Waste Management Association of Australia
Queensland Branch

C/- Dr David Moy
PO Box 394
SALISBURY QLD 4107
Mobile: 0411 871 460
email: davidmoy@optushome.com.au

Submission into Waste Generation & Resource Efficiency in Australia

The Chair,
Inquiry into Waste Generation
and Resource Efficiency,
Productivity Commission

Dear Sir/Madam,

The Waste Management Association of Australia (WMAA) is the pre-eminent industry / professional organisation representing the waste and resource recovery industry sectors in Australia. It includes among its membership national and international companies, small business, local government and individuals. The WMAA has Branches in every state and a national Divisional structure that incorporates Special Interest Groups from each state Branch. In additional to a strong technical knowledge base, the WMAA has an education and communication Division that is actively involved at all levels within industry, government and the wider community. It is therefore well placed to make a useful input to the Productivity Commission's deliberations.

The Queensland Branch of the Waste Management Association of Australia is pleased to be able to respond to the call by the Productivity Commission for submissions on Waste Generation and Resource Efficiency. This submission aims to complement and supplement – rather than replicate – submissions made by other State Branches and individual members. In this latter case, attention is drawn to the METTS submission that looks at the concept of Zero Waste in the context of the Waste Hierarchy as well as providing comment on the use of incineration as a tool for enhanced resource recovery and waste minimisation within Australia. It is noted that incineration has been looked on with disdain since the early 19990's. However, more recently, this view has been modified in many overseas countries. In particular, Germany now requires all waste to be volume reduced prior to land filling of residues. This occurs with maximum energy recovery and is a tool for waste minimisation of the landfill - a valuable community asset!

1. *The economic, environmental and social benefits and costs of optimal approaches for resource recovery and efficiency and waste management, taking into account different waste streams and waste related activities.*

   The late Professor Philip Jones, Foundation Chair, School of Environmental Engineering, Griffith University frequently made the point that '*there are only three environmental sinks – air, land and water. Furthermore, all human activities resulted in discharges or emissions to one of these sinks. All such emissions represent waste – including energy.*' It is important therefore that the PC takes account of all components of a waste stream over its full life cycle.

Frequently, a focus on solid waste ignores the fact that associated emissions to water and air are part of this waste stream – often arising during resource recovery or disposal.

In this context it is worth closely looking at carbon dioxide generation and recovery. Until recent years, carbon dioxide was seldom considered as an emission or waste. Only hazardous emissions were of note! Climate change has changed that. However, the potential economic benefits of recovery of carbon dioxide (and its associated water vapour) need to be objectively reassessed in the light of the economic and environmental costs of its continued release as part of the waste stream and as integral part of all waste management and resource recovery activity. Technology for cost-effective recovery of this secondary resource needs to be developed by our research organisations and industry. The PC could look closely at support for such research.

The Waste Hierarchy is widely adopted in Australia and overseas to address environmental issues associated with waste management. Divergence from application of the strict hierarchy is frequently permitted to take account of perceived social and economic issues. However, current processes frequently lack rigour and do not necessarily achieve good outcomes. There is a need to provide more objective evaluation tools if sustainable waste management processes are to be achieved.

While it is acknowledged that formal Life Cycle Analysis and Impact Assessment are data intensive and costly, there is a need for the development of improved Decision Support Tools that allow an objective assessment of all stages of waste management and resource recovery. In his PhD studies into a decision framework for the integrated management of organic wastes, Kijak (PhD Thesis, CQU, 2004) undertook a simplified, objective assessment of the impacts of varying the environmental, economic and social weighting on the 'preferred' (optimal) integrated waste management approach. It would appear to be of value to further develop such tools as an aid to all sectors choosing optimal waste management strategies.

One of the key points to be made is that 'optimal approaches' will not be the same across Australia or even within one region. There is a need for greater attention to be paid to differences between large and small urban communities and between different local government areas – even for a specific waste stream. If the Waste Hierarchy is applied, account needs to be taken also of economic and social factors. The same decisions are unlikely to arise for a major capital city as for a small country shire in a remote area of Australia.

Landfills are frequently subject to attack in Australia. However, it is often overlooked that the primary role of a landfill is to protect public health. As a community asset it therefore is on a similar level to a sewage treatment plant. The importance of this role for landfills will remain until all levels of government decide to identify, promote and fund alternatives to manage putrescible wastes – primarily derived from food wastes. To date only a few governments have moved beyond small trials of alternative putrescible waste management options – despite the valuable mineral, nutrient and organic content of such organic materials. Much needs to be done – particularly when the 2005 study into 'Sustainable Consumption' by The Australia Institute identified that approximately $5 billion of waste food was generated in Australia in 2004. Of this approximately $2.5 billion derived from fresh food. This work and its relevance to waste management were highlighted in the key note address of WASTE Q 2005 – the WMAA's Queensland Conference (Brisbane, 2005). The nexus between unsustainable consumption patterns and opportunities for resource recovery industry expansion needs to be further examined by the national and state governments. WMAA is currently funding a small further study during 2006.

2. *Institutional, regulatory and other factors which impede optimal resource efficiency and recovery, and optimal approaches to waste management, including barriers to the development of markets for recovered resources.*

WMAA (Qld) contributed extensively during recent years to a Queensland State Government (EPA and Industry Development Departments) promoted initiative to look at the preparation of an Industry Development Strategy for the Waste and Resource Recovery Industry in Queensland. While the study remains incomplete, some important aspects were identified.

A Manufacturers' working group clearly identified a problem with National Product Standards – generally developed and published by Standards Australia. There are well over 1000 such standards. They were written some years back and the (generally) prescriptive nature of the standards was based on industry and local government experience with products manufactured from virgin materials eg virgin plastics. Some standards, to achieve the essential strength, working life and reliability of a product prescribe, for example, the wall thickness of a pipe manufactured for a specific local government –controlled development. While the same strength and other parameters can be achieved with secondary resources, a greater wall thickness is required. This thickness however, does not achieve compliance with the relevant AS product standard. The market for pipe made from recovered plastic is therefore significantly reduced.

A need is identified therefore to fund a review of relevant product standards to ensure these do not limit the applications and markets fro products made from recovered materials. The task is significant and therefore needs financial support from Government.

A major barrier to market development for recovered materials lies in the (almost complete) absence of applied research into materials recovery and remanufacture within Australia's universities. This is complemented by an absence of applied research into the social and cultural factors that impede the uptake of products made from recovered materials. The problem is highlighted by the changes to regulatory definitions of 'waste' and 'secondary resources' to help remove the 'dirty second hand' image sometimes associated with recovered resources. While such definitional changes have proved useful in facilitating industry and product development, more multi-discipline research is necessary to further reduce social and regulatory barriers to market development.

Supply factors such as security, quantity, quality and timeliness for delivery are important factors in secondary resource recovery. There is a need to develop collaborative partnerships between industry sectors and local governments if supplies of secondary resources are to be optimal for industry / product development. While the WMAA is working to achieve such partnerships, government incentives should be considered as a key mechanism to enhance WMAA activities and achieve more sustainable resource recovery.

3. *The adequacy of current data on material flows and relevant economic activity, and how data might be more efficiently collected and used to progress optimal approaches for waste management and resource efficiency and recovery*.

Definitional variations between State regulations, Australian Standards and common use hamper the collection of reliable data on waste generation and recovered resources. The Australian Standard on Waste Terms and Definitions – despite being developed collaboratively by regulators and industry –is seldom followed or even recognised.

Similarly, the National Waste Classification is long overdue for review and revision. This is an essential prerequisite for improved data collection and reliability. The classification also

needs to better encompass secondary resources and have a focus such that data tabulated against the fields is useful to all sectors of waste and resource recovery and remanufacture planning for development.

The Australian Bureau of Statistics is probably the only organisation within Australia with the potential regulatory power to ensure reliable, comprehensive data is collected. Funding of any central data system is a key issue for Government and Industry.

4. *The impact of international trade and trade agreements on the level and disposal of waste in Australia.*

One of the key issues for the Waste Industry associated with international trade is the unattended 'import' of disease vectors, pathogens and unidentified toxic substances that are subsequently presented for recovery of disposal. There is too little reliable data currently available to WMAA as an association to assess the magnitude of the problem or its potential risk to the industry and Association members. It is however an issue that needs to be examined and discussed as an outcome of the Productivity Commission enquiry.

The WMAA expresses concern about the occasional reports of illegal dumping of toxic substances and other materials in oceans whose currents are likely to impact Australia's shores. In particular the deliberate release of solid wastes by shipping is of concern. Again the extent of the problem and the magnitude of associated risks are largely unknown.

5. *Strategies that could be adopted by government and industry to encourage optimal resource efficiency and recovery.*

Unfortunately time does not permit of an adequate response to this topic. However, members of the Queensland Branch of WMAA would be available to participate in the future development of such strategy development and planning to enhance resource recovery.

In considering the development of performance indicators, AS ISO 14031 Performance Evaluation standard should be considered as a framework. However, consideration should also be given to inclusion of 'changes in condition' indicators in any performance evaluation framework. In addition performance indicators should be developed that are common and relevant along the supply chain and allow the measurement and reporting of supply chain effectiveness as well as the performance of individual organisations. The PhD research of Jose Coelho (CQU, 2005) is relevant as a starting point for some of the factors that merit detailed consideration.

I trust that the above short submission will be of assistance in your deliberations. I and my member colleagues are available to participate in further discussions if this is of further assistance.

Yours faithfully,

Dr David Moy
for WMAA (Qld Branch)