

To Department of Climate Change, Energy, the Environment and Water

From Daniel Fyfe, CEO
Australian Landfill Owners Association (ALOA)

Date: 7 May 2026

Subject: **National Greenhouse and Energy Reporting (NGER) scheme – 2026 public consultation**

ALOA's comments focus on this year's proposed changes for the reporting of emissions from waste (ie, section D of the consultation paper).

ALOA appreciates the Department considering reporting requirements for landfills at this time. Current reporting limitations have material regulatory implications for landfills under the Safeguard Mechanism and restrict the ability of landfill owners to effectively demonstrate emission outcomes being achieved at well-performing sites.

In summary, ALOA seeks:

- Review of the CEL to be applied in Method 1 to better recognise phytocap and interim cap outcomes.
- Further revision of existing and proposed Method 2 elements to improve its practicability to support its uptake – especially with the important improvement proposed through the removal of CEL application under this method.
- Further review of waste composition defaults as the proposed updates are insufficient in recognising waste trends to effectively support increased accuracy in emissions reporting.
- Given the continuing application of the SGM to landfills and the known accuracy limitations under NGER currently, the establishment of suitable transitional provisions enabling the use of more accurate reporting for past years.

ALOA seeks the Department establish the changes necessary to avoid perverse emissions or cost outcomes arising under the SGM and that are possible for improved practicability this year, while recognising that some of its proposals will likely require further investigation and thus may be suitable for later updates.

Method 1 – Capture Efficiency Limits

ALOA observes that the current capture efficiency limits (CEL) provision is being brought up into Method 1 (proposed to become section 5.4(5)).

Firstly, ALOA strongly supports the removal of the CEL from Method 2. This removes one key barrier to the uptake of Method 2 to help support more accurate site-based reporting.

However, the limited change proposed has not included review and improvement of the limits established in the CEL provision. In particular:

- The current CEL provides limits based on the type of landfill cap in place.
- For areas of the landfill that have gas extraction systems operating in interim and final phytocap the CEL is 75%.
- ALOA considers these limits are too conservative and is aware they are disincentivising investment in appropriate alternative methane capture and abatement activities, yet:
 - Phytocaps are often considered as an alternative or complementary abatement measure to gas extraction and combustion. They are subject to approvals by State regulators as suitable final capping. Venkatraman and Ashwath (2009) and Sun (2013) show the emission performance of phytocaps can exceed other types of final caps.

- Intermediate caps are also engineered caps that can still have the same legislated methane performance requirements as final capping (NSW EPA 2016) – able to exceed a CEL of 75% with investment in a well-managed gas extraction system.
- With Method 2 currently unused and not likely to be able to be taken up by all landfill operators (even with improvements), ALOA contends the Method 1 CEL default limits require review to avoid over-estimations of landfill emissions at well-managed sites.
- ALOA also encourages future consideration being given to establishing suitable default limits for other definable gas management and extraction activities beyond capping and thereby encourage that investment to improve recovery above the default CEL.

Method 2 - Practicability

As flagged above, ALOA warmly welcomes the removal of the CEL from Method 2. ALOA notes the changes to Method 2 have been proposed 'to make site measurements and first order decay (FOD) model calibration more accurate and improve implementation' (consultation paper p23).

The need for improved accuracy is critical given NGER reporting given it now has a regulatory impact, directly affecting financial implications for landfill operators under the Safeguard Mechanism. Improved accuracy is also generally desirable for understanding of landfill sector emissions.

The ability to use a 'suitably qualified person' is also a welcome proposal. The proposed definition is appropriate. ALOA also generally supports the ability of multiple technologies of suitable accuracy being able to be used for methane detection.

However, other key barriers remain and new impediments would arise within Method 2 through the proposed updates. These would prevent landfill operators from being able to use Method 2 and hence the current accuracy issues and regulatory risks arising from this will remain.

Key issues are:

- *Representative area selection* (s5.17A) – an existing issue is that the current scale and low permeability requirements make it improbable that a suitable area could be selected at many sites, other than by survey of the entire landfill.

ALOA suggests greater flexibility is required to prevent practical inhibition of uptake of Method 2.

- *Landfill gas flow measurement requirements under Division 2.3.6* (s5.17D) – an existing issue is that these requirements are highly impracticable in well fields and are prohibitive to uptake of Method 2.

ALOA urges the Department liaise with suitable specialists to establish a practicable measurement approach to help support Method 2 uptake.

- *Emissions categories* (s5.17F) – *emissions categories* – the proposals would class rates >25ppm as 'elevated'. This measurement rate is considered feasible and it would also be low in the context of States' landfill standards, where intervention levels apply between 100-500ppm. It does not relate to measurement approaches required to be used by landfill operators ongoingly for State regulatory purposes. Distinctions between approaches will matter.

ALOA suggests the Department consider its approach and alignment with State EPA landfill guidance to support suitable measurement requirements.

- *Walkover survey requirements* (s5.17F) – *Transect density* – while ALOA supports the intent of improving accuracy through increased transects with the proposed CEL removal, a transect density of <2 metres for elevated methane levels will be impossible at various sites due with significant vegetation and geographic limitations. Between this, proposed changes to emission categories and frequency requirements, the method would introduce significant increases in time and costs for measurements.

ALOA seeks that as far as possible, the requirements should align with State EPA measurement requirements rather than being separate and additional to them to help support effective Method 2 uptake. Further

consideration could also be given to whether new technologies need to have the same density requirements, as this may also be able to adjust time and cost impacts while achieving equivalent accuracy.

- *Emissions from landfill gas wells* (s5.15, 5.17F) – both the concept and drafting of these provisions is unclear and appears flawed. The rates given are entirely inappropriate noting how gas systems work and in proposing a 350,000x increase in emission levels between a measurement of 25ppm and 26ppm. This is alongside presuming a flat emission rate whether a measurement of 26ppm or 20,000ppm, for example, is obtained. Without adjustment, these provisions would be prohibitive to the uptake of Method 2.

ALOA urges a return to first principles and direct engagement with landfill gas specialists.

- *Frequency of measurement* (s5.17) – the proposal for quarterly measurements for at least 12 months does not align with EPA requirements in all cases. For example, some undertake two measuring events with auditor verification. The proposal that measurements need to be repeated if the capture efficiency is >100% could mean that it could take years before a site-specific capture efficiency could be achieved, while incurring multiple additional measurements and expense.

To enable use of Method 2, ALOA nominates further review to better harmonise with State monitoring requirements. This could be through the use of averaging to suit existing monitoring event requirements. Exceedance of 100% CE remains foreseeable given the measurement technique involved and should not trigger new measurement requirements.

Waste composition defaults (s5.11)

As accurate as possible waste composition defaults are a key element for improved accuracy of reporting. The updates proposed in the consultation contain no reference to the evidence used to enable understanding of the reasonableness of the proposals made so cannot be evaluated. No class has been established for MSW with FOGO services. However, this is an essential need given national and state waste policies have and are driving strong changes in the diversion of organic matter through changed collections. National averages are no longer suitable at this level given the differences in character and progression with organics diversion between jurisdictions.

To facilitate use of Method 2 and provide a way for landfill operators (and, indirectly, waste generators) to show changes in emissions generation, a FOGO category must be established and accompanying provisions made to allow landfill operators to access and use suitably verified information for waste collection types received at their site, including catering for any material differences between states or territories. To do otherwise, means that changes in emissions generated (and then captured) at a site cannot be demonstrated – reducing the accuracy and integrity of reporting. It means that Australia's emissions from waste cannot be accurately accounted for or waste policy outcomes observed. Critically, landfill operators can face increased costs falsely under the SGM's operation.

ALOA urges that further analysis be done in this area, using a transparent evidence base, to support suitable changes.

Yours sincerely



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References

- Sun, J. (2013). Phytocaps as biotic systems to mitigate landfill methane emissions. PhD thesis, Department of Infrastructure Engineering & Department of Agriculture and Food Systems, The University of Melbourne.
- K. Venkatraman and N. Ashwath, Int. J. Environ. Technol. Management, 2009, 10, 4-15.
- NSW EPA (2016), Environmental guidelines: Solid waste landfills.