



21 November 2017

Waste and Resource Recovery team
Economics, Governance and Waste
Department of Environment, Land Water and Planning
Level 1, 8 Nicholson St East Melbourne Vic 3002

Via email: wastepolicy@delwp.vic.gov.au

RE: “Turning Waste to Energy” consultation paper

Thank you for the opportunity to provide feedback on the Victorian Government’s “Turning Waste to Energy” consultation paper.

The Central Victorian Greenhouse Alliance (CVGA) is a network of 12 regional and rural councils spread across northern and central Victoria including the Cities and Shire Councils of Ararat, Ballarat, Buloke, Central Goldfields, Bendigo, Gannawarra, Hepburn, Macedon Ranges, Mt Alexander, Pyrenees and Swan Hill. The CVGA has existed since 2001, working with its members on climate change and energy projects, advocacy and information sharing. The CVGA is part of a broader network of Victorian Greenhouse Alliances operating across the State.

1. What is the appropriate role for waste to energy in Victoria’s waste and energy sectors?

The CVGA councils have a strong interest in promoting and facilitating renewable energy, and recognise that producing energy from waste has a role to play in that generation and is critical for reducing greenhouse gas emissions. The Victorian Government has also recognised the need to decarbonise Victoria’s energy sector, and has developed an ambitious Victorian Renewable Energy Target (VRET) of 25% by 2020, and 40% by 2025. Reaching this target and moving towards 100% renewable energy will require a diverse mix of generation technologies beyond solar and wind technologies.

For many of our councils, greenhouse gas emissions from landfill comprise a significant component of overall emissions profiles. For example, emissions from landfill in 2014 in Mount Alexander Shire Council comprised 88% of the councils total emissions¹. In its “Fuelled for Growth” report, RDV estimates there is conservatively around 10.3 million tonnes of waste available in Victoria each year for energy production². This is a significant energy resource that is largely untapped.

We also emphasise that WTE will play a particularly important role in the generation of green gas as well as opportunities for district heating systems. The CVGA has recently completed a feasibility study into the potential for a regional WTE facility for exporting green gas to the grid. This study proved that is technically feasible now, and has a positive business case but

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https://www.mountalexander.vic.gov.au/files/Environment/2_Mount_Alexander_Climate_Change_Action_Plan_-_Final_Document_-_Adopted_by_Council.pdf

² http://www.rdv.vic.gov.au/_data/assets/pdf_file/0004/1154452/Fuelled-for-Growth.pdf

there are limited examples of gas injection from WTE in Australia³. This will be important as much of the focus on 100% renewable energy is often focussed on electricity. As councils and communities increasingly move towards electrification, there needs to be alternatives to natural gas to avoid the gas network becoming a stranded asset but also to offer low carbon alternatives to segments of the community who have gas requirements.

2. Is there a limit to the scale of waste to energy projects Victoria can or should support?

The CVGA considers that although the sector is in its early stages, there will be a future need to limit waste streams for waste to energy projects. Without the right policy settings, perverse incentives could lead to waste for energy competing against and comprising other elements of the waste hierarchy. Policy settings need to align with the current waste hierarchy that favours waste avoidance, reuse and recycling ahead of conversion to energy. However, CVGA believes that there is currently far more waste going to landfill that has no other potential for reuse, recovery or recycling that this limit is likely to be unnecessary for some time until there is a significant quantum of planned waste to energy plants. Also there are many other waste streams that can be incorporated into WTE such as biomass such as agricultural waste and pondage weed.

3. How can we ensure our reuse and recovery objectives are balanced against the need for business certainty to invest in waste to energy facilities over time?

We note that a key factor in encouraging waste to energy projects is a requirement for long-term contracts between waste to energy plant builders and owners and waste suppliers, in order to provide investment certainty. However, we also note that in some mature waste to energy markets, such as Sweden, this has led to perverse outcomes in which countries have had to import waste from neighbouring nations in order to provide steady revenue streams for plant investors. Critics of waste to energy plants also note that while mature markets have strong recycling rates, these are constrained in reaching their full potential by the economic drive to ensure sufficient waste is available for waste to energy plants. Consequently, CVGA recommends that policymakers should consider a cap on the amount of waste to be diverted to waste to energy projects. This approach has been applied by municipal waste authorities in Flanders, Belgium resulting in an increase in reuse and recycling rates, while providing certainty for investors.

4. Do the current regulatory arrangements provide adequate protection for Victoria's environment and communities?

Our recent feasibility study into a regional waste to energy facility in Hepburn Shire, found there are many existing regulations around the location and design of waste to energy facilities. The study that found many of these regulations require very strict planning approvals and EPA requirements once certain thresholds have been passed. However, as WTE is a relatively new sector we found that many of these regulations are non-specific and do not consider the many different technology and design solutions available for WTE projects. As such, many regulations are acting as barriers to WTE projects. CVGA

³ <http://www.cvga.org.au/waste-to-energy-micro-power-stations-network.html>

recommends that the current regulatory requirements are reviewed in order to ascertain what is appropriate for different scales of WTE facilities considering the latest technological advancements. Also we recommend that the State Government work closely with WTE projects currently being funded through the SV Waste to Energy Infrastructure Fund to evaluate the appropriateness of the current regulatory regime.

One of the great opportunities in the WTE sector is the advancement of Combined Heat and Power and the roll out of district heating systems. There is very limited uptake of these projects in Australia. Doncaster Hill in eastern Melbourne is advanced in developing a district heating system, however has come across a number of regulatory barriers in relation to sharing energy across property boundaries and complex rules around private and public ownership. Lessons from this project should be considered in order to make district heat options more widely accessible and adopted in new and retrofitted precincts and other settings.

5. Are the existing programs to support waste to energy projects adequate?

CVGA welcomes recent funding initiative of the SV Waste to Energy Infrastructure Fund and believes that in order to grow the sector this initial funding is crucial. We expect that as more WTE projects come online, the State Government will have an important role in sharing lessons and provide ongoing programs to support scaling up of the industry.

We consider that much greater investment by the Victorian Government could encourage WTE plants to be developed in most regions and towns across the state. The State could work to support communities to install CHP plants and district heating systems using locally produced waste as fuel by funding a number of publically accessible demonstration plants across the state. These should, where practical, be government facilities using waste to energy systems to meet their own energy needs.

Arguably, one of the most efficient forms of waste to energy operation is Combined Heat and Power (CHP). Most CHP systems produce one to two times the kWhs of heat as electricity. The most cost effective option for operating a CHP plant is to sell the heat as well as electricity. To achieve this it is vital that plants are located and sized to meet local heat demand. While district heating systems are virtually unknown in Australia, over 60% of residential energy use is for heat (space heating and hot water) with commercial and industrial sectors having similar levels of demand. This is a significant form of energy demand and supports the concept of district heating systems in Victoria. Using waste to energy to supply this heat will replace more fossil fuel at a lower cost.

6. What landfill levy settings are likely to provide the greatest economic, environmental and social benefits for Victoria?

Over time, the State Government should phase in higher regulations regarding what materials are permitted in landfill. Any materials that have potential to be redirected to WTE where there is a local or regional facility available should either be banned from landfill or incur higher landfill levies.

7. What would best practice contracts for waste to energy feedstock supply look like? How do these vary across the various technologies?

Best practice contracts need to be considerate of the waste hierarchy to ensure that WTE feedstock is a 'last resort' option, after reuse, recycling and other forms of recovery has been exhausted. Also, best practice contracts should address greenhouse gas emissions and this should impact decision making on the choice of technology as well as the distance that feedstock is travelling to a facility.

9. What role should communities play in the development of waste to energy projects?

Any new energy generation technology needs to invest in building strong community support and 'social license' to operate. Engaging communities early on will be crucial to build awareness of what the different types of technologies are, how it affects other elements of the waste hierarchy and what its overall role in our energy mix is. Anecdotes from our region suggest there is limited awareness of WTE technologies amongst the general community, with many considering WTE to be solely high polluting incinerating technologies.

Furthermore there is a big opportunity for communities to become actively engaged in waste to energy projects in the same way we are seeing in wind and solar projects. A number of community groups in our region are looking at how they can play a greater role in WTE, such as the Mount Alexander Sustainability Group, and the Ballarat Renewable Energy and Zero Emissions. The State Government should support these groups to progress projects and explore different community ownership models going forward.

11. Is there a need for more action to inform businesses and communities about waste to energy?

Yes. This is crucial to build support and social license for the sector going forward. Also there are many commercial applications for WTE that will enable businesses to save costs and be buffered from rising electricity and gas costs.

Demonstration projects across the State are crucial to build awareness of different technology types and applications to promote broader uptake. Local and State Government play a critical role in WTE leadership, and should seek to adopt as much WTE for their own facilities that can be opened for demonstration purposes. These projects could also seek to open up plants for enabling waste streams from diverse local industries and businesses.

12. Are there other barriers to operating waste to energy businesses in Victoria?

The biggest barrier is lack of demonstration projects across the State, and education and awareness of WTE potential, including understanding different technologies and applications. Another key challenge is understanding at what scale WTE plants should be, whether a large regional facility is better or worse than a series of small municipal level plants. In the same way as we are seeing with other generation technologies like wind and solar, the answer will be a mix of different sizes across the state and no one size fits all. However, the State Government should play a role in helping regions strategically plan for WTE going forward.

Thank you for the opportunity to make a submission. Please get in touch if you require any further information.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Rob Law', is enclosed in a light gray rectangular box.

Rob Law

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