



11 August 2023

Submission: Safeguard Mechanism Production Variables Update

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 provide feedback to the consultation on updating production variables for the Safeguard Mechanism. We understand that has been a substantial undertaking across a variety of industries, and we thank DCCEEW for their close engagement and collaboration with our industry.

Our comments on the draft *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Production Variables Update) Rules 2023* are limited to Section 61 – Natural gas throughput.

Throughput production variable (PV)

We are pleased that DCCEEW, following engagement with industry and separate expert consultation, has agreed to replace the Work of Compression PV with a Gas Throughput PV for gas transmission pipelines. This PV is simpler to calculate and incentivises pipeline operators to reduce compression activity which generates emissions. APGA and its owner members concur with the proposed wording of the PV as in the draft amended Rules:

61 Natural gas throughput

- (1) Gigajoules of natural gas that are received by the facility as part of carrying on the natural gas transmission activity at the facility.
- (2) The metric in subsection (1) is applicable to a facility that conducts the natural gas transmission activity and reports emissions under Division 3.3.7 of the NGER (Measurement) Determination.

Default emissions intensity values

As part of the development of the Throughput PV, DCCEEW has recalculated a default emissions intensity value:

- (3) The default emissions intensity is 0.000509 t CO₂-e per gigajoule of natural gas.

APGA does not concur with this proposed emissions intensity value on the following grounds:

- Pipeline facilities have been influenced to increase emissions intensity since the time window used in the default emissions intensity value methodology; and
- Issues inherent in applying average values to the pipeline industry.

Time window use in default emissions intensity value methodology

In calculating the default emissions intensity value, DCCEE has used consistent data years for all industries, that is FY2012 to FY2017. This aligns with Principle 2 of the *Emissions Reduction Fund Safeguard Mechanism Framework for developing default production values and emissions-intensity values*: treat facilities and industries consistently.

For gas transmission pipelines however, the use of these consistent data years is not *robust* (Principle 4) or *effective* (Principle 1). This is due to two significant gas transport market changes which have occurred since the FY2012 to FY2017 window, which significantly impact emissions intensity of pipeline infrastructure. Importantly, these changes are not a result of pipeline facility actions – rather, they are a result of changes in legislation and as a result of reduced gas production in proximity to southern markets.

National Gas Law Reforms

Reforms to the National Gas Law since the FY2012 to FY2017 window have incentivised higher utilisation rates of transmission pipeline infrastructure. In particular, introduction of the Day Ahead Auction in which unutilised capacity is auctioned off from a \$0 starting price has increased the utilisation rate of many pipelines. This has increased the likelihood that compression (or higher intensity compression) may be required to transport gas at rates closer to a pipeline’s maximum capacity. This in turn has resulted in higher emissions intensity of gas throughput for many pipelines in more recent years.

This legislative change to pipeline operation was not the choice of pipeline facilities, yet it acts to increase pipeline facility emissions intensity. Pipeline facilities should not be negatively impacted through the use of an emissions intensity factor calculated on the basis of a past legislative framework which allowed pipeline facilities to operate at a lower emission intensity.

Increased reliance on northern gas production transported to southern markets

Reduced gas production in southern states, due to both State based gas moratoria and natural field depletion, have increased reliance of New South Wales and Victorian gas customers on Queensland gas supply. This increased demand for north – south gas haulage has necessitated the expansion of capacity on existing pipelines supplying northern production to southern states. The particular market dynamics driving least cost expansion choices which have occurred since the FY2012-2017 window have increased emissions intensity of some pipelines relative to what they may have been otherwise.

Supplying the southern markets with gas from northern markets was not the choice of pipeline facilities, yet these facilities have been forced to increase emissions intensity as a result. Pipeline facilities should not be negatively impacted through the use of an emissions intensity factor calculated prior to a time in which they were influenced to make more emissions intensive capacity expansion decisions. Emissions intensity of expansion options

is not the only factor that needs to be considered, and flexibility is also a key concern in maintaining energy security in the southern states.

The temporal period used by DCCEEW in calculating the average emissions intensity value therefore does not reflect the true effect of these changes in gas market supply dynamics.

APGA's members provided recent emissions data to DCCEEW to support our application for a transition to the Throughput PV. This data is more recent than that used by DCCEEW to calculate the default emissions intensity value and, to our understanding, a more accurate reflection of the current gas pipeline transmission industry. A rough recalculation of the default emissions intensity value using these data results in a much higher figure – around 0.000779 t CO₂-e per gigajoule of natural gas, rather than 0.000509 t CO₂-e.

Recommendation

We implore DCCEEW to reconsider the method for calculating the default emissions intensity value for gas transmission pipelines be reconsidered in light of this. Instead, APGA recommends use of a more recent window in its methodology.

Consequences of pipeline industry averages under the Safeguard Mechanism

APGA appreciates that the approach taken by DCCEEW in applying average emissions intensity values is consistent with the design of the Safeguard Mechanism, which consider emissions produced on a 'per-widget' basis. The recent Safeguard Mechanism Reforms to move most Safeguard Mechanism Facility (SMF) types from a site-specific to an industry average baseline production variable PV is, therefore, also consistent. The average widget, all else being equal, should be able to be produced with an average emissions intensity.

When applied to gas transmission pipelines, however, this does not hold, as there is no such thing as the average gas transmission product.

An industry average pipeline transport 'widget'

Differences between the unique circumstances of every pipeline mean that there is no such thing as an industry average widget for pipeline transport. All gas transmission is unique, as transmission occurs:

- Across unique distances via unique routes and unique elevation changes.
- With or without compression necessary for gas transmission included within the pipeline facility.
- In unique quantities, at unique capacities and variations of capacity across time.
- With unique supply and demand customer pressure requirements.
- Through unique pipeline diameters and unique compression configurations, both of which exist through multi-decadal investment horizons.

These differences mean that there no two pipeline transport services are alike. As such, there is no industry average emissions intensity of delivering a 'widget' of pipeline transport. This is seen in the differences between individual pipeline site specific baseline PVs and an estimated industry average baseline PV which APGA calculated to be in the order of 40% to 60% variation above or below each pipeline SMFs site specific baseline PV. APGA anticipates that DCCEEW analysis will support this finding.

In understanding why this may be the case, consider the following cases:

- 10km pipeline compared to a 1000km pipeline;
- A pipeline with an increase in elevation compared to a pipeline with a decrease in elevation;
- A pipeline which receives gas at high pressure from a customer compared a pipeline which receives gas at a low pressure from a customer;
- A pipeline which delivers gas at high pressure from a customer compared a pipeline which delivers gas at a low pressure from a customer;

In each of these cases, it is unreasonable to expect that any would have the same emissions intensity relative to its throughput. Unfortunately, as we are certain that the independent expert which examined the Pipeline Throughput PV found, considering any of these additional variables alongside throughput only makes the differences between pipeline facility cases more extreme, rather than less extreme.

As there is no industry average widget for pipeline transport, it is unreasonable to expect an industry average emissions intensity for this 'widget'. This does not preclude each pipeline facility's emissions being considered relative to its own historical emissions.

The transition to industry average baseline PV will result in substantial winners and losers and transfer of wealth to and from pipeline SMFs. For this reason, APGA proposed in our feedback to the Safeguard Mechanism Reforms and the Climate Change Authority's review of the *National Greenhouse and Energy Reporting Act 2007* that gas transmission pipelines be exempted from the transition to an industry average baseline PV.¹

These issues also carry to the use of the default emissions intensity variable for calculating the Throughput PV, and APGA reiterates that gas transmission pipelines should be exempted from industry average figures overall.

Little recourse for action

Pipeline facilities which find their emissions intensity above that of the industry average will likely have few economically efficient actions to take. This is because the emissions intensity they exhibit will be relative to the unique service which they provide, a service which has no relationship to the industry average value. Costs to reduce emissions could be equivalent to complete asset replacement, resulting in multiplication of pipeline transport costs to energy customers. This will have adverse effects on all Australian energy consumers, including passing on costs to wholesale gas markets and the NEM.

Recommendation

APGA recommends that DCCEEW review pipeline facility specific production variables alongside the industry average production variable and engage with facility operators to understand whether there is a viable option for emissions reduction. Once the disconnect between pipeline facility services and industry average emissions intensity is clear, we

¹ APGA, 2023, *Submission: Climate Change Authority Review*, https://www.apga.org.au/sites/default/files/uploaded-content/field_f_content_file/230630_apga_submission_-_cca_nger_review.pdf

recommend that DCCEEW commence a legislative change process which allows for pipeline facilities to be exempt from compliance with industry average baselines.

Compounding issues of industry averages

The uniqueness of pipeline infrastructure, and the inappropriate calculation and application of average emissions intensity factors, combines to provide a very inaccurate picture of true emissions intensity of pipelines.

While the move to a Throughput PV alleviates some of the existing issues in calculating emissions, the use of the default emissions intensity factor obfuscates and does not truly reflect current emissions, and importantly will not accurately reflect efforts to *reduce* emissions.

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

Yours Sincerely,

A handwritten signature in grey ink, appearing to read 'JM', is positioned above the typed name.

JORDAN MCCOLLUM
National Policy Manager
Australian Pipelines and Gas Association