Submission No 144

INQUIRY INTO 'ENERGY FROM WASTE' TECHNOLOGY

Organisation: The Australian Council of Recycling

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Via email:
Portfoliocommittee6@parliament.nsw.gov.au

To whom it may concern,

The Australian Council of Recycling (ACOR) welcomes the opportunity to comment on the inquiry on Energy from Waste (EfW) technology.

ACOR is the peak national industry association representing a broad range of organisations within the resource recovery industry. We represent a diverse group of members, including local councils, public and private resource recovery and recyclers with different interests in the EfW technology. This submission reflects a brief consultation with ACOR members and possible areas of concern are specified below.

- **Waste hierarchy:**
  The waste hierarchy (Figure 1) is a set of priorities for the efficient use of resource:
  1. Avoidance: action to avoid & reduce the amount of wastes generated
  2. Resource Recovery: including reuse, recycling, reprocessing and energy recovery (e.g. EfW)
  3. Disposal: including management of all disposal options in the most environmentally responsible manner. Some types of waste such as hazardous waste or asbestos, cannot be safely recycled and disposal is the most appropriate management option.

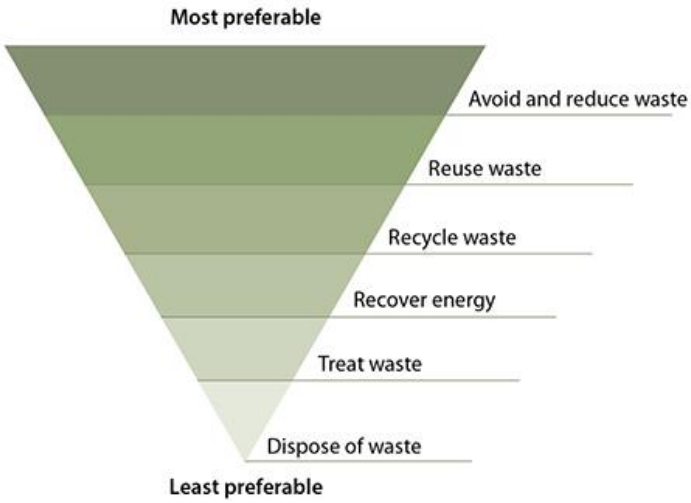

Figure 1. The waste hierarchy (NSW EPA)

- **Waste levies:**
  - According to the Protection of the Environment Operations Act 1997 (POEO Act), licensed waste facilities are required to pay a contribution of each tonne of waste received at the facility, referred to as the "waste levy".
  - Waste levy aims to reduce the amount of waste being landfilled and promote recycling and resource recovery.
  - Waste levies should be set at a level and applied in a way to embed a financial or commercial incentive for consumers and those disposing of end-of-life products and materials to divert resources to resource recovery as a first resort with landfill disposal as a last resort
  - ACOR advocates that levies should operate as a 'feebate' such that the levy (fee) imposed on wasteful resource disposal is applied as an incentive (rebate) for the benefit of resource recovery and recycling by commercially available means
  - ACOR believes waste levy should not apply to: (1). recycling residues which are inherently not capable of being recycled based on current best practice and (2). Hazardous materials such as asbestos and highly contaminated soils, which have no recyclable properties and should be properly disposed to landfill. Alternatively, some ACOR members believe that waste levy should apply to residual waste as it is an important aspect of the commercial drivers for EfW. It will stop any

future efforts being made on recycling residuals and doom these residuals to only be landfilled, because this is the cheapest alternative but it will not be the best outcome for the environment.

- ACOR supports a consistent approach to levy systems across all Australian jurisdictions

- **Role of Energy from waste (EfW) technology in addressing waste disposal needs and the resulting impact on the future of recycling industry**
  - The potential exists for 3% to 6% of our electricity needs could be met by energy from recovered materials. This potential resource (which is currently being wasted to landfill) can be recovered as energy by effective Policy on Energy from Non-standard Fuels
  - ACOR supports a policy which encourages the recovery of this resource, while avoiding unacceptable adverse impacts on the environment and community
  - ACOR believes the Policy should direct its focus to protection of the environment by reference to emission standards rather than by attempting detailed regulation of inputs. Industry should employ the most effective and economical strategies for EfW technology, with reference to the waste hierarchy.
  - ACOR is in opposition to mass burn/incineration of recyclable materials that can be recovered by viable technological and commercial means.
  - Landfill has served as the final disposal option for waste for most of human history. The challenge through the past 150 years and more recently over the past 30-40 years has been the changing nature of waste and in society and human behaviour, resulting in growing waste volumes and different types of waste for disposal.
- **Extended Producer Responsibility (EPR)**
  - In other jurisdictions with Energy from Waste as part of the waste management solution, Extended Producer Responsibility (EPR) is widespread.
  - Extended Producer Responsibility (EPR) is defined in the 2001 OECD Guidance as *"an environmental policy approach in which a producer's*

responsibility for a product is extended to the post-consumer stage of a product's life cycle".

- It adopts the Polluter Pays Principle (PPP), an environmental policy principle which requires that the costs of pollution be borne by those who cause it.
- And the Circular Economy concept, aiming to close materials loops and extend the lifespan of materials through longer use and the increased use of secondary raw materials, improving resource security.
- The following is an extract from a paper published on EPR, "The State of Play on Extended Producer Responsibility (EPR): Opportunities and Challenges - Global Forum on Environment: Promoting Sustainable Materials Management" 17-19 June 2014, Tokyo, Japan": *"(EPR) is increasingly recognised worldwide as an efficient waste management policy to help improve recycling and reduce landfilling of products and materials. The basic feature of EPR is that producers assume responsibility for managing the waste generated by their products put on the market. Since its first developments in the early 1990s, such schemes have contributed to significant increases in recycling rates and reductions of public spending on waste management in many countries. In addition, producers under an EPR scheme are incentivised to maximise the material benefits from their products throughout the value chain."*
- Today, most OECD countries and many emerging economies have EPR programmes and policies in place. Such programmes are also in the scoping stage in some developing countries in Asia, Africa and South America. Australia falls way behind other comparable countries in this respect, which is a lost opportunity.
- The introduction of Energy from Waste solutions prior to the introduction of such legislation creates a number of potential challenges;
    1) The loss of potentially recyclable and recoverable material back into a circular material economy and
    2) The incineration of wastes which have no energy value

3) The incineration of wastes of a hazardous nature with potential implications on emissions to atmosphere and in the residual disposal of incinerator bottom ash.

- In an Australian context, this would need to be applied at a Federal level. This provides the funding required to establish infrastructure to separate, collect and recycle various waste streams. EPR obligations may cover either specific products or a broader category of products or industries. Small consumer electronics appear to be the most prevalent product covered under EPR across the world. These are followed by large appliances, packaging (including plastics, beverage containers), tyres, end of life vehicles (ELV) and batteries with other products targeted by EPR including waste oil, paint, chemicals and fluorescent light bulbs.
- Policy makers in OECD and emerging economies are now implementing EPR policies as an efficient target-oriented environmental tool along with traditional instruments and regulations such as landfill taxes or emission standards for waste treatment facilities.
- Finally, where EPR has been introduced into countries where EfW is the disposal option for residual waste, such as in Japan, subsequent reductions in residual waste generation as a result of recycling through EPR has resulted in reductions of available waste to incinerate, leading Councils to adjust their recycling systems, collecting less, to ensure sufficient waste is available to feed the EfW plants.
- In conclusion, legislative drivers need to be introduced to get waste out of landfill into recycling, before the introduction of EfW, otherwise introducing EfW given it is price competitive against landfill in a high levy environment; will simply result in lost recycling opportunities.

- **Regulatory standards**
  - Appropriate emission standards, modelled on European standards, having regard to national and international practice for monitoring and auditing, should be applied to energy recovery & co-firing plants. Best practice and policy will provide for a strict and reliable monitoring of EfW plants.

- EfW facilities should be demonstrated through reference to other locally or internationally established plants using same technologies, and if possible, treat comparable waste streams on a similar scale.
- There is a wide range of materials disposed to landfill which have resource value, but unfortunately the regulation, cost benefit, incentives, public education and infrastructure to separate and reclaim these materials is not sufficient.
- This is a challenge for the industry and one which requires regulatory intervention to achieve better environmental outcomes. NSW and Australia more widely needs to look across the other OECD countries at best practice in environmental outcomes.

- **EfW plants**
  - Refuse derived fuels (RDF) may not be subjected to regulation of input specifications due to the high cost and complexity. Provided recyclables and hazardous waste are removed before fuel manufacture, any attempt to regulate the input specifications of these engineered fuels, whether from mixed sources or otherwise, may create unnecessary technical and legal complexity. Fuel should be designed to the specification of the customer to meet the technical requirement of the energy plant. The control of environmental impacts should principally be managed by regulation of emissions at the energy plant, which will in turn dictate the necessary quality of fuel sources.
  - Concerns have been raised that the above point will in fact cause recyclable materials to “drift” into EfW.
  - However, RDF specifications for fuel exist in a European context (EN 15359) and these are the specifications that are generally followed by suppliers into alternative fuel markets – i.e. cement kilns. These European standards measure and limit contaminates.

- **State and local government responsibility**
    - ACOR believes responsibility should be given to State Government in terms of environmental monitoring of EfW facilities.

- **EfW technology**:
    - ACOR strongly advocates that resource recovery and recycling facilities should be funded by waste levies.
    - ACOR advocates for streamlined planning for waste infrastructure, with a single master planned precinct approach with buffers and emissions standards
    - Opportunities to incorporate future advances in technology into any operating EfW facility will depend on the level of landfill levy. A higher levy rate can help fund EfW facilities with modern technology.

- **The risk of future monopolisation in markets:**
    - Policies should take a portfolio approach as several facilities will ultimately be constructed, resulting in newer and more efficient technologies that will emerge over time, i.e. a portfolio approach.

ACOR welcomes the opportunity to contribute to the inquiry and stands ready to appear before the enquiry as required.

Yours sincerely,

Grant Musgrove
Chief Executive Officer