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Deputy Secretary
Department of Climate Change, Energy, the Environment and Water
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17 June 2024

Dear Ms Evans

Re: Reform Options for ACCU Scheme Landfill Gas Methods

Thank you for the opportunity to provide feedback on the Reform Options for ACCU Scheme Landfill Gas Methods paper. The Waste Management and Resource Recovery Association of Australia (WMRR) is the national peak body representing Australia's \$17 billion waste and resource recovery (WARR) industry. With more than 2,200 members from over 400 entities nationwide, we represent the breadth and depth of the sector, including representation from business organisations, the three (3) tiers of government, universities, and Non-Government Organisations (NGOs), including research bodies.

As the national peak industry body for the WARR sector, we support all efforts to drive both improved environmental outcomes and the behaviours required to achieve Australia's 2030 targets, as we are acutely aware of the problematic contribution that material extraction and poorly managed processing and use of resources has on Greenhouse Gas (GhG) emissions. As stated in the *Circularity Gap Report 2022*, the current global linear economy is firmly steering us towards a 3- to 6-degree temperature increase. If the world continues its business-as-usual approach, then it will emit 65 billion tonnes of GhGs in 2030.

In 2023 it was calculated that only 7.2% of materials globally were circular, 70% of emissions linked to material handling and use, including extraction, transportation, and processing for use of our phones, clothes, and meals. With 80% of actual emissions being linked to mobility, housing, and nutrition- we need to move the focus on emissions beyond just energy (scope 1 and 2 emissions) if we are serious about hitting Australia's stated 2030 target of 43% reduction in emissions below 2005 levels. We also note that landfill emissions are scope 3 emissions from other sectors of the economy.

The Climate Change Authority (CCA) 2023 Annual report stated Australia's GhG emissions were 467 million tonnes in the year ending June 2023, an increase of four (4) million tonnes. It is noted however the DCCEEW GhG December 2023 Quarterly update stated emissions in the year to December 2023 were in fact 432.9 million tonnes of carbon dioxide equivalent (Mt CO₂-e). Nevertheless, to achieve a 43% reduction in emissions by 2030 compared with 2005 levels, and net zero emissions by 2050, Australia would still need to decarbonise at an average annual rate of 17 million tonnes to be on track to achieve the 2030 targets.

WMRR notes that the purpose of the Australian Carbon Credit Units (ACCUs), is to incentivise change to avoid the release of GhG emissions into the atmosphere or remove or sequester carbon from the atmosphere, effectively to drive good behaviours and gain improved environmental outcomes. WMRR believes that the WARR sector could significantly reduce our direct emissions (currently representing 2.97% (13.9Mt) of total emissions) as well as double the amount of ACCUs generated (to ~10MtCO₂-e) through increased landfill diversion, organics processing, and methane recovery. Further, as the WARR sector is intertwined with all other industries, we have a vast opportunity to assist the entire supply chain in reducing its carbon footprint and reducing impacts on biodiversity by using less for longer.

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The challenge at present is that we do not appear nationally to have as yet linked the interplay between the natural environment, material management (including the role of the 'waste sector') and addressing GhG emissions. As a result of this, we are yet to see a strong integrated policy and/ or regulatory framework that incorporates this systems' thinking, and therefore drive (including incentivizes) the correct behaviours. Both Europe and America by comparison have a 'Green Deal' that link these key policy pieces, with requisite economic tools to create the settings for green jobs, green investment and addressing carbon, which Australia could also benefit from.

Whilst it could be argued that Australia is on the path to creating some of these tools with the existence of Safeguard Mechanism, ACCUs (yet no framework for prioritising proponent led methodology applications), the Net Zero Plans being underway and a framework for circular economy being developed. The reality is that they are still largely done in isolation, fail to link to one another and do not have a clear framework for Australia as to how these will manage the inevitable interactions and achieve the net zero ambitions. Examples of this lack of interplay in the consultation process include no consideration of the significant impact the national policy commitment to remove 50% of organics from landfill by 2030, will have on the composition of landfills and gas generation. Another example being the drive to increase recovery of materials to 80% by 2030 yet there has been no real advancement on methodologies for alternative waste treatment methods to assist in incentivising investment in resource recovery to drive material away from landfill and reduce reliance on virgin material.

Nevertheless, WMRR supports the ACCU Scheme and its intent to encourage projects across a range of sectors to reduce emissions or store carbon, however WMRR believes it must also play a role in incentivizing the correct behaviours and achieving the government's stated ambitions of 80% diversion by 2030. To do so requires a sustainable and economically viable resource recovery sector to reduce carbon emissions and assist the 'waste' sector transitioning away from a reliance on landfill disposal options. We recognize that there will always be a role for landfill for poorly designed and problematic materials (such as PFAS and asbestos), as well as in times of natural disaster. However, given how often the resource recovery industry competes financially with landfill bound material, achieving long term profitability can be challenging due to sensitive market dynamics.

WMRR notes that a misalignment between policies could be interpreted relating to resource recovery assets (such as AWT) and those relating to landfills (with landfills acknowledged as the least preferable disposal option for waste). This misalignment is shown via the Emissions Reduction Fund (ERF) register, where only 3.19% of all ACCUs generated have been via AWT, versus 27.42% of total ACCUs from the landfill sector and associated methodologies. It is noted in the discussion paper by the department that both sectors compete for waste volumes, however the statistics appear to indicate a possible market distortion that incentivises the capture of emissions over emissions avoidance and diversion from landfill as a higher priority in the waste sector.

Having said that, WMRR does recognise that to date Australia's ERF carbon framework and LFG Method has been key to driving continued emissions reduction outcomes and these need to be protected to avoid any adverse emissions consequences. Existing protections ensure abatement achieved is additional, high integrity and meets the Offset Integrity Standards (including the use of baselines), and as such, only a portion of physical abatement achieved (around 60%) is rewarded with ACCUs. Reflecting a conservative level of regulatory additionality. Through any review process, it is essential that the important benefits arising now under the LFG Method for a safer climate future are maintained and continue to provide certainty for the landfill sector whilst also providing the needed confidence to allow a sustainable 'waste transition' to occur and allowing landfill diversion assets to grow and become sustainable over the longer term. Please note that WMRR also strongly argues for longer crediting periods for all landfill and alternative waste ACCU projects as an appropriate response to safely managing end-of-life material.

The waste transition and associated mandated targets cannot be achieved in the current environment, however, given the need for meaningful long-term settings and support. Government at all levels has a clear role to assist and structure the market until it reaches commercial equilibrium by providing structure that supports the resource recovery sector (in the case of ACCUs, at no cost to government). While continuing to increase the cost of landfill in order that waste will be economically diverted rather than becoming a source of ongoing multi

decade emissions. Given the permanent nature of landfills (even after closure), significant ongoing investment is needed in both power station and gas capture infrastructure. Without ACCUs or significant new cost imposts on ratepayers and business, investment in gas capture infrastructure and power stations would cease and increases in methane emissions would occur, undermining Australia's climate goals.

WMRR's responses to the consultation questions can be found at **Annexure A**. Please contact the undersigned if you wish to further discuss WMRR's submission.

Yours sincerely



Gayle Sloan

Chief Executive Officer

Waste Management and Resource Recovery Association of Australia

Annexure A

Measuring methane proportion of landfill gas 1. Is the preferred approach (Option 1) appropriate, and will it strengthen integrity of the landfill gas methods? 2. Are there any circumstances where conservative default factors should still be available for projects other than flaring projects at closed landfills?	In principle there is no objection to direct measurement with any additional costs recouped as part of the true cost of managing landfill, however WMRR is advised that direct measurement for quantification of annual site emissions purposes will likely remain impractical for quite some time due to emissions variability over a matter of hours. WMRR understands that measurement techniques do exist that allow localisation of high emission areas (concentrations) and snapshot whole site emissions quantification (average mass emission rates during the monitoring period). These are not one (1) tool or method but a range of methods that can be applied to answer specific questions (localisation and quantification) with varying levels of precision, repeatability integration period and cost, however they will incur significant costs.
Resetting baselines 3. Is the preferred option (Option 2A) appropriate? 4. Are there other options for resetting baselines, or other impacts of options, that should be considered? 5. Would requiring project proponents to improve modelled estimates of methane generated at landfills (before capture) so capture efficiencies measurements are more accurate be burdensome?	WMRR notes that reference to international analysis is not helpful when it considers gas capture in absence of the suite of other policies aimed at addressing landfill diversion, resource recovery and carbon mitigation are not considered. The reality is that Australia is a significant laggard in waste and carbon policy, so it is inappropriate to draw such comparison simply based on GDP and head of population. WMRR notes however that Australia has committed to achieve 43% reduction in emissions by 2030, and as such the combination of baseline and annual increase should be targeted to meet this. Inventory estimates were only ever intended by the IPCC for use in building up country wide inventories and not providing accurate site estimates for other purposes. It is well known that significant differences exist between inventory model estimates of generation and field measurements of fugitive emissions. This issue and particularly field measurement-based estimates of the differences and challenges of snapshot monitoring given temporal and diurnal variability in these emissions have been widely discussed at recent forums including the EREF Methane Summit in Chicago (October 2023), Global Waste Symposium (California February 2024) and CanCH4 (May 2024). It is evident that the more recent work is not included in the technical report, and some of these post-date the document currently being consulted on. Improving modelled estimates will rely on verification of the model performance and calibration of the model. Emissions measurement allows some assessment of the modelled generation error and potentially improve estimated capture efficiency but does not address other variables such as the changes in waste composition, temperature, moisture and operational changes that do affect generation and capture. It will be necessary to address the matter of periodic re-calibration of modelled estimates and the resultant effect on abatement which introduces uncertainties in estimating costs and revenue when considering this in an investment context. Generation (and thus Capture efficiency as defined in the landfill method) and emissions are currently modelled not measured. Improved measurement of emissions to localise and focus collection (find and fix) focusses attention for an operational response.

Should small, regional landfills (landfills located near small population centres that receive less than 50,000 tonnes of waste per annum) have lower baselines, and if so, what should the baselines be?	This is within reach of most operators with current tools accessible in most localities and will incur additional costs in operational response. This would be logical as they are typically subject to lower levels of regulatory scrutiny due to their perceived lower significance as they have lower total waste in place and mass emission rates. The detailed field studies in Canada (Martino, 2024) corroborate this as showing smaller sites generally have lower capture efficiencies or higher fugitive emission rates than larger sites.
Increasing baselines overtime 7. Is the preferred option (Option 3A) appropriate? 8. Are there other options for increasing baselines, or other impacts of options, that could be considered? 9. Is legislating a process for reviewing the baselines beneficial? Is the chosen review period time appropriate? Why/Why not?	WMRR agrees that it is important to review the baselines over time. As mentioned above the goal must be to ensure that we reach the legislated 43% reduction by 2030. However, in establishing baseline levels and increases to attain this level over the next six (6) years, real regard must be had to the comprehensive policy framework in place and the impact this will have on landfill composition, as well as whether the landfill continues to be active. If the preference is for five (5) yearly reviews as flagged, this must also be applied to all resource recovery methods (eg AWT) given the relationship between these reviews and the crediting periods will be critical to investment. As infrastructure assets like AWTs require long term certainty to facilitate investment and for the abatement potential to therefore be achieved. The preference would be for a five (5)-year baseline enshrined process for ERAC review with sufficient robustness to allow the private sector to proceed with investment without unnecessary long-term concerns. Concerns related to a change in government and/or potential to change legislation that would materially impact a proponent's ability to generate ACCUs over an extended period is a key risk.
Evaluation 10. Are the proposed evaluation criteria appropriate for assessing options? Do you agree with the assessment? If not, why?	It is recommended that further review be undertaken of how to: • improve generation estimates (using field validation) which are applied to site specific assessment or reporting (ie an effective Method 2 for larger sites); and • equitably address costs of the proportional contributions of legacy wastes, estimation error and future variability.
Other issues 11. If crediting periods were to be extended for waste methods, what would be the appropriate extension or end date, taking into account the Offsets Integrity Standards?	WMRR advocates that waste methods crediting periods should at least align with any extension provided to landfill gas methods, however fundamentally they should align with the asset lifecycle that is being deployed to manage emissions. Ideally as we move Australia further towards achieving 80% recovery, investment in technology to enable greater landfill diversion will become essential in the absence of growth or increased capacity in landfills. To sustain the required investment and infrastructure growth required to achieve GHG ambitions, a decoupling and/or 'remaking' of AWT methods to landfill gas method baselines may be required to incentivise ongoing investment and operations. With the reality being AWT assets provide the real benefit of circulating material that may have been destined for landfill. At present, there is a material difference between ACCUs generated at landfills and those by AWT projects. Given the goal is to remove materials from landfill and keep in circulation. Reducing reliance on virgin and reducing emission must be addressed if we

12. What evidence supports the application of a similar approach to waste diversion methods? (possible crediting period extensions alongside increasing baselines)	are genuine about incentivizing correct behaviour. Under the current crediting period, there is a lack of financial viability over the lifecycle of AWT assets which do not align with ~30-year lifecycle, given that AWT asset owners often need to purchase/leasing industrial land and make considerable capital investment in processing equipment, as opposed to landfill gas operators on existing landfill sites. Further other waste methods often compete with landfill for 'waste', and in an environment where landfill gate fees are often still the cheapest option, the financial returns under current market and crediting period conditions are not feasible. Which means that the barriers to entry in 'waste diversion methods' are higher than landfill gas. Other waste methods should at least align with any extension/increase to the landfill gas method. Waste diversion methodologies are higher up the waste management hierarchy and are important to the entire economy via avoiding emissions as opposed to capturing after emissions have been generated. The noted competition (included within the paper) for waste streams is genuine, albeit skewed towards waste diverting to cheaper disposal options such as landfill. This is in an environment where emissions avoidance is a priority. In the absence of AWT and other waste methods, the government would be solely reliant on landfills to capture waste sector emissions, and may adversely impact its own policy targets in relation to diversion and resource recovery, which may inadvertently continue to maintain the sector's reliance on landfill in the longer term, as opposed to encouraging emissions avoidance and higher order use As modelling by Blue Environment in the <i>Waste Emissions Projections 2023</i> demonstrated ACCUs have led to significant additional waste emission abatement. This would also be the case for alternative waste diversion methods and these need to be comprehensively considered. Blue Environment also undertook calculations to estimate the scale of the task in meeting the national waste recovery target (80% by 2030) and assessed the impact of the most substantial efforts towards meeting them, they estimated that an additional 15 million tonnes (Mt) of additional annual recovery will be needed to meet the target. The reality is that if alternative methods are not encouraged Australia will continue to rely on landfills without encouraging emissions avoidance and higher order uses. Jeopardizing other objectives/ policies, hence the ongoing call for a comprehensive integrated response to carbon and material policies by WMRR.
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