

INQUIRY INTO 'ENERGY FROM WASTE' TECHNOLOGY

Organisation: Hunter Joint Organisation of Councils

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Portfolio Committee No. 6 – Planning & Environment
NSW Legislative Council

C/O - Kate Mihaljek

26 May 2017

Dear Madam

INQUIRY INTO 'ENERGY FROM WASTE' TECHNOLOGY – SUBMISSION FROM THE COUNCILS OF THE HUNTER WASTE REGION

The Councils of the Hunter Waste Region thank the NSW Legislative Council for the opportunity to provide a submission on matters relating to the waste disposal industry in New South Wales, with particular reference to Energy from Waste (EfW) technology.

The attached submission was developed by the Hunter Joint Organisation of Councils' Environment Division and the Councils of the Hunter Waste Region, through an open consultative process with officers and senior managers. The nine Councils of the Hunter Waste Region are:

- Cessnock City Council
- Dungog Shire Council
- Lake Macquarie City Council
- Maitland City Council
- Muswellbrook Shire Council
- City of Newcastle
- Port Stephens Council
- Singleton Council
- Upper Hunter Shire Council

Staff from Hunter Councils' Environment Division have consulted councils from our waste region and participated in the LGOV NSW teleconference in order to gauge broader sectoral considerations.

The Councils of the Region are overall supportive of the use of EfW technologies that assist with minimising waste to landfill and comply with all relevant requirements and guidelines. The use of EfW technologies may provide a mechanism for councils in the region to ultimately meet the state-wide targets stipulated in the NSW WARR Strategy 2014, although no plans currently exist to utilise this technology. Councils of the Hunter Region note the following:

- Significant landfill capacity exists within Council facilities in the Hunter Waste Region and this ensures local and regional municipal waste disposal options over the medium to long-term.
- Only one major EfW facility currently operates in the vicinity of the Hunter Waste Region and it receives only limited tonnages of untreated wood waste.
- Councils will continue to support processes and technologies consistent with the waste hierarchy that ensure best value use of resources.

- Councils do not support the development of any facility which may lead to exposure of air-borne contaminants and adverse public health impacts to the community.
- It is recommended that the current NSW Policy is reviewed to consider an allowance for no limit by weight on residual waste materials that have already undergone processing treatment through an alternative waste technology (AWT) process.

Please do not hesitate to contact _____ (Director Hunter Councils Environment Division) on _____ to discuss any aspect of this submission.

Yours Sincerely

Roger Stephan
Chief Executive Officer

Detailed Submission

The following submission has been compiled with advice and information from the nine (9) Councils of the Hunter Waste Region, and discussion with a variety of stakeholders through an LGOV NSW teleconference on 10 May 2017. Individual member Councils may submit their own detailed submissions to the Inquiry. This submission will support and provide regional context for those individual submissions.

Hunter context

Significant landfill capacity exists within Council facilities the Hunter Waste Region. This capacity is spread across numerous sites including Summerhill Waste Management Facility (Newcastle), Muswellbrook Waste Management Facility, Cessnock Waste Management Facility and Singleton Waste Management Facility. Landfill extension activities are underway at the Awaba Waste Management Facility in the Lake Macquarie City Council area.

This landfill capacity availability ensures Council waste disposal options over the medium to long-term, although continued landfilling of residual waste is not the preferred management option for member councils, as they seek to maximise diversion from landfill, and increase recycling and resource recovery in line with regional and State Waste Avoidance and Resource Recovery Strategy targets.

Two councils in the Hunter Waste Region currently collect landfill gas to produce renewable energy which is exported back onto the energy grid – Newcastle City Council (NCC) and Lake Macquarie City Council (LMCC). The 2.2 MW generator currently generates enough energy to power approximately 2,400 homes per annum at the NCC Summerhill Waste Management Facility and the 1.1 MW generator at the LMCC Awaba Waste Management Facility currently generates enough energy to power approximately 1,200 homes per annum.

Only one major EfW facility currently exists in the vicinity of the Hunter Waste Region, the Sunset Power International (formerly Delta Energy) power station at Vales Point in the Central Coast Council area. This facility is licensed to use a range of biomass feedstocks for co-firing with coal. Councils are able to send materials such as untreated timber to this facility as a feedstock.

Several sites in the region have been proposed for the commercial development of new EfW facilities; however none of these seem likely to be developed in the immediate future. These are:

- a) Huntlee residential township, NSW
- b) Hunter Industrial Ecology Park, Weston NSW

The timeline for the development of any new EfW facilities is at least 3-5 years given the range of required financing, planning and approval processes. The waste industry requires clear and consistent policy to allow certainty for investment decisions and to source the capital to develop new facilities.

For any new EfW facilities to be successful in the region, the costs of utilising the facility must be competitive with the current cost of landfilling residual waste. However, Hunter Region Councils' would not support any plan to further ramp up the NSW Waste Levy, beyond the current CPI levels stipulated in the Clause 5 of the POEO (Waste) Regulation, in a bid to make EfW technologies more competitive with landfill costs. This form of incentive to use EfW technologies could create a perverse outcome for the region as it would take in excess of 5 years to establish a facility while local communities pay more for an outcome

which cannot be immediately realised, while many years of landfill still capacity exist and act as a long-term safeguard to disposal requirements, should no other alternative technologies become available to minimise waste to landfill.

Any Council use of EfW technologies would have to be consistent with EPA Policy Statement criteria for service collection system requirements and demonstrate clear cost benefits in choosing to use an EfW technology option.

If EfW facilities are developed in the region and are available to member councils, there is an absolute expectation that these facilities would comply or exceed good neighbour principles and comply with all relevant emissions standards as outlined in the NSW EfW Policy Statement and the POEO Act, as well as being competitive with currently available waste management and resources recovery technologies.

There are further strong expectations that any noise, dust, odour and transport impacts associated with the facility would be minimised to the satisfaction of NSW EPA compliance staff, as well as councils and the affected communities.

Responses to Terms of Reference

The following points relate to the nominated Terms of Reference of the Inquiry:

The current provision of waste disposal and recycling, the impact of waste levies and the capacity (considering issues of location, scale, technology and environmental health) to address the ongoing disposal needs for commercial, industrial, household and hazardous waste

1. Given the appropriate circumstances, such as the availability of a licenced EfW facility, and Councils in the region offering the designated levels of recycling services as outlined in the NSW EFW policy (Table 1 below), there is interest in future opportunities to direct residual municipal waste to EfW facilities that demonstrably meet all relevant legislative operational standards.

Table 1: Resource recovery criteria for energy recovery facilities

Mixed wastes		
Waste stream	Processing facility	% residual waste allowed for energy recovery
Mixed municipal waste (MSW)	Facility processing mixed MSW waste where a council has separate collection systems for dry recyclables and food and garden waste	No limit by weight of the waste stream received at a processing facility
	Facility processing mixed MSW waste where a council has separate collection systems for dry recyclables and garden waste	Up to 40% by weight of the waste stream received at a processing facility
	Facility processing mixed MSW waste where a council has a separate collection system for dry recyclables	Up to 25% by weight of the waste stream received at a processing facility

2. Based on the current tonnages available in the region, the viability of any new facility is contingent on its ability to access waste from all sectors - municipal solid waste, commercial and industrial waste and construction and demolition wastes.
3. Councils of the Hunter Waste Region will continue to support processes and technologies consistent with the waste hierarchy. They aim to recycle high calorific organic materials, including food and garden waste, to maximise their value as a resource, sequester carbon and keep them in the productive economy to be used for purposes such as landscaping, erosion control and agriculture.
4. As discussed in the Hunter Regional context above, any drive to ramp up levy prices in a bid to make EfW technologies more cost competitive would be a perverse outcome for the region as many years of landfill capacity exist and act as a long-term safeguard to disposal requirements should no other alternative technologies become available to minimise waste to landfill.
5. Consideration should be given to developing criteria in the state EfW Policy that address the residual portion of waste from other alternative waste technology process – see point 19 below.

The role of ‘energy from waste’ technology in addressing waste disposal needs and the resulting impact on the future of the recycling industry

6. The clear priority of the Hunter WARR Strategy, and all local waste strategies within the region, is to treat waste as a resource in line with the waste hierarchy - where waste avoidance is the most preferable option, followed by reuse, recycling, resource recovery (including EfW) and disposal as a last resort.
7. Based on modelling undertaken during 2016 for the implementation of the Hunter WARR Strategy, the use of a thermal EfW technology is one of a range of technology options that may enable the Hunter Waste Region to meet or exceed the NSW WARR Strategy 2021 targets of 70% recycling and 75% diversion from landfill. A clear funding model that enables councils to develop of cost benefit analysis and associated business cases would be required to assess the viability of this approach.
8. If such an option is utilised in the region, there will be clear benefits via minimising waste to landfill and associated long-term and sustainable conservation of the available landfill space.
9. Directing residual municipal waste to an EfW facility should not impact adversely on the recycling industry for either dry mixed recyclables in the yellow-lidded bin, or organic recyclables (garden vegetation and/or food) in the green-lidded bin, as long as these materials are still be prioritised for recycling where services are available.
 - a. The development of state-wide standards on contamination and diversion would assist to ensure that this is the case
10. There would also need to be a clear financial benefit to councils to choose an EfW option for residual waste rather than continuing to landfill it.
11. The European experience indicates that the countries most likely to take up EFW technologies are the same countries that already have relatively high recycling and recovery rates via conventional means. The Hunter Waste Region is at a point where

EfW technologies could start to form an important component of the overall approach to waste management and resource recovery.

12. It is recommended that the NSW EPA sets clear and realistic restrictions on materials by weight, volume and composition that are allowable as feedstock to EfW facilities. It is also recommended that these restrictions are coupled with bans or strict limits on specific material types that are readily recyclable.

Current regulatory standards, guidelines and policy statements oversighting 'energy from waste' technology, including reference to regulations covering:

- i. the European Union
- ii. United States of America
- iii. international best practice

13. A strong and consistent policy framework is the most effective means for ensuring the efficient and appropriate uptake of EfW technologies across the state. The NSW EfW Policy is seen as a solid safeguard against negative impacts on the recycling industry as it promotes best value use of resources.
14. Although the NSW EfW Policy was released in 2015, its Guidelines are yet to be released. The release of these Guidelines would assist in providing certainty to all stakeholders as to how the use of EfW technologies can be best taken up across NSW. The need for this certainty is demonstrated by the fact that no new EfW facilities have been built in NSW since the adoption of the NSW EfW Policy.
15. Any future use of EfW technology service providers and facilities in the region is predicated on Councils' compliance with NSW EfW Policy resource recovery criteria for energy recovery facilities applicable to the MSW. This would require councils wishing to send residual waste to EfW facilities to have implemented mixed recycling, garden organics and/or food and garden organics services for their residents prior to considering EfW options.
16. Councils recommend that relevant policies across states be reviewed and standardised to allow greater consistency and certainty for waste industry players who plan to develop EfW facilities. This is not currently the case.

Additional factors which need to be taken into account within regulatory and other processes for approval and operation of 'energy from waste' plants

17. Councils in the region fully support the overarching aim of the NSW EfW Policy Statement (2015) to maximise best value of resources. They would only seek to use EfW for residual municipal waste (MSW) that is available after all other recovery opportunities have been exhausted.
18. The use by councils of any EfW facility developed in the region would carry with it the expectation of absolute rigour and appropriate safeguards in the planning, operation and continuous monitoring of the facility regardless of the specific technology used.
19. It is recommended that the current NSW Policy is reviewed to consider an allowance for 'no limit by weight' on residual waste materials that have already undergone processing treatment through an alternative waste technology (AWT) process such

as mechanical and biological treatment. Under the current criteria, if a Council has only a dry recyclable system in place, and sends all residual waste to AWT treatment, only 25% by weight of the residual waste from that process is allowed for energy recovery.

20. Similar consideration should also be given to the residual waste stream from material recovery facilities (MRFs), especially given the high calorific value of the materials.
21. Councils recommend that consideration be given to the disposal of the ash or residual material derived at the end of the EfW process, as this material can be highly toxic.

The responsibility given to state and local government authorities in the environmental monitoring of 'energy from waste' facilities

22. Environmental monitoring of all licenced facilities in NSW is undertaken by the NSW Environment Protection Authority. Therefore councils in the region do not believe that they have any role in this process. Councils also lack the expertise and resources to take on this task.

Opportunities to incorporate future advances in technology into any operating 'energy from waste' facility

23. Opportunities to incorporate future advances in technologies into already operating facilities are seen as acceptable as long as current resource recovery and environmental protection standards are maintained through a solid policy framework.

The risks of future monopolisation in markets for waste disposal and the potential to enable a 'circular economy' model for the waste disposal industry, and

24. Councils in the region are supportive of the 'circular economy' model; however this concept is still in its infancy in Australia. Closing the loop on valuable finite resources is a key driver for our members and the region.
25. Councils would support the development of EfW at appropriate facilities such as the Hunter Industrial Ecology Park, particularly if EfW was clearly a complementary technology used in an integrated manner amongst a range of technology options to recover resources and minimise waste to landfill.
26. Councils do not support the use of EfW technologies that in any way cannibalise viable resource recovery processes.
27. All relevant NSW policy and legislation should minimise the opportunity for monopolies to develop and ensure that a "black hole" which needs to be fed scenario is not created. EfW facilities should operate in a competitive market with other options for residual waste streams. If waste volumes are required to make a facility viable this should be secured through normal contract negotiations with Councils, ROCs or other waste generators. Councils do not support any ongoing subsidy from rate payers (excluding any funds from a competitive grant process) to make a facility viable.

