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Mr Phillip Weikhardt
Presiding Commissioner
Inquiry into Waste Generation and Resource Efficiency in Australia
Productivity Commission
LB2 Collins St East
Melbourne Vic 8003

Dear Commissioner Weikhardt,

Thank you for the opportunity to comment on the Productivity Commission draft report 'Waste Management'. The Waste Management Association of Australia (the Association) NSW Branch has been following the progress of this Inquiry with great interest. Association members span the breadth of the waste management and resource recovery industry. The Association thus has the depth of experience and expertise to offer comment on the 'Waste Management' draft report.

WMAA NSW Branch would agree with the Commission that if society is to have landfill facilities, then they should be 'best practice' engineered landfills operated under strict regulation in order to minimise the risk of damage to the environment. There would also be agreement that the 'best' waste management or resource recovery outcome is one where 'net social benefits are maximised (or net costs minimised)'. Where disagreement would start to appear with most Association members is with the Commission's approach to accounting for risk, externalities, upstream benefits and benefits of landfill avoidance.

The NSW Branch considers that by using assumed low risk of impact to reduce potentially large environmental externalities to low levels, the Commission has minimised the real societal values associated with decreased pollution, lower natural resource depletion, and less disruption to eco-system services. It also appears as if the Commission has given little weight to a community willingness to pay for resource recovery that leads to improved environmental outcomes.

It is also not clear that the Commission is justified in equating resource efficiency with economic efficiency ('meaning that the returns to all resources, not just raw materials, should be maximised'). Resource efficiency is very different to economic efficiency and the two terms cannot be used interchangeably. The NSW Branch recommends that the Commission re-examine issues related to resource efficiency as per OECD 'Total Material Requirement' indicators, taking into account the fact that once a material is disposed of to landfill it has limited additional resource productivity, other than to generate bio-gas, while recycling plays a vital role in improving resource efficiency.

The Commission recommendations are also contrary to current community expectations and to standard messages in water and energy sectors. The message of 'save water, save energy' is commonly linked to sustainability. The waste message of the last fifteen years has been to reduce, reuse and recycle and has broadly been accepted by community members. The Commission appears to have discounted community concerns, and the real private costs that new landfill facilities would face have also been discounted in cost comparisons with alternatives.

The final report would be greatly enhanced if it included forecasting, modelling and consideration of the impacts of the Draft Recommendations on the waste management and resource recovery industry as it currently stands. WMAA recommends that the final report include further modelling on these issues.

The NSW Branch's initial assessment of such impacts are presented in this response to the Draft Report.

The purpose of this analysis is to firstly alert the Commission of the need for this type of assessment to accompany recommendations in order to validate the goal of improving 'economic, environmental and social outcomes' (as per the original terms of reference), and secondly, to provide a starting point for the debate on likely impacts.

In summary the possible impact of the draft recommendations on waste management and resource recovery industries could include:

- the loss of 7.6 million tonnes of recycled materials,
- $400 million in commodity sales,
- 5,630 jobs, and
- $191 million in landfill levy funds,

in addition to requiring additional water and energy resources to process replacement primary resources.

WMAA recommends the Commission document in the final report its predictions in relation to the flow on effects of the recommended policy settings.

The WMAA has outlined its agreement with some of the specific recommendations of the draft report, but has concerns about the flow on impacts of suggested dismantling of the existing waste management policy framework.

It is hoped that the Commission will use this feedback on the Draft Report to shape a suite of final recommendations that will improve 'economic, environmental and social outcomes' for Australia.

Yours faithfully,

Mike Ritchie

President

NSW Branch

Waste Management Association of Australia

NSW Branch Waste Management Association of Australia

Comments on Productivity Commission Draft Report 'Waste Management'

NSW Branch Waste Management Association of Australia – Overview of Position

The NSW Branch submission to the Productivity Commission Inquiry into Waste Generation and Resource Efficiency (submission #1) outlined the Branch's position to a number of key points identified under the Inquiry's terms of reference. In general the NSW Branch:

- supports the use of the waste hierarchy to direct policy whilst recognising the benefit of a broader set of social, environmental and economic principles being introduced
- supports full cost benefit analysis in determining public policy options
- recognises the legitimacy of resource recovery and waste minimisation as public policy statements by Federal, State and local governments
- recognises that waste recycling and treatment leads to lower greenhouse gas production
- supports the use of landfill regulation to raise operating standards of current landfills (excluding those which have already achieved "best practice", defined below)
- supports stronger controls on the environmental effects of untreated putrescible waste to those landfills which are only achieving minimum standards or none at all
- recognises the value of MBIs in delivering better resource recovery outcomes
- supports the conclusion that well run landfills are relatively benign as regards the immediate environment
- believes that most landfills do not conform to the PC minimum guidelines and certainly do not incorporate gas capture (refer comments on best practice below)
- identifies the need for data to support strategic development of recycling schemes
- recognises a need to remove barriers to the export of recyclables
- supports current NSW state policy on waste avoidance and resource recovery, albeit acknowledging some significant deficiencies in the framework (particularly in relation to facilitating, planning and approving new infrastructure).

It appears that the Commission needs to give more consideration to the input from stakeholders and some conclusions are not supported by current community expectations and run counter to the broad thrust of current state, national and international policy, particularly in relation to the issues of waste minimisation, targets and policy settings.

Specific comment on draft recommendations is offered below, followed by a preliminary assessment of potential impacts arising from the draft recommendations relating to the waste hierarchy, use of targets in policy settings and discontinued use of landfill levies.

Productivity Commission Draft Recommendations

The NSW Branch of the Waste Management Association of Australia has assessed the key draft recommendations provided in 'Waste Management' report, and provides the following brief observations a supplement to the preceding discussion.

Draft Recommendation 7.1

> ***Governments should not allow the priorities suggested by the waste hierarchy to override sound policy evaluation principles based on a net social benefits approach. All of the costs and benefits of alternative waste management options should be carefully evaluated.***

- yes all costs and benefits should be evaluated, however within the context of resource efficiency, sustainability and accounting for the non-monetised value of recycling.
- although it is not exhaustive, NSW Branch supports the use of the waste hierarchy as a broad policy tool.

Draft Recommendation 7.2

> ***Governments should not directly or indirectly impose waste minimisation and recycling targets as part of waste management policy.***

- targets are a useful means to ensure desired outcomes are delivered
- targets for recycling are well in line with community expectations
- targets are also useful for informing the waste management and resource recovery industries of upcoming changes to waste management practice
- targets are a legitimate statement of public policy intent by government
- perhaps the Commission could recommend a series of new targets or sustainability "score cards" to enhance or even replace the waste tonnage targets

Draft Recommendation 8.1

> ***Governments and retailers should not proceed with their foreshadowed plan to eliminate plastic shopping bags by the end of 2008 unless it is supported by transparent cost–benefit analysis. The analysis should clarify the problems that the ban would seek to address, the response of the community to a ban, and whether or not alternatives — such as tougher anti-litter laws and means for encouraging greater community participation in controlling litter — would achieve better outcomes for the community.***

- NSW Branch supports tougher anti litter and illegal dumping laws
- agree that plastic bags may not be the biggest waste problem, but supports the principle of EPR
- recognises that all EPR schemes should be subject to rigorous cost benefit analyses.

Draft Recommendation 8.2

> ***Greenhouse gas externalities should only be addressed within a broad national response to greenhouse gas abatement, not through landfill regulation or levies.***

- international experience of best practice landfill is that it includes gas management (capture for energy) systems
- a lack of action on a national greenhouse gas level should not be reason for the waste management industry not to address greenhouse emissions
- both regulation and levies have a part to play in managing landfill greenhouse gas externalities and improving the performance of existing landfills. Modern landfills can capture significantly higher greenhouse gas emissions and the WMAA supports tougher regulation to make this happen.

Draft Recommendation 8.3

Australian Governments should increase the level of public awareness about the costs and benefits of different waste disposal options, including the capture of energy from waste.

- agree that community should be better informed regarding the costs and benefits of different disposal options
- it is generally true that all other options are more expensive than disposal to landfill particularly while the costs of externalities, resource depletion and greenhouse gas emissions are discounted.

Draft Recommendation 9.1

Governments should discontinue the current practice of using landfill levies since:

pursuing objectives, such as arbitrary landfill diversion targets and revenue generation, to fund waste policies, will lead to inefficient outcomes;

the external costs of disposal of a modern, fully-compliant landfill are believed to be small, and levies are a poor instrument for directly targeting those externalities; and

the objective of reducing greenhouse gas externalities should be addressed within a broad national response to greenhouse gas abatement, not through landfill regulation or levies.

- The WMAA NSW has supported levies as a legitimate mechanism of public policy, however, we argue strongly for maximum levels of hypothecation
- hypothecation of landfill levies in some jurisdictions has built some recycling infrastructure, but the WMAA would strongly encourage increased 'ring-fencing' to construct new infrastructure
- Levies are useful in preserving current landfill space and in encouraging the development of other technologies
- The WMAA would support the introduction on an MBI such as the UK cap and trade scheme (LATS) to take some emphasis away from the levy
- NSW Branch would support the development of differentiated levies to more accurately reflect environmental performance and externalities, where these can be efficiently and effectively implemented
- the Commission's conclusion on landfill externalities is regarded as conservative by the WMAA and the PC might recommend further investigation on this matter. The NSW Branch believes that the treatment and evaluation of the costs of externalities and the potential impacts of greenhouse gas emissions needs more serious treatment in the final report.
- The Commission would recognise that most landfills (estimated at >80%) are not "modern, fully compliant" with most landfills failing to meet the minimum standards specified in the draft report.

- The BDA report 2003 reports that a survey of MSW landfills in metropolitan areas of Perth, Adelaide, Melbourne and Brisbane was undertaken in 1997. The key results relating to environmental management of these metropolitan landfills were:

    - only one third of the landfills were lined
    - only half had landfill gas management
    - only two thirds had leachate treatment systems

  For example the NSW EPA Compliance Performance Report for Rural Waste Landfill Facilities 2002 found significant operational failings and associated impacts upon the environment.

  In fact of the 30 landfills audited 24 had inadequate gas controls and 22 had inadequate leachate controls. Put another way 75% had inadequate gas control and 66% had inadequate leachate control.

  These figures are currently being updated via the WMAA landfill audit.

- A best practice putrescible landfill would incorporate the following characteristics:

    - Gas capture efficiency of greater than 70%
    - Demonstrated rapid stabilisation of emplaced putrescible material
    - Fully engineered leachate collection and management system (eg herring bone collection pipework at cell base)
    - Fully engineered liner system (eg demonstrate adherence to EPA guidelines k = 10-9 or double lined)
    - Significant landfill buffer zone
    - Demonstrated host community engagement.

- All of these would apply to non-putrescible landfills other than the magnitude and efficiency of gas capture.

- The WMAA supports the recommendation to improve the performance of landfills through regulatory intervention to encourage operators to achieve landfill "best practice".

- If the landfill levy were being used solely to capture externalities then there is an argument for a differentiated levy, with lower levies for high performance, best practice landfills. Clearly, the costs of achieving best practice are significantly higher than meeting the minimum standards. As such, best practice facilities designed to receive residual class 1 with a high degree of environmental assurance, could be given consideration in the application of the levy. Issues of administrative efficiency and effectiveness would need to be considered by the Government.

Draft Recommendation 10.1

The terms of reference for the scheduled 2008 review of the National Packaging Covenant should be expanded beyond an assessment of effectiveness. An independent review should consider all relevant evidence about whether the Covenant (and supporting regulation) delivers a net benefit to the community.

- agree. The scheduled 2008 review is an appropriate time to measure effectiveness.

Draft Recommendation 10.2

Product stewardship schemes for computers, televisions and tyres should not be introduced without robust evidence that:

- ***there would be a net benefit for the community***
- ***other policy options would not deliver a greater net benefit.***

This is particularly the case if a mandatory approach - involving either industry-government co-regulation or government regulation- is being contemplated.

- agree. There needs to be a net benefit of these schemes
- there are many cases of voluntary stewardship schemes that have delivered good recycling outcomes. For example newspaper publishing and newsprint manufacturing industry.

Draft Recommendation 12.1

State and Territory Governments should ensure that all local government operated landfills comply with all relevant licence conditions and charge users the full costs of waste disposal.

- NSW Branch agrees with this recommendation.
- All landfill operators whether public or private should operate to a set of minimum environmental standards and have incentives to move toward "best practice". Failure to achieve a uniform minimum operating standard distorts the market in favour of the poor operators with lower costs.

Draft Recommendation 12.2

State and Territory Governments should consider shifting the responsibility for waste management in large urban centres from local government to appropriately constituted regional bodies.

- this recommendation has broad support within the NSW Branch.

Draft Recommendation 12.3

State and territory environmental regulators should undertake a review of those regulatory requirements that lead to the unnecessary regulation of byproduct materials where it can be demonstrated that the materials can be safely reused or recycled.

- NSW Branch agrees with this recommendation.

Draft Recommendation 12.4

Governments responsible for specifying the use of materials for products, including building and construction, should review all product standards that frustrate the use of recycled products and/or call for the use of virgin materials, with a view to replacing them with performance-based equivalents where this is feasible.

- NSW Branch agrees with this recommendation.

Draft Recommendation 13.1

The Environment Protection and Heritage Council should coordinate the development of a concise, nationally consistent, data set for waste management that would facilitate evaluation and comparison of waste management policies across jurisdictions. It should have regard to data collection practices already in use.

- NSW Branch agrees with this recommendation

- however would add that the data collection should explicitly collect the requisite information to address resource efficiency as outlined by OECD.

Draft Recommendation 13.2

Government-funded data collection on waste management should focus only on the data needed to address important policy issues such as those identified in this report.

- NSW Branch agrees and recommends that the Commission make recommendations on the need for specific research and data for:
  1) the valuation of externalities
  2) quantifying existing impacts of landfill operations nationwide (distinguishing the different levels of performance in current landfill operations)
  3) comprehensive regulatory audits of current waste processing facilities
  4) detailed assessment of the impacts of recommended policy settings on the existing industry.

Likely Impact on the Waste Management and Resource Recovery Industries

There appears to be discrepancies between the draft report 'Waste Management' and the original terms of reference relating to waste generation and resource efficiency. One of the important shortcomings of the draft report is that it does not articulate how the implementation of draft recommendations will result in a situation where 'resource efficiencies can be optimised to improve economic, environmental and social outcomes'.

The assessment below is based on WMAA's interpretation of the PC recommendations as they relate to the removal of levies, withdrawal of targets, movement away from the waste hierarchy, fewer EPR schemes and a 'hands-off' or laissez faire approach to the operation of the market (particular the markets decision to extract or not extract materials from the waste stream).

In particular the predictions are based on the WMAA's interpretation of the following report recommendations:

- Draft Recommendation 7.1 - priorities suggested by the waste hierarchy should not override sound policy evaluation principles based on a net social benefits approach
- Draft Recommendation 7.2 - Governments should not directly or indirectly impose waste minimisation and recycling targets as part of waste management policy
- Draft Recommendation 8.2 - Greenhouse gas externalities should only be addressed within a broad national response to greenhouse gas abatement, not through landfill regulation or levies.
- Draft Recommendation 9.1 - Governments should discontinue the current practice of using landfill levies.

The Commission has rightly recommended that the true cost of externalities be factored into the cost of landfill. (The Commission discounts the value of resource depletion to nil and posits the management of greenhouse gas emissions with other arms of government). Once that is done the Commission suggests thereafter that the market is the most efficient determiner of residual commodity value and consequently the decision to extract or not extract materials from the waste stream. This laissez faire approach will have a significant effect on the existing resource recovery industry.

Table 1 overleaf provides a summary of Australia's current waste generation, disposal and recycling rates. The summary has been based on 'Waste and Recycling in Australia' (Hyder Consulting 2006), which

formed Attachment A to the Department of the Environment and Heritage Inquiry submission (#103). Material composition estimates have been created by averaging NSW and Victorian data.

It is noted that the Commission has also adopted these data as the national benchmark for waste generation in its Draft Report. Commodity value estimates have been provided by a number of sources, including NSW Branch members and work by Hyder consulting commissioned by ACOR (Inquiry submission #40).

Table 1: Summary of Australia's current waste generation, recycling and disposal performance (nearest 10,000 tonnes)

Material Type	Total Tonnes Generated	Total Tonnes Recycled	Total Tonnes Disposed	Commodity Value ($/tn)	Commodity Value
Paper & Cardboard	5,000,000	2,310,000	2,690,000	$70	$161,700,000
Glass	870,000	370,000	500,000	$72	$26,640,000
Adjusted Non-Ferrous	230,000	100,000	130,000	$1,500	$150,000,000
Ferrous	3,670,000	2,790,000	880,000	$75	$209,250,000
Plastic	1,690,000	190,000	1,500,000	$300	$57,000,000
Garden Organics	3,800,000	1,550,000	2,250,000	$20	$31,000,000
Food and other organics	3,200,000	310,000	2,890,000	$20	$6,200,000
Wood/Timber	2,070,000	440,000	1,630,000	$20	$8,800,000
Soil/Rubble and Other Clean Excavated Material	3,840,000	1,390,000	2,450,000	$15	$20,850,000
Concrete, bricks and asphalt	6,780,000	4,810,000	1,970,000	$15	$72,150,000
Other recyclables (inc Textiles)	980,000	700,000	280,000	$10	$7,000,000
Other (waste)	250,000	-	250,000	-	$-
Totals	32,380,000	14,960,000	17,420,000		$750,590,000

(Note that non-ferrous has been estimated on the basis of 0.7% of total waste generation)[1]

The above table identifies that current recycling in Australia creates over $750 million of commodity sales by recycling nearly 15 million tonnes of material.

The Commission estimated the average total private cost of landfill as being $122 per tonne, compared to $130-$145 for kerbside recycling and waste to landfill, and $155-$209 for kerbside recycling and waste to an alternative waste treatment (AWT) facility (p80).

On this cost basis it is reasonable to expect that over time AWT and kerbside recycling would be severely curtailed and gradually replaced with a single wheelie-bin sent to landfill. It will generally only be those recycling activities able to compete with landfill gate fees (ranging from $16 to $57 per tonne (PC draft report p.64)) that will continue to be viable, depending on the location of the landfill and its cost base.

The application of a landfill levy to account for externalities would have some moderating effect, though given the low average cost of landfill in Australia, relatively few of the major recycling activities would be viable and virtually none in regional and rural areas would be able to compete.

The potential effects on recycling and waste tonnages in Australia, are summarised in Appendix 1.

On the basis of the analysis in Appendix 1, WMAA has conservatively estimated that half of the current recycling materials would be lost, reducing recycling in Australia to 7.4 million tonnes. This equates to a recycling rate of 23%, down from the current rate of 46%, with disposal likely to account for approximately 25 million tonnes of materials.

The loss of half the recycled material would seem to a conservative estimate given that most recycling streams are currently either supported by existing policies in some form or carried out because of a regulatory requirement.

[1] Nolan ITU, 2004, 'Global Renewables National Benefits of Implementation of UR-3R Process® - A Triple Bottom Line Assessment', Global Renewables Limited, Sydney.

The flow on effects of this material going to landfill is expected to involve an associated loss of approximately $400 million of commodity sales.

One of the biggest potential impacts of cutting the recycling sector in half would be the accompanying loss of jobs. ABS data identifies that 'Waste Management Services' employed 14,500 people in 02/03.[2] The Australian Council of Recyclers estimates that recycling jobs are in the order of 1 direct full time job for every 2,200 tonnes of recycled material.[3] On this basis the loss of 7,590,000 tonnes of recycling correlates to a loss of 3,450 jobs.

However, it is not only in the direct processing of recycling materials that losses may be experienced. There are also several attendant service industries, such as those involved with kerbside recycling. For example the National Environment Protection Council identifies that approximately $338 million is paid for kerbside collection,[4] including collection costs and gate fees to Material Recovery Facilities for processing. This represents another loss of income to waste management and resource recovery industries, carrying with it a loss of 720 collection jobs and 70 supervisory roles.[5] It is thought that there would at least be that number again for C&I and C&D special purpose recycling, creating an additional loss of 770 jobs. This does not include other ancillary jobs, such as those associated with local government waste education (estimated at 600 jobs).

The anticipated job losses from implementing Commission recommendations are thus estimated to be 5,630 full time positions, which represents over one third of the existing waste management and resource recovery sector. The multiplier effect of the loss of revenue from recycled material sales and lost jobs would appear to comprise a significant loss to the Australian economy.

There are additional product quality impacts likely to arise from reduced volumes of recycling in Australia. For example, recycled content newsprint has better technical properties for printing, allow for finer surfaces and better print detail. Furthermore the energy usage to make recycled fibre newsprint pulp is one sixth that used to make pulp from wood.[6]

The probable reduction in recycling as a result of implementing Commission recommendations would thus have additional flow on impacts such as increased energy usage for processing primary materials, in addition to lower quality products, where that additional value add is no longer provided by recycled materials.

A final area of impact to consider is the accompanying loss of government revenue from removing landfill levies. It is estimated that nearly $191 million (see Table 3 below) is raised through landfill levies by several jurisdictions across Australia. The removal of these levies effectively creates a funding hole that needs to be filled through other taxation or financing mechanisms.

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[2] ABS, 2003, 'Statistics of Waste Management Services', Australian Bureau of Statisitics, Canberra. Found online at www.abs.gov.au, June 2006.
[3] ACOR, undated, 'Home Page', Australian Council of Recyclers, Sydney. Found online at www.acor.org.au, June 2006.
[4] NEPC, 2006, 'Used Packaging Materials – National', National Environment Protection Council, Adelaide. Found online at www.ephc.gov.au/pdf/annrep_04_05/203_226_App_6_UPM_All.pdf, June 2006.
[5] WMAA member information indicates that one kerbside recycling truck can collect from an average of 1,050 households per day. 1 truck operating per 9 day fortnight = 9,450 households. NEPC data indicates that 6,783,161 households have recycling services, which would require approximately 720 truck to collect once every fortnight.
[6] Personal communication Tony Wilkins, News Limited Environmental Secretariat, 29 June 2006.

Table 3 – Current funds raised by waste levies in Australia (nearest $100,000)

State and Region	Levy Amount	Estimated Funds
New South Wales Metro	$22.70	$115,200,000
New South Wales Regional	$15.00	$19,000,000
Victoria Metro Municipal	$7.00	$8,700,000
Victoria Metro C&I and C&D	$11.00	$23,200,000
Victoria Regional Municipal	$5.00	$2,200,000
Victoria Regional C&I and C&D	$9.00	$5,800,000
Western Australia Municipal	$3.00	$2,200,000
Western Australia C&I and C&D	$1.00	$2,000,000
South Australia Metro	$10.80	$11,000,000
South Australia Regional	$5.40	$1,400,000
Total		$190,700,000

(Note 80:20 ratio used to split metropolitan tonnages from regional tonnages.)

The WMAA raises these issues with the Commission in the hope that the final report will incorporate the effects of its recommended policy settings in its evaluation of options.

Further the WMAA would encourage the Commission to recommend detailed studies of the effect that such policies would have on individual material streams and the flow on market effects.

Commission recommendations and Community Expectations

Overall standards of social behaviour are changing across Australia with regard to resource consumption. Current media attention on drought induced water restrictions in major metropolitan centres and on the looming global warming crisis caused by greenhouse gas emissions has provided a clear imperative to community members regarding the conservation of water and energy resources. This new 'community contract' is based on an understanding of potential negative environmental impacts caused by our current patterns of production and consumption.

Behavioural change which focuses on resource conservation has positive impacts for the future of society as a whole, yet seems to have been discounted by the Commission. The message of 'save water, save energy' is well established, however a more unregulated and hands-off approach to waste is at odds with community acceptance of a changing social contract that requires action to reduce environmental impact. An increased participation in recycling fosters awareness of the limited nature of resources, contributing to a societal mindset of conservation. There are also significant savings in water and energy[7] created through the recycling and reuse of many products such as glass, paper, metal, plastic, rubber to name but a few.

[7] See for example the discussion in MMA and BDA, 2003, 'The Potential of Market Based Instruments to Better Manage Australia's Waste Streams' Department of Environment and Heritage, Canberra. Found online at http://www.deh.gov.au/industry/waste/mbi/pubs/study.pdf, June 2006..

More than 80% of Australians live, work and play in capital cities,[8] meaning that a corresponding proportion of waste is also generated in capital cities. History has demonstrated the community concern associated with establishing new landfill facilities.[9] Whilst it is true that modern well run landfills meeting minimum performance requirements (such as leachate control, weighbridges, management systems to reduce hazards, provision of post closure remediation funding and greenhouse gas capture), are more environmentally benign, that in itself does not overcome community concerns for the landfill development per se.

While there are many 'holes' in Australia that are created at a greater rate than landfill, few of these are accessible for waste management purposes. The establishment of new 'best practice landfills' will likely face opposition and will probably involve large transport costs as approved sites are moved increasingly away from residential developments. The Commission should identify the increased private costs associated with the approval and operation of such landfills in any evaluation of options.

The NSW Branch believes that better outcomes would be delivered by designing a framework for waste management and resource recovery that is aligned more closely with community expectations.

Methodology Issues - Equating Resource Efficiency with Economic Efficiency

In the draft report 'Waste Management', the Productivity Commission has equated resource efficiency with economic efficiency 'meaning that the returns to all resources, not just raw materials, should be maximised' (p1). The reasoning for this equation is that economic efficiency '…requires that no other combination of resource use could lead to a higher level of community wellbeing' (p7).

The NSW Branch agrees that waste management should occur 'to achieve the best overall outcome for the community' (p 305), and that the 'best' outcome is delivered when 'net social benefits are maximised (or net costs minimised)' (p59). However the conclusion that resource efficiency is covered by the meaning of economic efficiency is not only doing an injustice to the terms of reference, it also lacks any reference to the international state of debate. This conflation of terms represents a flaw in the Commission's methodology.

The National Council on Competition and the Electric Industry of the US defines resource efficiency as 'The use of smaller amounts of physical resources to produce the same product or service'.[10] The European Commission has developed a three pronged approach to ensuring availability and managing environmental impacts related to natural resource utilisation, namely:

- sustainable use of natural resources
- waste prevention and recycling
- integrated product policy to address environmental impacts.

Within this context EC has defined resource efficiency as 'the efficiency with which we use energy and material throughout the economy, i.e. the value added per unit of resource input'.[11] The Organisation for Economic Co-operation and Development provide insight into measuring resource efficiency by providing several potential indicators, including:

- Direct Material Input (DMI) – all solid liquid and gaseous materials that enter the economy for production or consumption (domestic extraction and imports)
- Domestic Material Consumption (DMC) – subtraction of exports from DMI to identify the total amount of material directly used in the economy

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[8] ABS, 2004, '2032.0 - Census of Population and Housing: Australia in Profile -- A Regional Analysis, 2001,' Australian Bureau of Statistics, Canberra. Found online at http://144.53.252.30/AUSSTATS/abs@.nsf/Lookup/2032.0Main+Features12001?OpenDocument, accessed June 2006.

[9] See Denlay, J., 1995, 'Wasted Time: Sydney's Solid Waste Crisis', Sutherland Shire Council, Sutherland for an overview of the opposition to new mega-tips and extensions to landfill sites.

[10] NCCEI, National Council on Competition and the Electric Industry. Found online at www.ncsl.org, accessed June 2006.

[11] EC, 'Sustainable Use of Natural Resources', European Commission, Brussels

- Total Material Requirement (TMR) – addition of unused domestic extraction and indirect flows associated with material inputs to DMI. TMR measures the total 'material base of an economy
- Total Material Consumption (TMC) – subtraction of exports and indirect flows associated with exports from TMR. TMC measures the total material use associated with production and consumption activities
- Domestic Processed Output (DPO) – total weight of DMI that has been used in the domestic economy before flowing to the environment. DPO is created at processing, manufacturing, use and final disposal stages of the production-consumption chain.
- Total Domestic Output (TDO) – addition of unused domestic extraction disposal to DPO
- Total Material Output (TMO) – total materials that leaves the domestic economy, both to the environment (disposal) and the rest of the world (exports).

One strategy to reducing Total Material Consumption (thereby increasing resource efficiency) is to prevent the export of materials to the environment (waste) by making efforts to recover resources. This approach recognises the fact that once a material is disposed of in landfill it has limited additional resource productivity. By incorrectly conflating resource and economic efficiency, the Commission has minimised the role that recycling plays in improving resource efficiency.

The brief discussion outlined above demonstrates directly that the resource efficiency is very different to economic efficiency. The two terms simply cannot be used interchangeably. The NSW Branch recommends that the Commission re-examine issues related to resource efficiency as per the OECD indicators above, taking into account that disposal limits any additional resource productivity.

In the draft report the Productivity Commission also asserts that economic efficiency is the best way of delivering ecologically sustainable development (ESD) because environmental protection will not always contribute to sustainability. 'It is possible that such protection could impose costs that lead to reduced investment in human or man-made capital that would have been more valuable to future generations' (p99). This definition is made possible by grouping human, man-made and natural capital into the 'estate' that is bequeathed to future generations. Most WMAA members would agree that economic efficiency could only deliver ESD if all externalised costs were adequately valued and internalised into prices of products and services. This raises the issue of valuing environmental externalities, and is addressed in the following section.

Valuation of Environmental Externalities

The Productivity Commission distinguishes between potential and expected costs. Potential costs refer to a worst case scenario, while expected costs discount the worst case scenario on the basis of the degree of risk that a potential impact will arise. Using this logic the Commission formed the view that many estimates of waste management externalities were overstated because of 'inadequate accounting of risk' (p60).

In particular the Commission concluded that the 'net external benefits of kerbside recycling vary according to circumstances, and are unlikely to be nearly as large as the $420 per tonne of recovered material figure that is widely quoted for kerbside recycling in Australia' (draft finding 4.4). However the Commission has not provided an alternative valuation of likely upstream benefits, preferring to assert that unless a kerbside recycling system is privately cost effective, it is unlikely to provide a net benefit to the community (p81). This can be interpreted as meaning that there are no quantifiable or real non-monetised up or downstream benefits arising from recycling.

There is a large body of work that supports the claim that recycling delivers environmental benefits to society at large, which appears to be discounted by the Commission. WMAA recommends the Commission draw conclusions on the future steps for accurately valuing the external benefits of recycling.

The difficulties associated with valuing the environment in economic terms are recognised by the NSW Branch, however it appears as if the Commission has discounted the evidence based on community willingness to pay for resource recovery that leads to improved environmental outcomes. For example if

the community wants to spend an additional $2 per week per household on ‘better’ waste management, that gives an indication of the market value of recycling. The problem is that community members are unable to go to the local shops and buy $2 worth of improved environmental outcomes.

However, arguments of economic efficiency should not be used against a genuine market demand for improved recycling, otherwise there would be many other ‘products’ arbitrarily removed from the market on the basis of economic inefficiency. The Commission might recommend mechanisms to convert a community willingness to pay into direct financial inputs for resource recovery.

Appendix 1 - Material specific potential impacts of Productivity Commission Recommendations

Materials likely to be recycled – assumed 30% reduction in recovery

The estimated impacts provided in the table below have been based on an estimated 30% reduction in tonnes recycled for those materials likely to continue to be recycled (albeit at a lower rate) as a result of removing levies, the removal of the waste hierarchy as a statement of public policy and the emergence of landfill as the waste management technology of choice by Governments). These materials include aluminium, ferrous metals, soil/rubble and other clean excavated material, and concrete, bricks and asphalt.

Materials likely to be severely impacted – assumed 90% reduction in recycling

Other materials are more susceptible to reductions in landfill gate fees and restated Government policy, for their viability and recycling rates are likely to be significantly reduced. For example paper & cardboard, glass, plastic, garden organics, food and other organics, wood/timber, and other recyclables (including textiles) which are currently marginal recycling activities at best.

Table 2 – Forecast recycling and disposal performance under productivity Commission recommendations (nearest 10,000 tonnes)

Material Type	Total Tonnes Generated	Total Tonnes Recycled	Total Tonnes Disposed	Commodity Value ($/tn)	Commodity Value
Paper & Cardboard	5,000,000	230,000	4,770,000	$70	$16,100,000
Glass	870,000	40,000	830,000	$72	$2,880,000
Adjusted Non-Ferrous (0.7%)	230,000	70,000	160,000	$1,500	$105,000,000
Ferrous	3,670,000	1,950,000	1,720,000	$75	$146,250,000
Plastic	1,690,000	20,000	1,670,000	$300	$6,000,000
Garden Organics	3,800,000	160,000	3,640,000	$20	$3,200,000
Food and other organics	3,200,000	30,000	3,170,000	$20	$600,000
Wood/Timber	2,070,000	40,000	2,030,000	$20	$800,000
Soil/Rubble and Other Clean Excavated Material	3,840,000	970,000	2,870,000	$15	$14,550,000
Concrete, bricks and asphalt	6,780,000	3,370,000	3,410,000	$15	$50,550,000
Other recyclables (inc Textiles)	980,000	490,000	490,000	$10	$4,900,000
Other (waste)	250,000	-	250,000	-	$-
Totals	32,380,000	7,370,000	25,010,000		$350,830,000

The contrast between current performance and likely impacts of the Productivity Commission draft recommendations is presented on a mass basis in Figure 1 and on a dollar basis in Figure 2.

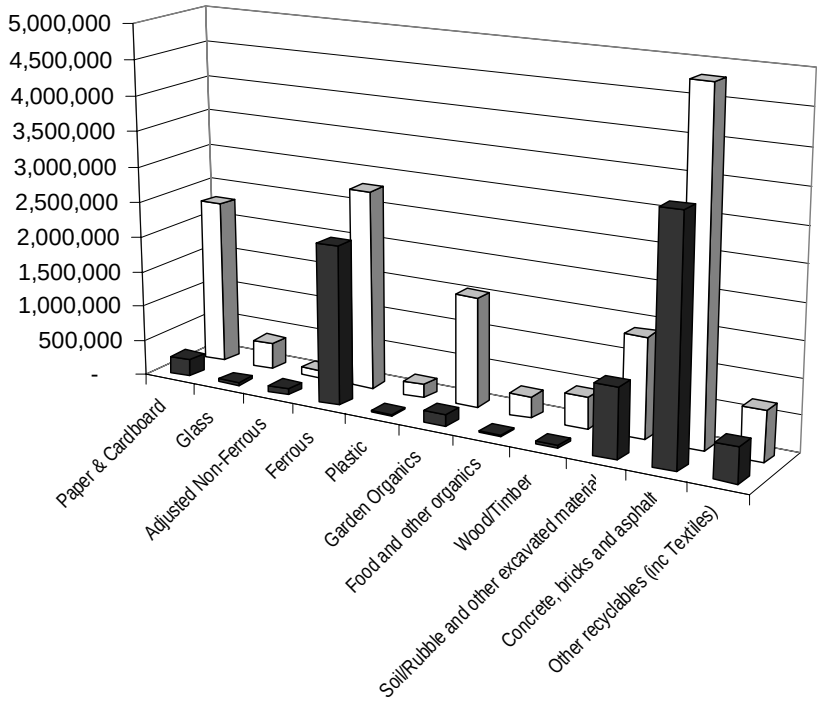

Figure 1 - Material breakdown of potential reduction of recycling in Australia (tonnes) arising from Commission recommendations (current performance in light shading, potential reduction in dark)

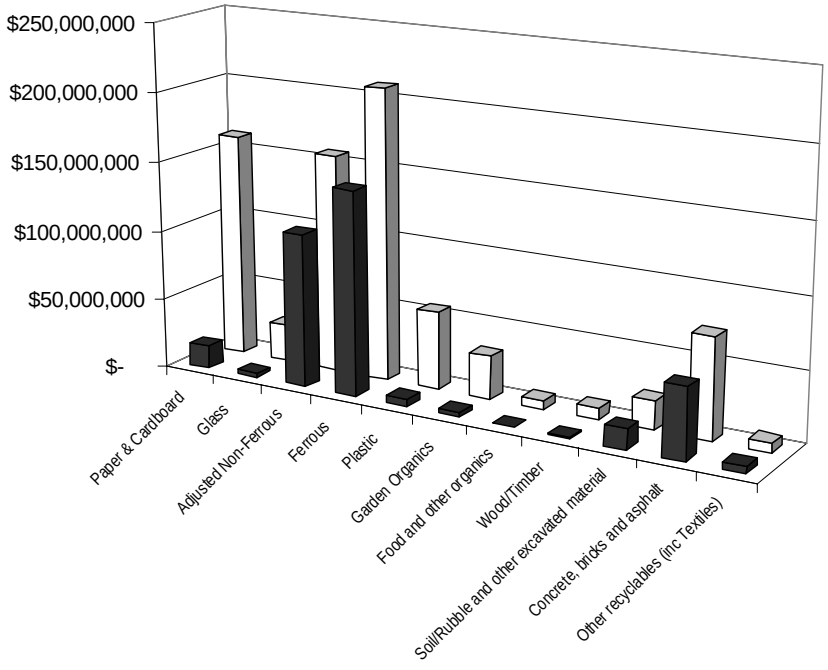

Figure 2 - Material break down of potential loss of commodity sales from Commission recommendations (current performance in light shading, potential reduction in dark)