AUSTRALIAN PRODUCTIVITY COMMISSION

Submission by ACT NOWaste - ACT Department of Urban Services

to the

Waste Generation and Resource Efficiency in Australia

Preamble

Thank you for the opportunity to provide input into the Productivity Commission Inquiry into waste generation and resource efficiency in Australia and future opportunities to attend hearings to input useful ideas and contribute to the critical and growing discussion on waste generation and resource efficiency.

Waste generation and resource management are critical to the present and future well-being of Australian society – socially, economically and environmentally. A comprehensive review, such as this Inquiry is providing a valuable mechanism to assess and understand the complexities of waste and assist with informed policy and program development into the future.

Our submission is based upon the extensive experience, expertise and knowledge gained from the operations of ACT NOWaste, the waste management section of the ACT Government located within the ACT Department of Urban Services.

1. ACT Background

In 1996 the ACT Government released the *No Waste by 2010 Waste Management Strategy for the ACT*. The strategy aims to achieve a waste free society with a focus on treating waste as a resource and maximising resource recovery while minimising waste to landfill.

Significant progress has been made to increase levels of resource recovery. Resource recovery in the ACT is at a record high being 73 per cent of the total waste generated. This has been achieved through progressive implementation of the 3 year action plans developed to guide progress towards the No Waste goal. The most recent action plan, *No Waste By 2010 - Turning Waste Into Resources – Action Plan 2004-2007* is enclosed for your information. ACT NOWaste is implementing an integrated approach to waste management. This involves a range of programs targeting specific waste sectors; the establishment of infrastructure and services; an emphasis on community engagement and education; and a range of supporting mechanisms such as waste pricing, market and business development, regulation and strategic policy.

While levels of resource recovery have steadily increased, overall waste consumption and generation rates is also increasing making it difficult to achieve substantial reductions in levels of waste disposal to landfill. See Attachment A for details.

2. Barriers to efficient management of waste generation and resource management

There is limited understanding within the general community of the issues involved in the waste collection, disposal, recycling and resource recovery industries. Most residents relate recycling to household kerbside recycling only and have little understanding of the broader areas required to achieve sustainable waste management. This results in fewer opportunities to recycle and re-use, and less efficient recycling regimes.

The Australia Institute's *Wasteful Consumption Report* supports claims that not only is waste generation at all time highs but wasteful consumption is of significant concern. That is, significant percentages of all goods purchased by Australians are not actually utilised or consumed and end up as waste. (The Australian Institute March 2005. *Wasteful Consumption in Australia*, Clive Hamilton, Richard Denniss, David Baker. Discussion Paper No 77.**)** It is expected this trend will significantly undermine the increased recycling effort undertaken by the government, community and business sectors in the ACT and nationally.

Community expectations migrate across boundaries, and one of the most difficult issues that ACT NOWaste deals with is the expectation that government will provide services for all waste removal regardless of cost. This arises from differing waste management approaches by municipalities across Australia to dealing with the more problematic domestic categories of waste likely to enter landfill such as green waste and domestic bulky goods. For example, many municipalities offer a separate green waste collection bin or kerbside domestic bulky goods/hard rubbish collections. These activities can increase the amount of waste entering landfill with a subsequent increase in environmental management costs.

The real costs of such services needs to be recognised by municipalities that undertake these services. There is a need for municipal organisations to be transparent to ratepayers and higher bodies of governance about the reasoning driving their waste management choices and the subsequent financial and environmental costs.

3. Social and economic benefits

There is little being done in the ACT, or across Australia, to address waste avoidance and excessively high levels of consumerism and wasteful consumption patterns. Waste agencies are struggling to tackle this issue and there appears to be little strategic action by all levels of government to discourage excessive consumption and address product design and life cycle issues.

The current consumer patterns appear to be a result of past social programming and we need to acknowledge where we are at now and to develop and implement strategies to encourage more sustainable consumption practices within the community. Significant support for cultural change towards using less, and more

thoughtful consumerism will be required to address this issue and should be the responsibility of both governments and industry to collaborate in this regard.

Fifty years of 'consumption' brainwashing need to be undone. The 1950s gave birth to a 'out with the old and in with the new' philosophy that in the late 1900s and early 2000s has grown into full blown consumerism – buying for the sake of buying. In the '50s, marketing consultant, Victor Lebow pushed for an increased focus on consumption for the post war US (Seymour and Giradet,1989. *Blueprint for a Green Planet*, Dorling and Kindersely, London):

> *Our enormously productive economy…demands that we make consumption a way of life, that we convert the buying and use of goods into rituals, that we seek our spiritual satisfaction… We need things consumed, burnt up, worn out, replaced and discarded at an ever growing rate…*

Except for recycling, a concept for which the public has developed a level of empathy, waste management is not 'sexy' and therefore requires considerable informed effort to develop a positive 'learning' profile at the community level. Consistent short and long term funding is essential for this to occur.

The recycling industry offers increased employment and new macro and micro business opportunities. In Canberra, the development of a materials recycling facility (MRF), the involvement of large contractors, small to medium contractors and medium to small recycling and value-adding re-use businesses all provide employment, in many cases for those who frequently find employment opportunities difficult to access. Up to 300 jobs associated with the re-use and recycling industries have been created in the ACT.

4. Technology

The correlation between technology and efficiencies is frequently not comparable or transferable internationally. The Australian context for use of technologies needs to be tailored for Australian circumstances as our relatively low disposal fees make many European and US technologies difficult to afford or implement in Australia.

A primary requirement should be the need to focus on minimising the amount of waste material prior to establishing Alternate Waste Technologies (AWTs). AWTs themselves should not be seen as **the** answer to efficient and effective waste management.

(a) Alternative Waste Management Technology

The purpose of Alternative Waste Management Technologies (AWT) is variable throughout the world, for example in Europe it is often used to stabilise waste prior to landfilling; provides solutions for composting garden wastes; provides a solution to extract recyclables from mixed waste; has a high percentage of residual waste generation that requires landfilling and is often based on technologies that are not considered appropriate in the Australian context (eg incineration).

AWT reliability is also questionable and its introduction into Australia has not been without significant problems. Many technologies have failed to perform and have not delivered on strategic objectives for waste diversion.

There are numerous hidden costs in AWT, including costs of failures and finding alternatives and long term sustainability along with increase risk exposure to the communities contracting such services.

Many stakeholders currently considering AWT's are under the impression that to progress waste minimisation the installation of an AWT will provide an off the shelf solution to achieve their goals. AWT's are often viewed as a "black box" with wastes in, resources out-problem solved. It is also worth noting that waste composition does vary from country to country and region to region as a result of economic, social, climatic and historical conditions etc and these factors have a significant impact on the role of AWT's. AWT's are definitely part of an integrated sustainable waste management solution but are by no means the only component to a successful strategy. The timing of the introduction of an AWT is also critical to ensure that a community is not paying a premium price for extraction and treatment of materials that would have been better dealt with by simpler, less expensive processes or technologies.

5. Optimal approaches and barriers to markets

Market development for recycled products is also critical to sustain an integrated approach to waste management. There is a need to systematically identify waste products that are suitable for processing and the subsequent products derived. Markets for these materials are critical to ensure that the fledgling resource recovery industry maintains stability and continues to grow and develop.

Current market needs should be identified and a gap analysis undertaken to highlight market development requirements or market shortfalls to ensure that waste-derived resources are utilised. For sustained resource recovery it is necessary to increase markets for recovered resources somewhat in line with increased levels of recovery.

It is also important to adopt a philosophy where the highest order resource value and use is sought for waste derived products, for example wood waste shouldn't be simply utilised as a fuel source for furnaces when it could have higher order uses in paper, cardboard, aesthetic chips/mulches; and crushed glass should not simply be used as an aggregate product when it when it can be utilised as an abrasive material or recycled into glass products.

While the need for market development within the Resource Recovery Industry is widely accepted, business development support is somewhat lacking, particularly from government agencies. Business development support for the resource recovery industry is critical to ensure that this fledgling industry is given appropriate assistance to establish, develop and continue to grow. Small local businesses are often filling a market gap where the larger corporations in the waste industry are not providing services. These smaller businesses are often innovative and progressive, however many lack the appropriate business establishment skills to succeed. There is definitely a role for governments to assist in this industry's development and an

acknowledgement of the important and significant benefits in jobs creation and positive economic impacts related to this industry's growth and expansion. The replacement of a waste disposal industry with a resource recovery industry will result in significant employment growth opportunities in this sector.

The true cost of waste to landfill needs to be better examined, commonly understood and integrated into policy decisions in an effort to allow resource recovery industry development. If waste to landfill remains the cheapest option then the resource recovery industry cannot compete and waste will continue to be sent to landfill. It is time that all impacts of landfilling such as green house effect; resource loss; loss of opportunity; environmental impacts; the full operational, contractual, administrative and post closure costs are acknowledged and duly considered in policy and strategy decisions.

The concept of waste generators being responsible for the waste they generate in a user pays model needs to be promoted and more widely accepted by the broader community. For example in the water and electricity sectors consumers are accepting of the fact that if they consume the resources they must pay for the quantity they have utilised. However in the waste sector residents are still struggling to understand that waste disposal isn't free. They believe it is simply a municipal service where waste is disposed of to landfill or to recycling and should be free.

Waste minimisation strategies should consider the cost impost implications on the community. For example, standard recycling costs $40-50 per tonne plus collection costs; processing mixed construction and demolition and/or commercial and industrial waste costs around $40-70 per tonne plus collection; and a waste treatment plant (focusing on organic based wastes) costs around $80-110 per tonne plus transport costs. The treatment plant can also be geared to deal with standard recyclables but this would attract a significant cost impost that is unnecessary if this material were simply diverted into a recycling stream.

It is problematic to assume that industry based take-back schemes will address resource recovery. It is far more pragmatic and practical for those already developing waste infrastructure and services to establish such systems. Industry should be required to assist in funding such schemes. A good example is computer reuse and recycling. Computer reuse is established with many companies and NGOs repairing/refurbishing computers and reselling them. Computer recycling remains a much more difficult proposition because it is costly. Currently in the ACT computers and monitors are recycled in a scheme that charges waste generators to dispose of the product. This waste generator based funding is utilised to fund computer recycling. Revenue collected falls significantly short due to a reluctance of waste generators to pay for the waste they generate and the impact of computers dumped at charity bins. If a recovery and recycling fee was charged and set aside at the point of sale of the item and this funding made accessible by local authorities who are generally at the coal face of recovering material then initiatives such as these would become much more reliable and widespread. There is a range of waste materials that would easily fit this approach such as electronic equipment, computers, tyres, etc

There is recent evidence to support the claim that there are significant stocks of electronic waste (computers, monitors, printers, faxes, TV's etc) in households. Much

of this material is expected to be disposed of over the next five years, creating significant issues for waste disposal given the nature and composition of this material. Impacts on leachate quality from electronic wastes containing a range of heavy metals and chemicals is little understood, and as such the precautionary approach should be applied with this material kept out of landfill.

Local authorities are often responsible for municipal solid waste with State /Territory agencies being responsible for household hazardous waste. Collection programs for this material are somewhat limited and much of this material continues to be disposed of through household disposal to landfill. While there has been considerable effort involved in reducing waste to landfill, there has been little genuine focus on reducing toxicity levels of materials being disposed of to landfill. Better co-ordinated, promoted and effective programs need to be developed to address this issue. For example, regular household hazardous waste collections and possibly permanent drop off facilities could be established.

Little research and development has been undertaken in the waste industry. There is a need for R&D programs in the areas of waste compositions, products derived from wastes and waste solutions. Perhaps a Commonwealth funded grants programs related to innovative resource recover programs could be established.

6. Efficient data collection and use to optimise approaches for waste

Waste audits are costly in terms of waste to landfill composition audits. There is little data sharing and data is often inconsistent, mostly because there are no common standards established for waste auditing methodologies, data collection and presentation.

National performance indicators for waste minimisation, management and resource recovery should be established and reported on by Local, State and Territory Governments. Standardised data collection and reporting would allow bench marking and progress reports on Commonwealth established targets and goals for sustainable waste management.

7. Institutional and regulatory factors that influence or impede optimal resource efficiency and recovery

There is a need to develop viable legislation, policies and/or models that level the playing field for environmentally friendly products against products that out perform on a purely financial basis. Environmental factors remain un-costed and thus in a society driven by a dominant economic paradigm, the true, ‘whole’ picture of costs (triple bottom line) are not considered.

Procurement practices continue to be price based and attempts to utilise “value for money” principles that integrate environmental criteria have had little impact on changing procurement outcomes. While much work has gone into sustainable procurement initiatives they are yet to become mainstream or effective.

With the business sector generating above 40 per cent of the ACT’s waste there is a clear market failure in the take up of recycling services and subsequent waste

diversion of standard recyclables such as paper, cardboard and other recyclables.. Governments are asking the waste transport companies to reduce garbage collection services and hence revenue and transition to the provision of recycling based services. It is assumed that waste companies would simply change their approach from waste collection and transport to landfill, to recycling collection and transport to a suitable destination eg a MRF/C&D processing facility based on rising waste to landfill charges. Anecdotal evidence suggests that the waste industry is maintaining waste services with clientele and adding on recycling services, which results in an overall higher net services cost. This is problematic and gives rise claims from businesses that recycling costs them more.

To succeed in efficient waste management, businesses must understand they control their waste and recycling services and that they must down size and reduce the frequency of waste services and take up recycling services to divert materials. In the ACT, waste to landfill prices have risen from $55 per tonne in 03/04 to $77 per tonne in 05/06 and it appears that this has had only minimal impact on businesses taking up recycling services that are readily available. This is somewhat surprising given that significant cost savings are possible for many businesses.

The intention of raising waste costs is not to have businesses pay higher disposal prices but rather to drive them into taking up recycling services as the cheaper alternative. If waste to landfill disposal remained the cheapest option recycling and the resource recovery industry would struggle to develop. In fact rising waste to landfill prices are essential to enable the development of the recycling and resource recovery industry.

In the ACT, resource recovery businesses are being established as they realise that they can process waste materials at a cost that sits under the waste to landfill charge**.** If waste pricing as a mechanism to “kick start” businesses into recycling fails, then regulations may need to be developed. This is not without its complications, particularly in monitoring and enforcement of recycling practices.

ATTACHMENT A

Table 1. Waste to ACT landfills (tonnes)

Waste type	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Commercial and industrial	69 032	69 958	70 727	** 73 326	*** 78 298	**** 63 315	62 787	75 436	88 041	86 966	77 069
Building and Demolition	70 597	66 358	58 249	50 469	63 743	741 18	70 345	52 400	27 358	32 338	29 735
Clean fill	4 361	3 406	2 499	696	461	1506	255	639	119	11	2
Garden waste	8 074	7 745	6 587	5 962	4 422	7417	3 847	6 738	5 182	2 998	3 469
Tyres	468	551	711	161	235	880	1 015	1 619	1 780	1 382	1 328
Asbestos	679	831	942	484	809	699	742	623	865	1 395	1 134
Special waste (contaminated soil, ash, sullage etc.)	5135	3682	3521	*12240	4645	4023	4494	1346	1 779	1130	3 053
Private delivery	64 640	51 072	44 050	43 041	45 497	49 542	22 072	22 339	21 568	22 833	28 709

ACT household collected	39 588	39 668	41 671	44 515	45 026	48 407	51 145	51 472	52 604	51 316	52 109
Queanbeyan household collected	9 481	8 789	9 025	8 832	9 550	9176	7 523	7 715	7 771	8 020	7 788
TOTAL	**272 054**	**252 068**	**237 981**	**239 726**	**252 686**	**259084**	**224 225**	**220 328**	**207 067**	**208390**	**204 396**
Disposal of Bushfire damaged material for 2002-03 (not included in above total)									*154,741*		
Grand Total									***361,808***		

* Includes contaminated soil from sheep dip sites clean up (9 735 tonnes)

** Includes deliveries of metal floc from Sydney (6 095 tonnes)

*** Includes deliveries of metal floc from Sydney (9 197 tonnes)

**** Includes deliveries of metal floc from Sydney (5 438 tonnes)

Table 2. ACT Recycling / Resource Recovery Results (tonnes)

Product	1994-95	1995-96#	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Glass	7 100	7 795	7 756	7 180	7093	7442	8224	8347	7856	6872	10 195
Paper/Cardboard	31 500	37 124	37 466	39 249	41974	39727	37147	42257	44560	42624	46 923
Rigid Plastics (PET, HDPE, PVC)	580	868	865	1281	1265	1167	1286	1462	1407	1395	1 373
Liquid-paperboard	240	251	229	187	*175	160	98	67	80	31	Included in paper
Aluminium	280	200	189	180	180	135	106	104	205	418	811
Steel cans	500	826	877	789	798	728	734	746	673	753	775
Garden/Compost	35 500	65 190	85 640	79 056	107848	117592	130446	132983	163379	181639	197 748
Demolition	48 400	55 389	82 848	88 873	154241	*156774	156606	188191	222760	232507	241 956
Metals ferrous	4 700	5 541	5 514	3 536	3350	4537	4782	7463	11021	17689	20 464
Cooking oil and fat	600	754	687	360	535	595	601	629	879	725	850
Clothing	1 850	1 585	1 181	2 145	2473	2819	2780	3185	3810	4580	4 238
Salvage & Reuse	3 920	7 000	4 451	5 086	6459	6970	6173	6995	2610	4445	7 259
Motor oil	1 400	1 935	2 669	2 415	3172	2169	3190	4069	2546	3014	1 747
****Other**					1325	1083	2606	2470	4820	7748	20 597

TOTAL	**136 570**	**184 458**	**230 372**	*** 230 337**	***330888**	***341898**	**354779**	**398967**	**466604**	**504440**	**554 936**

\# 1995/96 results have been revised from earlier published data based on ACT Waste Inventory study results

* Revised from previous published data

** Includes Animal Wastes, Film Plastics, Sullage, Batteries, Paint, Timber and Tyres

Waste data derived from landfill database. Recycling compiled from data provided by ACT Resource Recovery industries. Not all recycling data is received and care should be taken with use and interpretation of results.