
FRAME 2026 Post-Conference Reflections

July 2026



Open Methane ::



Dear FRAME attendee,

First, thank you again for your participation in the inaugural FRAME conference.

When we began planning the event, we were not certain whether it would meet a real need, or whether there would be enough engagement to make it worthwhile. The depth of discussion across the sessions, and the conversations in and beyond the room, strongly suggested the answer to both questions was “yes”.

So now what? The first task was to capture the main messages from the conference. This reflections document is our attempt to do that. We would welcome your feedback, particularly on any points we may have overlooked, mischaracterised or underplayed.

The next task is to produce more public-facing outputs from the conference.

Two preferred formats are a journal article in the climate policy area and an article for *The Conversation*. Both formats limit our ability to publish detailed written content more widely before those pieces are prepared. For that reason, we propose to hold off on publishing more detailed textual outputs until that process is further advanced, including presentation slides from the event. Realistically, that will take at least three months.

The final question is whether or not to repeat the FRAME conference and, if so, when.

Our current thought is that FRAME should be repeated, and potentially expanded, with stronger participation from industry and the non-government sector. We learned this year that we need to allow more time for participants’ internal approval processes. We therefore hope to announce a date for FRAME II in around three months, most likely for a similar time next year.

To help our planning we encourage you to complete the survey we circulated. We especially welcome negative comments, that’s how we can improve.

Whatever the fate of the in-person conference, we are keen for FRAME to continue as an ongoing forum for useful conversations around the issue of methane. To that end, we are planning to host a series of webinars, where participants can share emerging research, sector updates and policy ideas.

We would welcome suggestions or proposals from participants who may wish to present, convene or help shape a future FRAME webinar. If you have an idea, please contact us directly.

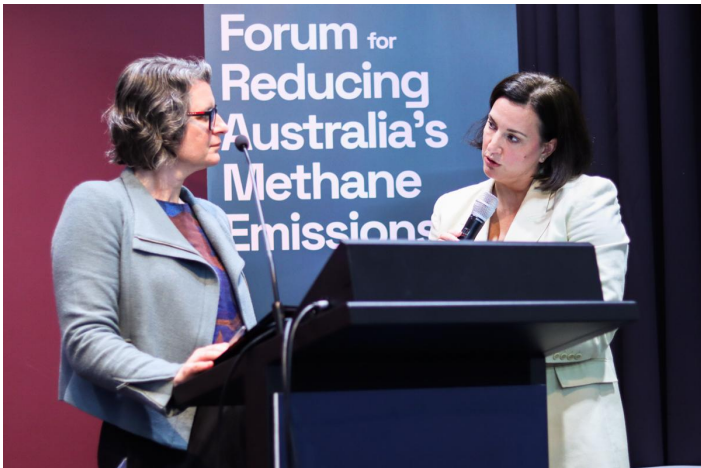
Thank you again for helping make the first FRAME conference such a valuable exchange.

Peter Rayner

Chief Scientist

The Superpower Institute







Reflections and key themes

FRAME highlighted that methane is not a single problem. Emissions arise across sectors as diverse as coal, oil and gas, agriculture, waste, wastewater and wetlands. The sources, measurement challenges and abatement options differ substantially across these sectors. Some methane emissions can be reduced quickly and profitably. Others require significant capital investment, new technologies, policy incentives or further research.

What connects these sectors is the need for credible information. Better methane measurement is foundational to better policy, better investment decisions, public accountability and real emissions reductions.

Across two days of discussion and knowledge exchange, several key themes at FRAME emerged.

Key themes:

1. Measurement matters – abatement needs monitoring
2. Regulation isn't keeping up with measurement technology
3. Integrated measurement and monitoring is needed across scales
4. Everywhere is different; Australia is different in its own way
5. Australia has large natural fluxes that need to be better understood
6. The cost of methane abatement is variable, depending on the sector and its progress along the abatement cost pathway
7. Investment in abatement requires policy and incentive certainty
8. Transparency and consistency in National Emissions Inventory data will improve trust
9. Metrics matter: GWP-100, GWP-20, or split gas
10. Co-benefits of methane abatement also matter

1. Measurement matters – abatement needs monitoring

It is critical for progress on abatement that methane emissions are accurately monitored. Methane emissions can be estimated by bottom-up methods (using activity data and emission factors), direct measurement in a few cases (e.g. sensors in underground coal ventilation shafts) or by top-down methods using atmospheric measurements from towers, aircraft and/or satellites alongside information on atmospheric processes.

Bottom-up methods are used for reporting, but they can be inaccurate and uncertain, and can completely miss sources in some cases. Top-down estimates provide a complementary and independent estimate of emissions – an insight into what is actually happening, rather than what is believed to be occurring.

Accurate emission estimates are needed to:

- Prioritise abatement at all levels (sub-facilities, facilities, organisations, regions and countries),
- Provide the evidence to justify investment in abatement measures, and
- Track progress (i.e. to see whether abatement actions are working as expected)

In most cases, bottom-up estimates alone are too uncertain for these purposes.

Classification of companies under the NGERS and the Safeguard Mechanism are based on bottom-up estimates, and ideally these would be independently verified through top-down measurement techniques.

The relative uncertainty between point sources and diffuse fluxes is different for CO₂ and methane. For CO₂, dominant point sources are driven by fossil fuel combustion. The quantity of carbon can be tracked by economic or transport statistics. Uptakes by natural or managed systems, which are far more diffuse, cannot be similarly traced. For methane, most point sources are inadvertent (fugitive). In rare cases they can be tracked with mass balance but usually there are no observational constraints on them.

In an efficient observing system, different components complement each other's strengths. Thus top-down estimates of methane emissions need to pay more attention to point or facility level measurements than CO₂ systems. The need for constraints at multiple scales, however, applies to both gases.

2. Regulation isn't keeping up with measurement technology

Regulation and emission reductions required under the Safeguard Mechanism are based on bottom-up estimates of emissions, and generally don't utilise top-down estimates.

However, measurement technologies to estimate emissions (such as airborne surveys) are quite mature and are routinely used in some other countries (e.g. Canada, USA, and through the UN's

Oil & Gas Methane Partnership 2.0, OGMP2.0) for emissions reporting, transparency and credibility.

Through an Expert Panel on Atmospheric Measurement of Fugitive Methane Emissions, Australia is evaluating numerous top down approaches for estimation of fugitive emissions from fossil fuels and their potential for use in NGERS and Australia's National Greenhouse Accounts.

3. Integrated measurement and monitoring is needed across scales

Top-down methods capture all emissions within their field-of-view regardless of their source. Bottom-up methods estimate emissions due to a particular process. In general bottom-up estimates, especially for industrial facilities, are made at finer scales than top-down estimates.

Frequently there will be several sources active within the footprint of one top-down estimate. Thus the simplest role top-down measurements can play is to evaluate the consistency of several bottom-up estimates and measurements underlying the top-down approach.

The difference in scale between the two approaches allows a hierarchy of verification in which each spatial scale can be used to cross-check smaller scales. This relationship is, itself, independent of scale so that, for example, assessments of a national budget using atmospheric measurements provides a check on subnational inventories.

4. Everywhere is different; Australia is different in its own way

Australia industries are not similar to elsewhere, meaning that abatement and monitoring must be customised to Australia.

Australia's livestock is typically farmed in extensive regions, rendering monitoring and abatement very difficult. Underground coal mines operate with such high safety standards that abating their ventilation emissions requires careful engineering. Much of the oil and gas sector is relatively modern, so that problems with aging infrastructure or old standards are less common than overseas. Australia's widespread renewable electricity generation makes it difficult for landfill abatement schemes to earn revenue from generating electricity.

Hence, naive application of international abatement interventions is not possible, presenting challenges for Australian industries, but opportunities for Australian researchers.

5. Australia has large natural fluxes that need to be better understood

As already noted, top-down methods see the entire flux in their footprint. Normally we are only interested in a component, e.g. the emissions from one facility. Uncertainties in any other flux which impact the measurement can confound our estimate. Thus, the better we know all other fluxes in the top-down footprint the stronger is our inference of the desired emission. It is not true, though, that perfect knowledge is needed. Often the target emission will have characteristics which enable us to attribute it (e.g. a strong point source in a diffuse background).

Because natural fluxes are under weaker human control than direct anthropogenic fluxes, they are more susceptible to environmentally-driven change (e.g. changes in temperature or rainfall). This is of policy as well as scientific interest since it influences the emissions trajectory required for a given climate target.

This problem is particularly acute for wetlands, which are extensive, heterogeneous and dynamic. They are also subject to significant but complex anthropogenic influence as their hydrology and extent are often controlled.

6. The cost of methane abatement is variable, depending on the sector and its progress along the abatement cost pathway

The cost of abatement varies between sectors. For instance, repairing leaks in oil and gas can increase profits (in other words, that cost is negative) while it is impossible to abate more than a small fraction of emissions from managed burns (in other words, that cost is infinite).

Using current data, it appears technically infeasible to abate more than about 40% of current coal fugitive methane; best practice may allow 85% of landfill methane to be captured; while abatement technologies for enteric methane are still nascent and costs of different interventions vary considerably. There is also disparity in current abatement across sectors: about half of landfill emissions are already being abated; oil and gas has started significant fugitive reductions; a modest amount of abatement is being performed through early dry season burning; while the coal sector is not abating methane above what is required to maintain high standards of mine safety.

All these mean that careful Australian-specific, even facility-specific, cost analyses are needed to support policy.

7. Investment in abatement requires policy and incentive certainty

No abatement has occurred without external influences, such as policy incentives or penalties, investor pressure, or market demands. The oil and gas sector is striving to reduce methane in order to access European markets and to increase profits for shareholders. Landfill and managed-burning abatement is primarily reliant on incentives such as ACCU sales, and increases and plateaus in landfill abatement can be clearly correlated with government policy. It is likely the coal sector will commence abatement only due to NSW EPA regulations.

Importantly, national data clearly show that methane abatement for decarbonisation has not increased over the past decade (except perhaps for the oil and gas sector). Abatement often requires high up-front capital expenditure, such as purchasing engines for electricity generation or regenerative thermal oxidisers for mine ventilation. Investment is therefore a long-term planning decision: such investment is only likely with stable policy.

Likewise, people may delay abatement action if they consider it likely that a future policy may provide further regulatory, financial, or other incentives. If they act now, their baseline under future policies may be lower, which disincentivises abatement actions now due to a high possible future cost.

8. Transparency and consistency in National Emissions Inventory data will improve trust

The National Inventory fulfils its role of providing a country-wide estimate of emissions. However, improving its transparency and consistency would unlock much greater potential for monitoring, investment, research and abatement.

The Forum noted various quantities that appeared to contradict industry or other government sources. This erodes trust in the methodology, algorithms and underlying data. Making methodology and source data public (such as disaggregated methane emissions, coal gas contents, waste composition and disposal rates), would not only restore trust, but would enable researchers to focus monitoring efforts, and provide tailored, relevant and useful advice to industry regarding abatement.

It was noted that many or all companies already provide such data to the National Inventory, so there would be no additional burden at the company level. It was also noted that in many cases, debatable commercial sensitivity is not a valid reason for obfuscating the data.

9. Metrics matter: GWP-100, GWP-20, or split gas

How we frame the need to reduce methane emissions relative to other greenhouse gases is critical, as it shapes mitigation priorities and influences decision-making by companies and policymakers.

International agreements and reporting under the Paris Agreement use the Global Warming Potential over a 100-year timescale (GWP-100) to convert different gases into CO₂-equivalents. While GWP-100 provides a consistent and robust basis for tracking progress toward long-term climate goals, it does not adequately capture the value of reducing emissions of methane, a short-lived climate pollutant, for delivering strong near-term climate benefits. These near-term reductions are critical for limiting peak warming and reducing the potential overshoot of the 1.5°C temperature target.

Alternative metrics offer different perspectives. GWP-20, which uses a 20-year time horizon, assigns a much higher weight to methane relative to CO₂ and better reflects methane's short-term climate impact, making it particularly useful for communication. Another approach, GWP*, compares cumulative CO₂ emissions with changes in the rate of methane emissions, highlighting that stable methane emissions do not contribute additional warming. However, this framing ignores the urgent need to reduce warming and the significant opportunity methane abatement presents to achieve this.

To deliver rapid progress in limiting global temperature rise, it is essential to elevate the focus on methane mitigation alongside — not instead of — sustained and deep reductions in CO₂ and other long-lived greenhouse gases.

Relevant listening: <https://www.letmesumup.net/when-is-20-more-than-100-beats-methane/>

10. Co-benefits of methane abatement also matter

There are many co-benefits to methane emission reduction, and often what we would call the co-benefit is actually the original — and sometimes the stronger — reason for action.

For example, the coal industry ventilates and captures methane for safety reasons (to remove explosion risk); the gas industry identifies and fixes gas leaks to recover saleable gas and improve safety and operational efficiency. The landfill and wastewater industries capture biogas to use for energy generation. Agriculture reduces methane emissions intensity when livestock productivity is increased. Management of fires to reduce methane emissions can align with Indigenous cultural practices, land management and job generation.

Where the case for reducing methane emissions is failing to persuade, progress can sometimes be advanced by emphasising co-benefits.

Event feedback summary

Eighteen attendees completed our post-conference survey, split roughly evenly between in-person (10) and online (8) participants, and spanning research agencies, government, industry, academia and the NGO sector. The response was strongly positive overall, and pointed to two clear, practical priorities for FRAME II: more industry voices in the room, and a smoother online experience.

The numbers

Across the headline questions, average ratings out of 5 were:

- **Overall experience: 4.2/5**
- **Session content: 4.3/5**
- **Speaker presentations: 4.4/5**
- **Overall organisation: 4.3/5**
- **Venue and facilities (in-person): 4.6/5**
- **Likelihood of attending a future FRAME: 4.5/5**

What attendees valued most

The strongest feedback was that FRAME brought people together who do not often sit in the same room.

Participants valued hearing how other sectors are dealing with similar problems: how emissions are measured, where estimates remain, what abatement is already possible, and how policy and reporting frameworks are developing.

The cross-sector format was identified as a strength: the *“cross-sectoral view was very useful and not available through any other conference.”*

Where we can do better

The most repeated piece of feedback was a wish for more industry participation, and more concrete, currently-deployed abatement examples alongside the research and policy content. This matches our own read of the room, and stronger industry and non-government participation is now a firm priority for FRAME II.

The online experience was the clearest area for improvement, consistently scoring lower than the in-person experience (average 4.0 for the online experience and 3.75 for Slido Q&A, against 4.2–4.6 elsewhere). Remote attendees told us panellist audio was sometimes hard to hear, and that Slido questions didn't always make it into the discussion.

Smaller but recurring suggestions included: giving agriculture more airtime and more real-world abatement success stories; allowing more time per presenter; and reconsidering red meat as the default catering option, which a couple of attendees felt sat awkwardly against the conference's climate message.

The survey is still open

Thank you to everyone who took the time to complete the survey, especially those who shared critical feedback – as Peter notes above, that's exactly what helps us improve. The survey remains open to those who still wish to leave feedback here:

https://docs.google.com/forms/d/13_rM21Oe8u-u2c7NneZCTYvyylrzwNF2YOeM4nfcSE/edit#responses

The full set of anonymised comments from the survey has been shared with the organising committee, and the two priorities raised most often here – industry participation and the online experience – will directly shape planning for FRAME II.

Staying connected

It's clear that now is the time for action on methane measurement and abatement across all sectors. For those sectors early in their abatement journey, this includes investment in research and development, trials, and collaborative knowledge exchange. For more advanced sectors, the focus should be on establishing sectoral norms and identifying / enacting the co-benefits from methane mitigation.

Across the board, there is a clear need for better education, communication and information sharing around methane abatement, monitoring, and opportunities, providing a bridge between industry, research, and government. Feedback from FRAME attendees suggests that there is a strong unmet appetite in this area.

We look forward to addressing this through future FRAME initiatives. You can stay connected up to date with the latest from FRAME and Open Methane through the following links:

Email: angela@frameconference.org.au

LinkedIn: <https://www.linkedin.com/company/open-methane/>

Newsletter: <https://openmethane.org/>

View photos from the event:

<https://drive.google.com/drive/folders/1RBaOOeLwKv6cdF402zYaUjhPoVy3ndXY?usp=sharing>

