



31 March 2021

Questionnaire Response: Victorian Fugitive Emissions Survey

The Australian Pipelines and Gas Association (APGA) represents the owners, operators, designers, constructors and service providers of Australia's pipeline infrastructure, with a focus on high-pressure gas transmission. APGA's members build, own and operate the gas transmission infrastructure connecting the disparate gas supply basins and demand centres of Australia, offering a wide range of services to gas producers, retailers and users.

APGA welcomes the opportunity to contribute to the Victorian Fugitive Emissions Survey, noting that the DELWP have defined Fugitive Emissions as venting, flaring and leaks.

APGA supports the goals set out in the Paris Climate Agreement, alongside stable energy policy driving towards a technology agnostic decarbonised future for the Australian gas industry as set out in [Gas Vision 2050](#). Fugitive emissions are taken seriously within the gas transmission pipeline industry as an important but low proportion of all gas industry fugitive emissions.

APGA advises that fugitive emission policy would be best implemented at the federal level, rather than on a state by state basis.

Response to Survey / Interview Questions for Regulators and Industry Bodies

Question 1.

What do you consider to be the main sources of fugitive emissions from the Victorian gas sector?

Current fugitive emission estimates under NGERs are available via the Clean Energy Regulator. APGA members are currently focused on improving their understanding of what the main sources of fugitive emissions are. Early work suggests that the main sources are from venting, flaring and equipment leaks.

APGA understands that fugitive emissions from gas transmission pipelines represent a low proportion of all gas industry fugitive emissions. This is expected to be especially true on a per gigajoule (GJ) customer use basis.

Question 1.a.

Describe each source and contribution (%) to fugitive gas emissions

APGA members are currently commencing programs focused on improving direct quantification of fugitive emission sources. These programs are in initial stages. Individual members advise that they would be happy to discuss their current knowledge of fugitive emission sources and contributions with the department directly. Please contact APGA for member details if independent contact has not been established.

For generalised information, APGA recommends the [Global Methane Initiative](#) to DEWLP, which investigates fugitive methane emissions on a global scale. There are a broad spectrum of known vent and flare fugitive emission sources within the gas transmission pipeline industry. These sources are uncommon to rare in occurrence and are generally able to be accounted for.

Fugitive emission via unknown and unmeasurable leaks are extremely rare on gas transmission pipelines. Large, unintentional fugitive emissions generally come in the form of the extremely rare pipeline loss of containment. A 1mm hole in a gas transmission pipeline is easily identifiable as it will cause a highly audible and highly visible (plume, excavation) event, as well as inventory loss noticeable to pipeline operators. Once identified, the emission can be ceased, quantified and reported.

Small unintentional fugitive emissions generally come from facility equipment leaks through known potential sources such as flanges and valve stem seals. For workplace health and safety and public safety reasons, surveillance for facility leaks is of high priority. Surveillance activities are typically undertaken on a regular basis by pipeline operators using multiple surveillance technologies.

Small leaks are generally not considered possible outside of gas transmission pipeline facilities thanks to the Australia Standard AS2885. This standard advises against the use of flanged connections outside of facility bounds. As such, gas transmission pipelines are almost exclusively weld-joined outside of facilities in Australia – making undetected leaks outside of actively monitored locations extremely rare.

Question 2.

Are you aware of any fugitive emissions reduction programs not already in progress which could potentially be implemented in Victoria? This could include either programs that have proven to be effective that are in place with individual operators and could be implemented by other owners/operator or examples of programs interstate/globally that are applicable in a Victorian context?

Question 2.a.

Please describe each program, who you know of that is implementing this program and the approximate reduction in fugitive emissions that could be achieved.

Question 3.

Can you identify the key barriers for owners/operators that would prevent them from implementing fugitive emissions reductions initiatives or programs?

The largest barrier which currently exists for gas transmission pipeline owner/operators is the lack of incentive to undertake action due to the resolution level of current NGERS reporting methodologies.

Current NGERS reporting methodologies for gas transmission pipelines only include a Method 1 and Method 2 fugitive emissions calculation methodology. As both methodologies only estimate emissions on an “asset” multiplied by “emission factor” basis, these methodologies provide zero incentive for any fugitive emission reduction activity. Under such methodologies, the only action which could possibly reduce a pipelines’ fugitive emissions as reported under NGERS would be to reduce the length of a pipeline or the number of facilities.

The development of an NGERS Calculation Method which allows pipeline operators to account for reductions in fugitive emissions creates an incentive to take action to reduce fugitive emissions. Care needs to be taken to ensure the cost of implementing any new fugitive emissions calculation methodology remains low.

Question 4.

What types of support would help overcome these barriers? (e.g. research and development, advisory services grants/loans, incentive programs, new regulations or policies etc.).

After a new NGERS reporting methodology and cost-effective surveillance standards have been embedded, a system for assigning credit for improving upon more accurate fugitive emission measurements would also help incentivise action towards fugitive emission reduction.

Question 5.

Do you consider that the reduction of fugitive emissions can be accelerated, and if so, what are some of the key issues that might need to be addressed in achieving such acceleration (e.g. potential impacts upon network tariffs and affordability)?

The gas pipeline industry is not yet in a position to measure the current pace of fugitive emission reduction in order to accelerate. Once a more accurate NGERS calculation methodology is developed, incentivising action to reduce gas transmission pipeline fugitive emissions, then a pace can be set. Once set, this pace can be analysed, and consideration can be made for possible acceleration considering based on improvements which are seen to arise.

To discuss any of the above feedback further, please contact APGA National Policy Manager, Jordan McCollum, on +61 422 057 856 or jmccollum@apga.org.au.

Yours Sincerely,

A handwritten signature in black ink, appearing to be 'JM' or 'J.M.', written in a cursive style.

JORDAN MCCOLLUM
National Policy Manager