RESPONSE TO THE PRODUCTIVITY COMMISSION

DRAFT REPORT ON WASTE MANAGEMENT

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VICTORIAN GOVERNMENT
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1. Introduction

The Victorian Government welcomes the Productivity Commission's inquiry into Waste Generation and Resource Efficiency. An examination of current arrangements is timely and may assist Australian governments improve their policy framework to reduce waste generation and improve resource efficiency.

Victoria's policies to address waste generation and resource efficiency have emerged from the progressive development and delivery of the sustainability policies and principles that were formally adopted by Australian governments in 1992. The development of Victoria's resource efficiency policies and strategies has been coupled with the achievement of significant outcomes in key indicators of resource efficiency. Consequently, the Victorian Government has confidence that its policy settings and directions are delivering good outcomes. A summary of our approach to resource efficiency and waste management is outlined in Section 2.

The Victorian Government recognises that our resource efficiency performance does not mean that there is no scope for further improvement. Victoria is consequently receptive to suggestions that can further enhance our resource efficiency.

In considering the Productivity Commission's draft findings and recommendations, the Victorian Government looks to the final Report to demonstrate a comprehensive analysis of the complex policy issues and interactions that underpin Australia and Victoria's resource efficiency performance.

In this regard, the Victorian Government believes the draft report has focused on a narrow definition of waste management rather than fully exploring the policy issues regarding waste generation and resource efficiency as described in the Commission's Terms of Reference. The basis for Victoria's analysis is outlined in Section 3.

The Victorian Government has also responded to several major Commission draft recommendations in detail in Section 4.

2. Policy context for resource efficiency in Victoria

In responding to the Productivity Commission's draft report, The Victorian Government is of the view that the Commission, through narrowing its response to its own terms of reference has restricted the consideration of the full suite of policy approaches to resource efficiency and waste management.

The following section provides an overview of the Victorian Government's policy approach to resource efficiency and waste management. The Victorian Government is of the view that the Victorian policy approach:

- is built on a comprehensive, system wide approach to environmental sustainability, resource efficiency and waste management, through *Our Environment, Our Future: Victoria's Environmental Sustainability Framework*[1] that provides directions for government, business and the community;
- utilises a range of policy tools, including legislation, regulation, statutory policy, grants and incentives, assistance programs and capacity building, to successfully deliver policy outcomes;
- has specific requirements for assessing and considering the potential impacts of legislative and regulatory proposals. For primary legislative proposals that may have significant effects on competition and/or business, Business Impact Assessments (BIAs) need to be undertaken. For subordinate legislation (in the form of statutory rules) that will impose an appreciable economic or social burden on a sector of the public, the relevant assessment tool is the Regulatory Impact Statement (RIS) process;
- requires sound data analysis and assessment to inform the development of strategies, policy tools, regulation, and targets for resource efficiency and waste management; and
- provides clear strategies and mechanisms for delivery of these policy goals for resource efficiency and waste management through Victoria's S*ustainability in Action: Towards Zero Waste*[2] strategy.

Through the above approaches, Victoria has achieved impressive results by both Australian and international standards, for resource recovery and avoidance of waste disposal. The data indicates that the increasing proportion of waste material that is recovered, recycled or reused demonstrates that Victoria's policies and programs for waste management and resource recovery are delivering a progressive increase in resource efficiency.

The following sections outline in more detail the Victorian Policy approach to resource efficiency and waste management.

[1] Our Environment, Our Future: Victoria's Environmental Sustainability Framework. State Government of Victoria (April 2005)

[2] *Sustainability in Action – Towards Zero Waste* State Government of Victoria (September 2005).

2.1. Policy and Strategy

Victoria's Policy

The Victorian Government is committed to making Victoria a world leader in environmental sustainability. *Our Environment, Our Future: Victoria's Environmental Sustainability Framework*[3] provides direction for government, business and the community on building environmental considerations into the way we work and live.

Victoria's policies, strategies and programs for environmental sustainability are based on the principles and commitments of the Intergovernmental Agreement on the Environment (IGAE) entered into by Australian governments in 1992. The Principles of Environmental Policy contained in the IGAE have been incorporated into Victorian legislation[4] and have guided the development of policies, strategies and programs, including the current Framework.

The Framework establishes three directions, for Victoria's future as a "Sustainable State".

- Maintaining and restoring our natural assets
- **Using our resources more efficiently**
- Reducing our everyday environmental impacts

In describing the resource efficiency direction, the Framework notes that:

> *Significant amounts of natural resources are wasted in the creation of goods and services. We need to use our natural assets as efficiently as possible, just as we do with our money and time.*
>
> *When Victorians think of waste, they usually think of the rubbish that ends up in their bins at home and at work, such as left over packaging or discarded goods. In fact we waste a lot more than this. One study suggests that humans are more then 10 times better at wasting resources then using them. This study found that only 7 per cent of the materials used to create products end up in the final product.*[5] *Moreover, 80 per cent of these products are discarded after a single use.*

In addition, the Framework notes that:

> *Environmental sustainability means that we need to consider carefully the full benefits provided by natural assets (for example in providing ecosystem services) before we make decisions on resource use. When the natural environment is damaged beyond repair, so too is its capacity to provide us with clean air and water, healthy soil and crop pollination, and to absorb our wastes.*

Resource recovery and the production of recovered resources provides an alternative to raw materials derived from natural resources. The resource recovery materials pathway is driven by demand for materials inputs and finding a destination for waste. The net result is a stronger "material flow loop" that directly reduces both the net inputs (raw materials) and outputs (emissions and disposed waste) to the environment. Material flows within the system are outlined in the diagram below:

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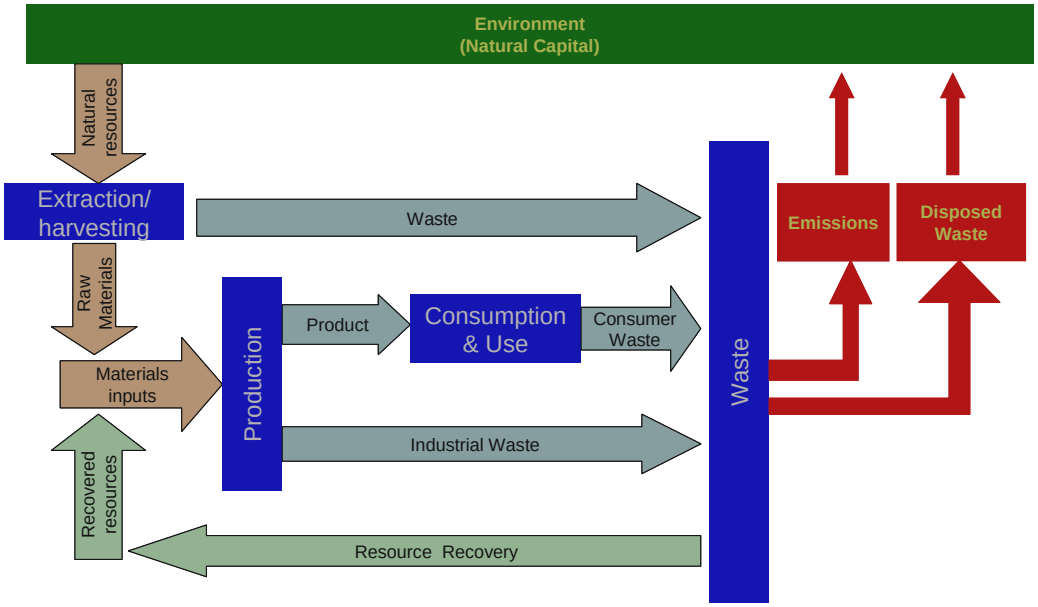
3 Our Environment, Our Future: Victoria's Environmental Sustainability Framework. State Government of Victoria (April 2005)

4 Environment Protection Act 1970

5 Factor Four: Doubling Wealth – Halving Resources Use. P.vi Weizsacker, Lovins and Lovins (1997)



The journey towards improved resource efficiency can be characterised by three key phases, or paradigms, affecting waste and resources public policy:

- Phase 1: 1970s: response to gross pollution and environmental harm. "Waste policy" characterised by emissions controls and regulation of waste disposal.
- Phase 2: 1980s: establishment of resource recovery and recycling systems and services and pathways from waste back to material inputs.
- Phase 3: 1990s and today: movement towards sustainable production and consumption to reduce the demand for natural resources and their depletion.

These phases represent a progression from protection of the environment through to environmental sustainability. Each phase builds on the consolidated achievements of its predecessor to address the next emerging priority. Victoria's current approach is reflected in Towards Zero Waste, which aims to strengthen the loop between "end of life" products and the inputs to new products. This, in effect, creates a demand for the recovery of materials from "end of life" products (and other production wastes) as a direct alternative to raw materials.

Towards Zero Waste

The Victorian Government made commitment in its *Sustainable State*[6] election policy, to *"encourage innovation in cleaner production, resource efficiency and waste reduction, and aim to move away from landfill by 2020*". This commitment is aimed at improving Victoria's resource efficiency and:

- Protecting the environment from the avoidable impacts of landfill disposal of waste – groundwater pollution, greenhouse emissions and local amenity impacts.
- Maintaining values of resources by keeping them in use and in the economy, rather than consigning their value to be landfill space.

[6] *The Sustainable State. Labor's Plan for a greener Victoria.*2002

Victoria's S*ustainability in Action: Towards Zero Waste*[7] strategy aims to deliver this policy commitment and is guided by three main objectives to increase resource efficiency:

- Generating less waste
- Increasing the amount of materials for recycling and reprocessing
- Reducing damage to our environment caused by waste.

The strategy contains 28 key actions encompassing industry incentives, education, and advisory support. These actions build on existing programs delivered by government which have established Victoria's successful track record as a leader in recycling and resource recovery. Strategies focus on the improvement of waste management systems and infrastructure, the establishment of product stewardship agreements, the development of both new and existing markets for recycled products, and raising the awareness and capacity of communities and business.

The benefits and costs of the *Towards Zero Waste* strategy were explicitly modelled and analysed.[8] This analysis concluded that, even under very conservative assumptions, the strategy was found to have positive net economic benefit to Victoria. In addition a supplementary report examined the economic, environmental and social benefits (and costs) of 16 options for recycling of solid waste generated by households and businesses.[9]

2.2. Implementing Resource Efficiency Policy

The Victorian Government uses a range of tools, including legislation, regulation, statutory policy, grants and incentives, assistance programs and capacity building, to deliver policy outcomes.

The introduction of statutory provisions is subject to detailed analysis and consideration of the environmental, social and economic costs and benefits of the proposal. For example, the statutory provision for establishment of State Environment Protection Policy and Waste Management Policy require the preparation, publication and consideration of a Policy Impact Assessment. Regulatory Impact Statements are required for all regulations.

Other programs, for example grants and incentives, are supported by business cases that establish the environmental, social and economic costs and benefits of the program.

Resource efficiency gains must take account of each sector's ability and preparedness to invest

Policy Impact Assessment

In Victoria, Policy Impact Assessments (PIAs) are required for all new or revised State environment protection policies and waste management policies that are developed under the *Environment Protection Act 1970.* A PIA seeks to summarise all the information, including scientific analysis and stakeholder input, used to develop the policy in a clear and transparent manner for the community and decision makers to consider.

The Policy Impact Assessment provides a discussion of the rationale for and likely environmental, social and financial impacts of the policy and identifies key alternatives considered during its development. It incorporates a description of the policy development process and the procedure for making comment on the policy.
All future PIAs will be assessed by the Victorian Competition and Efficiency Commission prior to their release with a draft policy for public comment.

[7] *Sustainability in Action – Towards Zero Waste* State Government of Victoria (September 2005).
[8] Benefit- Cost Analysis of Victoria's Towards Zero Waste Strategy. Allen Consulting Group November 2003
[9] Triple Bottom Line Assessment: An Examination of the Economic, Environmental and Social Costs and Benefits of Strategic Waste Management Options – Sinclair Knight Merz – June 2003.

and recover costs over reasonable timeframes. For example within the agriculture and forestry sector, this will be against the context of global market competitiveness.

Analysis of the costs of waste management for Victorian manufacturing industries (see attachment 1) suggests that these key industries are reasonably insensitive to waste management costs. The Victorian Government has addressed the challenge that this creates for encouraging improved resource efficiency through "waste wise business" programs that deliver cleaner production and improved waste management (see attachment 1). These examples illustrate that weaknesses exist in markets that impede efficient use of resources and that a detailed understanding of the particular circumstances allows effective government interventions to be made.

Assessing the impacts of legislative and regulatory proposals

The Victorian Government has specific requirements for assessing and considering the potential impacts of legislative and regulatory proposals. For primary legislative proposals that may have significant effects on competition and/or business, Business Impact Assessments (BIAs) need to be undertaken. For subordinate legislation (in the form of statutory rules) that will impose an appreciable economic or social burden on a sector of the public, the relevant assessment tool is the Regulatory Impact Statement (RIS) process.

Based upon the same methodology, the key components of BIAs and RISs are:

- a description and assessment of the nature and the extent of the problem(s) being addressed;
- a statement of the objectives of the proposed legislation (primary or subordinate);
- a description of the expected impact on affected groups (particularly small business in the case of BIAs), having regard to economic, social and environmental impacts;
- an assessment of the costs and benefits of the proposal (which are quantified, where possible) and other practical alternative means of achieving the objective; and
- an explanation of why the other options are not appropriate.

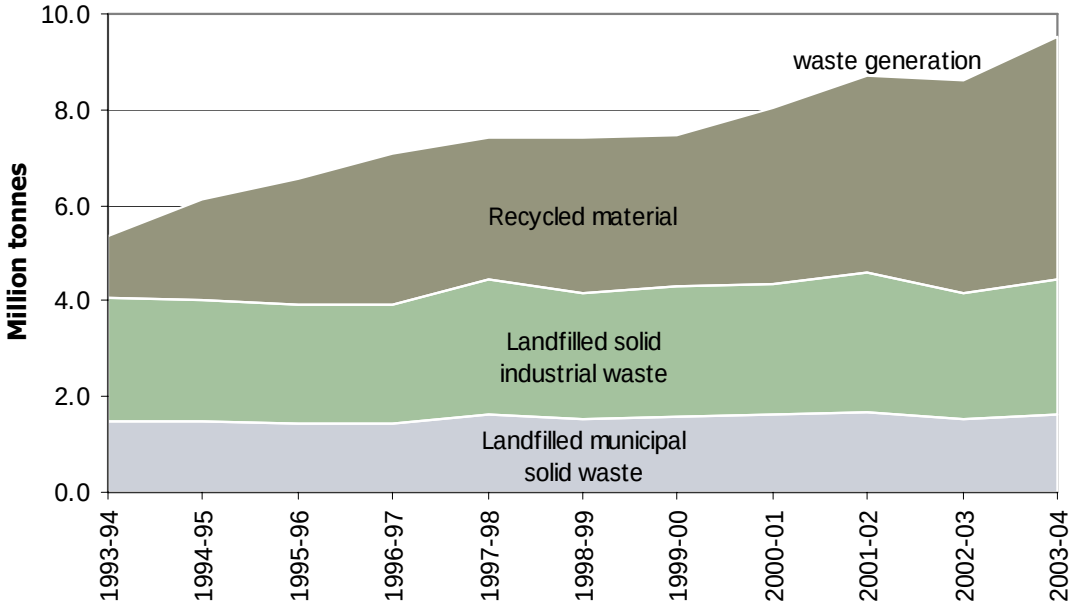
Thus, the analysis contained in BIAs and RISs informs decisions about whether a problem exists that may warrant government intervention, and whether regulation in the form of primary or subordinate legislation is the best alternative open to the government to meet the identified objective.

From - Victorian Government 2005, Victorian Guide to Regulation, p. 1-6.

2.3. Victoria's Waste Management and Resource Recovery Achievements

Victoria has achieved impressive results, by both Australian and international standards, for resource recovery and avoidance of waste disposal. Overall outcomes for the last decade are illustrated in the following figure.

Solid waste generation, Victoria 1993-94 to 2003-04



This data shows that while waste generation has progressively increased (as it is linked to economic growth), the proportion of waste materials that are recovered for reuse and recycling has also progressively increased. The net result is that, despite the growth in waste generation, disposal of waste to landfill has remained reasonably steady for the last decade.

The increasing proportion of waste material that is recovered shows that Victoria's policies and programs for waste management and resource recovery are delivering a progressive increase in resource efficiency.

Victoria's policy position for resource efficiency has been developed and refined with an understanding of the potential risks to economic prosperity and growth from inappropriate demands on manufacturing industry. The Victorian Government is concerned that inappropriate costs to industry can adversely affect the viability and sustainability of the State's manufacturing industries. It understands the costs of waste management and resource recovery and the sensitivity of markets to increased costs, as outlined in Attachment 1, and pursues opportunities that deliver net benefits to Victoria.

3. Scope of the Inquiry - Terms of Reference

The Victorian Government welcomes the inquiry into Waste Generation and Resource Efficiency in Australia by the Productivity Commission.

However, the Draft Report released by the Commission appears to have narrowed the scope of the Inquiry as described in their Terms of Reference. The rejection of the concept of resource efficiency, based on a 'common definition' by submitters, is unnecessarily restrictive and the Victorian Government notes that the Commission's concerns could have been addressed by adopting an appropriate definition of resource efficiency, rather than rejecting the term completely.

The Victorian Government believes a more considered interpretation of resource efficiency and full consideration of the Terms of Reference would have enabled the Commission to more comprehensively consider potential sources of market failure, upstream and downstream resource allocation and technical efficiency issues.

The following section details the basis for Victoria's analysis of the resource efficiency definitions and Terms of Reference.

Terms of Reference

The following extracts of the Terms of Reference, provided to the Commission by the Federal Treasurer, describe the key parameters of the objectives and scope for the inquiry.

The objective of this inquiry is to identify policies that will enable Australia to address market failures and externalities associated with the generation and disposal of waste, including opportunities for resource use efficiency and recovery throughout the product life-cycle (from raw material extraction and processing, to product design, manufacture, use and end of life management).

In undertaking this inquiry, the Commission is to examine ways in which, and make recommendations on how, resource efficiencies can be optimised to improve economic, environmental and social outcomes. This will include an assessment of opportunities throughout the product life cycle to prevent and/or minimise waste generation by promoting resource recovery and resource efficiency.

The Commission has assessed the Terms of Reference for the review against its charter which requires that all costs and benefits of policy options be considered in order to maximise community wellbeing. This then requires the Commission to view its inquiry reference from the perspective of economic efficiency. This approach is appropriate given that environmental and social costs and benefits can be brought into consideration in assessing the matters referred to the inquiry.

However, the Commission has then adopted a narrow interpretation of the terms of reference where it identifies the objective of the inquiry as being to: "identify policies to address market failures and externalities associated with *the generation and disposal of waste*" (Page 1 of the draft Report). The objective of the inquiry has been further limited through the title of the draft report, 'Waste Management' which appears to reflect the Report's lack of analysis of Government intervention relating to upstream externalities.

Defining Resource Efficiency

A reasonable interpretation of the terms of reference for the review would be for the Commission to consider generation and disposal of waste in some detail with respect to both upstream and downstream influences and advise on the most effective form of policy interventions. The Commission largely ignores upstream policies which affect the generation of waste and decisions about how waste should be managed.

Further, the report, whilst acknowledging economic efficiency as the key determinant of society's wellbeing, has neglected to consider aspects of economic efficiency that are relevant to its achievement. It emphasises the maximisation of allocative efficiency (best outcomes for the community) through ensuring that 'both private and external costs and benefits are taken into account in the way that waste is managed, and the net social benefits are maximised' (page 59). The Commission gives no consideration to aspects of technical efficiency in the upstream and downstream activities that lead to 'waste management' activities. Consideration of technical efficiency could also be considered to encompass technological and economic innovation, including organisational, institutional and social change.

The Commission acknowledges that economic efficiency encompasses the concept of resource efficiency, but rejects use of the term and further consideration of it in isolation from economic efficiency after reviewing a range of definitions from submitters to the inquiry.

4. Response to Particular Findings

The following section provides specific Victorian Government responses to key parts of the Productivity Commissions Draft Report.

In summary, the Victorian Government has the following specific responses:

'Upstream' issues

- While the Victorian Government agrees that direct policy instruments are the most appropriate, where the externalities involve emissions to the environment or disposal of waste, then waste management and environment protection policies may be the most direct and efficient policies.
- The Victorian Government asserts that when an integrated resource efficiency paradigm is applied, creating a separation between resource recovery and the extraction/ harvesting of natural resources may fail to take advantage of the opportunities to cost effectively minimise the total externalities.

Waste Hierarchy

- While the Victorian Government agrees with the recommendation made by the Productivity Commission that the wastes hierarchy should not be used by governments to override other policy considerations, it notes that this is not the case in Victoria and that statutory frameworks for the development and assessment of government activities, outlined in Section 2.2 above, ensure that a considered and balanced multi-objective approach is taken.

Landfills

- The Victorian Government made a commitment in the *Sustainable State Policy*, to "encourage innovation in cleaner production, resource efficiency and waste reduction, and aim to move away from landfill by 2020".
- While the emphasis of Victorian Government policy is to encourage resource efficiency and reduce the level of reusable resources going to landfill, it acknowledges that landfills will continue to be required for the disposal of some wastes. The siting, design and operation of landfills will continue to be driven by policies that ensure the best environmental, social and economic outcomes for Victoria.

Greenhouse Gas Emissions from Waste

- While the Victorian Government agrees with the Commission that a broad national response to greenhouse gas abatement (eg. through a national emissions trading scheme – ETS) is necessary for an effective and efficient abatement effort, it believes that such a response may not be sufficient in its own right.
- In this regard, Victoria is working with other States and Territories to develop a national ETS, but believes it is also important to pursue cost-effective complementary national and state-based programs which will prepare the economy for a carbon constrained future.
- The Victorian Government also notes that specific controls on landfill gas, such as those contained in Victoria's *Waste Management Policy (Siting, Design and Management of Landfills)*, serve purposes other than greenhouse gas abatement (eg odour control). These objectives, and related controls, would, therefore, need to be pursued.

Target Setting

- The Victorian Government agrees with the Productivity Commission's concern about the setting of arbitrary and unachievable "zero waste" targets. However Victoria's *Towards Zero Waste* strategy and its targets, has been supported by rigorous economic modelling and analysis that show net economic benefits to Victoria in addition to the resource efficiency benefits.
- On the basis of sound economic, and cost/benefit analysis, the targets established in *Towards Zero Waste* have been adopted by Government as Key Performance Indicators for the Victorian Government's *Growing Victoria Together* policy statement.

Product Stewardship and Plastic bags

- The Victorian Government believes that resource efficiency performance would be enhanced through improved national approaches to resource efficiency. It supports for example the development of national approaches to product stewardship.
- The Victorian Government notes that the objectives underpinning a phase out of plastic bags would include improved resource efficiency through the avoidance of unnecessary low value use of resources, reduced waste generation and protection of the environment from discarded bags and poor disposal practices.
- The Victorian Government agrees that sound cost benefit analysis should inform policy proposals for management of plastic bags. To this end it notes that in 2005, Australian, State and Territory environment Ministers asked for a range of regulatory options in relation to plastic bags to be developed. In doing so they also committed environment agencies around Australia to develop a robust cost/benefit analysis to evaluate the options for a range of potential actions to reduce the impact of plastic bag litter on the environment.

Role of Local Government

- The Victorian Government has considered the optimal and appropriate institutional arrangements for municipal waste management in the Melbourne metropolitan area and believes that individual councils should retain control of their waste management budgets and will determine what services and waste disposal options they need to meet their communities' needs.
- The proposed new metropolitan waste management arrangements for Melbourne, fully recognise that local governments have, and will continue to have, a key role in waste management through the provision of services to their local communities and households.
- Proposed regional arrangements for Melbourne, developed in full partnership with local government will be appropriate for the development of strategic and technology options, where the regional scope offers economy of scale opportunities.

Landfill Levies

- The Victorian Government does not agree with the Commission's recommendation to discontinue landfill levies as Victoria's landfill levies provide a price signal that environmental externalities need to be considered in the cost of waste disposal. The structure and application of these levies mean that they are broad based instruments that are equitable and non-discriminatory.

- In Victoria, levy funds are used to help foster the environmentally sustainable use of resources and best practice in waste management, establish waste management infrastructure, industry waste reduction programs, education programs, regulatory controls and enforcement regimes. These programs directly offset the external impacts of landfill disposal by increasing resource recovery and improving the efficient use of resources.

The following sections provide more detailed analysis of key recommendations.

4.1. Upstream issues

The Productivity Commission considers the reuse of recovered "waste" materials as an "upstream issue" of "waste management". However, the Victorian Government understands the benefits of the reuse of such materials as a key component of a 'resource efficiency' model.

In the Productivity Commission's model, the externalities of extraction and harvesting of raw materials are best addressed through "direct" policy instruments other than "waste management". Firstly, while the Victorian Government agrees that direct policy instruments are the most appropriate, where the externalities involve emissions to the environment or disposal of waste, then waste management and environment protection policies may be the most direct and efficient policies. Hence, many "upstream issues" are within the ambit of "waste management" in Victoria. Secondly, when an integrated resource efficiency paradigm is applied, creating a separation between resource recovery and the extraction/harvesting of natural resources may fail to take advantage of the opportunities to cost effectively minimise the total externalities.

Segments of the manufacturing industry have taken advantage of the benefits of the use of recovered versus virgin materials (eg steel, glass and cardboard packaging industries), and returned savings to their business in raw material costs, energy and water usage. In addition to the direct savings to the businesses, there are also substantial reductions in environmental externalities that have been achieved through these strategies. Despite the potential direct savings to businesses, there are often barriers to uptake or adoption. Particular hurdles include the capital cost of change (if different technologies or processes are required to deliver improved resource efficiency) and uncertainty about the likely cost savings. Government intervention can assist by establishing demonstration works that show the outcomes that can be achieved, helping to bridge the capital investment gap and improving the understanding of the costs and benefits that are available.

Upstream benefits of resource recovery

In 2000, the then EcoRecycle Victoria commissioned the Centre for Design at RMIT to undertake a study into the environment benefits and impacts of Victoria's kerbside paper and packaging waste management system to quantify the upstream benefits of recycling viz a viz landfill[1]. The report was peer reviewed by an independent Stakeholder Advisory Committee and internationally.

The study shows net savings per typical Melbourne household per week of:-

- 3.2 kg CO2 (or greenhouse gases)
- 32.2 megajoules of embodied energy (or enough energy to run a 40 watt light bulb for 72 hours)
- 92.5 litres of water

Applying this to 2004-05 data for Victorian household recycling of 441,676 tonnes of material recycled (after removal of contamination), the total benefits are estimated to including savings of:-

- 253,204 tonnes of CO2 a year (or taking 42,217 cars off the road)
- 6,313,175 gigajoules of electricity a year, equivalent to 276 days of watching television for every Victorian
- 10,685 megalitres of water a year (or 24 showers for every Victorian per year)

4.2. Waste hierarchy

The Productivity Commission has made a draft recommendation that:

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. (draft recommendation 7.1)

The wastes hierarchy is only one of the eleven Principles of Environment Protection incorporated in the *Environment Protection Act 1970* that articulate the Act's purpose and guide its administration. Other principles include the principle of integration of economic, social and environmental considerations and the principle of improved valuation, pricing and incentive mechanisms. These principles are taken from the Intergovernmental Agreement on the Environment, agreed to by all Australian governments in 1992.

While the Victorian Government agrees with the recommendation made by the Productivity Commission that the wastes hierarchy should not be used by governments to override other policy considerations, it notes that this is not the case in Victoria and that statutory frameworks for the development and assessment of government activities, outlined in Section 2.2 above, ensure that a considered and balanced multi-objective approach is taken.

4.3. Landfill

While the Productivity Commission, in its "Key Points" states:

> *"The Commission does not favour any one method of waste disposal over others. Waste policy should be about achieving the best possible outcomes for the community, not prescribing one technical solution at the expense of others.",*

it also makes a case for landfilling of waste throughout its draft report. For example, another "Key Point" states:

> *"Residual levels of externalities from modern, fully complying landfills appear to be small. Any further tightening of regulation would need to be carefully assessed, and preceded by better enforcement of existing regulations."*

The Victorian Government made a commitment in the *Sustainable State election policy*, to "encourage innovation in cleaner production, resource efficiency and waste reduction, and aim to move away from landfill by 2020". This commitment recognises the potential adverse environmental impacts of landfills, including odour, litter, greenhouse gas emissions, visual and amenity impacts and contamination of waterways and groundwaters.

While current environment protection requirements aim to reduce, and where possible minimise, the impacts on to the environment from landfill disposal of waste, it is recognised that these impacts cannot be eliminated.

The legacy of previous landfill operations on the environment is sometimes experienced in the costs involved to make the sites safe for public use, long after their closure as a landfill. Plumes of contaminated groundwater in the "sandbelt" area south-east Melbourne and the rehabilitation of former landfill sites present liabilities and costs to generations long after the closure of landfill operations. For example, in 1999 the City of Yarra spent $1 million rehabilitating contamination in the Edinburgh Gardens, North Fitzroy, which had been caused by use of the site as a landfill in the nineteenth century.

In increasing the diversion of resources from landfill and reducing the amount of residual waste that will require landfill disposal, Victorian Government policy is focusing on those waste components that have either increased value as recovered resources, potential to cause environmental problems or both. These efforts can improve the environmental outcomes of landfill operations while also meeting economic and social objectives.

Occupying space in a landfill is a low value use of many materials. Situations where higher value uses exist but that are not been fully utilised require examination to determine the reasons and identify possible strategies to achieve the latent economic potential. In addition to the economic benefits that can be obtained, the use of recovered materials to substitute for virgin raw materials reduces the greenhouse and pollution impacts from the extraction, transportation and processing of new materials.

It is important to note that waste disposal makes only a small contribution to the rehabilitation of quarried landscapes. Victoria's extractive industries (excluding Brown Coal and minerals) removed 38.8 million tonnes of material in 2003-04. In the same period 4.45 million tonnes of waste were disposed to landfill. Consequently, waste disposal is not, and cannot be expected to be, a primary means for rehabilitating quarried landscapes.

While the emphasis of Victorian Government policy is to encourage resource efficiency and reduce the level of reusable resources going to landfill, it acknowledges that landfills will continue to be required for the disposal of some wastes. The siting, design and operation of landfills will continue to be driven by policies that ensure the best environmental, social and economic outcomes for Victoria.

4.4. Greenhouse Gas Emissions from Waste

The Productivity Commission has made a draft recommendation that:

Greenhouse gas externalities should only be addressed within a broad national response to greenhouse gas abatement, not through landfill regulation or levies. (draft recommendation 8.2)

While the Victorian Government agrees with the Commission that a broad national response to greenhouse gas abatement (eg. through a national emissions trading scheme – ETS) is necessary for an effective and efficient abatement effort, it also believes that such a response may not be sufficient in its own right.

In this regard, Victoria is working with other States and Territories to develop a national ETS, but believes it is also important to pursue cost-effective complementary national and state-based programs which will prepare the economy for a carbon constrained future.

The reduction of greenhouse gas emissions from waste management is a case-in-point. Victoria's *Waste Management Policy (Siting, Design and Management of Landfills)* provides the EPA with the power to "require a landfill operator to install a landfill gas collection system in existing and/or new landfill cells where … it is necessary to reduce greenhouse gas emissions". This policy is supported by a *Best Practice Environmental Management* guideline for the *Siting, Design, Operation and Rehabilitation of Landfills* which states that "the method of landfill gas disposal will be influenced by energy recovery or greenhouse gas considerations … with the minimisation of greenhouse gases being the primary driver".

As stated in the Productivity Commission's Draft Report (page 66) – "Some modern landfills are designed and managed to reduce their greenhouse gas impact". It is important to recognise that this outcome is driven by requirements such as those implemented through Victoria's *Waste Management Policy.* The Victorian Government also notes that specific controls on landfill gas, such as those contained in Victoria's *Waste Management Policy (Siting, Design and Management of Landfills),* serve purposes other than greenhouse gas abatement (eg odour control). These objectives, and related controls, would be pursued regardless of resource efficiency considerations.

4.5. Target setting

The Productivity Commission has made a draft finding that:

Targets for waste management are virtually impossible to set at an optimal level and are almost always arbitrary. Broad targets do not account for regional differences in waste management costs, nor are they sensitive to changes in market or institutional settings. Whilst they might be argued to have some aspirational virtues, targets such as zero waste to landfill lack credibility and appear to be unachievable. More importantly, the pursuit of recovering resources at any cost can be highly inefficient and result in perverse outcomes.

A better approach is to address relevant market failures through other instruments, including regulation of landfill. The right incentives will then exist to guide the emergence of relevant markets for waste reduction and recovery. (draft Finding 7.1)

and a draft recommendation that:

Governments should not directly or indirectly impose waste minimisation and recycling targets as part of waste management policy. (draft recommendation 7.2)

The Victorian Government agrees with the Productivity Commission's concern about the setting of arbitrary and unachievable "zero waste" targets. However, Victoria's *Towards Zero Waste* strategy and its targets, has been supported by economic modelling and analysis that show net economic benefits to Victoria in addition to the resource efficiency benefits .[10]. The approach to data analysis is summarised below.

On the basis of sound economic and cost/benefit analysis, the targets established in *Towards Zero Waste* have been adopted by Government as Key Performance Indicators for the Victorian Government's *Growing Victoria Together* policy statement.

The Victorian Government's *Towards Zero Waste* strategy was developed from a solid research base of data and analysis[11]. In establishing targets for waste reduction, resource recovery and litter improvements, The government agency that was then responsible for development of the strategy (EcoRecycle, now incorporated into Sustainability Victoria), undertook broad ranging studies analysing the sources of industrial and municipal wastes and life cycle and cost/benefit analysis of alternative waste and recycling systems and technologies. Broad ranging consultation also took place with industry and local government in identifying opportunities and the barriers to resource efficiency, recycling and markets for end product.

In particular, comprehensive work was undertaken by consultants Nolan ITU in development of the Solid Industrial Waste Data Report (a key input to the strategy's development) which established baseline and trend data of waste generation, recycling and disposal for industrial wastes based upon data from a range of sources. Analysis included both state-wide, region by region data and consideration of municipal waste generation, recycling and disposal (through data obtained from annual local government surveys by EcoRecycle Victoria).

Data from the Nolan ITU study was input to a model developed by EcoRecycle Victoria. The Waste Model was then used to analyse where opportunities existed to recover additional materials, how these would grow over time (i.e. model factored in GSP and population growth) and what this would mean in terms of tonnes diverted on a material by material and sector by sector basis for each of Commercial & Industrial, Construction & Demolition and Municipal sectors. Targets for each sector were then derived from the "bottom up" modelling of waste composition and sector[12].

4.6. Product Stewardship and Plastic bags

The Victorian Government believes that resource efficiency performance would be enhanced through improved national approaches to resource efficiency. It supports for example:

[10] Benefit- Cost Analysis of Victoria's Towards Zero Waste Strategy. Allen Consulting Group November 2003

11 The strategy and supporting documentation can be obtained at http://www.ecorecycle.sustainability.vic.gov.au/

[12] The Productivity Commission is welcome to review the Waste Model - please contact Sustainability Victoria

- The development of national approaches to product stewardship that would ensure measurable environmental improvement within the Australian context while maintaining consistency with approaches and outcomes internationally.
- The potential development of Commonwealth legislation to implement and enforce national product stewardship approaches for a range of products. Voluntary sector initiatives underpinned by a regulatory safety net to capture non-participants (known as "co-regulation") is an approach that is well supported by a range of industries in Australia. However, there is an increasing recognition that fully regulatory options also need to be considered.

The Productivity Commission has also commented on proposals to phase out single use, lightweight plastic shopping bags. The Commission's draft recommendation is that:

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. (draft recommendation 8.1)

The prolific use of plastic bags has become an issue of increasing community concern. The substantial number of bags used in Australia for low value uses has made them a public symbol of inefficient resource use; along with their presence and impact as litter. It is estimated that in Victoria, more than one billion lightweight single-use plastic bags are distributed each year. As noted by the Productivity Commission, approximately 1 % of these bags, or around 10 million per year in Victoria, will become litter.

It is clear that issue of high levels of plastic bag consumption and their environmental impacts, as litter is an issue of significant community concern. The reduction of around 50% in plastic bag usage nationally over the past two years in the absence of regulation is evidence of this. This has involved many consumers opting to purchase reusable bags, and whole communities opting to ban plastic bags via programs that have effectively banned plastic bags in a number of localities. For example a number of Victorian townships have elected to become 'plastic bag free', including the townships of Anglesea, Aireys Inlet, Cockatoo, Warrandyte Shopping Centre and Armstrong Street Village in Middle Park.

While the voluntary efforts undertaken so far by some retailers are commendable, it has still fallen short of the targets set by the retailers themselves. For varying reasons a significant number of retailers have not yet participated in the voluntary schemes. The different availability of "free" bags is leading to some disparity between retailers and some mixed messages and confusion for consumers. This situation may become an impediment to the achievement of the voluntary targets. Options, other than voluntary action, may need to be pursued to achieve agreed outcomes.

The Victorian Government agrees that sound cost benefit analysis should inform policy proposals for management of plastic bags. To this end it notes that in 2005 Australian, State and Territory environment Ministers asked for a range of regulation options in relation to plastic bags to be developed. In doing so they also committed environment agencies around Australia to develop a robust cost/benefit analysis to evaluate the options for a range of potential actions to reduce the impact of plastic bag litter on the environment.

This analysis is currently underway, and it is expected that a draft of this cost/benefit analysis will be available later this year to assist informed decision-making in relation to plastic bags.

The Victorian Government notes that the objectives underpinning a phase out of plastic bags would include improved resource efficiency through the avoidance of unnecessary low value use of resources, reduced waste generation and protection of the environment from discarded bags and poor disposal practices.

4.7. Local government's role in waste management

The Productivity Commission has made a draft recommendation that:

State and Territory Governments should consider shifting the responsibility for waste management in large urban centres from local government to appropriately constituted regional bodies. (Draft Recommendation 12.2)

The Victorian Government has considered the optimal and appropriate institutional arrangements for municipal waste management in the Melbourne metropolitan area and believes that individual councils should retain control of their waste management budgets and will determine what services and waste disposal options they need to meet their communities' needs.

The proposed new metropolitan waste management arrangements for Melbourne, fully recognise that local governments have, and will continue to have, a key role in waste management through the provision of services to their local communities and households.

Proposed regional arrangements developed in full partnership with local government will be appropriate for the development of strategic and technology options, that where the regional scope offers economy of scale opportunities.

Following a comprehensive review process involving Melbourne's Local Governments and Regional Waste Management Groups, the Victorian Government announced key reforms to our current solid waste arrangements. The reforms included a comprehensive new planning framework for solid waste across Melbourne and the replacement of the four Regional Waste Management Groups with a single Metropolitan Waste Management Group, supported and informed by a Local Government Waste Management Forum.

The reforms are designed to:

- Achieve a scale of operation that is appropriate for the planning and delivery challenges associated with achievement of *Towards Zero Waste.*
- Provide governance mechanisms that are effective and responsive to identified accountabilities.
- Ensure that council engagement and representation of interests is maintained while also achieving economies of scale.

4.8. Landfill levies

The Productivity Commission makes a draft recommendation that:

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.***

(draft Recommendation 9.1)

Victoria agrees with the Productivity Commission's recommendation that landfill levies should not be used to pursue *arbitrary* landfill diversion targets. However, Victoria's *Towards Zero Waste* strategy includes targets for resource recovery that, as described in Section 4.5 above, that are a result of extensive analysis and modelling. While expressed as "diversion from landfill", they cannot be considered as arbitrary.

Therefore, the Victorian Government does not agree with the Commission's recommendation to discontinue landfill levies as Victoria's landfill levies provide a price signal that environmental externalities need to be considered in the cost of waste disposal. The structure and application of the landfill levies mean that they are broad based instruments that are equitable and non-discriminatory.

Victoria's landfill levies, established under the *Environment Protection Act* 1970, are an integral component of the State's waste management system. Different levy rates apply to municipal, industrial and prescribed industrial wastes deposited to licensed landfills in Victoria.

It is noted that the Productivity Commission estimates the cost of externalities for best practice landfilling of municipal solid waste to be in the range $5 to $19 per tonne. Victoria's landfill levies for municipal solid waste are currently (from 1 July 2006) $8 tonne in metropolitan areas and $6 tonne for rural areas. Likewise, for commercial and industrial waste the Productivity Commission estimates external costs for disposal into best practice landfills as between $7 and $25 per tonne while Victorian levies on these wastes are $11 and $13 per tonne in rural and urban areas respectively. Victorian landfill levies are, therefore, at the lower end of accounting for externalities.

Levy funds are used solely for the purposes of environment protection and fostering the environmentally sustainable use of resources and best practice in waste management, establish waste management infrastructure, industry waste reduction programs, education programs, regulatory controls and enforcement regimes. These programs directly offset the external impacts of landfill disposal by increasing resource recovery and improving the efficient use of resources.

Municipal and industrial waste levy funds are distributed between Sustainability Victoria, EPA Victoria, Regional Waste Management Groups and the Sustainability Fund. Much of

this money is then passed on for use by local governments, industry, and community groups through grants programs.

EPA uses funds from the landfill levy to support its work in statutory policy formation, licensing, regulation and enforcement in relation to waste. As an example, EPA is currently finalising a revised statutory policy for landfills – the *Waste Management Policy (Siting, Design and Management of Landfills).* This policy will promote continuous improvement in the way in which we site, design and manage landfills in Victoria, as well encourage the diversion of waste materials for re-use or recycling as opposed to disposal.

Regional Waste Management Groups (RWMGs) receive landfill levy funds for core administrative costs and to support Regional Education Officers. RWMGs are a key link between statewide agencies and local government in the promotion of municipal waste reduction and best practice management of municipal wastes. Regional Education Officers provide advice and assistance with waste reduction programs, such as waste and litter reduction programs for schools, public events and small-to-medium businesses and organisations.

Sustainability Victoria develops and implements statewide strategies, plans and programs for solid waste. It allocates the majority of funds it receives to local government, industry, the community and others to facilitate the adoption of best practice in waste management, promote market development and to support education and anti-litter programs. In 2002/03, EcoRecycle Victoria provided over $7m in grants to external bodies including local governments.

Landfill levy funding has been utilized to establish a sustainable and efficient kerbside collection and sorting industry. For example, a grant of $250,000 was made to the City of Ballarat to upgrade the Ballarat Transfer Station – improving the handling of waste materials and reducing risks to the environment. The total $7m of grant funding was leveraged to over $29m of investment in grant projects.

The Sustainability Fund has been established to support priority projects and initiatives that foster the environmentally sustainable use of resources and best practice in waste management.

5. Conclusions

The Victorian Government recognises and appreciates that the Productivity Commission has a significant challenge before it to fully assess policy approaches to waste generation and resource efficiency.

The Victorian Government believes this is best achieved through a broad analysis of waste generation and resource efficiency policy rather than a narrower focus on waste management.

As an active player, the Victorian Government has developed and implemented policies and strategies that are delivering good resource efficiency outcomes. Victoria will continue to refine these policy settings and directions to ensure that the best outcomes are achieved for Victoria.

Victoria agrees with the key thrust of the Productivity Commission's draft report – that efforts to further improve resource efficiency need to be cognisant of and sensitive to the environmental, social and economic consequences of these efforts. Victorian Government policies, such as *Growing Victoria Together* through to more specific policies and strategies such as *Towards Zero Waste*, embrace as an underpinning philosophy the 'triple bottom line' approach of aiming to contribute simultaneously to environmental, social and economic objectives.

However, Victoria's experience in applying 'triple bottom line' approaches to the development of resource efficiency policy and strategy has resulted in outputs and outcomes that are different to those postulated by the Productivity Commission in their Draft Report.

These differences have been outlined in this submission. Victoria enjoys a position of good resource efficiency performance and, more broadly, strong social and economic outcomes. The Victorian Government believes that these are key factors that the Productivity Commission should consider in developing its final findings and recommendations for this inquiry.

ATTACHMENT 1

WASTE DISPOSAL COSTS AND IMPROVING RESOURCE EFFCIENCY OF VICTORIAN BUSINESSES

Waste Collection and Transport

The bulk of costs for provision of waste management services to industry lie in the collection and transport of wastes – typically these make up 70-80% of total waste management costs to industry. These costs are often more influenced by the distance traveled to the point of disposal (e.g. landfill or recycling facility) than the method of disposal.

An initial analysis of this key aspect of waste management suggests that:

1. Wasted by-products also waste scarce transport resources.

    - There is the waste of scarce road space and rail time slots of bringing the surplus goods and services to the consumer or producer;

    - The waste of scarce road space and rail time slots of bringing the surplus goods and services from the consumer or producer to the waste recycling or tip facilities; and

    - The transport task associated with (a) and (b) above wastes energy and causes transport externalities (emissions, deaths, accidents).

2. There is market failure in the waste of transport resources.

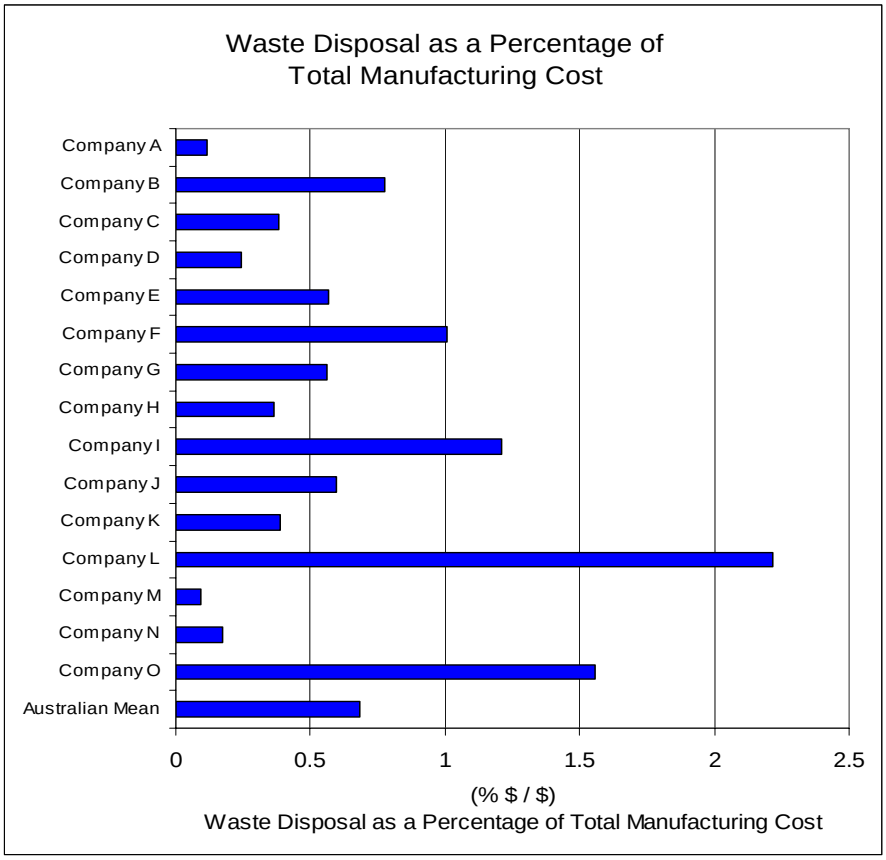
    - The marginal truck or train does not pay the full cost of rectifying the congestion associated with that waste-associated trip.

3. Any minimisation of waste would help ease transport congestion in Melbourne, a matter addressed by the current Victorian Competition and Efficiency Commission (VCEC) Inquiry: *Making the Right Choices: Options for Managing Transport Congestion (Draft report April 2006).*

However, there is a lack of quality freight statistics, especially for waste movement, that hinders the work of the Victorian Government and its agencies, especially VCEC, in exploring options to minimise congestion in Melbourne.

Waste Disposal

Industry surveys demonstrate that waste management is not seen as a significant cost to business. This is illustrated by a survey undertaken of the food processing sector in Victoria in 2000, which found that waste management costs (including solid, liquid and prescribed wastes) were within a range of 0.1% to 2.2% of total manufacturing costs (see graph below).



The net financial impact on businesses that choose to dispose of their waste to a recycling facility rather than landfill are negligible, even where there is an apparent significant difference in the gate fee for receiving the waste.

For example, assuming that the gate fee for a recycling facility is twice that of landfill disposal and if collection and transport was at the lower end of the scale (at say 70% of the waste disposal costs) then the gate fee difference could add 15% to the total cost of waste disposal. However, this is 15% of approximately 1% of the total manufacturing cost, or more directly a change of 0.15% of the total manufacturing costs. For most firms, this is probably below the detectable noise level of fluctuating prices and costs to source materials and transport materials and products.

Cleaner Production and Improved Waste Management

Many businesses are able to reduce their waste disposal requirements, and the associated waste costs, through cleaner production and source management of waste streams. These measures reflect the avoidance components of *Towards Zero Waste*. The case studies described in the following table illustrate the reductions in waste to landfill and the associated costs that have been achieved by Victorian businesses.

Company	Turnover and Year	No. Employees (FTE)	Waste Disposal to Landfill, tonnes per annum & annual waste management costs		Strategy Employed
			Before	After (2005)	
Masterfoods (SnackFoods – Ballarat)	Not available – private company	660	2600 tpa (2002) ($257,400)	650 tpa ($64,340)	Better internal segregation of wastes and of production waste from landfill to stockfeed has increased diversion rate from 34% to 82%
Crown Limited (Melbourne)	$2.7 billion (2004)	4320	5000 tpa (2003) ($276,500)	4300 tpa ($236,850)	Segregation and diversion of organic waste streams from landfill has increased diversion from 30% to 40%
Tuftmaster Carpets (Preston)	Not available – private company	170	530 tpa (2001) ($50,000)	205 tpa ($19,350)	Diversion of cardboard and plastics from landfill waste. Diversion rate increased from 17% to 48%.
INC Corporation (Dandenong) (Manufacturer of fabrics for acoustic and thermal insulation, filtration, upholstery and thermoformed items. Manufacturer of automotive interior trim systems.)	Not available – private company	200	1500 tpa (2004) ($110,000)	1200 tpa ($88,000)	Materials efficiency program – value of lost raw materials reduced from $2.1m pa to $1.2m pa (a $0.9 million saving to the company).
Lend Lease Property Management – Dandenong Plaza Shopping Centre	$237 million (2004) (Lend Lease not Dandenong Plaza)	400 (Lend Lease not Dandenong Plaza)	1070 tpa (2002) ($125,000)	876 tpa ($102,000)	Increased diversion of cardboard, plastics and organics away from landfill. Diversion rate has increased from 17% to 31%.

The Victorian Government's policies and programs for cleaner production have helped these firms improve their resource efficiency, reducing both their costs and their effect on the environment. These examples highlight some important aspects of improving resource efficiency:

- Business practices are not necessarily financially cost effective. All of these examples demonstrate that lower cost options were available to commercial enterprises.
- More efficient use of material resources and the avoidance of environmental externalities does not necessarily mean higher costs. All of these examples combine improved resource efficiency with lower costs.
- Government intervention, in the form of cleaner production assistance programs to industry, has helped to initiate changes in business practices that deliver cost savings to these firms.