



Ms Kate Houghton
Secretary
Department of Energy, Environment and Climate Action
8 Nicholson St, Melbourne 3000
Email: energy.upgrades@deeca.vic.gov.au
Submission via [Online Portal](#)

28 April 2026

Dear Ms Houghton

Re: Victorian Energy Upgrades - Industrial heat decarbonisation

Thank you for the opportunity to provide feedback on the proposed new activities in Victorian Energy Upgrades (VEU) to support gas-reliant businesses to decarbonise their industrial heat production. The Waste Management and Resource Recovery Association of Australia (WMRR) welcomes the opportunity to provide input on the proposed expansion of the VEU program to include behind-the-meter biogas as a Project-Based Activity (PBA). The biogas PBA targets hard-to-abate industrial gas use, which represents approximately 31% of Victoria's gas consumption (~55 PJ/year) by enabling direct substitution of fossil gas.

WMRR is the national peak body for Australia's \$21 billion waste and resource recovery (WARR) sector, representing over 2,300 members across more than 400 organisations. In Victoria, WMRR represents over 530 individual members from more than 90 entities. Our sector plays a critical role in Australia's economy through infrastructure delivery, collection, resource recovery, manufacturing of secondary materials, energy recovery, and community engagement. Central to our advocacy is the connection between carbon reduction and the transition to a circular economy. By prioritising waste avoidance and the recovery and reuse of materials, the WARR sector extends material life, reduces reliance on virgin resources, and delivers significant emissions reductions while supporting jobs and economic resilience.

WMRR research¹ indicates that in 2023-24, Victoria contributed ~25% of national waste-sector emissions (3.56 / 14.3 MtCO₂-e) and generates a large share (~23%) of Australia's waste (~15Mt / 70MT). It follows that Victorian policy such as the proposed expansion of the VEU to include biogas derived from Anaerobic Digestion (AD) of organic waste feedstock has the ability to provide a significant lever for national decarbonisation, with even modest improvements within Victoria likely to have a material national impact.

AD breaks down organic carbon compounds in an environment that is devoid of oxygen and nitrate to generate biogas, containing 45% to 75% methane that would otherwise be released into the atmosphere. AD systems can combine food organics and/or food organic, garden organic (FOGO) with other feedstocks, such as municipal

¹ WMRR's *State of Waste and Resource Recovery Sector* report will be released publicly in mid 2026.

sewage or animal waste, to maximize biogas output. The biogas can be burnt to transform it into a combination of electricity and heat. Given that part of the carbon is converted into biogas during the process, the remaining digestate is relatively richer in nitrogen compared to conventional composts. This digestate can be dewatered and pelletised to produce an organic fertiliser with nitrogen content exceeding 5%. However, AD remains underdeveloped in Australia due to high upfront capital costs and limited access to secure, source-separated feedstock. However, it is anticipated that policy drivers such as mandated organics diversion targets and increasing focus on methane reduction will assist to accelerate its development. In WMRR's view, the VEU can play a critical enabling role by providing a clear and bankable revenue signal, supporting co-located industrial AD systems and facilitating early-stage project deployment.

WMRR broadly supports the inclusion of the Biogas PBA, and makes the following comments for DEECA's consideration:

- Leveraging the GreenPower methodology for Renewable Gas Guarantees of Origin (RGGOs) to inform Victorian Energy Efficiency Certificates (VEEC) measurement is a sensible approach that appropriately recognises the role of biogas in reducing lifecycle emissions and aligns with broader renewable gas policy. While VEECs incentivise energy efficiency and RGGOs certify renewable gas, aligning the two (2) frameworks will support biogas projects by improving revenue certainty. This is particularly important given the high capital costs and limited revenue streams of biogas projects, helping to build investor confidence and improve project bankability for anaerobic digestion projects.
- Many industrial facilities operate combined heat and power (CHP) systems, which achieve higher overall efficiency, and therefore, it makes sense that energy savings be calculated based on biogas input, rather than electricity output. Consistent with the VEU treatment of renewable electricity, it follows that where biogas is used solely for electricity generation, abatement should be based on onsite electricity consumption. WMRR notes that electricity-only systems are likely to be limited and CHP systems will represent the primary use case.
- WMRR advocates for a systems-based approach and encourages the alignment of VEU settings with circular economy and net zero strategies. WMRR is not aware of how the energy policy considerations for biogas have been cross referenced with the Victorian Recycling Infrastructure Plan (VRIP). In particular:
 - as Victoria's organic waste feedstocks are primarily composted, there is a risk of distorting feedstock markets and undermining existing composting systems with VEU incentives for AD. It should be noted that the focus on energy outcomes does not explicitly consider the benefits of compost in terms of soil health, nutrient recovery and carbon sequestration from compost application. WMRR would encourage DEECA to investigate the tonnage flows expected to be routed from existing composted waste streams to new AD projects to ensure that existing Victorian WARR infrastructure and investment is not adversely affected.
 - WMRR acknowledges that biomethane and network injection are being considered separately. However, policy alignment across programs will be critical as limiting support to behind-the-meter biogas may constrain economies of scale and limit regional and centralised project development.



In summary, biogas derived from AD of organic waste provides a mechanism to capture and utilise methane from organic waste that offers a readily deployable, low-emissions alternative that can be integrated into existing industrial systems with minimal modification. This dual benefit makes biogas uniquely positioned to contribute to both WARR sector decarbonization and industrial energy transition towards net zero. With appropriate policy settings, the VEU can play a critical role in scaling anaerobic digestion, supporting industrial decarbonization and delivering measurable emissions reductions

WMRR looks forward to continued engagement with DEECA on implementation of this measure. 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