenue risk created by the NGL at the point in time of making an investment decision. Investors are still exposed to revenue risk at the point of reaching FID, hence are unlikely to reach FID for development of multi-user infrastructure within the Corridor. As National Gas (Northern Territory) Act 2008 is Northern

Territory Government legislation, the shortcomings of these protections can only be resolved through an act of the Northern Territory Government.

APGA Recommendation

APGA proposes the Northern Territory Government legislate that any pipeline infrastructure subject to the NGL developed within the Darwin to Tennant Creek Infrastructure Corridor be guaranteed to receive both the Greenfield Incentive and Price Protection under the NGL.

This guarantee would fully and adequately address the revenue risk created by amendments to the NGL, making it easier for investors to achieve FID on larger, multi-user pipelines which are not 100% contracted. By reducing revenue risk, it would be more likely that lower cost pipeline transport is able to be developed through the corridor to the benefit of all users.

This recommendation reflects the actions taken by the Northern Territory Government to support development of the Northern Gas Pipeline (NGP). In what can be considered a precursor to the Greenfield Incentive, the NGP was granted a 15-year derogation from Chapter 6A of the National Gas Law (Access disputes—non-scheme pipelines) and an additional exemption to Part 23 (Access to non-scheme pipelines) of the National Gas Rules.

As detailed in its submission to proposed amendments, APGA endorses the automatic application of the Greenfield Incentive with Price Protection to all hydrogen and renewable gas pipelines. Such an automatic exemption would be reasonable in light of the differences in natural gas and renewable gas production, lack of market to base regulation upon, and national desire to see a thriving hydrogen and renewable gas market in Australia for both domestic and export consumption.

To discuss any of the above feedback further, please contact me on +61 422 057 856 or jmccollum@apga.org.au.

Yours Sincerely,



JORDAN MCCOLLUM
National Policy Manager
Australian Pipelines and Gas Association