Submission No 150

INQUIRY INTO 'ENERGY FROM WASTE' TECHNOLOGY

Organisation: Western Sydney Regional Organisation of Councils

Date received: 26 May 2017

WSROC

Advocating for the people of Western Sydney

SUBMISSION:

Response to 'Energy from waste' technology Inquiry

May 2017

Representing the councils of western Sydney.

Terms of Reference

That Portfolio Committee No. 6 inquire into and report on matters relating to the waste disposal industry in New South Wales, with particular reference to 'energy from waste' technology, and in particular:

a) 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

b) the role of 'energy from waste' technology in addressing waste disposal needs and the resulting impact on the future of the recycling industry

c) 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

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

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

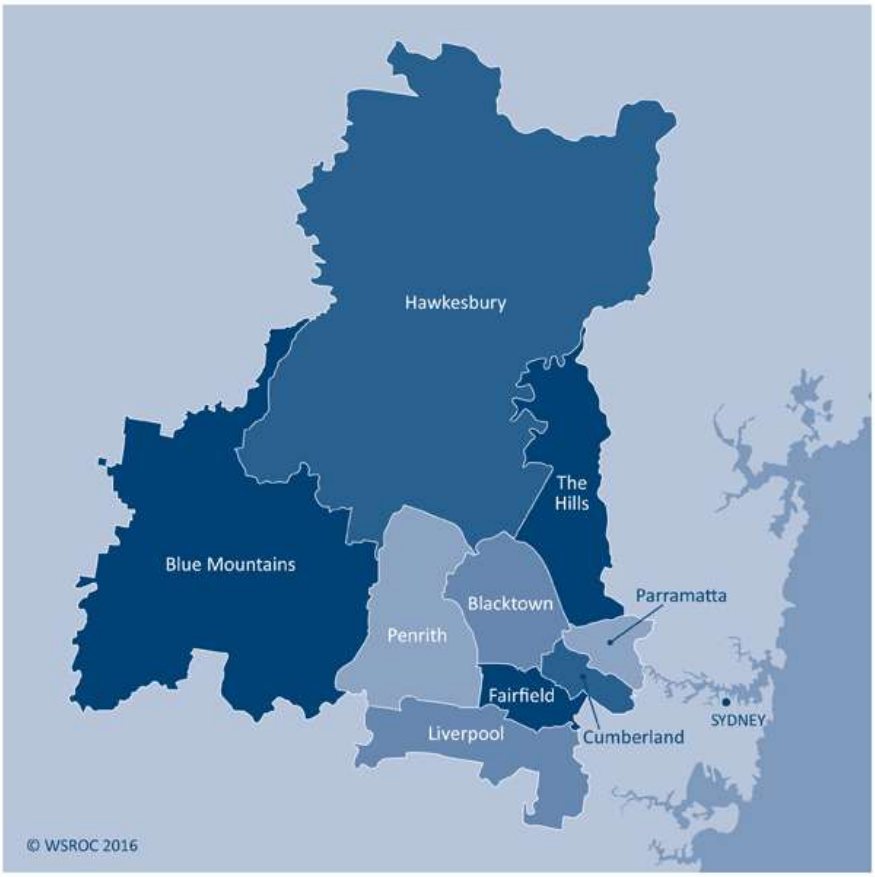
f) opportunities to incorporate future advances in technology into any operating 'energy from waste' facility

g) 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

h) any other related matter.

Western Sydney Waste Avoidance and Resource Recovery Strategy

In 2014, the NSW Environment Protection Authority (EPA) funded WSROC to develop the *Western Sydney Regional Waste Avoidance and Resource Recovery Strategy* (the Strategy) and to work towards fulfilling strategy outcomes. Councils working together under this regional waste program are Blacktown City Council, Blue Mountains City Council, Cumberland Council, Fairfield City Council, Hawkesbury City Council, Liverpool City Council, Parramatta City Council, Penrith City Council and neighbouring non-member The Hills Shire Council.



This strategy was developed to outline the broad directions for resource recovery practices across western Sydney, and explore options for addressing waste management challenges faced by participating councils. By working together, councils are committed to improving regional cooperation and identifying opportunities to improving recycling and resource recovery practices across the region. As western Sydney sits at the forefront of Sydney's future challenges and opportunities, this strategy ensures the region's future direction maximises waste avoidance and optimises resource recovery outcomes for this significant and growing population.

As part of this regional waste initiative, WSROC seeks to ensure that the strategic waste and resource recovery issues detailed in the terms of reference consider the strategic needs and direction of councils to deliver efficient waste and recycling services to their communities. Waste and resource recovery staff from the participating councils regularly work together with staff from the neighbouring Macarthur Regional Organisation of Councils (Campbelltown City Council, Camden Council and Wollondilly Shire Council) on regional waste initiatives, including infrastructure initiatives. This submission represents this Greater Western Sydney Waste Managers Group.

Reference Sector A

(inquire into and report on matters relating to 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.)

Western Sydney Waste and Resource Recovery Infrastructure Needs

Western Sydney is home to most of Sydney's waste infrastructure. Traditionally, waste facilities were located throughout metropolitan Sydney, closer to the populations they serve. Many of western Sydney's waste and recycling infrastructure were located on Sydney's fringes when developed, and now face pressures from encroaching residential and commercial development. The closure of many local waste facilities throughout Sydney means that while western Sydney is home to a significant amount of waste and recycling infrastructure, it no longer services just the needs of Western Sydney. It needs to address waste management capacity issues of the entire Sydney metropolitan area.

A key action in the western Sydney waste strategy was to conduct a comprehensive infrastructure needs assessment for the region. This analysis was undertaken in 2015 and reviewed available waste disposal and processing (recycling) infrastructure against the forecasted population growth of the councils to 2021. This assessment[1] showed a shortfall in required capacity in mixed waste treatment facilities (such as Advanced Waste Treatment facilities used to process household garbage waste), energy recovery facilities, recycling facilities and organics processing facilities. The low available capacity of putrescible landfill was considered a risk to councils.

Responsibility for infrastructure planning

Councils are concerned about a lack of a coordinating body to strategically plan Sydney's waste infrastructure needs. Councils, or even groups of councils, cannot alone plan for Sydney's waste processing and disposal needs, given the complex flows of waste throughout Sydney, and the mix of municipal solid waste (MSW), commercial and industrial waste (C+I), and construction and demolition waste (C+D), of which the latter two are outside councils' responsibility. While we hear the NSW EPA has done some recent work in this space to calculate infrastructure capacity, it seems this analysis has been used to inform grant funding and not to undertake any strategic planning with councils or the waste industry.

There appears to be no role taken by Department of Planning and Environment to plan for such infrastructure, which is concerning given waste disposal and processing is an essential household and commercial service. The fact that waste planning is not given similar consideration to water, energy, roads and other essential infrastructure is concerning to councils. Councils influence in infrastructure planning lies in the ability to influence investment decisions by the waste industry for waste processing infrastructure if councils collaborate together by entering into regional or sub-regional waste disposal contracts. Regional contracts bring together multiple councils' waste, which then provide sufficient volumes of waste to process, and when combined with a sufficient contract term (normally a 10-15 year term), allow for capitalisation of the investment leading to investment in new waste infrastructure.

Location of infrastructure

There are risks to existing waste disposal and processing infrastructure from residential encroachment and competition for appropriately zoned commercial and industrial land. As more

[1] *Western Sydney Regional Waste and Recycling Infrastructure Assessment* KMH Environmental (August 2015)

waste and recycling facilities cease operations or consolidate operations, the location of appropriate facilities to service councils' MSW becomes a challenge, as the distance to facilities from local government areas (LGAs) increases. This is an ongoing challenge given increasing development, urban infill, and the substantial traffic volumes even outside peak travel times. When a waste disposal or processing facility closes, and the land if not retained for use as a waste facility, there is a risk that the industry will likely lose that location for a waste facility for good. An example of this is the Eastern Creek Landfill, currently also home to Eastern Creek Resource Recovery Park. With the closure of the landfill on 1 July 2017, should Property NSW decide to cease the resource recovery operations at the site, one of Sydney's most significant waste management locations will be lost. It is concerning that less than 2 months before the closure of the site, there is still no agreement on the future of the site, and despite repeated requests, councils have not been provided any information and therefore are unable to make alternate plans in case of closure.

New waste facilities require suitably zoned land; even existing waste infrastructure facilities are facing substantial challenges, particularly from residential creep. There is concern that;

- there may not be enough suitability zoned land for new waste facilities in the region, and
- significant challenges for existing facilities to expand and take extra waste as population growth and increasing per capita waste generation intensifies.

Throughout Sydney, most notably in new growth centres, there is little to no provision made for including waste facilities in the expanding growth zones, with challenges to establish even the smallest waste infrastructure, such as community recycling centres. Recent efforts by western Sydney councils to rollout out a network of community recycling centres (to accept household quantities of batteries, paint, gas bottles and smoke detectors) saw the identification of only 6 community recycling centres sites (and one mobile collection truck) to service 1.7 million residents in the region, despite NSW EPA recommendation of one site per 50,000 households.

Similarly, there are concerns with the rollout of the Container Deposit Scheme that sites for required collection infrastructure for the community to retain deposits will not be able to be delivered at the rate required by the scheme.

Infrastructure to meet Regional and NSW waste and resource recovery targets

The Western Sydney Waste Strategy seeks a reduction in waste sent to landfill across the region, in particular through the following targets:

- Gradually improve the regional resource recovery rate to 58% by 2017 and 70% by 2021.
- Work towards achieving the NSW Waste and Resource Recovery (WARR) Strategy target of 75% diversion of all waste by 2021.

Additionally, councils are working to increase their waste diverted from landfill in line with their own policy and the NSW Waste Avoidance and Resource Recovery Strategy 2014-21. Currently, only 53% of domestic waste is diverted from landfill across the region. It should be understood that regional and council waste reduction targets flow from the NSW Government WARR targets, and the state governments' role in setting targets is significant.

Our councils are at the forefront of waste reduction and recycling efforts at the local level. Some western Sydney councils are achieving high diversion rates and undertaking numerous waste reduction and processing initiatives in line with preferred resource recovery order detailed in the waste management hierarchy. However, councils have indicated they may struggle to reach their

resource recovery targets based on existing resource recovery and waste processing options available to them.

Infrastructure technology

WSROC undertook modelling to calculate the region's projected resource recovery rate with regards to projected population growth to 2021. This analysis determined that the region is unlikely to meet its 70% recycling target, but may get close by processing additional waste through mixed waste treatment facilities to recover resources. Additionally, the region will be unable to reach the 75% waste diversion target without thermal processing of processed residual wastes. Improved technological performance of Material Recovery Facilities (MRFs) could also contribute to an improvement in recovery rates.

Therefore, councils must seek advances in technology to assist with achievement of recycling rates targets beyond their current capabilities. The regional waste strategy's action plan seeks to investigate the future needs for waste and recycling infrastructure to process domestic waste from a significantly increasing western Sydney population. It also pursues investigation of diversion of waste to Energy from Waste facilities should they become available.

Should any proposed facility be operational before 2021 and process waste residuals from domestic waste streams, councils may have the opportunity to deliver greater diversion of waste. A well designed facility that accepts these residuals has the potential to assist councils achieve strategy target to keep more waste from being disposed to landfill. The availability of such a facility also helps to address 'recovery of energy' in the waste management hierarchy, which has long been a missing gap due to the lack of facilities servicing metropolitan Sydney.

Reference Sector B

(*the role of energy from waste technology in addressing waste disposal needs and resulting impact on the future of the recycling industry)*

If western Sydney councils are to meet the NSW WARR (and regionally adopted) waste diversion from landfill targets, then the provision of energy from waste facilities provides an additional capability that will assist in achieving this target. Councils are committed to the disposal and processing of waste in accordance with the waste management hierarchy, ensuring waste avoidance, reuse, recycling occurs before any further waste treatment or disposal. All councils offer recycling services to residents, and most send their garbage waste to an advanced waste processing facility for treatment to recover remaining resources. As a result, much of the waste sent to landfill in this region has already been depleted of recoverable resources.

However, while the provision of energy from waste facilities is an important step in reaching this target , many councils specify resource recovery outcomes when contracting waste processing and disposal, and as a result do not predetermine what technological solution should achieve this. It is generally the waste industry that will determine and offer the technology to achieve councils' required outcomes.

Councils are supportive of the NSW Energy from Waste policy, and in particular support the resource recovery criteria requiring removal of valuable resources prior to any energy from waste treatment. There is also a role for the production of resource derived fuel (RDF) as an output of mixed waste processing of municipal waste to reduce the volume of residual waste landfilled.

As noted, while councils are supportive of the resource recovery criteria which must be met before adopting energy from waste, it is noted that there are no such limits for landfills. Not setting

resource recovery criteria for landfills means the recognised higher order use for waste (i.e. energy from waste) as per the internationally adopted waste management hierarchy, faces more regulatory barriers compared to landfilling. This could be overcome by adopting similar resource recovery criteria for landfilling or the introduction of landfill bans for waste containing significant recoverable material such as organics or recyclable plastics.

Reference Sector C

(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)

This submission does not address concerns by councils for community health and other such risks, as this is outside the scope of responsibility of this professional network. However, councils expect any waste disposal or processing facility, including energy from waste facilities, to;

- be subject to demonstrated best practices,
- achieve a balance between the commercial objectives of the facility, the needs of local communities and the protection of the environment,
- comply with any relevant regulations, policies and guidelines, including the NSW Energy from Waste Policy,
- subject to effective compliance and enforcement regimes.

Reference Sector D

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

There is little doubt that energy from waste plants presents both opportunities and challenges, many of these can be identified and appropriately exploited or mitigated. Some however will be difficult to identify early in the process but their consequences will surface later on. Contractual arrangements, service level agreements, protocals etc may prove insufficient in addressing these when an energy from waste facility is wholly in private sector hands. Similarly a risk to a future private operator may be that a major waste stream (domestic waste) is in the hands of councils.

It may well be that achieving a good balance between risk, commercial opportunity and ensuring the appropriate environmental outcomes requires a private public partnership involving local government.

Regardless, any proposed Energy from Waste facility must meet the Energy from Waste policy, and consistency with the policy must be granted before progressing to the planning approvals process. A well-defined framework needs to be developed to ensure rigorous application of the policy before detailed planning assessment.