

Energy from Waste Parliamentary Inquiry

Supplementary Questions on Notice

1. The EPA contracted EnriskS to evaluate the human health risk assessment provided as part of the proposed Energy from Waste Facility at Eastern Creek.

- **Is this standard practice or is this because the one provided by the proponent was insufficient?**
- **How much did this cost the EPA?**

Response: It is standard practice to require proponents of energy recovery facilities to undertake human health risks assessments. The EPA employs both its own internal expertise and third party experts to provide independent expert advice on proposed developments that could impact on human health.

In relation to the TNG proposal, both internal and external experts were engaged to ensure the proposal was adequately and robustly assessed.

The EPA and the Department of Planning and Environment (DPE) shared the costs of engaging EnRiskS for this proposal. Since 2014, the EPA has paid \$13,200 to EnRiskS in relation to this proposal and DPE have paid a further \$22,825, with the total amount for the TNG project to date being \$36,025.

2. Has the EPA modelled what the impact on recycling rates would be if a facility the size of the proposed Energy from Waste Facility at Eastern Creek was built?

Response: The *NSW Energy from Waste Policy Statement* provides a specific resource recovery criteria to ensure that only residuals that would otherwise end up in landfill are used as feedstock for energy recovery. This is to ensure that energy from waste operations in NSW do not compromise current and future recycling activities.

In the Environmental Impact Statement, the proponent provided insufficient data on the waste feedstocks proposed for the Energy from Waste Facility at Eastern Creek for the EPA to make a robust assessment on the impact of facility on recycling rates. In the EPA's submission the proponent was requested to provide detailed modelling of the waste available as feedstock for the proposed facility.

3. Would disposing of waste through waste to energy be cheaper than through a recycling operation?

Response: The waste levy is the main economic instrument used in NSW to ensure recycling is competitive against recycling.

Independent financial assessment of the potential impacts of energy from waste operations on resource recovery and recycling in NSW found that the impact of new energy from waste facilities would:

- pose no risk to current recycling activities such as material recovery facilities accepting household recyclables and commercial paper collection as these materials have far more value (or less negative value) than the gate fees possible from any waste to energy facility;
- likely increase the viability of future alternative recycling options for mixed waste streams (such as alternative waste treatment facilities (AWTs) and commercial and industrial processing facilities) where the residual from these operations is used for energy from waste;
- pose a significant risk to future alternative recycling options but only if the energy from waste facility accepted an unsorted, mixed waste stream, akin to a mass burn incinerator.

The above findings led to the development of the resource recovery criteria in the *NSW Energy from Waste Policy Statement* which requires the processing of mixed waste and use of residuals only for energy recovery.

4. The Total Environment Centre has said in their submission that mixed waste has high levels of contamination caused during collection and compaction. How would the community and the EPA know what was contained in mixed waste that was being burnt in a waste to energy facility and the contaminants that could be released when burnt?

Response:

It is acknowledged that mixed waste is heterogenous and variable over time. The *NSW Energy from Waste Policy Statement* is clear that any risks posed by this variability must be managed by employing best available techniques, particularly with respect to process design and emission control technology. In addition the *NSW Energy from Waste Policy Statement* requires facilities to:

- use technologies that are proven, well understood and capable of handling the expected variability and type of waste feed stock
- meet technical criteria such as combustion temperature and residence time which are based on the chlorine content of the waste and, as a minimum, the Group 6 air emission standards in the Protection of the Environment Operations (Clean Air) Regulation 2010; and
- demonstrate that facilities have in place procedures to identify and remove any hazardous wastes from their feedstocks.

These criteria ensure contaminants are either destroyed in the combustion chamber through the use of appropriate technology and minimum combustion parameters or removed with a high efficiency through the use of best practice control technology.

The EfW Policy also requires the proponent to demonstrate the performance of the proposed facility through reference to fully operational plants using the same technologies and treating like waste streams in other similar jurisdictions. The benchmarking provides valuable information confirming both the input contaminants and the air pollutants from a like process.

The proponent would also be required under the conditions of approval and/or licence conditions to undertake a proof of performance (PoP) program to demonstrate the performance of the facility. The POP program would require air emissions sampling and analysis of all pollutants of concern. Further, once a facility is operational the *Energy from Waste Policy Statement* requires continuous emissions monitoring of a range of pollutants to ensure ongoing performance and compliance.

5. What is the EPA doing to reduce waste being generated in the first place?

Response: The *NSW Waste Avoidance and Resource Recovery Strategy 2014–21* lists avoidance and reduction of waste generation as one of its key result areas. The target in this area aims to improve the efficient use of materials across the community and avoid generating unnecessary waste. The strategy retains an ambitious target to reduce the rate of waste generated in NSW per capita.

To achieve this, the NSW Government is investing more than \$802 million under *Waste Less Recycle More* to reduce waste and improve recovery across every waste stream.

The initiative includes the \$5 million Love Food Hate Waste program, which is educating households and businesses to reduce food waste by providing grant funding for councils and community organisations for education projects and engagement activities to raise awareness, skills and knowledge. The Organics Infrastructure (Large and Small) Grants provide funding for food donation infrastructure, like fridges, vans and freezers to rescue more surplus food before it becomes a waste to redistribute to people in need. The new \$2 million Food Donation Education program will support increased recovery/avoidance through education.

Since 2013, the EPA's food donation initiatives have resulted in 6,000 more tonnes of edible food no longer being wasted each year in NSW, instead being used to feed the needy.

The EPA's industrial ecology program Circulate is investing \$5 million facilitating the reuse of waste in the commercial and industrial and civil construction market sectors. This program aims to promote a circular economy for businesses creating synergies with recovered resources.

In addition to this, the waste levy in NSW sends a strong price signal to waste generators to avoid, reduce or reuse the waste they produce.

6. Would a 15km buffer zone from residential areas be something that the EPA would support?

Response: The EPA does not specify minimum distances for the location of industry from residential areas. Instead the proponent should choose an appropriate site for a project and undertake site specific assessments (air quality, noise etc.) to demonstrate a proposal is unlikely to result in adverse impacts. This approach results in the determination of a site specific 'buffer' for each proposal which adequately prevents against adverse impacts.

For air quality, a site specific assessment is conducted in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (2016). The site specific air quality assessment accounts for individual plant and operating processes, the local receiving environment and factors that influence the dispersion of emissions – such as local terrain and meteorology.

7. Does the EPA have an estimate for how much waste is being generated in NSW that could be recycled but is currently going to landfill?

Response: In line with the NSW EPA's Waste and Resource Recovery Strategy 2014-2021 waste targets, waste diverted from landfill is set at 75%.

Of the 16 million tonnes of waste generated across NSW in 2014-15, about six million tonnes ended up in landfill. The six million tonnes sent to landfill was made up of food waste, garden organics, plastics, timber, paper and cardboard, concrete, bricks and tiles, sand soil and rubble, metals, glass and other organics. To a smaller extent it also included textiles, plasterboard and E-waste. Many of these waste types are recyclable, however the ability to recover these resources depends on the way they are collected, contamination rates and available technologies.

To further understand the composition of waste going to landfill in NSW and how to achieve increased recycling rates, the EPA will be conducting an audit of Commercial and Industrial waste in 2017 with an audit of Construction and Demolition waste anticipated for 2018. A Waste and resource Recovery Infrastructure Strategy 2017-2021 has also been drafted for consultation later in 2017.