



The Boomerang Alliance is an association of 47 national, state and local NGOs
www.boomerangalliance.org.au

WASTE TO ENERGY POLICY 2018

The China ban on Australia's mixed paper and plastics derived from kerbside recycling due to contamination rates has prompted calls from councils, state and federal governments for major investment in waste to energy (WTE) plants. The Boomerang Alliance opposes this push as contrary to achieving recycling and likely to produce dangerous air pollution. Commentary from senior politicians has also misrepresented the current nature of existing plants and fails to mention significant risks.

Waste to energy is the conversion of wastes into electricity, usually through incineration of the waste. There are about 60 facilities in Australia, the vast majority involved the burning of homogenous material such as organic offcuts like sugar cane to provide electricity for adjacent sugar mills. There are also Refuse Derived Fuel facilities; WTE plants that collect emitted methane from landfill and sewage to convert to electricity; and there are anaerobic digestors (these extract gas through microbial activity not incineration). Mixed waste incinerators are a far more complex and dangerous proposal and will fail to obtain a social licence to operate.

Emissions

Any waste to energy process presents serious inherent risks to human health and the environment and needs rigorous assessment and public consultation, in particular mixed waste incinerators. These use household and small business garbage and contain organic materials, plastics and household chemicals and other hazardous materials.

There is no thermal process to capture the embodied energy value of mixed waste that will not create significant pollution and toxic risks. It is not possible to accurately identify the emissions profile of mixed waste and prevent pollution spikes on a case by case basis; and we note authorities in the US have found that such waste to energy plants emit significantly more toxins into the atmosphere than coal burning. Most plants also produce a high level of residual ash, which is toxic and needs additional treatment and dedicated storage.

They also have a greenhouse gas profile equivalent to burning coal (US EPA 2014).

Cannibalising resources

Further, such plants require 'reliable waste volumes' (CEFC, 2016) over long periods to justify investment, consequently locking up (and using only once) resources that could be repeatedly recycled in the circular economy.

Export

Australia's export of unprocessed waste to developing nations for supposed WTE operations is also unacceptable and continues to cause significant health and pollution events across South East Asia.

We oppose the creation of fuels and/or incineration or pyrolysis of: municipal solid waste, hazardous, medical and any other mixed waste stream.

Boomerang has considered in the past that in very limited circumstances, waste to energy involving residual material supports the higher level and maximised recycling because it can improve the financial basis for such recycling, especially in the face of increasing landfill waste levies. However it is apparent that such an apparent 'concession' will be misused by industry proponents and we no longer wish to offer this, as there is clearly a rush that is clouding informed debate about the future of our recycling.

Inappropriate metrics

Waste to energy proponents (industry and councils) tend to focus on 'diversion from landfill' as the key metric when the central metric for a waste strategy in the 21st century is recycling of recovered waste. The diversion focus is essentially greenwashing. It is often associated with a dirty MRF, not a genuine source separating facility.

Energy produced

We also note that waste to energy plants generate very little energy and will never be an important source. The calorific value of mixed waste is low. One estimate (CEFC 2016) suggested that if Australia incinerated all of the 'feasible' waste it would generate about 2% of electricity needs. Not only is this minimal, but such a high level of input will never occur. There is a much higher energy return from recycling and avoiding use of virgin material.

Some additional facts and figures

- New proposals at Eastern Creek in Sydney and the ACT, using mixed waste have been thoroughly assessed by regulators and rejected by EPA and Health authorities.
- Emissions from WTE are dangerous. A New York State Department of Conservation Report (2011) compared emissions from WTE and equivalent coal plants and found that WTE produced 14 times the amount of mercury as a coal plant and more lead and cadmium than coal burning.
- Over 90% of the material that is burned could be recycled or composted ('9 Reasons to move away from Waste-to-Energy', Sara Muznik, Zero Waste Europe Blog 2018)
- Denmark's GHG emissions are twice as high as expected due to increased CO₂ emissions from WTE plants (Technical University Denmark Report (2010)).
- The EU Circular Economy Action Plan (January 2018) cites mixed waste WTE as no better than landfill.
- Due to operational and compliance costs, WTE is very expensive. UK gate fees for WTE plants range from \$130-\$260 per tonne of waste received (The Tipping Point, 12 April, MRA Consulting Group 2016)
- The Industry Committee of the European Parliament voted in 2017 to exclude renewable energy subsidies for incineration of mixed municipal waste.