



USED PACKAGING MATERIALS

Impact Statement for the draft National Environment Protection Measure for Used Packaging Materials

January 1999

EXECUTIVE SUMMARY

INTRODUCTION

Packaging waste has been identified as a priority waste stream by ANZECC. There is strong community support for recycling, and an equally strong expectation that local government authorities will provide, or arrange for, an appropriate collection service where feasible.

BACKGROUND TO THE NATIONAL PACKAGING COVENANT

The proposed National Packaging Covenant will be the lead instrument for managing packaging waste in Australia. The Covenant is a voluntary agreement between industries in the packaging chain and all spheres of government. It is based on the principles of product stewardship applying throughout the packaging chain from raw material suppliers to retailers, and the ultimate disposal of waste packaging. A key feature of the Covenant is that it will result in a sustainable kerbside recycling system.

Development of the Covenant was complex. While both industry and governments have supported a collaborative and flexible approach, a major industry concern has been to ensure that agreeing to voluntary measures through the Covenant did not tilt the playing field against the interests of Covenant signatories. Industry called for a regulatory mechanism for non-signatories to the Covenant, to ensure that signatories were not disadvantaged.

Effective national action to support the cooperative framework of the Covenant will enable the self-regulatory Covenant to address the community demand for recycling services, as well as wider community concerns about the need to conserve resources. The Covenant will also support recycling schemes and ensure that they are provided in a cost-effective manner that produces real and sustainable benefits, including the development of markets for recycled materials.

The Covenant commits signatories to implementation of best-practice environmental management in packaging design, production and distribution; research into environmental and life cycle issues, including recoverability/recyclability and safe disposal; consumer information; data collection; and market development for recycled products.

THE PROPOSED NATIONAL ENVIRONMENT PROTECTION MEASURE

The NEPM will guide jurisdictions in the creation of a nationally consistent regulatory safety net affecting the small minority of players who do not join the Covenant or establish other arrangements that produce outcomes equivalent to those achieved through the Covenant.

In considering the suitability of regulatory options, it was necessary to consider the principles of the Covenant and the potential scale of application of the NEPM. Highest level negotiations on the Covenant have indicated that the vast majority of Australian packaging supply chain and retailing industries will become signatories to the Covenant.

Legislating to make compulsory the flexible, voluntary commitments under the Covenant would be impracticable, administratively burdensome, and out of proportion to the size of the problem being addressed. With this in mind, a range of overseas models for the management of packaging waste were reviewed, as well as a range of options which had previously been canvassed by ANZECC.

The recommended regulatory option for implementation by jurisdictions is the imposition of a “take back and utilise” obligation at a key point in the packaging chain – the brand owner. Brand owners will generally be the Australian producers or importers of packaged products, but will not include retailers unless they are also manufacturers, wholesalers or importers. Brand owners are nominated as the point in the packaging chain where there is relative freedom of choice and action, and where product stewardship principles can be realistically pursued. The kinds of materials to be recovered and the level of recovery and utilisation are to be established by reference to the performance of Covenant signatories. Hence, while the NEPM guidelines do not include specific targets, it is anticipated that the implementing mechanisms in jurisdictions could contain appropriate performance indicators, to be adjusted when necessary to align with Covenant performance.

These obligations on non-exempt organisations equate to the performance expectations which signatories to the Covenant self-impose in the pursuit of product stewardship. The proposed regime will have the desired effects of underpinning the Covenant, reinforcing product stewardship principles, and ensuring no competitive disadvantage to Covenant signatories. Setting performance objectives in respect of take back by reference to the performance of Covenant members will ensure that expectations placed upon non-signatories to the Covenant are not arbitrary and are actually achievable in an Australian or jurisdictional setting.

In the absence of exemption thresholds for the NEPM obligations, it is proposed that enforcement of the NEPM will be modelled on the Trade Practices Act by being largely based on complaints or an assessment by the relevant jurisdiction that intervention may be needed. For example, enforcement action may be considered appropriate where there appears to be blatant disregard for the law; there is significant public detriment; or where successful enforcement, by litigation or other means, would have a significant deterrent or educational effect.

The resource implications of enforcement will not emerge until the effectiveness of the NEPM in encouraging Covenant membership becomes clear. If, given the existence of the NEPM, the Covenant finally attracts almost all industry players, enforcement activity against those few remaining outside the Covenant should not require significant jurisdictional resources.

SUMMARY OF THE DRAFT NEPM FOR USED PACKAGING MATERIALS

The draft National Environment Protection Measure (NEPM) for Used Packaging Materials is comprised of a goal, guidelines to participating jurisdictions and data protocols.

The goal is defined in terms of support for the Covenant and resource conservation.

The guidelines advocate the introduction of statutory provisions at jurisdictional level requiring brand owners to take back and re-utilise a proportion of the packaging materials they put into the market, where the performance expectation is established by reference to the performance being achieved by signatories to the National Packaging Covenant.

The protocols establish data reporting requirements for brand owners, local government authorities and State/Territory jurisdictions, which are intended to establish the amount of packaging put into the market, the amount recovered and the purposes to which it is put. The protocols also provide for the incorporation of relevant Covenant data.

SUMMARY OF IMPACT STATEMENT

The Impact Statement is comprised of four parts.

BACKGROUND

The first part covers background issues including the relationship between the proposed National Packaging Covenant and the draft NEPM, models of packaging regulation from around the world, the Australian kerbside recycling collection system and the Australian packaging sector.

OPTIONS

The second part considers a range of options that might be applied to statutory measures to regulate the packaging put into the market by non-signatories to the National Packaging Covenant. It includes the preferred option of requiring brand owners to take back and re-utilise a proportion of the packaging they put into the market. The ability of each of the options to support the National Packaging Covenant is assessed in terms of its strengths and weaknesses.

IMPACTS

Part three deals with the economic, environmental and social impacts of the NEPM. The evaluation of the social impacts includes a substantial record of industry and local government viewpoints. Some limitations are imposed on the ability to assess

economic and environmental impacts by the nature of the NEPM as a support device for the National Packaging Covenant. The effect of the NEPM is paradoxical: of itself, it can have only marginal impacts, yet as a catalyst it makes possible the impacts of the Covenant, which will not exist without a regulatory safety net.

Economic Impacts

General

The Covenant will make the major impact and the NEPM impacts will be confined largely to producers of packaged goods having approximately a 10% market share of grocery items retailed within Australia. The lack of information in relation to the economic impacts of recycling has made a traditional cost benefit analysis of the NEPM impossible. As a result, economic impacts have been assessed on the basis of cost effectiveness.

The Impact Statement concludes that the overall cost to the community of collecting and recycling packaging materials is unlikely to be adversely affected by either the Covenant or the NEPM. These costs are currently met by a combination of rates, prices of products and over-market buy back price mechanisms. The move towards a market based system through the Covenant will cause changes in the mix of these mechanisms.

Although the NEPM introduces explicit obligations for brand owners affected by the NEPM, the small market share represented by this group suggests that any macro-economic impact is not measurable. Furthermore, it cannot be assumed that all parties not subscribing to the Covenant would be affected by the NEPM. Industries or companies that have put in place arrangements to produce equivalent outcomes to those achieved through the Covenant will be exempt.

Since the enforcement model proposed is based on a complaints system, it is probable that some (unknown) proportion of smaller players would not be complained about, even if a competitor had information indicating non-compliance, if the competitive threat was small. If a complaint were made, jurisdictions would need to be satisfied that enforcement action was strategically and economically beneficial.

Any impact of a goods and services tax (GST) on stakeholders is not taken into account in this assessment.

Brand owners

Costs for brand owners resulting from compliance with the NEPM will vary between companies depending on how they manage their obligations and record keeping requirements. It is probable that agency arrangements for materials recovery will dominate, that economies of scale could be secured through that route and that costs to companies will be limited. Brand owners can discharge their obligations by undertaking or assuring the recovery and utilisation of used packaging materials which are the same as the packaging in which their products are sold. This allows flexibility and constrains any unreasonable costs that might otherwise have been

incurred. The information to be recorded may well already be available to brand owners, since packaging considerations are already significant factors in marketing consumer products.

Collection services

It is anticipated that no change to collectors' municipal services will result from the NEPM. It is feasible that companies affected by the NEPM will contract directly or indirectly (through local government) to comply with their obligations. This may provide the opportunity for collectors to diversify their services on a commercial basis.

Administrative Costs To Jurisdictions

Resources will be required at State/Territory and local government levels for the purposes of monitoring, reporting on and enforcing the NEPM. It is anticipated that in part these would be provided from savings in resources presently committed to research and policy development in State/Territory Environment Departments. The proposal to establish a complaints based enforcement regime would limit enforcement costs to the necessary minimum.

Local Government

An objective of the NEPM is to ensure that materials collected in kerbside collection systems are confined to those agreed to by local government in subscribing to the National Packaging Covenant. In principle, provided brand owners covered by the NEPM faithfully carry out their responsibilities, the NEPM would have negligible impact on local government. Local government is empowered to recover collection and sorting costs from non-complying brand owners, however it is expected that this power would only be exercised where it is strategically and economically beneficial to local government.

In relation to local government reporting requirements, most of the information in relation to kerbside collection is already recorded as part of local government management practices. In some jurisdictions, regional waste management planning regimes require similar levels of data collection to those proposed in the draft NEPM.

Wider Community

The wider community will benefit from transparency of costs to ratepayer for waste and recycling services. This information provides the community with a perspective on which to base the value of their kerbside service.

Environmental Impacts

Environmental Impact of Not Making the NEPM

In the "do nothing" scenario (the absence of a NEPM or other device to progress the Covenant) the community is likely to see a reduction in the amount of material recovered at kerbside. A reduction in the recovery of recyclable materials can be expected to result in an increase in the rate of consumption of equivalent virgin

material. Conversely, an increase in the amount of materials recycled represents a potential saving in landfill space.

It is expected that aluminium, steel and glass containers will continue to be collected, whether or not the Covenant/NEPM proceed. Collection of mixed paper and plastics is less assured. A recognised difficulty in assessing the environmental impact of plastic packaging, is the trade-off between virgin gas and oil used to make plastics, and that used as an energy source in collecting and recycling plastic packaging.

An alternative scenario in the absence of an effective Covenant/NEPM package is that individual jurisdictions will take action to impose individual regulatory options. The outcome may be nomination of recovery levels for recyclables which produce adverse environmental impacts, e.g. by requiring collection of materials without regard to energy issues, or which fail to recover a level of materials which is environmentally and economically feasible.

Environmental Impact of Making the NEPM

As support for the Covenant, it is clear that the NEPM will only result in marginal environmental impacts. However, the NEPM encourages membership of the Covenant which is intended to be the primary instrument for delivering environmental benefits

Companies or industrial sectors choosing to operate outside the Covenant framework have the option of establishing a collection system such as a bring system, that may be more economical than a kerbside system, but could have other environmental impacts. It is beyond the scope of this Impact Statement to research all possible scenarios. However due to the predicted coverage of the Covenant it is expected that any or all of these systems will be operating with marginal environmental effect.

Regional Environmental Differences

The draft NEPM for Used Packaging Materials does not propose to establish ambient environmental quality standards. The desired environmental outcomes of the Covenant/NEPM are, in relation to consumer packaging and household paper, optimal resource use and recovery and the conservation of virgin materials. Achievement of these outcomes may have region-specific environmental impacts in those areas which produce virgin materials used in packaging (e.g. bauxite, wood pulp and soda ash/sand) by reducing the amount of those materials consumed in meeting Australia's consumer packaging needs. It is expected that optimal use of resources and conservation of virgin materials are likely to lead to positive rather than negative environmental impacts.

Regional differences which may have an impact on the management of used consumer packaging materials are more typically social and economic differences. Therefore regional **environmental** differences are not considered significant in relation to the development of the NEPM.

Social Impacts

Industry Attitudes

A survey of companies and industry associations from across the packaging chain was conducted in early 1998. At the time the questionnaire was distributed and the interviews conducted, neither the nature of industry commitments under the Kerbside Schedule to the Covenant, nor the form of the proposed NEPM, were known.

Most industry interviewees believed that industry was already fulfilling its environmental obligations with regard to packaging product stewardship and that market forces should determine the best outcomes for kerbside systems. Many companies expressed a firm view that an effective NEPM is required to ensure that the National Packaging Covenant proceeds. There was general concern with Governments applying strong punitive measures. At the same time, those industries most involved in recycling activity saw value in 'evening up the playing field', especially if financial contributions were amongst the obligations of the Covenant.

Some of the industry positions expressed at the time have evolved with the progress of Covenant negotiations, and are now more supportive of the Covenant/NEPM package

Local Government

The strong message from local government is that kerbside recycling services are very likely to be reduced if local governments' short term kerbside funding problems are not dealt with, and that longer term increases in kerbside recovery are anticipated, based on the delivery of a more sustainable kerbside system. Local government sees industry and Commonwealth and State Governments as stakeholders who should be contributing directly to the funding costs of kerbside, while also fulfilling other roles in waste minimisation.

Community Attitudes

The relatively high levels of material recovery achieved in most Australian kerbside recycling programs demonstrate a significant level of community support for these programs. Surveys of community attitudes conducted since 1994 typically rank the environment as one of the most significant state policy concerns and they expect it to be the top state priority issue in ten years time.

The high level of involvement in recycling suggests that any action to significantly reduce service levels would be met with concern, although the somewhat thin knowledge base of many people raises the possibility that a concerted advertising campaign could change thinking.

A number of the surveys cited explored the question of shared responsibility for the cost of kerbside recycling systems. This issue has been explored in more detail in assessing the impacts of the Covenant, as the NEPM will not operate to directly address kerbside funding issues. However it can be generally stated that only a small proportion of respondents appeared to understand the funding issues associated with kerbside recycling collections.

IMPLEMENTATION ISSUES

Part four covers implementation issues including a review of existing statutory frameworks in participating jurisdictions which would need to accommodate, or be varied to accommodate, the NEPM. An assessment of resourcing issues has been included. Part four also deals with mutual recognition and international trade issues.

NEPC ACT REQUIREMENTS FOR IMPACT STATEMENTS

Section 17 of the NEPC Acts requires that Council prepare an Impact Statement relating to the proposed measure that includes the following:

- (i) the desired environmental outcomes. These are addressed in section 1.4.
- (ii) the reasons for the proposed measure and the environmental impact of not making the measure. The reasons for making the measure are set out in section 1.2.1; and the environmental impact of not making the measure is set out in section 3.2.1.
- (iii) a statement of the alternative methods of achieving the desired environmental outcomes and the reasons why those alternatives have not been adopted. This is covered in section 2.
- (iv) an identification and assessment of the economic and social impacts on the community (including industry) of making the proposed measure. These are dealt with in section 3.
- (v) a statement of the manner in which any regional environmental differences in Australia have been addressed in the development of the proposed measure. These are addressed in section 3.2.3.
- (vi) the intended date for making the proposed measure. This is explained in section 4.1.3.
- (vii) the timetable (if any) for the implementation of the proposed measure. At this stage an implementation timetable has not been developed for this measure.
- (viii) the transitional arrangements (if any) in relation to the proposed measure. No transitional arrangements are currently proposed.

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1. BACKGROUND

1.1 NATIONAL ENVIRONMENT PROTECTION COUNCIL

The National Environment Protection Council (NEPC) is a body established by each State and Territory and the Commonwealth Government to work cooperatively at a national level to ensure that all Australians enjoy the benefits of equivalent protection from air, water, soil and noise pollution and that business decisions are not distorted nor markets fragmented by variations in major environment protection measures between member Governments. The NEPC stems from the *Inter-Governmental Agreement on the Environment (IGAE) 1992*, which agreed to establish a national body with responsibility for making National Environment Protection Measures (NEPMs). The operation of NEPC is covered by the *National Environment Protection Council Act 1994*.

1.1.1 NATIONAL ENVIRONMENT PROTECTION MEASURES

NEPMs are broad framework-setting statutory instruments, which, through an extensive process of inter-government and community/industry consultation, reflect agreed national objectives for protecting particular aspects of the environment. NEPMs may consist of any combination of goals, standards, protocols, and guidelines.

A two-thirds majority is required for the Council to make a NEPM. Implementation of NEPMs is the responsibility of each participating jurisdiction. A NEPM will take effect in each participating jurisdiction once it is notified in the Commonwealth of Australia Gazette, but is subject to disallowance by either House of the Commonwealth Parliament.

It should be noted that any supporting regulatory or legislative mechanisms which jurisdictions may choose to develop to assist in implementation of the proposed NEPM will need to go through appropriate processes in those jurisdictions.

1.1.2 PURPOSE OF IMPACT STATEMENT

In making NEPMs, the NEPC must have regard to a number of considerations. These are detailed in section 15 of the *National Environment Protection Council Act, 1994*, and include:

- consistency with the IGAE,
- environmental, economic, and social impacts,
- relevant international agreements, and
- any regional environmental differences.

Prior to making a NEPM the Council must prepare a draft of the NEPM and an impact statement (section 17 of the NEPC Acts). The Impact Statement must include the following:

- a) the desired environmental outcomes;*
- b) the reason for the proposed measure and the environmental impact of not making the measure;*
- c) a statement of the alternative methods of achieving the desired environmental outcomes and the reasons why those alternatives have not been adopted;*
- d) an identification and assessment of the economic and social impact on the community (including industry) of making the proposed measure;*
- e) a statement of the manner in which any regional environmental differences in Australia have been addressed in the development of the proposed measure;*
- f) the intended date for making the proposed measure; and*
- g) the timetable (if any) in relation to the proposed measure.*

These requirements are set out in the legislation which has been passed by all jurisdictions, and reflect the views of the Commonwealth, State and Territory Governments as to the type of assessment needed to evaluate the potential impacts of adopting a proposed NEPM.

The NEPC legislation requires that both the draft NEPM and the Impact Statement be made available for public consultation for a period of at least two months. The Council must also have regard to the Impact Statement and submissions received during public consultation in deciding whether to adopt a proposed NEPM. The key role of this Impact Statement is to assist in the process of public consultation over the proposals contained in the draft NEPM.

The goal of the NEPM makes it clear that it is intended to operate only in support of the proposed National Packaging Covenant (the Covenant), which is described in more detail below. In assessing the impacts of the NEPM, this Statement acknowledges that the Covenant and the NEPM are an integral package and that assessment of the NEPM cannot ignore the anticipated effects of the Covenant.

At the time of writing (May 1998), the details of the Covenant have not been finalised. Once the commitments have been agreed in principle between the Covenant negotiating parties, the Covenant will be subject to a regulatory impact assessment at Commonwealth level. This assessment will inform further debate about the impacts of the Covenant/NEPM package.

1.1.3 SOURCES OF INFORMATION

Much of the material in this Impact Statement is based on conclusions drawn from various pieces of economic and sociological research. A variety of references have been used. Some work referred to has been commissioned by industry sponsors while various spheres of government have instigated other work.

To date there has been a paucity of information in relation to the economic and environmental impacts of recycling. This was noted in the Industry Commission's 1996 report into Packaging

and Labelling¹, and continues to apply. (The Commission's Terms of Reference did not require it to report on social impacts.)

Two fundamental concerns of a researcher should be to ensure that results are both valid and reliable. In the natural sciences data are seen as reliable if other researchers using the same method of investigation on the same material produce the same results.

Amongst social sciences, such as economics and sociology, which are the bases of research in the Impact Statement, none would claim that the same standards of reliability can be attained, but many would argue that social data can in principle attain a certain standard of reliability.²

Many people subscribe to a view that quantitative methods provide greater reliability. They usually produce standardised data in statistical form. The research can be repeated and the results confirmed. Qualitative methods are often criticised for failing to meet the same standards of reliability because the procedures used to collect data can be unsystematic, the results are rarely quantified and there is no way of replicating a qualitative study to check the reliability of findings.

On the other hand, supporters of qualitative methods often argue that quantitative methods lack validity. Statistical research methods may be easy to repeat but may not give a true picture of social reality. They may lack the depth to describe accurately the meanings and motives that form the basis of social action. They require the use of categories imposed by the researcher, which may have little real meaning or relevance.

Data are valid if they provide a true picture of what is being studied. However, data can be valid without being reliable. Studies can be replicated and produce the same results but both sets of results may not be a valid measure of what the researcher intends to measure. For example, statistics on attendance at football matches may provide a reliable indication of attendance but do not necessarily give a true picture of commitment to sportsmanship and would be invalid for that purpose.

Appropriate sampling is also a concern for social research. Random sampling relies on statistical probability and involves relatively large sample sizes to be confident that the sample is genuinely representative. Stratified random sampling involves dividing the sample frame into groups. The sample is then selected from each of these groups ensuring that the proportions in the sample are in the same proportions as in the population as a whole.

The following statement is taken from the BIEC National Recycling Audit and Garbage Bin Analysis 1997 Report, and gives an indication of the kinds of issues that need to be kept in mind when considering the results of economic and sociological research.

With all of these findings, however, it should be noted that this project did not include in its methodology an examination of other factors that impact on performance. These include information and educational programs conducted by the local council, the

¹ *Packaging and Labelling*, Industry Commission Report No. 49, 14 February 1996.

² Haralambos M. & Holborn M. (1990), *Sociology: Themes and Perspectives*, London, Unwin Hyman.

relative age of a given system, local policy and strategic frameworks, and the availability of resources.

For example, it is unclear whether lower diversion rates for fortnightly systems are solely a function of the frequency. Indeed, a council not using a standard weekly service achieved one of the nation's highest diversion rates.

It is anticipated that stakeholders will seek to draw comparisons and make conclusions on the basis of this report. While this process will in and of itself lead to systemic improvements and is to be welcomed, prudence needs to be applied in making straight one-to-one comparisons. Again, other possible influencing factors outside the report's scope must be taken into account.

Because the Impact Statement refers to research conducted by industry groups and all spheres of government, there are likely to be competing claims in respect of the validity, reliability and objectivity of material cited. It is doubtful that research has been repeated to check results or that the research has tested a pre-conceived hypothesis. As a consequence the material drawn upon should only be regarded as indicative. In general, while it is reasonable to take it into account in forming a view of the impact of the Covenant and NEPM, it cannot be regarded as establishing a case for any particular point.

1.2 BACKGROUND TO THE COVENANT AND NEPM

The role of packaging

Packaging serves many useful purposes and plays an important role in preserving, protecting and marketing products during their storage, transport and use. Packaging reduces damage or wastes and plays an important public health function by protecting and preventing the contamination of food and beverages.

Packaging labelling informs consumers about a product's characteristics and qualities and helps them make informed purchasing decisions relating to recycling and disposal.

In situations where a heavily urbanised society requires food to be produced distant from its consumption, the benefits of packaging of processed food and beverages can be measured in terms of reduced waste (through less spoilage and damage), more effective transport and reduced energy and labour requirements.

Packaging can also protect people and the environment by safely containing hazardous materials during storage, handling and transport. Most of these benefits, however, occur prior to consumption and are not readily apparent to consumers, who are generally responsible for disposing of the used packaging.

Environmental effects of packaging

There is a range of environmental costs associated with the production, use and disposal of packaging.

The production of some types of packaging is energy intensive and can generate solid wastes which may contain impurities and hazardous substances. Some materials generated during production, such as offcuts and scraps, can be reused within the production process. Solid wastes need to be appropriately managed or disposed of in order to avoid risks to people or damage to the environment. Production of some packaging types (e.g. aluminium) from secondary materials requires less energy than the production of the same package from virgin materials.

The production of packaging may also result in liquid and gaseous waste emissions, which can be associated with potentially serious air and water pollution and other environmental problems. Effective control and treatment of emissions may be required, prior to their release into the environment.

Most energy production and use results in the generation of carbon dioxide and other greenhouse gases which contribute to global warming.

If not effectively disposed of, packaging can cause environmental impacts such as litter. Litter detracts from the attractiveness of the natural environment and artificial landscapes, can interfere with and harm wildlife, can be a danger to people, and can be widely dispersed making it difficult and costly to collect.

Packaging accounts for a significant component of municipal waste and, as a consequence, is a contributor to landfill costs and impacts.

Community support for recycling

There are strongly held beliefs across the Australian community, as evidenced by widespread news reporting, surveys and data on recyclables collections, that used consumer packaging materials should be managed in such a way as to reduce their environmental impacts.

Participation in recycling is seen by many individuals as one way that they can contribute to help the environment and conserve natural resources. Community support for recycling has been strong, and is growing, and has been identified as one of the main reasons why local authorities have established recycling schemes.

It has been suggested that the value of the community's involvement in recycling goes well beyond the recycling issue and helps raise awareness about other resource conservation and environmental issues.

Basis for the Covenant and NEPM initiative

It was against this background of strong community support that ANZECC focused on a range of waste minimisation issues, and specifically endorsed the National Waste Minimisation and Recycling Strategy and the National Kerbside Recycling Strategy in 1992. This process led to the signing of a number of 'material specific' national waste reduction agreements in 1992, some of which have recently been renegotiated and endorsed by ANZECC.

Governments have a desire for sustainable use of virgin materials, and for materials recovery and utilisation systems that are based on common industry practices applying broadly across industry sectors, including import operations. Industry wants economically efficient practices and seeks consistent national approaches in re-use and recycling policies.

In November 1996, the Australian and New Zealand Environment and Conservation Council (ANZECC) directed the Standing Committee on Environmental Protection (SCEP) to negotiate with industry and local government an agreement covering all aspects of the packaging chain, based on the principle of shared responsibility. The agreement was to include distribution of responsibilities and costs and aimed, *inter alia*, to secure the kerbside recycling system.

In June 1997, ANZECC endorsed the development of a National Packaging Covenant. The Covenant aims to establish a framework for effective life cycle management of packaging products and establish a collaborative approach between Commonwealth, State and local governments and industry.

The process of developing a National Packaging Covenant represents a move away from prescriptive regulation and supports a self-regulatory regime based on industry's expressed commitment to the ethic of producer responsibility. There is the beginning of a partnership between government and the packaging supply chain to achieve improved environmental outcomes in the most cost effective manner.

The Covenant is a voluntary agreement which includes industry commitments to self regulation based on the principles of product stewardship and shared responsibility. The responsibility and cost of diverting resources from landfill has tended to fall on the collectors, mostly local government, and packaging producers that buy back the materials. Product stewardship imposes an obligation on all those who benefit from production to assume a share of responsibility for a product over its life cycle. It guards against for example, concentrating environmental costs onto the packaging component, where they would have a greater relative impact than if spread across a product's entire life cycle.

By adopting product stewardship principles, the Covenant has clarified these responsibilities so that no sector should bear a disproportionate burden of the costs and conversely, no industry sector receives a competitive advantage by avoiding responsibility.

Broad objectives for the diversion of resources from the waste stream are defined in the Covenant. These provide opportunities for reducing packaging requiring disposal and optimising

resource use, by advocating techniques such as lightweighting in the manufacturing process, and re-use and recycling of materials.

The Covenant is supported by seven schedules:

Guiding Principles and Objectives for Kerbside Recycling – which establishes principles for kerbside recycling, appropriate pricing mechanisms and the use of accredited systems;

Product Stewardship – Outcomes – which is an industry code of practice for those involved in the design, manufacture and use of packaging and includes guidelines for evaluating environmental impact of materials and products;

Action Plan Guidelines - which provides guidance on developing an Action Plan that will meet the standard expected under the Covenant;

Action Plan Validation – sets out procedures for validating action plans;

Kerbside Schedule – which establishes a collective commitment from local government and industry to support an economically and environmentally sustainable national program for kerbside collection of recyclables. It outlines objectives, principles and preferred practices and mechanisms for financial support;

Industry Strategy for Sustainable Recycling – designed to improve the operation of kerbside collection services; and

Local Government Guidelines – Kerbside Recycling – establishes best practice guidelines for kerbside collection services.

In June 1998, industry proposed to ANZECC a strategy for sustainable recycling. This was further refined and led to an industry offer in August 1998 to match government funding for an agreed suite of transitional mechanisms to facilitate a move over three years to a sustainable market-based kerbside recycling collection system. While there are significant details remaining to be negotiated, this offer has been described as a major indication of industry commitment to product stewardship and the Covenant process. The support of the great majority of the Australian packaging supply chain for the industry offer has confirmed governments' commitment to the self-regulatory model and established the position of the proposed NEPM as a safety net affecting a very small proportion of the market, rather than as a primary regulatory instrument.

1.2.1 REASONS FOR INTERVENTION

Development of the Covenant was complex. While both industry and governments have supported a collaborative and flexible approach, a major industry concern has been to ensure that agreeing to voluntary measures through the Covenant did not tilt the playing field against the

interests of Covenant signatories. Industry called for a regulatory mechanism for non-signatories to the Covenant, to ensure that signatories were not disadvantaged.

In order to recognise the commitment that the majority of the packaging chain has made with the preparation of the Covenant, Governments have agreed to regulate to ensure that signatories to the Covenant have some protection in the market place from “free riders” in the kerbside system.

In keeping with the spirit of the Covenant, it was necessary to identify a single mechanism that could be developed nationally within a statutory framework which assured consistent application and implementation across all jurisdictions. The only environmental regulatory framework satisfying these criteria is a National Environmental Protection Measure (NEPM) under the National Environment Protection Acts. Industry signatories to the Covenant will be exempted from all provisions of the NEPM.

- Intervention is needed to support the national cooperative framework and approach for the effective lifecycle management of packaging and paper products - covering their design, production, distribution, use, recovery and disposal - so that governments and industry have clear and consistent performance benchmarks and objectives. Effective national action to support the cooperative framework of the Covenant will also:
 - address community support and demand for recycling services, as well as wider community concerns about the need to conserve resources;
 - support recycling schemes and ensure that they are provided in a cost effective manner and produce real and sustainable benefits;
 - support the development of markets for recycled products so that there is an increased demand for recovered materials; and
 - respond to industry concerns that separate systems for resource recovery at state level impose additional costs on industries operating in national and international markets.
- Intervention is also needed to establish a nationally consistent and reliable basis for the collection of data on the overall environmental impact of used packaging, including better information on the environmental and economic costs and benefits associated with the recovery, reuse, recycling and disposal of used packaging materials.

1.2.2 STAKEHOLDERS IN THE COVENANT/NEPM PACKAGE

As noted earlier, the responsibility and cost of diverting used packaging materials from landfill has tended to fall on the collectors (mostly local government) and end users (the companies that buy back the materials). Implementation of the Covenant/NEPM package is intended to assure a more equitable sharing of responsibilities and costs.

The impetus for development of the Covenant/NEPM package has arisen from:

- a desire on the part of all spheres of government to optimise resource use and reduce the amount of packaging waste being disposed to landfill;
- the strong community support for the continuation of recycling collection services; and
- the inequity in the way the responsibility for diverting used packaging materials from landfill is being borne predominantly by collectors and end users, and is being avoided by other parts of the packaging chain.

The stakeholders in packaging waste minimisation who may be affected by the Covenant/NEPM are:

- State and Territory governments;
- local government authorities;
- contracted collectors and sorters of recyclable materials;
- companies who currently recover and utilise packaging materials through local government-provided or other collection mechanisms;
- companies who benefit from the production and use of the packaging materials in which their products are sold, but who have to date not borne any responsibility for stewardship of those packaging materials (referred to as “free riders”); and
- members of the community both as ratepayers and as consumers.

1.2.3 THE COVENANT/NEPM AND SMALL/MEDIUM ENTERPRISES

The proposed NEPM would impose an obligation on all brand owners to be responsible for assuring the recovery and utilisation of used packaging materials in which their products are sold to consumers. At this stage, no threshold is proposed for the imposition of these obligations. Based on overseas experience, the introduction of formal thresholds runs the risk of encouraging market distortions, contrary to the intent of the NEPM. When considering the numbers of small and medium businesses which may be affected by the NEPM, it is important to recognise that the definition of brand owner excludes retailers unless they are also the trade mark owners/licensees or the direct importers of the packaged product (the first sellers of the product in Australia). This definition is expected to exclude a large proportion of small retail businesses in Australia.

Nevertheless, it is proposed that the obligations will apply to small and medium enterprises who may argue that their size makes actual recovery and utilisation of their used packaging materials impracticable. However it should be noted that the Covenant provides opportunities for small

and medium enterprises to practise product stewardship through means commensurate with their capacity. These means may not necessarily involve actual recovery and utilisation systems. Small and medium enterprises can therefore avoid the proposed NEPM obligations by becoming Covenant signatories and developing product stewardship practices appropriate to the scale and style of their operations.

For those small brand owners who remain outside the Covenant, it should be noted that enforcement of, and reporting under the NEPM is proposed to follow the model of the Trade Practices Act by being on a complaints or notification basis. This is because:

- the expected very high coverage of the Australian packaging supply chain by the Covenant would not justify extensive bureaucratic resources being spent on the NEPM – if extensive bureaucratic intervention is required this would indicate that the self-regulatory Covenant has not been successful and more comprehensive regulatory models may need to be explored; and
- the impetus for the development of the NEPM is to avoid competitive disadvantage to industry volunteers, and enforcement should therefore be strategically focused on this outcome.

The enforcement model is spelt out in more detail in Section 4.1.2.

1.3 PURPOSE OF THE NEPM

The purpose of the NEPM is to provide support for the National Packaging Covenant and ensure that signatories are not competitively disadvantaged.

Industry signatories to the Covenant make commitments to practise product stewardship, including:

- continuous improvement in recovery and reprocessing of used packaging materials; and
- support for kerbside collection or other recovery systems.

Commonwealth, State and Territory and Local Governments make commitments to develop consistent and harmonious policies and assist in community education and the production of reliable data.

Commonwealth, State and Territory Governments agree to develop a National Environment Protection Measure.

Local Government signatories make commitments in relation to municipal charging and best practice in the delivery of kerbside recycling collection systems.

1.4 DESIRED ENVIRONMENTAL OUTCOMES

The desired environmental outcomes from the combination of the Covenant and NEPM are to optimise resource use and recovery and encourage the conservation of virgin materials.

The **scope** of the NEPM is limited to the recovery, re-use and recycling of used consumer packaging materials and will focus on:

- materials used for packaging materials consumed on domestic premises;
- materials used for packaging food and beverages intended for consumption in public places or in commercial provision of food services to individuals in hotels and restaurants;
- household paper and cardboard; and
- bulk packaging of household products.

1.5 REVIEW OF OVERSEAS MODELS

1.5.1 EUROPE

In Europe, funding systems have been put in place to achieve a large-scale increase in the percentage of packaging collected, sorted and recycled in order to meet arbitrary percentage targets imposed by law. These targets apply to commercial and industrial packaging waste, as well as to used packaging from household sources.

The European Commission (EC) Packaging and Packaging Waste Directive adopted at the end of 1994 covers all packaging placed on the market within the EU, but it is up to the member states to take measures to ensure that the percentage recovery and recycling targets are met.

Appendix A sets out in detail the systems established in European countries to establish frameworks for achieving, and in some cases exceeding, the EU targets. These provide useful examples of how industry has responded to legislated obligations, typically by funding recovery and utilisation systems through licensing a trade mark or “Green Dot” label to brand owners and packaging manufacturers. Appendix A also examines the rationale behind the European focus on brand owners, the concept of “shared responsibility” and the operating results and costs of these systems. However it is important to note that, in most of Europe, the EU Directive and national legislation to implement it have been the primary drivers of packaging waste initiatives.

The Netherlands

The Dutch approach (Covenant plus back-up legislation) has some lessons for Australia, and is also examined in more detail in Appendix A. However, there are important differences between

the two countries. The Netherlands is a densely populated country with a high water table and consequent shortage of landfill sites. Government, industry and the public are agreed that waste minimisation is a major environmental priority. There have been some bad experiences with air pollution from dirty incinerators in the past, and few are keen to see an expansion of energy-from-waste capacity.

The second generation Dutch Covenant involves some funding commitments, but these are small by European standards. The Dutch see no need for a Green Dot symbol or any other central funding arrangement, as any recycling deficits will be small enough to be internalised.

The idea is that the scheme will actually save local governments money by guaranteeing to take back household packaging waste provided it meets specifications. Where the material has a value, industry will pay it. Thus for glass, the maximum cost to local governments will be A\$50 per tonne, against landfill costs which average A\$172 per tonne and can be as high as A\$290 per tonne.

The Government accepts that the first Covenant has resulted in reduced municipal spending on waste management and so accepts the principle of shared responsibility. Local authorities will be responsible for the collection of household waste and for the incineration of contaminants. Industry will be responsible for delivering the collected materials to the reprocessor. Research into the best way of recovering energy from used plastics packaging will be shared between the public and private sectors.

The ultimate aim is that packaging should become both an integral part of a company's environmental management system, and an integral part of the country's material waste management system. Then, once the second Packaging Covenant has come to the end of its life – at the end of 2001 – packaging should disappear from the political agenda.

1.5.2 NORTH AMERICA

Canada

Geographically and socially, Australia has much more in common with Canada than with Europe. Like Australia, Canada is seeking industry support for kerbside collections of packaging and other materials available in large quantities in the household waste stream (newspapers, for example). By contrast, European legislation focuses on the collection and recycling *only* of packaging, but irrespective of whether the packaging waste arises in the household waste stream or on commercial/industrial premises.

Other things being equal, therefore, Canadian experience would provide a better guide. However, Canada does not as yet have the breadth and diversity of experience available in Europe. A detailed account of Canadian approaches, which have included container deposit legislation and an attempt at achieving a National Packaging Protocol, is in Appendix A.

The United States

Up to now, US jurisdictions have legislated on packaging waste management with a much lighter touch than in Europe. The physical environment has more in common with Australia than with Europe, and they have demonstrated that market-based mechanisms can be made to work provided they are properly designed and the targets are realistic. Systems in place in the US include container deposit legislation, advance disposal fees and minimum recycled content regulation. These are also detailed in Appendix A.

2. REGULATORY OPTIONS

2.1 CONTEXT

Packaging waste has been identified as a priority waste stream by ANZECC. There is strong community support for recycling, and an equally strong expectation that local government authorities will provide, or arrange for, an appropriate collection service where feasible.

The proposed National Packaging Covenant will be the lead instrument in terms of managing packaging waste in Australia. The Covenant is a voluntary, agreement between industries in the packaging chain and all spheres of government. It is based on the principles of product stewardship applying throughout the packaging chain from raw material suppliers to retailers, and the ultimate disposal of waste packaging. A key feature of the Covenant is that it will establish a sustainable kerbside recycling system.

The Covenant commits signatories to implementation of best-practice environmental management in packaging design, production and distribution; research into environmental and life cycle issues, including recoverability/recyclability and safe disposal; consumer information; data collection; and market development for recycled products.

The Covenant also states that industry signatories will contribute to the effective environmental management of packaging throughout its life cycle, and will:

‘In cooperation with State and Local Governments continue to provide financial support for kerbside and other recycling systems, including the development of infrastructure for reprocessing of secondary materials and participation in the identification, development and implementation of best practice.’

The NEPM will provide for a regulatory safety net affecting the small minority of players who do not join the Covenant, with exemptions for, or deemed compliance by:

- Covenant signatories who fulfil their Covenant obligations; and
- other industries or industry sectors where the jurisdiction is satisfied that arrangements exist which produce outcomes equivalent to those achieved through the Covenant.

2.2 EVALUATION CRITERIA FOR REGULATORY OPTIONS

In considering the suitability of regulatory options, it was necessary to consider the principles of the Covenant and the potential scale of application of the NEPM which is essentially designed to address the free riders issue.

Highest level negotiations on the Covenant have indicated that the vast majority of packaging supply chain and retailing industries will become signatories to the Covenant. The role of the NEPM, which will apply to only a minority of industry players, is to provide support for signatories to ensure that they are not unfairly disadvantaged as a result of their Covenant commitments. The NEPM is not intended to mirror the Covenant. Legislating to make compulsory the flexible, voluntary commitments under the Covenant would be impracticable, administratively burdensome, and out of proportion to the size of the problem being addressed.

The following principles were incorporated in the NEPM proposal approved by NEPC in February 1998. The preferred regulatory approach, in conjunction with the Covenant should, in relation to used packaging materials:

- establish a framework for life cycle management;
- assure minimisation of packaging waste;
- be environmentally and economically sustainable;
- maintain competitive neutrality between Covenant signatories and firms covered by the NEPM;
- lend itself to implementation through harmonised regimes;
- have low administrative costs for both industry and government; and
- ensure that those whose materials are collected in kerbside systems bear the costs of collection commensurate with the amount of materials collected for which they are responsible.

2.3 DISCUSSION OF “BLANKET” REGULATORY OPTIONS

This section contains an overview of general regulatory options for managing packaging waste. Some of these options were previously canvassed by ANZECC prior to the commencement of negotiations on a voluntary, self-regulatory approach. Most of the options were included in the NEPM proposal approved by NEPC in February 1998 as potential mechanisms for a regulatory safety net for the Covenant. However, it is recognised that these options, while potentially feasible as stand alone regulations, are not suitable for the purpose of providing a regulatory safety net for the Covenant for a number of reasons. For example;

- fees and levies may be considered unconstitutional, anti-competitive, a tax on business and do not address product stewardship or packaging waste management issues; and

- targets are often seen as inequitable between materials, generate ongoing debate about the appropriate levels, require expensive data reporting and monitoring systems and would be impractical in terms of implementation and enforcement.

However, whilst inappropriate as a safety net mechanism, these options could be reconsidered in the future should the Covenant/NEPM package not proceed. They are included here for completeness of the discussion.

2.3.1 FEES ON INPUTS TO PRODUCTION (VIRGIN RAW MATERIAL LEVIES)

This option places an obligation on manufacturers of packaging materials to pay a fee based on the quantum and/or type of virgin materials used in the manufacturing process.

Key Distinctions between Covenant Signatories and Non-Signatories

It would not be feasible to make a distinction between Covenant signatories and non-signatories. This mechanism would have to be applied to all packaging manufactured in Australia, and could not be made specific to non-signatories of the Covenant.

Strengths

- The option addresses life cycle management by targeting the use of virgin materials and, on a local level is environmentally sustainable. It would address packaging waste minimisation to the extent that it is applicable to locally manufactured packaging materials.
- Potential to improve economic viability of recycled materials as secondary resources or as an alternative to virgin materials.
- Would lead even potential non-signatories of the Covenant, i.e. companies which, by definition, are not very interested in resource conservation issues, to seek sources of recycled material or recycled-content packaging in order to limit or remove their exposure to the levy.
- Would internalise environmental costs throughout the packaging chain.
- Would raise funds which could be used to support local authority kerbside collections.

Weaknesses

- Would not capture imported packaging.
- Difficult to single out packaging from all other applications for the materials subject to the levy.

- Difficult to calculate in advance what levels the levies should be to achieve the desired results regarding packaging waste management.
- Could undermine competitiveness of Australian products if set too high, partly because the mechanism is inherently more inflationary than other options, because of its focus at the beginning of the production chain.
- Would have the potential to become entrenched as a revenue-raiser even if no longer required for its original purpose.
- Would only affect those companies in the packaging chain, which are not strong enough to insist that their suppliers bear the full financial burden of the levy.

Overseas Examples

There are no examples of this option being implemented overseas. Virgin material levies were talked about a great deal in Europe at the time work on the draft Packaging and Packaging Waste Directive was beginning, particularly in Germany. The idea was abandoned because of legal difficulties and the trade issue. It was concluded that if intervention was needed to change the relative prices of virgin and secondary raw materials, this could be achieved more satisfactorily by cancelling subsidies relating to the extraction and use of virgin materials.

At one time, Italy imposed a tax on polyethylene used to manufacture plastic films for the Italian market. The revenues were used to fund collection and reprocessing and research into new end-use markets. However, the tax was repealed after a challenge by the European Commission on the grounds that the research benefits would distort the market in favour of Italian companies, and that while Italian companies paid the tax on the raw material, foreign companies paid it on the value of the products made from polyethylene.

Conclusions

Only the Commonwealth could introduce this option as an excise. In addition to the other practical objections, the failure to capture imports and inability to distinguish between Covenant signatories and non-signatories would make virgin raw material levies an ineffective mechanism for a regulatory safety net.

2.3.2 FEES ON PRODUCTIVE OUTPUTS (PACKAGING LEVIES)

This option places an obligation on brand owners to pay a fee related to the amount of packaging they place on the market, unless they sign the Covenant or produce equivalent outcomes in some other way.

Key Distinctions between Covenant Signatories and Non-Signatories

Non-signatories would still pay through a rigid formula, rather than having the more flexible options available to them under the Covenant.

Strengths

- Proven effectiveness as a way of raising money to support packaging waste management.
- Would, in principle, capture imports on the same terms as domestic products (though small importers might be more difficult to police than small domestic manufacturers).
- Raises industry awareness of packaging waste management as an issue.
- Encourages packaging minimisation, for example by discouraging excess packaging (if levy properly designed) and design for recycling.

Weaknesses

- May be unconstitutional if imposed at State/Territory level.
- This option cuts in half way through the product life cycle, and does not comprehensively address life cycle management issues. There is nothing inherent in the system design which would enhance or guarantee environmental sustainability because the fee is likely to be simply passed directly to the consumer.
- May not capture imports on the same terms as domestic products (although this would not apply if it were imposed at State/Territory level).
- Levy revenues are excises or tariffs, and would, on current practice, go to consolidated revenue rather than being allocated to waste management.
- This option may catch few companies as a ‘regulatory safety net’, since the free riders are generally perceived to be importers.

Overseas Examples

There are packaging levies in all but two of the 15 member states of the European Economic Area (EU + EFTA) to have declared a policy. These are closely related to fulfilment of the take-back obligation (see Take Back and Utilise Option in the next section).

- Levies on the packer/filler or importer placing packaged goods on the market in the seven ‘Green Dot’ countries (Austria, Belgium, France, Germany, Luxembourg, Portugal and Spain).

- Levies on the packer/filler or importer placing packaged goods on the market in three other member states (Finland, Norway and Sweden).
- Levies on companies throughout the packaging chain in three further member states (Ireland, Italy and the United Kingdom).

There are also levies on the packer/filler or importer placing packaged goods on the market in the Czech Republic.

Conclusions

This is an effective way of dealing with the kerbside funding gap, but in the Australian context, would be a very expensive solution in relation to the scale of the problem, for reasons which are elaborated in greater detail in section 4.2.0.

2.3.3 RETAILER LEVIES AT STATE LEVEL

Retailers choosing not to sign the Covenant would be obliged to pay a fee related to the amount of packaging they place on the market. Wholesalers may possibly also bear the obligation as proxy for retailers of below a specified size measured by turnover or selling area.

Key Distinctions between Covenant Signatories and Non-Signatories

Under the Covenant, companies at any level in the packaging chain would be expected to make commitments and/or contributions to support kerbside and other recycling systems. This option would single out non-signatory retailers for a levy to be used for the same purpose.

Strengths

- Would corral the retail sector.
- Proven effectiveness as a way of raising money to support packaging waste management.
- Would, in principle, capture imports on the same terms as domestic products (though small importers might be more difficult to police than small domestic manufacturers).
- Raises industry awareness of packaging waste management as an issue.

Weaknesses

- By cutting in at the retail transaction level, this levy is too late to be effective in terms of life cycle management. It is highly unlikely that it would be sufficiently associated with packaging waste to provide incentives for packaging waste minimisation.

- There could be price distortions arising from double-counting (packer/filler signatories contributing on behalf of their output, and retailer non-signatories contributing on behalf of the same items of packaging), unless a data-gathering system was put in place to ensure that retailers did not pay the levy on packaging units already covered by the packer/filler's participation in the Covenant.
- A retailer levy in place of anything aimed at packaging manufacturers and/or packer/fillers would by-pass those companies for which packaging is a major part of their business.
- Would be costly to administer if it covered small as well as large retailers and distortive if it did not. This could be solved in part by making wholesalers bear the obligation as proxy for small retailers, but that would involve a further administrative complication in establishing and verifying what part of their output they were liable for.
- Since retailers deal in packaged units rather than packaging *per se*, any levy would either relate to the value of the packaged product rather than the packaging itself, or involve a costly and complicated extra data-conversion exercise.
- If applied by State/Territory, it is likely that constitutional authority to raise the levy would come into question. In view of the long history of uncertainty in this regard, it seems unlikely that a State-based levy approach could be designed appropriately for this NEPM.
- Revenues would be consolidated revenue rather than being earmarked for waste management.
- It is unclear how Covenant/Non-Covenant products could be differentiated at the check out.

Overseas Examples

There are no examples but many of the costly complexities of the United Kingdom's 'shared responsibility' system could arise. In the United Kingdom, the same item of packaging carries obligations applicable to the raw material manufacturer, the packaging manufacturer, the brand owner and the retailer, and efforts to avoid 'black holes' and double counting have been expensive and unsuccessful. The resultant data are very different from previous estimates, and the reliability of the new figures is not known.

Conclusions

This option would not be an effective regulatory safety net since packer/filler non-signatories would not be covered, and likely to be extremely complicated to administer within the context of the relative scale of problems to be dealt with by the Covenant/NEPM.

2.3.4 WASTE DISPOSAL LEVY ON HOUSEHOLDERS

Under this option, an obligation is placed on householders to pay a waste disposal levy, and on local government to collect it. The levy would be applied towards the cost of kerbside collection for recycling.

Key Distinctions between Covenant Signatories and Non-Signatories

There are no key distinctions between Covenant signatories and non-signatories because this option deals with the funding issue by charging citizens in their roles as householders and waste discarders rather than as consumers and packaged goods purchasers.

Strengths

- It would contribute to the economic sustainability of municipal waste disposal. It could be considered to address life cycle management and packaging waste minimisation to a degree by providing an incentive to exercise consumer choice in favour of less packaging.
- This mechanism would affect all used packaging, and could not be made specific to non-signatories of the Covenant. The revenues could, however, be used to defray the costs of Covenant signatories.
- The administrative cost of a system based on a prepaid garbage bag or subscription to a certain level of service, e.g. garbage bins of a specified number and/or size, would be very low. However, a weight-based system would involve fitting trucks with weighing equipment and would add to the time needed for each pick up.
- Some Australian municipalities already have such systems in place, on a pay-by-volume basis.

Weaknesses

- Creates an incentive for improper disposal. For example, littering or putting (chargeable) general waste into the (free) receptacles provided for recyclables.
- It is questionable whether the use of levy proceeds would be enough of an incentive to lead non-signatories into the Covenant, as they would by definition have little or no packaging waste management costs.
- It is possible that the wide variation in rates that apply across Australia, not least because of rate capping in some jurisdictions, would be a disadvantage.

Overseas Examples

Improper disposal is a particular problem for kerbside systems in Europe. It means that kerbside collections maximise the material collected but lower the quality and value of the material e.g. because of improper disposal to avoid volume based waste charges. DSD collects very poor quality material because of contamination with non-recyclables, despite Germans being very civic-minded and recycling-conscious. About 30% of the material collected through the DSD system is rejected at the sorting facility. However, North American sources usually dismiss contamination as a problem. Similarly, Australian experience of pay-by-volume household waste systems is that improper disposal is not a major concern. Such systems can assist the achievement of waste minimisation, as frequently demonstrated in areas where the approach is used.

Conclusions

This option has a very limited impact on encouraging a life cycle approach to product management. It should be seen as one valuable part of a broad municipal strategy to achieve waste minimisation goals.

2.3.5 MANDATORY RECYCLING TARGETS

This option imposes obligations on packaging manufacturers and fillers to achieve declared numerical targets for the recovery and utilisation of packaging materials.

Key Distinctions between Covenant Signatories and Non-Signatories

Under this option, non-signatories would have to take responsibility themselves to meet the legislated targets. Covenant signatories would be taken to have practised product stewardship by virtue of their Covenant membership, and would only be required to demonstrate achievement of the commitments in their Action Plans under the Covenant. These commitments may or may not include recycling targets for individual companies.

It would be necessary to impose a labelling requirement to ensure non-signatories were excluded from – or could be easily identifiable within – the kerbside collection system. Collection may still be contracted out to local governments, but they would have the right to pass on the costs to the companies concerned. This option would also require companies to ensure that sufficient collection and recycling took place to meet the quantified targets laid down.

Strengths

- Targets for the recovery and utilisation of used packaging materials would be successful in addressing packaging waste minimisation, life cycle management and environmental sustainability of the system.

- Concentrates the minds of all players provided there are tough sanctions for non-achievement.
- Targets are intuitively attractive in that they provide a measurable assessment of progress.
- Has worked well in Australia under the National Kerbside Taskforce approach in a voluntary framework.

Weaknesses

- Elevates recycling to an end in itself rather than a means to an end.
- Arbitrary targets may have an overall negative effect and generate ongoing debate about the appropriate target levels. The problem of setting realistic targets is not so great if the targets are 'indicative' rather than mandatory but unless the players *believe* that there will be severe penalties for missing them, targets lose their incentive function.
- If the targets are too high, they would only exacerbate the problem of low secondary raw material prices as a result of oversupply.
- Optimum recycling levels depend on place e.g. transport distances, absorption capacity of the local environment, time and technology changes. Up to now, data have never been good enough to enable meaningful recycling targets to be set.
- For targets to be credible, an expensive system of data reporting and enforcement is needed.
- Would only lead major players to sign the Covenant. Smaller companies would probably feel that the targets will be achieved or missed irrespective of whether they contributed their fair share, so they might just as well not try.

Overseas Examples

Targets are in place throughout the European Economic Area as a result of the EC Packaging and Packaging Waste Directive.

Most US states have set recycling or waste reduction targets, though in a less prescriptive way that does not involve detailed data submissions from individual companies. Similarly, Canada has a national packaging waste reduction target, which the provinces are each implementing in their own way.

Conclusions

Targets set the general direction of policy and establish the extent to which recycling has to be given priority irrespective of economic considerations, but are not an implementation mechanism

per se. In Europe, where the targets are most rigorous, the outcome has been the establishment of funding systems as in Fees on Productive Outputs.

Target setting has usually been motivated by a shortage of suitable landfill sites for waste disposal and community reluctance to accept municipal waste incinerators. In Australia, the aims are also optimal resource management, and a solution to the political problem created by the cost of providing kerbside collection services.

Good resource management should allow recycling to find its own level through negotiating challenging but achievable targets rather than forcing it upwards to meet some arbitrary target. Statutory targets are not therefore likely to be helpful.

2.3.6 MANDATORY TARGETS FOR RE-USE OF RECYCLATES

Under this option, packer/fillers not signing the Covenant would be obliged to meet percentage targets for the use of secondary raw materials across the total range of packaging they use.

Key Distinctions between Covenant Signatories and Non-Signatories

This mandatory minimum recycled content requirement would only apply to non-signatories. Thus while participants in the Covenant are supporting recycling through their product stewardship commitments which could include contributions to kerbside collection, non-participants would support it through providing an end-use market for the recycled materials.

Strengths

- Targets for the re-use of used packaging materials could be successful in addressing packaging waste minimisation, life cycle management and environmental sustainability of the system.
- The ‘funding gap’ can be solved if demand for the secondary raw materials is sufficient for them to command a price that covers the cost of collection, sorting and reprocessing and is competitive with virgin materials. This may be possible if there is a strong economic incentive or legal requirement for secondary materials to be used.

Weaknesses

- Potential trade barrier as imports made from virgin materials may be blocked.
- May be sub-optimal in resource use terms. To meet performance requirements, recycled packaging may need extra weight to compensate for the use of material of unknown specification or quality or to allow for an extra layer for food-contact purposes.

- Whilst it is reasonably straightforward to set targets for users of rigid packaging, such as the beverage producers, it would be difficult to set realistic targets for multi-product companies using a wide variety of rigid and flexible packaging.
- May take the NEPM beyond the packaging chain in that the most suitable outlets for secondary raw materials may be in non-packaging applications.
- The size of the Australian market may mean that end-use options are more limited than in countries with a larger population.

Overseas Examples

Mandatory minimum recycled content has been introduced as a freestanding measure in the following jurisdictions:

- California (10% post-consumer recycled content in garbage bags, rising to 30%; 15% recycled content in glass containers, rising to 65%).
- Washington DC (5%-35% post-consumer recycled content in unbleached paper packaging, 80%-90% in recycled board).
- Wisconsin (10% recycled content in plastics packaging for non-food applications).

Conclusions

A mandatory minimum recycled content requirement would be virtually impossible to enforce and monitor since there is no way that recycled material can be identified in the finished packaging. The only way of controlling minimum recycled content is by monitoring the inputs to the production process, which is impossible for imported packaging or packaged goods.

Mandatory minimum recycled content may be considered a trade barrier, unless imports are excluded. In this case, domestic industry would be placed at a disadvantage as importers are seen to be the most likely free riders.

As a legal instrument this option is not viable.

2.3.7 THE ADVANCE DISPOSAL FEE AND 'MENU OF OPTIONS'

Under this option, an advance disposal fee would be imposed on packaging unless:

- a recycling target is achieved; or
- a prescribed minimum recycled content is achieved; or
- a source reduction target is achieved; or
- the packaging is reusable, or re-used, a prescribed number of times; or

- the company concerned is either a Covenant signatory which is fulfilling its Covenant obligations; or
- is carrying out arrangements which the jurisdiction is satisfied produce equivalent outcomes to those achieved through the Covenant.

Key Distinctions between Covenant Signatories and Non-Signatories

The recycling/recycled content/source reduction/re-use options would only apply to non-signatories. Thus while participants in the Covenant are supporting recycling and life cycle resource management through their compliance with the provisions of the Covenant, non-participants would provide support in a more formalised but still relatively flexible manner.

Strengths

- Would partially overcome the trade barrier objection to mandatory minimum recycled content legislation.
- Allows companies to choose the most appropriate option rather than prescribing it for them.
- Otherwise combines the strengths of Mandatory Recycling Targets and Mandatory Targets for the Re-use of Recyclates.

Weaknesses

- If applied by a State or Territory, it is likely that constitutional authority to impose the advance disposal fee would come into question. In view of the long history of uncertainty in this regard, it seems unlikely that a State-based disposal fee could be designed appropriately for the NEPM.
- So far, this option has only been applied to beverage containers. It could be applied to all packaging, but for some companies the practicable options would be much less than four of the options. For example, a flexible food wrapper cannot have recycled content or be re-used and cannot itself be recycled though the company would contribute financially to the recycling of other packaging. Further source reduction might be difficult without technological innovation and/or huge investment in new equipment.
- In the original US context (freestanding legislation), this would compel all players to contribute but as a regulatory safety net the menu of options would be difficult to frame. It would be no defence against free riding if companies were allowed to rely on the recycling targets option and the targets were applied on an industry-wide basis. The targets would have to be company-specific, which would be difficult to monitor. Source reduction over a period of time is difficult to measure if the product or the nature of the pack changes. This can only be avoided by some generalised formula such as overall weight of packaging

divided by number of units of output. In the case of low-volume imports, any structural changes in the product range over time are likely to be magnified.

Overseas Examples

Mandatory minimum recycled content has been introduced as part of a 'menu of options' in:

- California - 25% of post-consumer recycled content in rigid plastics packaging, unless item is reusable 5 times, or achieving a 25% recycling rate, or source-reduced by 10% over 5 years.
- Florida – now sunsetted - 1c-2c advance disposal fee payable unless 35%-50% minimum recycled content in glass, 25% in plastics and 30%-50% in paper.
- North Carolina - 25% recycling of polystyrene foam unless it uses 25% post-consumer recycled content.
- Oregon - as above for California.

Conclusions

This option is not considered suitable as an effective instrument for a regulatory safety net. Demand for secondary raw materials is better stimulated by non-statutory methods.

2.3.8 LANDFILL LEVIES

Currently, levies are imposed by some jurisdictions on some or all waste disposed to landfill. As a safety net option, these levies would be increased and a proportion of levy income set aside on a permanent basis to support kerbside recycling.

Key Distinctions between Covenant Signatories and Non-Signatories

There would be no opportunity to distinguish between Covenant signatories and non-signatories. A landfill levy is collected as a tax on landfill operators, who are relative bystanders in packaging terms. Costs will be passed on to users of landfill, including local government authorities, which may then pass them on to ratepayers.

Strengths

- On a broad basis, any impost which discourages the disposal of waste to landfill could be seen as environmentally beneficial. The extent of the reduction in landfilling may depend on the size of the levy.
- There is already broad acceptance in some jurisdictions of the use of landfill levies as a policy tool.

- Low administrative costs where a levy system is already in place.

Weaknesses

- Landfill levies are charged according to the weight of the materials disposed of and penalises denser materials rather than more toxic or less recyclable materials.
- Very difficult to discriminate between packaging and other materials.
- This option does not address the issues of imported packaging or support for kerbside collection systems.
- Does not address lifecycle assessment of packaging materials.
- If waste minimisation initiatives, for example in relation to denser materials, significantly reduce the amount of material going to landfill, the proportion of levy income available to support kerbside would drop accordingly.

Conclusions

While several jurisdictions have used landfill levy income to address waste management issues, entrenching the use of that income to support kerbside collection systems is a blunt instrument for addressing consumer packaging waste. Most funds would be generated by materials not collected at kerbside, so that the users of kerbside are not obliged to meet their material collection costs.

This option would not be suitable as a regulatory safety net, since it provides neither an incentive for non-signatories to join the Covenant nor any protection for Covenant signatories from competitive disadvantage.

2.4 *OPTIONS FOR A REGULATORY SAFETY NET*

The Covenant is the lead instrument in terms of managing packaging waste in Australia with the majority of industry players becoming signatories. The NEPM, as a regulatory safety net, will therefore, only apply to a minority of industry players. The following options are discussed on the basis of their suitability as a regulatory safety net appropriate for the size of the problem being addressed:

- Do Nothing Option;
- Take Back and Utilise Option; and
- Container Deposit Legislation (CDL).

2.4.1 DO NOTHING OPTION

This option is not really an option in the usual sense, as development of the NEPM is a condition of finalisation of the Covenant. However, if the Covenant fails, States and Territories would be free to implement a range of legislation dealing with packaging waste. This would be contrary to the agreed approach of self-regulation through the voluntary mechanisms of the Covenant with a supporting safety net provided by the NEPM.

Impacts on Stakeholders

The potential compliance costs to industry could be considerable if jurisdictions introduce a range of different measures.

- Jurisdictions would be subject to strong community pressures to implement their own measures, which may be more or less onerous than the NEPM, requiring appropriate levels of resources for implementation and enforcement.
- Different packaging regulations around the country would probably not pose problems for collectors and sorters of packaging materials unless they were operating across jurisdictional boundaries. Different systems and standards could also result in inconsistent quality and quantities of recycle, which would affect its market value.
- In the absence of the national initiatives contemplated under the Covenant local governments would continue to be faced with funding instability for kerbside collections in an uncertain market for recycles, and consequent difficulties in sustaining kerbside recycling systems.
- Impacts on communities would vary but could include sharply escalating costs for kerbside recycling systems or a significant reduction in service availability.

2.4.2 COMPULSORY TAKE-BACK AND UTILISE REQUIREMENT

This option places an obligation on brand owners and importers to undertake, or assure the recovery, re-use and recycling or energy recovery of the consumer packaging in which the brand owner's products are retailed. Any target would be established by reference to the performance of Covenant signatories.

Brand owners would also be required to provide on the product label/package information to consumers as to how the packaging is to be recycled, or that it is not recyclable.

Key Distinctions between Covenant Signatories and Non-Signatories

The contributions and commitments of Covenant signatories will buy the right to full use of the waste management system provided by local government.

The take-back requirement, by contrast, ensures that non-signatories take responsibility upon themselves for the collection and re-use or recycling of the packaging they have placed on the market. Collection may still be contracted out to local authorities, but they would have the right to pass on the costs.

Strengths

- Provides a strong incentive for brand owners (the part of the packaging chain which has most influence over choice of packaging) to sign up to the Covenant. If they do not, they have a choice between either entering the waste collection business themselves or engaging a third party (possibly local government) to act on their behalf.
- Addresses life cycle management to the extent that consideration of the future re-use of the product needs to be taken into consideration at the beginning of the packaging chain in product design. There is also potential for optimal resource use by conservation of virgin materials.
- Labelling requirement for non-signatories could serve as a sort of ‘Green Dot in reverse’ as it would alert consumers to the fact that the company concerned had not committed itself to the same standard of product stewardship embraced by other concerns.

Weaknesses

- Credible enforcement is essential: non-signatories must feel that there is a reasonable chance that they will be caught and fined if they fail to show what provisions they have made for take-back. With a complaints-based enforcement system, this need not necessitate disproportionate monitoring activity by regulators, but does require that resources are available to ensure swift and decisive action where it appears to be justified.
- There would be pressure to set thresholds for application of a take-back obligation. Although thresholds are intuitively appealing, it is better not to set a minimum company size requirement for obligated companies. Thresholds tend to be arbitrary and can create problems around threshold levels. The absence of a specified threshold creates the possibility that anyone might be checked for compliance. Enforcement authorities would need to concentrate their efforts strategically. If enforcement is complaints-based, then in practice enforcement efforts are likely to be focused on larger companies, with larger throughputs of packaging.
- The requirement to demonstrate sale of recovered materials as a secondary resource must include provision for an audit trail, which ends with a *bona fide*, authorised recycler. If there are no such controls it is all too easy for the obligated company to arrange for the collected material to be discreetly landfilled or illegally dumped.

Overseas Examples

- Take-back is the basic mechanism in most countries of the European Union (EU) for achieving the recovery and “valorisation” (i.e. energy recovery plus recycling) targets laid down. The take-back obligation applies throughout the packaging chain. Brand owners and importers are in principle legally responsible for taking back used packaging from consumers, either directly or through a third party such as local governments, and the packaging industry takes legal or contractual responsibility for taking back and recycling the collected material.
- In Germany, take-back is the legal obligation throughout the chain. In the case of retail packaging, or more strictly, ‘sales packaging’, there is an exemption for retailers and brand owners taking part in a ‘Dual System’ which collects, sorts and passes on used packaging for recycling on their behalf. The Dual System exemption applies only while 80% of each packaging material is collected and 80%-90%, depending on the material, of the collected material is sent on for reprocessing. If these targets are not met, the retailers have to set up collection facilities at or near their stores and their suppliers have to take the material back and have it recycled. Germany has had problems with free riders, because the law does not require companies complying independently of the DSD organisation to prove to the authorities what they are doing to comply.
- In France, brand owners and importers have a choice between joining Eco-Emballages or another compliance scheme which will help fund local authority collection and sorting, making their own collection arrangements, or operating a deposit scheme. In practice, joining Eco-Emballages is by far the most attractive option for the vast majority of companies. As in Germany, use of the Green Dot symbol on-pack shows that the brand owner is making a financial contribution to packaging waste management. But in France, fraudulent use of the symbol is a trading standards offence. This individual sanction has been a more effective enforcement mechanism than the draconian collective penalty of cancellation of the Dual System exemption, a severe sanction for the retail trade but one which does not affect the individual free rider.
- In Germany, the packaging industry has a legal obligation to take back the collected material, whilst in France there are contractual commitments. The Dutch Packaging Regulations impose a take-back obligation on packaging manufacturers who have not signed the Covenant and raw material suppliers must ensure that sufficient reprocessing capacity is available to meet the percentage recovery and recycling targets. Meeting the targets themselves is the responsibility of non-signatory brand owners and importers, but they have no specific take-back obligations. In the Netherlands all individual obligations lapse for businesses which are party to a Covenant.
- There are also take-back obligations for consumer packaging, based on either the German or the French approach, in Austria, Belgium, Finland, Ireland, Italy, Norway, Portugal, Spain and Sweden.

- These European compliance schemes are expensive to operate. As Appendix A shows, the main French and Austrian organisations have an operating cost of A\$16 million and DSD in Germany has operating and staff costs of A\$131 million (A\$139 million in France, the lowest of the three, and A\$306 million in Germany). However, it should be noted that the funding these schemes provide is much larger than that envisaged for Australia.
- In Ireland, a requirement for take-back at company sites is in force for companies which fail to join REPAK, the collective recovery scheme. However, it is not being enforced as yet. Registration as well as enforcement is the responsibility of the local governments in Ireland and, although this allows local knowledge to be brought to bear, it also means some duplication of effort in setting up systems to implement this new requirement. Full enforcement will take time.

Conclusions

Compulsory take-back provides a strong incentive for manufacturers/fillers to minimise packaging waste. Provided it is linked with an obligation to utilise collected materials, it could form the basis of an environmentally sustainable system. However, the system does not specifically address life cycle management issues.

The individual take-back obligation provides an incentive for non-signatory brand owners to consider joining the Covenant where they have a right to participate in the kerbside collection system.

Its application to imports, as well as local packaging, assures no competitive disadvantage for Covenant signatories, and it can be specifically targeted to ensure that those taking part in kerbside collections are obliged to meet the costs of collection.

In addition, harmonised regimes are achievable and would encourage equal ownership at state and federal level.

Impacts on Stakeholders

- Brand owners who are not Covenant signatories need to make arrangements to undertake or assure systematic recovery of their packaging materials to at least the level achieved by comparable Covenant signatories. They will also need to establish data collection and record keeping procedures.
- This option may result in the establishment of additional collection and sorting services to accommodate some brand owner take back requirements.
- If free-riding brand owners do not fulfil their take back obligations, collectors and sorters, including some local government authorities may have to handle non-signatory materials.

- State and Territory governments will require resources to implement and enforce the NEPM regardless of the form it takes. Administrative requirements under the take back option can be minimised by operating on a complaints based system.
- Consumers need to be informed about the recyclability of various packages. Some packaging may no longer be recyclable under the definition in the draft NEPM or may require specific directions as to how it is to be recycled.

2.4.3 CONTAINER DEPOSIT LEGISLATION

A second option for the NEPM is a Container Deposit Law (CDL) which would mandate a deposit-and-return system for a broad range of rigid containers.

Another example of Container Deposit Law (CDL) is the ‘half-back’ CDL which also mandates a deposit-and-return system for a range of rigid containers as with a broad based CDL.

The key distinctive feature of a half-back CDL is that only half of the deposit charged would be returned to the consumer when the container was brought back. The remainder would be paid into a levy fund to be used to support kerbside recycling. (See also Fees on Productive Outputs)

Key Distinctions between Covenant Signatories and Non-Signatories

This is an alternative way of ensuring that non-signatories take responsibility for the collection and re-use or recycling of the packaging they have placed on the market. Collection would need to be carried out by the retail trade or at ‘redemption centres’, as contracting out collection to local government or other collectors would not be feasible. Non-signatories would be required to offer refunds on their containers, whereas signatories would not be obliged to do so. Distinctive labelling would be necessary to identify non-signatory containers for which a refund is available.

Strengths

- Proven effectiveness as a way of encouraging return of (beverage) containers for recycling. Recovery rates typically achieve greater than 72% and as great as 98%³.
- Would capture imports on the same terms as domestic products.
- Less breakage of glass than in kerbside recycling systems. Glass is a heavy and breakable material, which has to be handled with care in kerbside. It adds greatly to the time taken to pick up recyclables from each household, particularly if it has to be colour-separated.

³ Congressional Research Service Report to Congress “Bottle Bills and Kerbside Recycling: Are They Compatible?”, 1993.

- Deposits could be a way of encouraging consumers to sort and return packaging with potentially hazardous residues which can harm recycling systems but do not produce enough material to make separate house-to-house collection economically viable.
- Costs are internalised in product prices (see footnote p.33).
- Can reduce costs of kerbside collection (see footnote p.33).

Weaknesses

- A CDL system that covers only a small proportion of consumer packaging (that of non-Covenant signatories) is likely to impose infrastructure costs disproportionate to the size of the problem being addressed. If major beverage industries are Covenant signatories and are therefore exempt from the system, it may not gain strong community support or patronage.
- CDLs have traditionally been used for beer and carbonated soft drinks (as in South Australia) and have sometimes been extended to other liquids. As no broad-based system is in operation anywhere in the world, the effectiveness of CDL covering more than a limited range of beverage containers has not been demonstrated.
- It is possible that popular support for a CDL on beverage containers may not carry through to a more equitable, broad-based system applying to used packaging in general.
- CDLs are less likely to be a workable option for grocery and non-food products distributed in flexible packaging.
- The beverage sector has shown good voluntary industry support for recycling in all states, except in SA where CDL applies, and is among the strongest supporters of the Covenant. Therefore the number of containers covered by this option could be quite limited.
- There would be a minor impact on environmental sustainability and packaging waste minimisation because the system is focused on recovery. Life cycle management is not addressed.
- A half back CDL is more inequitable than a standard CDL model, in that not only is rigid packaging singled out for an expensive waste management system for its own products, but it is also expected to finance the collection of other sectors' packaging which is likely to be less easily recyclable.

Overseas Examples

- CDLs are in place in ten states of the USA: California, Connecticut, Delaware, Iowa, Maine, Massachusetts, Michigan, New York, Oregon and Vermont. They originally covered only beer, carbonated soft drinks and waters but some states have extended their

scope to other beverages (though not to milk). The Connecticut, Iowa, Oregon and Vermont CDLs now cover malt liquor, Michigan's covers canned cocktails, New York's covers wine coolers, and Maine's law covers all beverages except milk. No state CDL covers milk.

- In Canada, Alberta, British Columbia, Saskatchewan and Brunswick, Newfoundland and Nova Scotia have CDLs on all beverages except milk. The provinces of Ontario and Quebec, and also Prince Edward Island, have CDLs on beer and soft drinks.
- The 'half-back' system is only used in Canada: New Brunswick, Newfoundland, Nova Scotia, Prince Edward Island and the Yukon. These provinces and territory account for less than 2.5 million of Canada's population of 29.6 million. This is a possibly unique example of using one sector (in this case, the beverage industries) to subsidise the recycling of all other types of packaging. In most jurisdictions, the aim is to apportion costs 'fairly' (i.e. so that each product sector or each material bears its own costs).
- Belgium's 'solidarity' principle is the exact opposite of 'half-back'. The FOST Plus fees were formulated so that the types of packaging which are relatively easy to recycle (such as beverage containers) are charged at a lower rate than those which are more difficult or impossible to recycle (such as flexible packaging like chocolate bar wrappers, or laminates like frozen food boxes). In this way those which are part of the problem of meeting the statutory recycling targets contribute to efforts of those which are part of the solution.

Conclusions

CDL is unlikely to be an equitable or an effective solution to the free rider problem, since a CDL system that covers only a small proportion of consumer packaging (that of non-Covenant signatories) is likely to impose infrastructure costs disproportionate to the size of the problem being addressed. If major beverage industries are Covenant signatories and are therefore exempt from the system, it may not gain strong community support or patronage. It does not of itself address support for collection systems by all users.

CDLs were adopted in a number of jurisdictions in North America in the 1970s and very early 1980s, with the exception of California (1987). Their scope has been extended from beer and carbonates to other beverages, but the only geographical extension has been to some of the smallest Canadian provinces. Where CDLs have been introduced, they are generally quite popular. They were originally designed as a solution to support refillable bottles and as an anti-litter measure. More recently, attention has shifted to recycling packaging materials irrespective of the products they contained, and tackling littering as a behavioural and waste management issue not confined to beverage containers.

CDLs have been used as a 'vertical' measure to impose a particular waste management approach onto a particular group of products: beverages. They do not address life cycle management. In the context of the NEPM, the required distinction is a 'horizontal' one – between signatories of the Covenant and non-signatories. It happens that the companies least likely to sign are the non-beverage manufacturers, whose products least lend themselves to the CDL approach.

A CDL as a regulatory mechanism in the NEPM would be a ‘vertical’ measure to divert from the kerbside collection system containers or materials whose residues may be deemed harmful. However, it would not steer producers into the Covenant nor substantially support the kerbside recycling system.

Half-back schemes have an advantage over conventional CDLs in that they do offer a targeted contribution to the kerbside funding issue. However they have the disadvantage of inequity in that the types of packaging to which they can realistically be applied are forced to subsidise other, usually less recyclable, packs. This option does not address life cycle management.

Impacts on Stakeholders

Brand owners, who are not Covenant signatories or performing at equivalent levels as Covenant signatories would need to establish the necessary infrastructure to collect and sort materials. Major industries are likely to become Covenant signatories and would be exempt from the system, so that infrastructure costs are likely to be disproportionate to the size of the problem. For example, facilities need to be established in locations which are readily accessible to the public. Even concentrating on major population centres would require establishments around the country for the collection of a minority of recyclable packaging materials presumably also collecting other non-Covenant packaging.

international experience indicates collection of materials is likely to be most convenient for the community at retail outlets. This would have an impact on retailers who would need to arrange collection facilities. However the SA experience is that over 95% of the material, other than kerbside collection, is returned through drop-off centres.

Consumers need to be informed as to what packaging materials are affected and how to reclaim the deposit paid where applicable. If Covenant membership were to fluctuate for any reason, such as late joining or expulsion of a brand owner, the messages to consumers could become confusing.

The community may not be supportive of a broad based CDL because of having to take materials to redemption centres to reclaim deposits.

2.5 *COST EFFECTIVENESS COMPARISON*

A cost effectiveness comparison of each of the three options listed in Section 2.4 is made Table 2.1 below.

Table 2.1: Cost Effectiveness of Regulatory Safety Net Options

OPTION	COST TO BRAND OWNERS	COST TO JURISDICTIONS
Do Nothing	<ul style="list-style-type: none"> Administration and compliance costs could be considerable if jurisdictions introduce a range of different measures Costs have already been incurred by companies committed to product stewardship because the Covenant would not proceed 	<ul style="list-style-type: none"> Development and implementation of own measures - probably similar to implementation of NEPM Local governments may continue to experience funding difficulties with kerbside recycling systems due to uncertainty in market prices for recycle Local governments may have difficulty costing kerbside recycling systems in an uncertain market for recycle (in absence of market based system for recycle proposed under the Covenant)
Take Back & Utilise	<ul style="list-style-type: none"> Arrangements to take back and demonstrate utilisation of packaging materials need to be made Equivalency option exists for brand owners whose materials are indistinguishable from others - may be less costly than alternative take back arrangements Data collection and record keeping 	<ul style="list-style-type: none"> Administration costs can be minimised by adopting a complaints-based model for enforcement Local government authorities have right to recover collection and sorting costs from free riders
CDL	<ul style="list-style-type: none"> Infrastructure establishment costs would be disproportionate for the amount of packaging covered. Data collection and record keeping could be complex and expensive for a range of containers of different materials and sizes Proven effectiveness as a way of encouraging return of (beverage) containers for recycling 	<ul style="list-style-type: none"> Introduces funds directly into the recycling system and works well for a limited range of containers (as in SA) but system is not a viable option for a wide range of containers May be complex to enforce and administer, although SA experience suggests costs may be containable

It can be seen from Table 2.1 that the ‘do nothing’ option leaves industry exposed to uncertainty over the kinds of legislative requirements they will be expected to comply with and the potential for there to be a range of different schemes.

CDL requires establishment of expensive infrastructure and is costly to administer relative to the size of the problem being addressed. The analysis shows that the Take Back and Utilise option is likely to be the most cost effective for industry.

For jurisdictions, Take Back and Utilise is likely to be most cost effective if a complaints-based enforcement model is used.

2.6 THE PREFERRED APPROACH

The above discussion shows that none of the options is ideal as a regulatory safety net for the Covenant. As result, the draft NEPM borrows from a number of possible approaches. Its main features are recommendations that jurisdictions should deal with packaging waste issues through a statutory instrument (the NEPM) which includes the following:

- an obligation imposed on the packaging chain, targeting brand owners as the point of entry to the chain;
- an obligation on brand owners to take back and re-utilise, or ensure the take back and re-utilisation of, packaging materials they put into the market or, where materials are indistinguishable in the waste stream, equivalent materials to those they put on the market;
- an obligation on brand owners to perform at pre-determined levels established by reference to the performance of equivalent brand owners and/or materials included in Covenant membership;
- an obligation to bear costs associated with collecting and sorting materials equivalent to that incurred by members of the Covenant (noting that the cost may be incurred through compliance with the above as opposed to a financial payment); and
- exemption from the above based on membership of and compliance with the Covenant, or an equivalent system.

These obligations on non-exempt organisations equate to the performance expectations which signatories to the Covenant self-impose in the pursuit of product stewardship. The regime will have the desired effects of underpinning the Covenant, reinforcing product stewardship principles, and ensuring no competitive disadvantage to Covenant signatories.

2.6.1 WHY A STATUTORY BASIS?

Placing governments' expectations of the packaging chain on record through a statutory instrument serves a purpose beyond fulfilling governments' role to express community values through legal means. While providing flexibility to States/Territories to address particular jurisdictional concerns using instruments (legislation, regulation, Environmental Protection Policies, etc) which are relevant to the concerns of the jurisdiction, there is no expectation of uniform measures or complementary legislation. However, if States/Territories seek the outcomes through means which include non-statutory measures, there is an increased capacity for inconsistency between approaches which may deny realisation of a national system.

2.6.2 WHY BRAND OWNERS?

Placing the onus for compliance on brand owners responds to the concerns raised in section 1.5 in respect of the British system, which sought to formalise the proportional obligations at each point in the chain. This is ultimately a futile exercise which can be expected to be overridden by relative power in the market. Brand owners are therefore nominated as the point in the packaging chain where there is relative freedom of choice and action, and where product stewardship principles can be realistically pursued.

Brand owners, as defined, will also encompass importers as well as domestic producers, thereby addressing a key concern expressed by industry participants in Covenant negotiations.

The intent of the NEPM is to correct an imbalance in the market which would be created if companies outside the Covenant were not required to practise product stewardship or support the kerbside recycling system. Targeting brand owners is based, in part, on their capacity to ensure that they do not bear this responsibility alone. They can exert their influence “up” the packaging chain as customers of packaging manufacturers and fillers, and can pass costs “down” the chain to wholesalers/retailers and consumers. In this way non-brand owners outside the Covenant who are part of the packaging chain can be influenced in the market place, not only by Covenant signatories with whom they have commercial relationships, but also by brand owners outside the Covenant.

2.6.3 WHY TAKE BACK?

The take back obligation is seen by industry (section 3.3) as a “draconian” approach. Given the divisions within industry set out in that section, this viewpoint is more likely to be that of organisations which have a negative regard for both the proposed Covenant and the NEPM, or indeed, for any form of government intervention. Whether the take back obligation is draconian in practice depends on its extent. Setting performance objectives in respect of take back by reference to the performance of Covenant members will ensure that expectations placed upon non-signatories to the Covenant are not arbitrary and are actually achievable in an Australian or jurisdictional setting.

The take back option places an obligation on brand owners and importers and not only ensures a level of product stewardship but also provides an incentive for brand owners to sign up to the Covenant.

Compulsory take back provides a strong incentive to minimise packaging waste. In the case of brand owners, it constitutes an effective driver to ensure that appropriate influence is exerted on packaging suppliers and manufacturers. When linked with an obligation to utilise recovered materials, it can form a cornerstone of an environmentally sustainable system which encourages lifecycle management.

The introduction of a re-utilisation requirement will contribute to the development of secondary markets, and will support product stewardship and the waste management hierarchy. It is

recognised that until such time as sufficient secondary markets exist in Australia, exports of material or energy recovery may be the best available options. In this regard, there is nothing in the draft NEPM that attempts to override jurisdictional positions on waste minimisation generally, or jurisdictional mechanisms to encourage observance of the waste management hierarchy.

The imposition of take back and re-utilise obligations on both imported and local packaging addresses the issue of the competitive disadvantage which would be suffered by Covenant signatories in a regulatory vacuum. The obligations are targeted so that those whose materials are collected in kerbside recycling collection systems are subject to sanctions if they do not bear costs commensurate with the amount of materials collected for which they are responsible.

3. IMPACTS

The impacts of the proposed NEPM need to be assessed in the context of its support role for the proposed National Packaging Covenant. The Covenant is the lead instrument in terms of mapping the overall future management of used packaging materials in Australia. It is the clear intention of Ministers that, if the Covenant ceases to be in force, the NEPM should not proceed.

The level of industry commitment to the Covenant as the lead vehicle for management of packaging waste is reflected in the fact that industry representatives at the Covenant negotiations account for almost 100% of packaging manufacture in Australia and over 90% of the nation's annual grocery sales. Seen in this perspective, the impacts of the NEPM can only be evaluated as a marginal effect, with the Covenant making the major impact.

3.1 ECONOMIC IMPACTS

Main stream economic texts⁴ advocate the adoption of cost benefit analysis (CBA) as a tool to analyse the optimal level of regulation. CBA requires that all the major costs and benefits of a proposal be quantified in money terms. It is most effective in instances where there is sound information on which to base the analysis. However, to date there has been a paucity of information in relation to the economic and environmental impacts of recycling. This was noted in the Industry Commission's 1996 report into Packaging and Labelling⁵, and continues to apply.

The impacts (economic, social and other) of the NEPM must be seen separately from those of the National Packaging Covenant. Whatever the effect of the NEPM, it will be a marginal effect within the total Covenant/NEPM package, confined largely to non-domestic producers of packaged goods having a 10% market share of grocery items retailed within Australia. This is because it is anticipated that close to 100% of domestically-produced packaging and over 90% of grocery items sold in Australia will be covered by the Covenant. Nevertheless, it is difficult to assess the marginal impact of the NEPM without some regard to the Covenant.

The overall cost to the community of collecting and recycling packaging materials is unlikely to be adversely affected by either the Covenant or the NEPM. The costs are currently met by a combination of rates, prices of products and over-market buy back price mechanisms. The move towards a market based system through the Covenant will cause changes in the mix of these mechanisms. Short-term industry funding within the Covenant will in part be invested in developing increased efficiencies in collection techniques aimed at reducing overall cost of recycling to the community.

Although the NEPM introduces explicit obligations for brand owners affected by the NEPM, the small market share represented by this group suggests that any macro-economic impact is not

⁴ Ward, R. *et al*, (1992), *Economics*, New York, Harper.

⁵ *Packaging and Labelling*, Industry Commission Report No. 49, 14 February 1996.

measurable. The overall level of activity associated with the recycling of materials used for packaging is unlikely to be measurably affected by the NEPM, although it may be argued that the total Covenant/NEPM package will effect some changes as indicated above.

The NEPM recommends mandating responsibilities that have been voluntarily embraced within the Covenant by any company within the packaging chain which does not subscribe to the Covenant. However, it cannot be assumed that all parties not subscribing to the Covenant would be affected by the NEPM. The NEPM provides for industries which have put in place arrangements that produce equivalent outcomes to those achieved through the Covenant to be exempt. Moreover, since the enforcement model proposed is based on a complaints system, it is probable that some (unknown) proportion of smaller players would not be complained about, even if a competitor had information indicating non-compliance, if the competitive threat was small. If a complaint were made, jurisdictions would need to be satisfied that enforcement action was strategically and economically beneficial. The proposed enforcement model is set out in section 4.1.2.

On this basis, it is not believed that the NEPM would have any measurable impacts at a macro level and that the impacts at a micro level are small.

The stakeholders in packaging waste minimisation who may be affected by the Covenant/NEPM have been identified in Section 1.2.2. For the purposes of this assessment, impacts have been assessed for the following stakeholder groups:

- brand owners;
- recycling collectors;
- jurisdictions; and
- wider community.

Any impact of a goods and services tax (GST) on stakeholders is not taken into account in this assessment.

3.1.1 BRAND OWNERS

Costs for brand owners resulting from compliance with the NEPM will vary between companies depending on how they manage their obligations and record keeping requirements. For example:

- Brand owners who are not Covenant signatories but who are already adopting product stewardship at a level commensurate with Covenant performance levels are exempt from NEPM obligations and incur no costs directly from the NEPM.
- Others will incur new costs to fulfil their NEPM obligations to take back and re-utilise materials they have put into the market and keep records.

The information to be recorded may well already be available to brand owners as part of their existing marketing arrangements, since packaging considerations are already significant factors in marketing consumer products. The extent to which the obligation to take back and re-utilise materials imposes costs will vary dependent on how companies respond.

The spectrum of responses is likely to extend from development of an agency relationship with either local government or independent collectors to establishment of dedicated company-owned collection systems and storage facilities. Given the small scale of operation of the likely affected companies, it is probable that agency arrangements will dominate, that economies of scale could be secured through that route and that costs to companies will be limited. Charges within such a system could be based on the value of the material collected. It is also possible that charges could relate to the costs of collection/sorting and the level of technology available. This would mean that costs to brand owners could vary according to both the value of the material they use for packaging and the simplicity of its sorting. Generally lower costs for brandowners could be incurred where the package is unbreakable and lends itself to sorting using simple technology (e.g. magnets/blowers). Other things being equal, the NEPM may put pressure on brand owners to package their products in materials which lend themselves to economical recycling.

The provision for brand owners to discharge their obligations under the NEPM by undertaking or assuring the recovery and utilisation of used packaging materials which are of a size and type substantially the same as the packaging in which their products are sold, rather than being to recover their own packaging, allows flexibility and constrains any unreasonable costs that might otherwise have been incurred.

Brand owners, who have not negotiated access to the system through the Covenant, may not be able to make a claim that their packaging is recyclable unless that claim is supported by advice to consumers as to how the packaging can be returned for recycling. The Australian Competition and Consumer Commission's position is that to make a claim that a product is recyclable requires that it has both inherent technical qualities which lend it to a recycling process, and that a system is readily available for its collection⁶.

3.1.2 COLLECTION SERVICES

Recycling collectors usually contract to local government to provide household collection services. Some also provide commercial collections of materials where the value of the material alone is capable of funding the service or where the collectors operate an integrated business in which recyclables collected are feedstock for other company enterprises (for example paper collections). It is anticipated that no change to collectors' municipal services will result from the NEPM. It is feasible that companies affected by the NEPM will contract directly or indirectly (through local government) to comply with the obligation to take back and re-utilise packaging materials. This may provide the opportunity to collectors to diversify their services on a commercial basis.

⁶ Trade Practices Commission, 1994, *Environmental Claims in Marketing*

3.1.3 ADMINISTRATIVE COSTS TO JURISDICTIONS

It is clear that resources will be required at State/Territory and local government levels for the purposes of monitoring, reporting on and enforcing the NEPM. It is anticipated that in part these would be provided from savings in resources presently committed to research and policy development in State/Territory environment Departments. The extent of any surplus or shortfall in such resources depends upon the extent to which the Covenant/NEPM package is successful in delivering a stable, agreed framework for recycling programs on a market basis. The proposal to establish a complaints based enforcement regime would limit enforcement costs to the necessary minimum. Implementation costs for jurisdictions are dealt with more fully in paragraph 4.1.2.

Local Government and Right To Cost Recovery

An objective of the NEPM is to ensure that materials collected in kerbside collection systems are confined to those agreed to by local government in subscribing to the National Packaging Covenant. In principle, provided brand owners covered by the NEPM faithfully carry out their responsibility to undertake or assure the recovery and utilisation of an appropriate proportion of the materials they put into the market, the NEPM would have negligible impact on local government. If a major brand owner leaves the Covenant, resulting in significant cost to local government, then local government is empowered to recover those costs from the responsible brand owner. It is expected that local government would only exercise this power where it is strategically and economically beneficial to do so.

In relation to local government reporting requirements, most of the information in relation to kerbside collection is already recorded as part of local government management practices. In some jurisdictions, regional waste management planning regimes specifically require similar levels of data collection to those proposed in the draft NEPM.

3.1.4 WIDER COMMUNITY

The wider community will benefit from transparency of cost to ratepayer for waste and recycling services so they will be aware of the costs involved in recycling. This information provides the community with a perspective on which to base the value of their kerbside service.

3.1.5 REVENUE ISSUES

The proposed NEPM makes no reference to the raising of revenues to support kerbside or for other purposes. This is beyond the purpose of the NEPM. The general perspective taken is that Covenant members will contribute, directly or indirectly, to kerbside costs through their negotiated relationship with local government in the Covenant. The focus of the NEPM has been to create a level playing field between exempt and non-exempt organisations.

3.2 SUMMARY OF ENVIRONMENTAL IMPACTS

3.2.1 ENVIRONMENTAL IMPACT OF NOT MAKING THE NEPM

The environmental impact of this proposed NEPM has to be assessed in the context of its supporting role to the National Packaging Covenant (Covenant). This NEPM is not designed to be a stand alone instrument. It has no currency without the successful implementation of the Covenant.

In the “do nothing” scenario (the absence of a NEPM or other device to progress the Covenant) the community is likely to see a reduction in the amount of material recovered at kerbside. The estimated reduction is in the order of 180 000 tonnes per year compared to current collection quantities. This reduction is in contrast to the projected increase of 200 000 tonnes per year in the NPC and NEPM environment. This results in a range of up to 380 000 tonnes potential difference in material recovery levels⁷. An increase in the amount of materials recycled represents a potential saving in landfill space. A reduction in the recovery of recyclable materials can be expected to result in an increase in the rate of consumption of equivalent virgin material.

It is expected that aluminium, steel and glass containers will continue to be collected, whether or not the Covenant/NEPM proceed. Collection of mixed paper and plastics is less assured. The range of plastics recovered is likely to be reduced so that low density/low price materials are no longer collected. This would coincide with a predicted increase in the use of most types of plastic packaging. However a recognised difficulty in assessing the environmental impact of plastic packaging is the trade-off between virgin gas and oil usage to make plastics and that used as a energy source in collecting and recycling plastic packaging. European studies undertaken on behalf of the Association of Plastics Manufacturers in Europe (APME) indicate that a supportable decision making table can be developed to indicate both the types of used plastic packaging that it desirable to collect for recycling and the optimum level of recycling that should be adopted.

A second scenario is that in the absence of an effective Covenant/NEPM package, individual jurisdictions will take action to impose individual regulatory options. While an outcome of the Covenant is intended to be optimal levels of materials recovery, there is no guarantee that individual jurisdictions would adopt this approach. The outcome may be nomination of recovery levels which produce adverse environmental impacts, e.g. by requiring collection of materials without regard to energy issues or which fail to recover a level of materials which is environmentally and economically feasible.

Whilst it is expected that the collective effort of individual jurisdictions may well produce similar environmental outcomes with respect to packaging waste reduction, it may well be

⁷ Data was contained in the “Used Packaging Materials National Environment Protection Discussion Paper” 6.July.1998, National Environment Protection Council Service Corporation.

achieved with higher overall environmental and economic impacts. This will be due in the main to the fact that any regulatory system is inherently less flexible and industry will have fewer options to meet the same objective.

3.2.2 ENVIRONMENTAL IMPACT OF MAKING THE NEPM

As explained in the previous section, the NEPM is the subordinate instrument to the National Packaging Covenant, and this NEPM does not operate in isolation from the Covenant.

It is not the intention to measure the environmental impacts of resource recovery or any particular element of the waste management hierarchy such as recycling. As the NEPM is designed to support the Covenant, it is clear that its *marginal environmental effect* will not be great. However, it encourages membership of the Covenant which is intended to be the primary instrument for delivering environmental benefits. It is anticipated that this issue is dealt with in more detail in the Regulatory Impact Statement on the National Packaging Covenant.

Provisions in the NEPM requiring “systematic recovery of consumer packaging in which the brand owners products are retailed” have to be assessed in light of what their equivalent Covenant signatory competitors are achieving. This ensures that packaging items which are clearly not practical to recycle or reuse are not forced into a collection scheme.

Companies or industrial sectors choosing to operate outside the Covenant framework have the option of establishing a collection system such as a bring system, that may be more economical than a kerbside system, but could have other environmental impacts. It is beyond the scope of this Impact Statement to research all possible scenarios. However due to the predicted coverage of the Covenant it is expected that any or all of these systems will be operating with marginal environmental effect.

3.2.3 REGIONAL ENVIRONMENTAL DIFFERENCES

In making any NEPM, the National Environment Protection Council must have regard, *inter alia*, to ‘any regional environmental differences in Australia’⁸. In addition, section 17(b)(v) of the Act requires that the Impact Statement to be prepared with the draft NEPM include ‘a statement of the manner in which regional environmental differences in Australia have been addressed in the development of the proposed NEPM’.

While the NEPC Acts do not provide any explicit definition of the term ‘regional environmental differences’, its meaning is nonetheless made clear. The legislation, and sections 15 and 17 in particular, provide a clear indication that the term is not intended to encompass regional economic and social differences.

⁸ section 15(g) of the National Environment Protection Council Act 1994 (Commonwealth) and the equivalent provisions of the corresponding Acts of other participating jurisdictions

The term ‘regional environmental differences’ is included in the provisions identified above in recognition of the fact that fundamental environmental characteristics of different regions may be very different, and that to apply uniform standards may not further the desired outcome of equivalent protection espoused in the legislation. For example, the issue of salinity in water bodies would provide a clear example of the need for regional environmental differences to be taken into account.

The draft NEPM for Used Packaging Materials does not propose to establish ambient environmental quality standards. Rather, as noted above, the purpose of the NEPM is to provide support for the principal instrument of change, the proposed National Packaging Covenant. The support is focused on ensuring that industry signatories to the Covenant do not suffer any competitive disadvantage as a result of fulfilling their product stewardship commitments under the Covenant and to prevent free riding in the kerbside system. The desired environmental outcomes of the Covenant/NEPM are, in relation to consumer packaging and household paper, optimal resource use and recovery and the conservation of virgin materials.

Therefore regional **environmental** differences are not considered significant in relation to the development of the NEPM. Regional differences which may have an impact on the management of used consumer packaging materials are more typically social and economic differences. For example, the availability of kerbside or other collection systems for used packaging materials is more likely to be a function of population density, community attitudes and local government policy decisions than a function of specific environmental characteristics. It should be noted that one of the mechanisms agreed to be implemented through negotiations on the National Packaging Covenant, to facilitate the transition to a sustainable market-based kerbside recycling system, is an examination of best practices in kerbside collection. This examination will specifically consider the feasibility and sustainability of kerbside collections in rural and remote areas of Australia.

Achievement of the desired environmental outcomes of the NEPM may have region-specific environmental impacts in those areas which produce virgin materials used in packaging (e.g. bauxite, wood pulp and soda ash/sand) by reducing the amount of those materials consumed in meeting Australia’s consumer packaging needs. It is not possible at this stage to assess the extent of that impact, noting in particular the relatively narrow scope of the NEPM. However it is expected that optimal use of resources and conservation of virgin materials are likely to lead to positive rather than negative environmental impacts.

3.3 SOCIAL IMPACTS

As indicated elsewhere, the NEPM lends support to the Covenant and consequently has marginal effects. However this supporting role is a keystone on which the whole Covenant/NEPM package depends. Although the following paragraphs cover a greater range of issues than strictly need to be covered to assess the social impacts of the NEPM itself, the material is included because it provides

a useful means of understanding attitudes across the Covenant, the NEPM and recycling more generally.

3.3.1 INDUSTRY ATTITUDES

Development of the Covenant to date has involved consultation with broad representation from industry for more than eighteen months. In this impact assessment of the NEPM it was important for industry's views to be represented.

To explore industry attitudes, in early 1998 a questionnaire was distributed and 30 interviews were conducted with companies or industry associations from across the packaging chain. This section reviews where the sample of industry representatives saw its responsibilities in waste minimisation, and its attitudes to the processes of establishing the Covenant and NEPM, as expressed in response to the questionnaire and interviews. It is important to note that, at the time the questionnaire was distributed and the interviews conducted, neither the nature of industry commitments under the Kerbside Schedule to the Covenant, nor the form of the proposed NEPM, were known.

This section also provides a summary of publicly expressed positions of the beverage, packaging and retailing industry associations in relation to the Covenant and NEPM. Some of these positions have evolved with the progress of Covenant negotiations, and express a more supportive view of the Covenant/NEPM than those expressed in the questionnaire/interview process.

Industry Interview Responses

Most companies and industry associations with whom consultations were held or from whom questionnaire replies were received appeared to be well informed about the Covenant and the NEPM development processes, although they could not at that stage have known the details of the Covenant commitments and NEPM proposal. The questionnaire and interview process involved a broad range of industry: materials suppliers; packaging manufacturers; packaging fillers from the food, beverage, other grocery and electronics industries; and retailers. Although there were different views between industries and companies some common themes were strongly amplified.

The issues surrounding a NEPM evoked the strongest reactions and highlight the paradox in much of the reaction to the potential of imposed costs and penalties. On the one hand, few industry respondents supported such an instrument and many were prepared to actively oppose any legislative impositions. On the other, many companies/industries acknowledged that the Covenant cannot exist without an effective NEPM.

This paradox emerged because companies, such as the beverage industry for example, which have had long involvement with Governments in recycling initiatives, expressed the view that there needs to be a 'level playing field'. Indeed this is important to all industry players. But there were concerns because:

- the content of the NEPM was unknown at the time of the survey;

- industry naturally opposes regulatory penalties which may be used against them now or by Governments in the future; and
- the attention given to the issue of funding for ‘the gap’ (the net cost to local government of kerbside collection services after the sale of materials) had removed much of the focus from the broader objectives of packaging waste minimisation.

Is there one industry view?

The views that were commonly expressed across industry are:

- a unanimous view that industry should not directly fund ‘the gap’;
- a strong commitment to fulfilling industry’s environmental responsibilities;
- almost universal opposition to legislative intervention and obligation despite the recognition by many companies that a successful Covenant requires an effective NEPM.

There appeared to be a greater variety of views in industries either at different points of the packaging chain or with different past commitments to recycling activity.

Examples of these differences are:

- Companies that had a long involvement in recycling and (possibly) subsidising initiatives in the past believe it is time that commitments were spread equitably across all materials and all sectors of the packaging chain.
- Retailers explained that they act as a conduit between consumer demands and product (and packaging) suppliers. They therefore believed their capabilities and responsibilities to be limited. Retailers pointed to activities to recycle plastic shopping bags and their extensive recycling of distribution packaging as significant contributions to waste diversion and as being the extent of their involvement.
- The aluminium industry, which has a high recovery rate and high value for its post consumer waste, expressed the view that other packaging materials should be compelled to meet the same achievements and a NEPM may contribute to this. But producers with materials having poorer performance (say some flexible plastics packaging) opposed intervention.
- Some manufacturers and converters of packaging were particularly concerned that they have shouldered the burden of responsibility and that importers of packaging and packaging materials were getting a free ride because they made no contribution to the system. Some manufacturers also believed that downstream companies in the packaging chain were not contributing their fair share of ‘shared responsibility’.

Industry Views on the NEPM

As previously noted the possibility of legislative intervention drew strong negative responses from companies and industries, on the grounds that low levels of government intervention allow competition and the marketplace to determine the best outcomes and only where market failure occurs is government intervention justified on the grounds of delivering an outcome for the benefit of the whole community.

On the other hand, many companies expressed a firm view that an effective NEPM is required to ensure that the National Packaging Covenant proceeds. It is difficult to reconcile this dichotomy of views amongst the same companies. One explanation is that the many companies that have already contributed to community recycling schemes believe that only legislation can coerce competitors that have thus far escaped contributions to recycling and litter reduction initiatives to share more equitably in their responsibilities. But there was a perception that such legislation could be applied to themselves in the future, encouraging an ambivalent attitude.

Industry was cautious because at the time of interviews, the mechanism to be used in a NEPM was unknown. There appeared to be a widely held perception that the NEPM would contain measures to raise funds that would be used to reduce the net cost of kerbside recycling collections to local government (the “gap”). Without knowing the proposed mechanism, industry’s natural aversion to legislative intrusion was the common reaction.

There was a strong sense of injustice and a determination to ‘fight’ any legislative measures. Industry considered the regulatory options being considered for the NEPM were ‘strong’ and potentially costly. There is a natural industry response to oppose such intrusions. The sense of injustice is heightened by the perceived intention of the Covenant and NEPM to channel funds directly to ‘the gap’. This, more than any other requirement of the Covenant or under the NEPM, polarised the majority of industry’s attitude to oppose legislative means.

In summary, the Industry Questionnaire found little support for any of the financial mechanisms that might be included in a NEPM. In relation to the options most closely considered for the NEPM, industry reactions as expressed in the questionnaires and interviews are summarised below.

Refundable packaging deposits

This system was seen as being administratively and operationally cost prohibitive.

It was also seen as a system which had the potential to destroy kerbside recycling by constructing a second (and expensive) recovery scheme.

Take back obligation for used packaging materials

Again, the main objections to a take back requirement outside kerbside (or other established recovery schemes) was the cost and the potential damage to kerbside. Health and safety issues were also raised.

Respondents were concerned that this option would mirror the German system which is generally regarded as being costly, inefficient and draconian. There was certainly concern that take back obligations were punitive in terms of added administration and costs to companies. When it was explained that the purpose of the requirement was to impose the costs of disposal on non-signatories to the Covenant, it was still generally regarded that take back requirements were too onerous and that Governments would be loath to implement such regulation.

Mandatory recycling performance/recyclate content levels

These mechanisms were also regarded as costly to implement, both for the industries concerned and government. They were also seen as significantly impeding industry's ability to compete.

Overview of Interview Responses

Most industry responses displayed some uncertainty about the function and form of a NEPM and included few suggestions about how to best structure a NEPM. There was general concern with Governments applying strong punitive measures. At the same time, those industries most involved in recycling activity saw value in 'evening up the playing field', especially if financial contributions were amongst the obligations of the Covenant. These mixed views of a NEPM highlighted the first of several paradoxes evident in industry response to the Covenant and a supporting NEPM.

The most common response from interviewed companies suggested that they would not join the Covenant if there were significant obligations beyond those implicit in the draft Covenant. In all cases respondents were adamant that they would not fund the kerbside gap nor make a contribution to it. There was, however, an acceptance from many respondents to make some undefined contribution to improving collection efficiencies and this was where a NEPM was considered appropriate to ensure equity.

Although industry supports the principles of product stewardship it generally expressed the view that local government should be responsible for the delivery and costs of kerbside recycling services.

The solution proposed by those industry respondents who had developed views on the issues was that the most efficient means to address the kerbside funding gap was either through a landfill levy or a household recycling levy. They argued that both of these solutions capture all packaging materials including imports and all aspects of the packaging chain finally involving households. Industry argued very strongly for the householder recycling levy from a number of perspectives, including its perceived administrative simplicity; its transparency; its incentive to

improve both waste reduction and recycling efficiency; and the pragmatic view that many studies had identified a willingness for householders to pay an appropriate premium for a comprehensive kerbside recycling system.

With this solution, the obligations avoided by those not in the Covenant would be more difficult to enforce in a NEPM, due to the less specific and more diverse obligations of Covenant signatories. Companies who intended to be Covenant signatories (assuming that there would be no obligation for contributing to the kerbside funding gap) were then more driven to see a NEPM as a matter of equity and fairness.

Most industry interviewees believed that industry was already fulfilling its environmental obligations with regard to packaging product stewardship and that market forces should determine the best outcomes for kerbside systems.

The clear message from those who indicated they were most likely to sign the Covenant was that they saw the Covenant in terms of its stewardship and environmental obligations, not as a means of assigning additional operating costs to business. Most companies and organisations believed they had a good record in these areas and argued they had shown pro-active and ongoing commitment.

There was a strong sense of frustration evident among raw material manufacturers who have been most tangibly and financially active through their buy back and take back commitments. All companies with a history of contributions to recycling believed they had been subsidising the system and, with cost pressures and a non-level playing field, they made it clear that they could no longer take back material at above market prices. For these companies, a NEPM would ideally include a levy on imported materials to tilt the playing field and would ideally be applied at a point in the supply chain closer to consumers. However, those concerned did not expect this outcome and, as for most respondents, strongly supported the option of a household levy.

In summary, in early 1998 industry wanted the Covenant to go ahead embracing the principles of product stewardship and environmental responsibility. For manufacturers, this included willingness to take back waste material of acceptable quality at market prices. However, if a NEPM were proposed to enforce or support a Covenant which contained onerous financial obligations, industry would not be prepared to sign the Covenant and would take whatever action is necessary to prevent the NEPM from being enacted.

A sample of Industry Association Views

The Beverage Industry Environment Council (BIEC), in a statement released on 4 December 1997⁹, indicated that it supported the development of a voluntary National Packaging Covenant and Kerbside Schedule in order to achieve: greater national consistency in waste management policy; 'shared responsibility' between industry, Governments and the community for the

⁹ BIEC, *National Packaging Covenant: BIEC Position Paper*, 4 December 1997.

management of used packaging waste; and a greater contribution from a wider range of companies across the packaging chain.

BIEC members have contributed more than \$50m since 1978 to waste minimisation activities through a voluntary, self-imposed environmental levy.

BIEC believe that the voluntary scheme must be supported by a NEPM to ensure Covenant signatories are not competitively disadvantaged. The NEPM should be developed in a timely and effective manner and it should require larger contributions from non-signatories to the Covenant.

The Packaging Council of Australia (PCA), in a Statement of Position released in May 1997¹⁰, indicated that:

An integrated approach to waste management is necessary, involving avoidance, recycling, landfill, lightweighting, packaging design, manufacturing practices, and cleaner production. Recycling is only part of the total waste management picture - and kerbside is a small part of that. All waste management options, including waste to energy, have a role to play in waste management.

PCA supports a voluntary approach with voluntary agreements to provide flexibility and greater scope for qualitative commitments that can be 'easily amended to reflect changing industry circumstances'. They also advocate equitable treatment of all packaging materials and the need to ensure the Australian packaged product is not disadvantaged against overseas competitors. PCA indicates that industry accepts that it has an environmental responsibility which should be shared with State Governments, Local Government and consumers.

The Australian Supermarket Institute (ASI), in an address at the Australian Chamber of Manufactures Packaging & Paper: Waste & Recycling Conference in September 1997¹¹ demonstrated that there was a perception that the NEPM was designed to raise funds to overcome the "gap" in kerbside funding. The ASI objected to the suggestion that a retail levy be introduced rather than a transparent increase in Local Government rates, as the levy was seen as a way for Governments to avoid the responsibility for an increased charge.

At a recent (September 1998) conference held by the Australian Industry group, many industry associations expressed a much more positive view of the Covenant/NEPM package, reflecting a broadening appreciation of the various options available to governments to fulfil community expectations on the minimisation and management of consumer packaging waste. The Australian Industry group supported a nationally based voluntary approach as opposed to a State by State approach, and endorsed the concept that the Covenant, rather than the NEPM, will be the major

¹⁰ Packaging Council of Australia, *A National Packaging Protocol Statement of Position by the Packaging Council of Australia*, May 1997.

¹¹ Bevan, B., 1997, *A Retailer's View*, paper presented to Australian Chamber of Manufactures Packaging & Paper: Waste & Recycling Conference, Sydney, 17 September.

instrument in dealing with kerbside recycling issues. Further, the group expressed the view that the Covenant should be able to stand alone and that the NEPM is unnecessary. This view is at variance with that expressed by industry negotiators of the Covenant.

At the same conference, the Plastics and Chemicals Industry Association sent a strong message that the Covenant/NEPM negotiations should be supported even by members of the packaging supply chain whose products are not normally recycled, because the alternative of government regulatory intervention at jurisdictional level has the potential to be more onerous and complex for industry.

3.3.2 LOCAL GOVERNMENT POSITION

The rising cost gap on kerbside has led to a concerted local government push to see the funding gap dealt with in the short term, while a more sustainable approach to kerbside is delivered longer term. The November 1997 Australian Local Government Association (ALGA) *Waste Minimisation Strategy: Kerbside Recycling* (the 'Kerbside Strategy') together with the resolutions from the 1997 National General Assembly of Local Government, set out local government's position. The dominant message of the Strategy and Assembly resolution is:

That Local Government make it clear that responsibility for waste minimisation and recycling must be shared more fairly by Industry, State Government and Commonwealth Governments, and that the services provided by Local Government may need to be curtailed if agreement on the preferred strategy cannot be reached within the financial year¹².

The Kerbside Strategy points out that Local Government given a very clear message that:

'... they want a system that delivers on community demands for effective and sustainable kerbside services'. It notes that the characteristics of an efficient, effective and sustainable kerbside recycling system may include (Kerbside Strategy p. b):

- *involvement of all stakeholders in a manner based on fair principles where responsibility is distributed on the basis of contribution to the problem;*
- *a fully integrated system, simple and transparent in its operation, that provides funding for research and development of new markets and new end-uses, as well as education and promotion;*
- *has the capacity to be financially self-supporting within a system driven by the demand for materials rather than product-focused and determined by the supply of materials;*

¹² ALGA (1997) Resolution 4.19(v) from the National General Assembly of Local Government

- *is able to accept new materials and products, and new stakeholders into the system to manage new waste streams such as construction and demolition waste, organics, electronic scrap, etc;*
- *has legislative support in place to underpin the system to catch free riders;*
- *reduces waste to landfill in a long term sustainable manner;*
- *has economies of scale at a state, national and international level; and*
- *co-ordination and monitoring of the entire system.*

While financial relief is seen as the primary benefit of the new approach in the short term, the emphasis on market development and on the system maintaining a demand-supply balance focuses attention on issues of longer-term viability.

The Strategy states that rural and remote communities often have an interest to participate in recycling but are hampered by the economics of commodity return and by industry unwillingness to accept responsibility for materials/packaging post-use.

It points out the influence of Commonwealth and State/Territory waste minimisation policies in encouraging local government development of kerbside systems and, in consequence, argues for greater involvement of these governments in meeting the local government costs involved in policy delivery. It also indicates that rate capping by some State Governments has constrained the capacity of local government to respond to rising kerbside costs - other Council services being squeezed in consequence.

The strong message from local government is that kerbside recycling services are very likely to be reduced if local governments' short term kerbside funding problems are not dealt with, and that longer term increases in kerbside recovery are anticipated, based on the delivery of a more sustainable kerbside system. Local government sees industry and Commonwealth and State Governments as stakeholders who should be contributing directly to the funding costs of kerbside, while also fulfilling other roles in waste minimisation.

The low kerbside recovery rate anticipated if local government meets the full net cost gap on its own (or, more correctly, consumers as ratepayers meet this cost), could see local governments meeting an estimated \$65 million net cost for kerbside (or a higher figure if commodity prices are below those which pertained in 1997). This represents an average cost of about \$13.25 per household per annum, which appears to be within bounds that the majority of ratepayers would accept, based on the various surveys cited in the Regulatory Impact Statement for the Covenant.

3.3.3 COMMUNITY ATTITUDES

Approach

The relatively high levels of material recovery achieved in most Australian kerbside recycling programs demonstrate a significant level of community support for these programs. This section presents evidence concerning community attitudes towards kerbside recycling, to assist in forming views on the likely nature of community response(s) to variations in the delivery of kerbside recycling collection services.

Attitudes to the Environment

Surveys of community attitudes conducted since 1994 typically rank unemployment, health, education, crime and the environment as the most significant state policy concerns. Over the same period, respondents have indicated that they expected the environment to be the top state priority issue in ten years time.

A December 1994 report by Keys Young for the Victorian Recycling and Resource Recovery Council and the Waste Management Council, *Recycling With Attitude*, found that 97% of respondents agreed that 'Protection of the environment is very important to me'. Some 86% indicated 'I am prepared to take personal action to protect the environment'. 75% of respondents indicated they had selected household products which they thought preferable from an environmental perspective over the past year. When this survey was repeated four years later by EcoRecycle Victoria, the results were similar with an increasing number of respondents indicating that their purchasing practices had become more environmentally conscious.

Waste/Recycling as an Environmental Issue

National survey findings

A 1998 study by the Australian Bureau of Statistics (ABS)¹³ shows that garbage disposal is the fifth most important environmental issue behind air, ocean and freshwater pollution, and the destruction of ecosystems. The survey also showed that participation in household recycling schemes is linked to convenience.

NSW survey findings

The 1994 NSW EPA *Who Cares About the Environment* report examined perceptions about the most pressing State environmental problems. That examination identified ocean and beach pollution and fresh water pollution as the top two concerns, with litter/dumping of rubbish and household waste/garbage being ranked seventh and eighth respectively. When asked to indicate environmental areas where they thought there had been improvement, some 71.4% mentioned household rubbish, easily the highest response. In short, household waste/garbage probably

¹³ "Australian Social Trends 1998", Australian Bureau of Statistics, 1998.

ranked down the list of environmental concerns because respondents saw that progress was being made in this area. Development of the kerbside system was perhaps the most significant innovation occurring in the waste area at the time.

The success of NSW kerbside recycling programs may have made people feel that something is being done to improve the state of waste. The 1997 NSW survey again placed 'dealing with household rubbish' at the top of the list in terms of environmental improvements which had been achieved over the past three years, while 'minimising the amount of waste the community produces' ranked fourth.

When asked about the most important environmental initiative the NSW government could take over the next few years, specific waste-related matters did not emerge as significant, although some replies have generic application in the waste field. This again suggests that progress in waste minimisation was being perceived.

The 1994 NSW survey asked respondents about changes they had made in their behaviour over the past five years, for environmental reasons. The top response, given by 90% of respondents, was that they had decided for environmental reasons to re-use or recycle something rather than throw it away. The 1997 survey produced a 91% response rate for the behaviour 'recycled bottles or cans or paper instead of throwing them away' and an 86% response rate for 'decided for environmental reasons to re-use something instead of throwing it away'. The 1997 survey also reported that 91% of people recycled. Rejecting excess packaging had also been practised by most respondents.

It is noteworthy that, when asked to list their most environmentally damaging behaviours, after 'use of motor vehicles, leaded petrol' (at 28% of responses), the most frequent responses were 'failure to recycle' (16%, similar to 1994 at 14%) and 'use of products that have lots of packaging or are damaging to the environment' (11%, down from 15% in 1993). Some 9% of respondents also noted the environmentally damaging behaviour of 'amount of waste generated'.

The 1997 report concluded that (p. 41): *In 1997, the community has a greater awareness of environmentally damaging behaviours.*

The 1994 NSW report noted that young people tended to be more pro-environment (p. 16), showing greater interest in, and responsiveness to, environmental issues. Young adults (25-34) emerged as the most pro-environment group, were most likely to have changed their behaviour for environmental reasons and most frequently identified environmentally damaging behaviour. Over half of the respondents in the oldest age bracket said they were 'quite confused by all the different information and claims' they heard about environmental issues (p. 17). The 1997 survey indicated that younger people, particularly women aged 20-29, are more likely to report improvements in 'minimising the amount of waste the community produces', perhaps showing returns from many years of state government emphasis on education and public awareness in this area.

In the 1994 survey, men showed more confidence than women about their level of understanding of, and a higher level of knowledge about, environmental protection matters. Women were more likely to change their behaviour for environmental reasons, in areas such as recycling and waste reduction. The 1997 survey showed similar results. It also indicated there were no major distinctions between men and women or the various age groups in priorities for waste management.

The 1994 survey showed that people in country areas identified waste management and disposal and water quality in rivers and creeks as the highest environmental concerns, although the 1997 survey did not reveal the same level of concern about waste. It did, however, indicate a high level of interest in recycling and education about it. The 1997 report noted that people in rural areas, small towns and Newcastle are most likely to report that they have not 'recycled bottles or cans or paper or plastic instead of throwing them away'. Only 1% of rural dwellers identified 'failure to recycle' as an environmentally damaging behaviour.

The findings suggest that there may be less pressure to maintain recycling service standards in NSW rural areas, in general, than in cities but that there are parts of the rural areas that will highly value services and wish to maintain them.

Victorian survey findings

The 1994 Victorian *Recycling With Attitude* survey found that 98% of respondents agreed that 'the way we collect and dispose of waste in Victoria is very important to me'. The proportion of respondents who nominated waste reduction as very important tended to rise with education and with age. Some 93% agreed that 'recycling is a normal part of life today', while 96% agreed that 'if we don't do something serious about waste in our community we'll face major problems in years to come'.

The more recent 1998 survey for EcoRecycle Victoria also found that 98% of respondents agreed that 'the way we collect and dispose of waste in Victoria is an important environmental issue', the same proportion as in the 1994 survey. The 1998 responses were similar between all four areas surveyed.

The 1998 survey found 71% of respondents agreeing that 'reducing the amount of waste going into rubbish tips' is very important, a further 24% agreeing it is fairly important. Respondents in Geelong and smaller towns were less likely to see this as very important than those in Melbourne and large towns, although differences were not large.

Community Attitudes to Kerbside Recycling

The 1997 BIEC survey

The high level of participation achieved in most kerbside recycling programs is behavioural evidence of support for the schemes. The survey responses commonly revealed in answer to questions about involvement in recycling backs up this behavioural picture. A 1997 BIEC study, *Kerbside Recycling Community Concerns Survey*, found that over 92% of respondents in each city claimed to be users of a kerbside recycling system.

When asked why they recycle, over 60% of respondents indicated that they saw this as a 'contribution to the environment and/or a good idea'. This was easily the most frequent response. Next most frequent responses were 'something we should do/our duty' (about 25% response), 'convenient/easy/service is provided' (about 15%) and 'not enough room in the garbage bin' (about 14%). Environmentally based motivation is thus the dominant factor.

Well over 80% of respondents in each city were satisfied with their recycling service, a high level of satisfaction. Reinforcing this satisfaction, some 75% of respondents expressed 'no concerns' about their service.

The concerns that were expressed related to service improvement, rather than wanting the service to contract or in support of factors which might support contraction, but the overall indication is one of strong satisfaction. Concerns with communication and dumping were more common in Melbourne than in other cities.

As with most community attitude surveys related to recycling, the BIEC survey indicated respondents had only a rudimentary knowledge about what happens to recyclables once they are collected. The survey also indicated that some 63% of respondents agreed with the statement 'The cost of recyclable products influences whether I buy them' and 62% disagreed with the statement 'I always look for products that are recyclable'. These findings indicate that many recycling householders have not drawn strong links between the need for markets for recycled products and the value of putting materials out for recycling. When considered alongside the explanations given for recycling, the findings suggest that motivation is well meant but not necessarily always well grounded in knowledge.

The high level of involvement in recycling suggests that any action to significantly reduce service levels would be met with concern, although the somewhat thin knowledge base of many people raises the possibility that a concerted advertising campaign could change thinking. However, the long build-up time that kerbside has been through (about ten years in the larger cities), indicates that attitudes and knowledge in this area take time to form and, in consequence, may take a long time to change. This is likely to produce adverse reactions for some time to any attempts to significantly scale back kerbside programs.

Victorian surveys

The 1994 Victorian *Recycling With Attitude* survey also considered attitudes to kerbside recycling. Some 77% of survey respondents indicated they currently recycled, to reduce waste, by far the most common response to actions taken to reduce waste (composting ranked second at 48% and re-use third at 14%). 40% of households said they were very actively involved in kerbside recycling and a further 33% said they were fairly actively involved. A further 17% indicated they were involved to some extent. Couples with children were more likely to be involved in recycling than couples without children, who were more likely to be involved than shared households. The 1998 Victorian survey again found that 77% said they were actively involved in recycling (with a slight decline to 43% saying they were actively involved in composting).

The most commonly recycled materials were reported in the 1994 Victorian survey as being glass (82% of households), newspapers (79%), other paper or cardboard (57%), plastic bottles (76%) and aluminium cans (57%). The similar pattern in these findings to the actual recovery rates of various materials in kerbside is indicative of the broad accuracy of the survey. The 1998 survey found that 93% of respondents reported recycling plastic bottles, 90% glass, 87% newspapers, 86% other paper or cardboard, 77% aluminium cans, 74% milk cartons and 61% steel cans. When these results are considered alongside changes in actual kerbside collection quantities and the reported constancy in involvement in kerbside (between the 1994 and 1998 surveys), the suggestion is that:

- about the same proportion of households are involved in kerbside recycling as four years ago;
- these households are putting more materials in their recycling containers;
- they are only doing this on some occasions (otherwise recovery rates of some materials would probably be higher than revealed in surveys such as the BIEC survey).

When asked why they recycle, 62% of respondents to the 1994 Victorian survey said to help protect the environment, conserve natural resources, etc. This is very similar to the NSW 1994 result and to the 1998 Victorian result (at 64%). The fact that recycling was convenient was mentioned by 31% of households responding to the Victorian 1994 survey, a result that was higher than for the same answer in NSW in 1994 (possibly reflecting the more widespread coverage/longer history of comprehensive kerbside systems in Melbourne than Sydney at the time). The 1998 Victorian survey found an increased proportion of households (40%) giving this answer, suggesting that kerbside is well into the habit phase.

Some 22% of people responding to the 1994 Victorian survey said they recycled in the belief that the community cannot keep dumping so much rubbish. This figure is similar (19%) in the 1998 survey. 19% of 1994 respondents said they thought recycling helped reduce litter, although this proportion had fallen to 13% in the 1998 survey. Environmentally based motivation seems a

little higher in the 1994 Melbourne survey than in the 1994 Sydney survey, as does habit in influencing involvement.

Items which were commonly re-used by Victorian 1994 respondents were glass bottles and jars, by 51% of respondents, plastic containers by 50% (e.g. fast food take-away plastic containers) and plastic shopping bags by 46%. The 1998 survey found 43% of respondents saying they had returned plastic bags to supermarkets.

85% of respondents to the 1994 survey agreed that 'the kerbside recycling arrangements in our area are easy and convenient to use' and 80% agreed that the 'kerbside recycling in our area is efficient and reliable'. These results are similar to the 1994 NSW results and to the 1997 BIEC results. By 1998, 89% agreed that 'kerbside arrangements in our area are reliable and easy to use'.

Only 26% of 1994 respondents thought that 'it is quite difficult to remember the times for recycling things', probably reflecting the frequency of weekly, 'same day as the garbage', services. However, only 34% thought that 'the local council gives us good feedback about how recycling is working in our area'. Communication from council was also something of a problem in the 1994 NSW results. The Victorian 1998 survey suggests that communication levels have improved in that state since 1994.

The 1998 Victorian survey found 42% of respondents were 'very satisfied' with their kerbside recycling services and 45% were 'fairly satisfied'. Those most satisfied were respondents with a wheelie bin (92%) or crate (90%). Respondents from smaller towns were less likely to be satisfied.

Almost half of the respondents to the 1998 survey suggested there were no changes they would like to see to local kerbside recycling arrangements. The most commonly suggested change was for a 'different recycling container' (21% of respondents) and 'more frequent services' (12%). These answers were fairly similar across the four types of study area.

Attitudes to Who is Responsible and Who Should Pay

A number of the surveys cited above also explored the question of shared responsibility for the cost of kerbside recycling systems. This issue has been explored in more detail in assessing the impacts of the Covenant, as the NEPM will not operate to directly address kerbside funding issues. However it can be generally stated that only a small proportion of respondents appeared to understand the funding issues associated with kerbside recycling collections.

3.3.4 WHAT THE PAPERS SAY

Media, such as local and regional newspapers and radio, provide an indicator of issues of public concern. A scan of recent press clippings and radio reports and interviews on the subjects of recycling and related waste matters was undertaken, to identify current issues of concern. Articles from Victoria, New South Wales and South Australia were sources for this section.

Note that the press coverage did not relate specifically to the proposed NEPM, but rather to general issues relating to the delivery of kerbside recycling collection services.

Clippings from February / March 1998 issues of Victorian suburban newspapers, rural press and some major national or metropolitan dailies were scanned.

The following issues appeared in the papers, in order of frequency:

- Council financial concerns about kerbside;
- packaging agreement/Covenant and related matters/levies/CDL/take-back;
- paper glut;
- need for the state to accept more responsibility for dealing with waste;
- new regional waste strategies;
- review of waste/recycling services (including providing new services);
- problems in rural recycling;
- problems with school paper recycling;
- need for market development for recyclables; and
- need for more price stability for recyclables.

Local government concerns about the financial impact of falling recyclables commodity prices and rising recovery rates on the cost of service provision were raised most frequently. The concerns were mainly expressed during interviews with, and/or press releases from, local government officials or elected representatives, including peak body leaders (the Municipal Association of Victoria). They reflect, *inter alia*, the November 1997 ALGA resolution to conduct ‘...a public campaign to engage widespread public support for all necessary actions to alleviate the current crisis’.

Related issues concerning the Covenant and other packaging stewardship measures were the second most frequently covered issues. The paper glut was also a frequent topic, while several articles included argument from interviewees along the lines that the state government should accept more responsibility for dealing with the growing financial problems in kerbside, because of its promotion of these systems of waste minimisation.

A small sample of NSW local media coverage between November 1977 and March 1998 was also considered. The issue that arose most frequently was the need for people to be involved in recycling and/or about the need for more information to facilitate such involvement. This reflected the period for which material was assessed, which included Recycling Week during November, 1997. Several items were about the need for market development if recycling was to be successful long term and a further six focused on the financial problems facing local council recycling programs. Some articles presented the results of particular local recycling programs (e.g. recovery rates), while a few argued for the State/Commonwealth Governments to do more to

assist recycling. A couple of articles discussed the need for legislation to get industry to take greater responsibility for its waste.

South Australian press covered the following recycling and related issues during the period February to March, 1998:

- concerns about recycling/transfer station location;
- concerns about location of a waste dump;
- concerns about paper/cardboard recycling/paper prices;
- petitions for more recycling;
- formation of a new regional group;
- litter/clean-up issues;
- paper recycling markets;
- implementation of a new split bin system;
- Council recycling costs; and
- recycling rebates.

Location specific concerns, such as NIMBY (Not In My Back Yard) relating to landfill and recycling/transfer station locations, were more notable in the South Australian media. There were relatively fewer concerns about the quality of recycling services, possibly reflecting the current state of development of kerbside recycling in South Australia.

Overall, the media coverage considered adds a little to the earlier discussion. The Victorian material shows that local government is able to achieve wide press coverage for its views and that, by implication, the financial situation of local government in kerbside is newsworthy. The NSW and SA material demonstrates continuing interest in building recycling programs/recovery performance, while the SA material also shows that NIMBY is alive and well. The frequent mention of markets in the context of recycling recognises the importance of this matter for long term sustainability but the lesser frequency of mention, compared to more 'sensational' types of issues, tends to misdirect the balance of focus from solutions towards problems.

4. IMPLEMENTATION ISSUES

4.1 *ANTICIPATED ISSUES IN AUSTRALIA*

4.1.1 OVERVIEW OF AUSTRALIAN LEGISLATION

Legislative responsibility for the management of used packaging materials rests with State and Territory jurisdictions.

Generally, the Australian legislative approach in this area has relied heavily on industry volunteers. Even where mandatory provisions exist (for example in NSW and Victoria), there is a clear expectation that industries will initiate action with regard to their own waste reduction responsibilities.

One disadvantage with this approach is that, by their very nature, those industries that do not volunteer to become part of the proposed Covenant are unlikely to enter voluntary negotiations to reduce used packaging waste on a jurisdictional basis.

Some jurisdictions have the capacity to introduce mandatory measures if the voluntary approach fails, however there is the possibility of a significant time lag between the failure of the voluntary approach and the introduction of relevant regulations.

Several jurisdictions have or are about to introduce legislative mechanisms for the adoption of National Environment Protection Measures, usually under the nomenclature of Environment Protection Policies. This adoption may be automatic or may require confirmation by government. Where the NEPM includes guidelines, there will be an extra step as those jurisdictions make the necessary regulations to implement the NEPM in accordance with the guidelines.

Commonwealth

Although no Commonwealth legislation is directly relevant, the Commonwealth has had a coordinating role in developing national approaches to the management of packaging waste under the Australian and New Zealand Environment and Conservation Council (ANZECC). Voluntary Industry Waste Reduction Agreements (IWRAs) have been negotiated with the ANZECC Industry Waste Reduction Task Force.

Material-specific agreements have been negotiated with the newsprint, paper packaging, steel can, liquidpaperboard and HDPE (High Density Polyethylene) industries. These agreements have covered lightweighting, reducing pre-consumer waste, ease of re-use and recyclability and the use of recycled material in new products.

NSW: Waste Minimisation and Management Act 1995

This Act includes as its stated principles a reduction of waste disposed and support of the waste management hierarchy: avoidance, re-use, recycling/reprocessing, disposal. Mechanisms in the Act relevant to the management of used packaging materials are:

Industry Waste Reduction Plans (IWRPs)

- can be negotiated or non-negotiated;
- nomination of industry/sector by Minister for Environment; industry can volunteer or advisory body can suggest to Minister;
- may cover set waste reduction targets and time frames; commitments to reducing waste through product design, production and packaging initiatives; financial contributions to support community waste reduction programs; public monitoring and reporting;
- notice(s) to rectify if industry member does not comply;
- a regulatory head of power exists if IWRP fails. Regulations may be made in relation to targets for recycling, refundable deposits, take-back and utilise obligations, performance bonds, compliance reporting, product bans.

The time frame for negotiated IWRPs is between 6 and 18 months.

A non-negotiated Plan may be instigated when:

- the past performance of an industry is poor;
- an industry sector is particularly diverse and complex; or
- an industry sector fails to develop a plan after being nominated.

A non-negotiated plan is to be developed by the EPA, and the time frame is likely to be substantially less than for a negotiated plan (no more than 6 months) although the Act still requires public advertisement of the intention to develop a plan.

Waste levy

Landfill operators in Sydney, Newcastle and Wollongong areas pay a landfill contribution.

Landfill licensing

Government may ban certain materials from landfill.

The Act has the effect of specifically legislating an obligation on industry to comply with an IWRP once it has been gazetted. Conversely, the Government has a legislated right to regulate if the IWRP process fails. In that event, the Act includes specific heads of regulatory power relevant to used packaging materials, including container deposit schemes and mandatory targets.

Victoria: Part IX, Environment Protection Act

The principles of this Act include the fostering of environmentally sustainable use of resources and best practice waste management; and support for the waste management hierarchy. Relevant mechanisms are:

Industry Waste Reduction Agreements

- Agreements are between industry and EPA.
- Statutory format, and/or, including support for ‘stable and viable’ collection system.
- Can include action plans and targets, reporting.
- Industry initiated, or mandatory to prepare draft if statutory notice is given by EPA.

The Act creates obligations in relation to the statutory format of IWRA, completion of draft IWRA within a specified period (6 months), and six-monthly reporting against IWRA commitments.

The IWRA process provided for in part IX of the Act is fundamentally voluntary. While the Act sets out the minimum subject matter that an agreement must address, the extent to which draft agreements address those matters may fall short of expectations. The quality of a draft document can only be improved through negotiation. The EPA has no power to impose an IWRA upon a recalcitrant industry party. The EPA does have the power to reject a poor quality document and require the submission of a draft which meets the statutory requirements as to content. An industry party can be prosecuted and/or named in Parliament if it fails to submit a draft as required. However, fundamentally, the process cannot be relied upon to impose any obligations under a NEPM.

Landfill levy

Levy on all wastes to licensed landfills.

State Environment Protection Policies

Section 17A of the Act provides for a NEPM to be incorporated into new or existing State Environment Protection Policies (SEPPs) or Industrial Waste Management Policies (IWMPs). However, the proposed NEPM for Used Packaging Materials could not be incorporated into

either a SEPP or IWMP as currently defined. SEPPs generally focus on the environmental quality of defined areas of the State or particular segments and elements of the environment, and not on particular types of waste or wastes in general. IWMPs relate to 'industrial waste' as defined in the Act. An argument that used packaging material falls within the definition would be unlikely to succeed. Accordingly the Act would need to be amended to provide for a new type of statutory policy to enable implementation of the proposed NEPM.

Queensland: Environmental Protection Act 1994

The *Environmental Protection Act 1994* (s. 34) provides for the adoption of NEPMs via regulation. The *Environmental Protection Regulation 1998* is to be amended to allow for the commencement of NEPMs.

Within the context of the proposed NEPM for used packaging, a regulation under the *Environmental Protection Act 1994* would be required to give effect to the measures and to provide for penalties and enforcement options.

The *Environmental Protection Act 1994* (s. 220) provides a head of power enabling regulations to be made about the keeping of records and submission of returns; setting standards, controls or procedures for the manufacture, sale, use ... of a contaminant including a waste; removal, collection, transport ... of waste; and a regulation may create offences.

An Environment Protection Policy (EPP) for waste management is currently being drafted. The EPP has the principles of supporting the waste management hierarchy, user pays, polluter pays, and producer responsibility. It will also incorporate provisions enabling preparation of voluntary or mandatory life cycle assessment.

Western Australia: Environmental Protection Act

The Act does not currently have a head of power to enforce recycling or other management of used packaging materials, although it is understood amendments are being considered to provide regulatory powers in this area.

The Act is currently being amended to enable the State to enforce NEPMs through EPPs or through regulations.

South Australia: Environment Protection Act 1993

This Act includes in its principles/objects the promotion of ecologically sustainable development, and the regulation of activities, products, substances and services that, through pollution or production of waste, cause environmental harm. Relevant mechanisms include:

Beverage container deposit system

This is specified in the Act in relation to nominated beverage containers (beer and carbonated soft drinks), and creates the obligations outlined in section 2.

Environment Protection Policies

These may set out controls or requirements as mandatory and enforceable under the Act. An EPP on Waste Management is under development.

Section 28a states that when a NEPM comes into operation under the prescribed national scheme, it automatically comes into operation as an Environment Protection Policy. The EPA has power to impose more stringent conditions than those contained in the NEPM. Under section 29, the normal procedures for making EPPs do not apply to a NEPM and the Minister may refer the draft EPP directly to the Governor. This would effectively reduce the period for implementation.

It is an offence to contravene mandatory provisions of an EPP (i.e. NEPM protocols).

Landfill Levy

A levy is imposed on waste to landfill in the metropolitan area and landfill operators in rural areas pay a per capita levy.

Licensing

All landfills and recycling operations are licensed. Container collection depots, as defined in the beverage provisions, follow an approval process.

Other relevant provisions of the Act include:

- section 54: the holder of an environmental authorisation may be required to enter into an environmental improvement program; and
- other provisions relating to the licensing of producers and transporters of listed waste, and to the storage, treatment and disposal of waste.

Tasmania: Environmental Management and Pollution Control Act 1994

The *Environmental Management and Pollution Control Act 1994* has no direct head of power relating to used packaging materials or specific provisions for industry waste reduction plans. However, it does contain several provisions which might have application in delivering the outcomes of the Used Packaging NEPM. In Tasmania, a NEPM automatically becomes a State Policy, and there are several powers in the Act which have application to State Policies.

Environment Improvement Programs (EIPs) are intended for application to individual activities which are not in compliance with the Act or regulations. They are not explicitly intended to be applied to industry sectors and there is no precedence for this. Notwithstanding this they may have some application as a person can be required by the Board to prepare an EIP to bring an activity into compliance with a State Policy. Hence, if there were individual companies which did not comply in some way with the NEPM, an EIP could be required to bring them into compliance.

Environment Protection Notices can be issued to persons 'if it is necessary to give effect to a State Policy', and may impose requirements.

Environmental Agreements can be made between the Board of Environmental Management and Pollution Control and individuals or industry groups. However, the Agreements are voluntary and are to achieve performance beyond the minimum required for compliance with the Act, and are unlikely to have direct application here.

Finally the Act contains broad regulation making powers in relation to waste management.

Northern Territory: Waste Management and Pollution Control Act

The Waste Management and Pollution Control Act received assent in September 1998 and is expected to commence early 1999. Implementation of NEPMs under the Act will be achieved through Environment Protection Objectives (EPOs) or regulations.

Environment Protection Objectives are similar to Environment Protection Policies of some other jurisdictions. EPOs can be in the form of a goal, standard, guideline or protocol and may contain mandatory provisions or desired performance outcomes. EPOs may be made in relation to a particular type of waste or industry.

The Act also contains broad regulation making powers in relation to wastes including making provision for recovery, recycling and labelling.

Australian Capital Territory: Environment Protection Act 1997

This Act provides for the adoption of negotiated codes of practice and environmental protection agreements which might be potentially used as a way of reaching agreement with generators of used packaging materials. The Act specifically provides for regulations to give effect to NEPMs.

Regulations could be made to give effect to a NEPM on used packaging materials, supported by policies in a (non-binding) Environment Protection Policy which could include the Covenant in an annexure.

4.1.2 RESOURCES REQUIRED

Imposing the Statutory Obligations

The above overview indicates that providing a statutory basis for the obligations in the NEPM guidelines will require amendment of principal legislation in Victoria and Western Australia, and possibly in Tasmania. It appears that subordinate instruments in NSW, Queensland, South Australia, Northern Territory and the ACT could impose the proposed obligations.

Development and passage of the required instruments will have short-term resource implications for all jurisdictions, although these and time factors may be more significant where parliamentary processes are involved.

Monitoring and reporting

Ongoing resources will be required in all jurisdictions for the purposes of monitoring, reporting on and enforcing the NEPM.

Local government will be required to monitor and report on its relevant functions as set out in the Protocols. It is expected that the great majority of the information required is already available, although some additional processing may be needed to present the information in an appropriate form.

Brand owners will be required to establish and maintain records of their compliance with the NEPM, and make those records available for inspection by the competent agency of the participating jurisdiction in which the brand owner has its registered office. Due to the small proportion of packaging expected to be covered by the NEPM, it is not considered that all non-Covenant brand owner information on recovery and utilisation rates will be necessary to form a reliable picture of national recovery and utilisation rates and trends in national performance.

The information necessary to establish national rates and trends is expected to be available through Covenant reporting arrangements, and will be included in the information provided to NEPC to enable reporting on achievement of the desired environmental outcomes of the NEPM as a support instrument for the Covenant package. It is therefore **not** proposed to require brand owners to report routinely to jurisdictions. Jurisdictions will, however, be able to inspect brand owner records at their own instigation or as a result of information and complaints received.

Jurisdictions will be required to assemble and collate such data as has been gathered through monitoring activities, and to prepare and submit annual reports in accordance with the NEPC Acts.

Enforcement – the Trade Practices Act model

In the absence of exemption thresholds for the NEPM obligations, it is proposed that enforcement of the NEPM will be modelled on the Trade Practices Act by being largely based on complaints or an assessment by the relevant jurisdiction that intervention may be needed.

Amongst other things, the Trade Practices Act deals with anti-competitive practices, unconscionable conduct, unfair practices, product safety and information, and product liability. The Act applies generally to the business and commercial activities of most corporations, sole traders or partnerships whose activities cross State boundaries or take place within a Territory, and to the commercial activities of the Commonwealth. Through complementary legislation across jurisdictions, most businesses in Australia are subject to both the Trade Practices Act and the Competition Code.

The proposed NEPM is being developed to address potential market distortions from increased costs to signatories to the National Packaging Covenant who make commitments to practice product stewardship. Industries involved in negotiating the Covenant have expressed concern that they are being competitively disadvantaged by effectively subsidising the collection of materials for free riders (both domestic and foreign) in the kerbside system.

The intent of the NEPM is to redress the competitive imbalance which would occur if the Covenant were to stand in isolation as a self-regulatory instrument to address the management of used packaging materials. Competition and fair trading issues are therefore common to both the Trade Practices Act and the proposed NEPM.

Trade Practices Enforcement Philosophy

Given the broad reach of the Trade Practices Act (covering most organisations engaged in trade and commerce, in addition to a strong focus on consumer protection), the ACCC periodically publishes short-medium term priorities for enforcement action. In a 1995 publication summarising the Trade Practices and Prices Surveillance Acts¹⁴, the ACCC's objectives are stated to be to:

- *improve competition and efficiency in markets;*
- *foster adherence to fair trading practices in well-informed markets;*
- *promote competitive pricing wherever possible ...;*
- *inform the community at large about the Trade Practices Act and the Prices Surveillance Act and their specific implications for business and consumers; and*
- *use resources efficiently and effectively.*

The last point is significant. While the Commission's role demands firm commitment to active enforcement of the Act's provisions, the development of practical work programs requires the prioritising of enforcement activities as a matter of policy.

The 1995 publication cited above goes on to state that, where it has discretion on whether or not to act, the ACCC gives priority to matters where:

¹⁴ Australian Competition & Consumer Commission, *Summaries of the Trade Practices Act and the Prices Surveillance Act*, November 1995

- *there appears to be blatant disregard for the law;*
- *the matter particularly affects disadvantaged consumers;*
- *there is significant public detriment;*
- *successful enforcement, by litigation or other means, would have a significant deterrent or educational effect; or*
- *an important new issue is involved, e.g. one arising from economic or technological change.*

The net result of the corporate strategy described above has been the creation of a compliance program within the ACCC wherein the work undertaken by staff largely flows from marketplace information, including complaints and inquiries about possible breaches of the Act, supplemented by inquiries made on the ACCC's own initiative and Government directions and references.

As part of ACCC's overall program structure, Program 1 (Compliance with the Trade Practices Act) is described in their 1996/97 Annual Report¹⁵ as follows:

Objectives

To secure compliance with the Act by:

- *responding to complaints and inquiries; and*
- *observing market conduct and initiating action where necessary.*

Strategies

The prime strategies in achieving the objectives of this program are:

- *timely response to community inquiries and complaints;*
- *improve compliance with the Trade Practices Act:*
 - *especially through the adoption of innovative and cost effective approaches to enforcement;*
- *undertake litigation for blatant breaches of the Trade Practices Act while giving a focus to compliance results in industry areas of potentially the highest return to regulation, in terms of improved efficiency and competition; and*
- *promote recognition of business and consumer rights and obligations:*
 - *encouraging ethical traders and consumers alike to make the Trade Practices Act work for them.*

Underpinning every aspect of the ACCC's work are the resources it deploys to get results. It must look to apply its limited funds where they will produce the most beneficial results, and is therefore necessarily concerned to use its resources to oppose the most pervasive and detrimental examples of unlawful conduct.

The Trade Practices Act is therefore seen as a suitable model because it has a focus on competitive disadvantage and preventing market distortions, as does the proposed NEPM. Jurisdictions will need to target enforcement activities for maximum effectiveness, noting that the NEPM will be ineffective if there is no real prospect of significant sanctions for those who do

¹⁵ Australian Competition & Consumer Commission, *Annual Report 1996/97*, August 1997

not fulfil their statutory obligations. The resource implications of enforcement will not emerge until the effectiveness of the NEPM in encouraging Covenant membership becomes clear. If, given the existence of the NEPM, the Covenant finally attracts almost all industry players, enforcement activity against those few remaining outside the Covenant should not require significant jurisdictional resources.

Summary

It is expected that the NEPM will not of itself impose significant long-term costs on jurisdictions, local government or the overall Australian packaging supply chain. However it is important to keep in mind that the NEPM will not exist in a vacuum, and that costs to industry and local government will be incurred in relation to the whole Covenant/NEPM package. Appendix A outlines the experience overseas in relation to a variety of systems. It gives some insight into the practicalities of implementing schemes of varying complexity, and the costs and efficiencies of those schemes.

4.1.3 PROPOSED DATE FOR MAKING THE NEPM

The NEPC Acts set out in detail the process for making a NEPM. This process includes statutory consultation periods of minimum duration on a draft NEPM and Impact Statement. The time taken to develop a draft NEPM varies considerably depending on a number of factors, including the complexity of the issue being addressed, the degree of community and jurisdictional agreement on the need for and approach to a NEPM and the availability of information to enable a complete assessment of the impacts of the proposed NEPM.

In the case of this NEPM for Used Packaging Materials, NEPC approved a proposal in February 1998 which contemplated making a NEPM for Used Packaging Materials in January 1999. This timing recognised the unique function of the proposed NEPM as a supporting mechanism for a self-regulatory system (the National Packaging Covenant) being developed outside of NEPC processes, and the need for the NEPM development process to keep pace with the development of the Covenant. It should be noted that, because the purpose of the NEPM is to support and complement the National Packaging Covenant, the NEPM as proposed cannot proceed unless the Covenant is formally agreed.

Preliminary consultation as the draft NEPM was being developed made it clear that there were a number of outstanding issues and information requirements which would need to be addressed before a public consultation process on a formal draft NEPM would be appropriate. The process anticipated in the NEPC Acts was therefore expanded to include a discussion phase preceding the release of a draft NEPM and Impact Statement for formal public consultation.

The addition of this extra consultative phase will allow more refinement of the proposal, and more detailed evaluation and assessment of the impacts of the proposed NEPM and the Covenant. The anticipated date of making the measure is now June 1999.

A detailed timetable for implementation of the NEPM is expected to be developed during the initial discussion phase. The NEPM will require implementation through statutory instruments in all jurisdictions, and the time taken to achieve this will depend to an extent on the type of statutory instrument required. Where principal legislation needs to be passed through Parliament, parliamentary business priorities and other factors will have an effect. If a regulation or other non-parliamentary instrument is appropriate, there will usually be compulsory assessment and consultation processes at jurisdictional level. Further coordination and agreement is required among jurisdictions in consultation with local government, in order to develop the reporting formats, and audit and survey methodologies necessary to implement the mandatory protocols proposed in clauses 15-20 of the NEPM.

4.2 TRADE AND MARKET ISSUES

4.2.1 MUTUAL RECOGNITION AND INTERNATIONAL TRADE

Mutual recognition legislation within Australian jurisdictions, and international trade agreements to which Australia is a party, prohibit the imposition of legislative requirements that constitute artificial trade barriers.

The draft NEPM proposes that jurisdictions will impose statutory obligations on the brand owners of consumer products to take back and utilise packaging materials, advise consumers on the recycling of packaging and support systems for the collection of used packaging materials. For the purposes of the NEPM, 'brand owners' include the first sellers of packaged products in Australia - that is, importers of packaged products. It is important to note that the draft NEPM does not propose any restrictions on the importation of packaged products of any kind. It does propose that certain information should be provided on product labels, but these labelling requirements are common to both domestic and imported products (similar to the South Australian labelling requirement imposed under its container deposit legislation). The draft NEPM does discriminate between products by providing for exemptions, but the proposed exemptions will be based on matters other than whether the product is domestic or imported, and will be available to importers of packaged products.

Although there has been some debate over the extent to which environmentally based restrictions might effectively be artificial trade barriers, it is not necessary to entertain those issues in this context, because the proposed NEPM will not impose any requirements which discriminate against imported products.

4.2.2 COMPETITION POLICY

Under the COAG Competition Principles Agreement (1995), an assessment of competitive implications is required as part of the process for making subordinate legislation. If approved by NEPC, the proposed NEPM will be adopted as subordinate legislation within most jurisdictions (under the processes for adoption of NEPMs set out in the NEPC Act passed by each jurisdiction).

The draft NEPM has been developed to address market distortions arising from the increased costs to signatories to the Covenant who make commitments to practice product stewardship. Equitable treatment of all packaging materials and the need to ensure that the Australian packaged product is not disadvantaged against overseas competitors are two issues which have been raised in this context.

Industries involved in negotiating the Covenant have expressed concern that they are being competitively disadvantaged by effectively subsidising the collection of materials for non-contributors or free riders in the system (both domestic and foreign). They have made it clear that a voluntary scheme is not possible without the introduction of a regulatory safety net to address these free riders and importers. It should be noted that there is no provision in the Trade Practices Act that would prevent non-signatories to the Covenant from exploiting any cost advantage they may gain from not becoming a member of the Covenant. Indeed, any attempt by Covenant members to reach an agreement between themselves on how they might prevent non-members from exploiting that cost advantage may in fact contravene the Trade Practices Act.

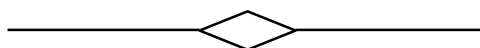
The intent of the NEPM is to redress the competitive imbalance which would occur if the Covenant were to stand in isolation as a voluntary instrument to address the management of used packaging materials. The draft NEPM proposes that obligations should be imposed upon brand owners who are non-signatories to the Covenant, which will:

- reflect the core commitments of Covenant signatories, particularly in relation to the recovery and utilisation of packaging materials through kerbside collection systems;
- impose a comparable financial burden on non-signatories; and
- eliminate any competitive advantage associated with the avoidance of product stewardship responsibilities.

The proposed obligations are focused on brand owners, on the bases that brand owners encompass importers as well as domestic producers; they can exert influence ‘up’ the packaging chain as customers of packaging manufacturers; and they can also pass costs ‘down’ the chain to wholesalers/retailers and consumers.

Conclusion

The draft NEPM does not propose any barriers to entry, exit or innovation in either the packaging manufacture or consumer products market. Exemption from, or deemed compliance with, the NEPM is attainable through joining the Covenant or through establishing arrangements which produce equivalent outcomes.



APPENDIX A

OVERSEAS EXPERIENCES IN MANAGEMENT OF USED PACKAGING MATERIALS

A1 THE SYSTEMS

A1.1 EUROPE

In Europe, funding systems have been put in place to achieve a large-scale increase in the percentage of packaging collected, sorted and recycled in order to meet arbitrary percentage targets imposed by law. These targets apply to commercial and industrial packaging waste, as well as to used packaging from household sources.

The 15 European Union (EU) member states fall into four categories:

- Those facing an urgent waste disposal problem, which introduced packaging recovery targets and systems as a matter of national policy (e.g. Belgium and Germany).
- Those which introduced targets and systems to ensure that their own recycling infrastructures were not undermined by the importation of German packaging waste which was made available free of charge or even with a 'dowry' attached (this was the French motivation and also the United Kingdom's starting-point, though in the United Kingdom this was overtaken by events).
- Those which have achieved high diversion rates without the need for funding systems, through infrastructures which internalise costs (Denmark and the Netherlands).
- Those which have had no national policy reason to set tough recycling targets and which have adopted legislation purely to meet their EU obligations (e.g. Spain and Portugal).

The European Commission (EC) Packaging and Packaging Waste Directive adopted at the end of 1994 covers all packaging placed on the market within the EU, but it is up to the member states to take measures to ensure that the percentage recovery and recycling targets are met.

The Directive does not require all companies to contribute. Individual companies are simply responsible for complying with whatever legal requirements are laid down at national level. In practice, though, the Directive has accelerated acceptance of the idea that all companies should be making a contribution.

The ‘Green Dot’ and Similar Systems

The classic way of setting up a ‘system’ to raise money from participants and disburse it to achieve the objectives is the ‘Green Dot’ system used in much of Europe. Brand owners pay a licence fee for use of the on-pack Green Dot symbol which shows that they are making a financial contribution to the management of packaging waste from households. A ‘Green Dot organisation’ administers the monies and disburses the revenues to fund collection systems.

The Green Dot countries are Austria, Belgium, France, Germany, Luxembourg, Portugal and Spain - they include some of those with the most ambitious recycling targets (Austria, Belgium and Germany) as well as some which are seeking to go no further than EU legislation demands (France, Portugal and Spain).

Broadly similar arrangements are in place in Finland, Norway and Sweden, except that the Green Dot symbol is not used.

Why Brand Owners?

The Green Dot system started as an industry initiative in Germany. In the late 1980s the Federal Government issued a steady stream of regulations and non-statutory edicts which it expected industry to follow for fear of unspecified further action. Key players within the packaged goods sector responded by devising the ‘Dual System’ - a private sector system to take complete responsibility for dealing with used packaging arising from households. Leading brand owners were willing to do this because they believed that this would put them back in control of their own destinies. The retail trade made sure that the plan was driven through: the retailers would have been most affected had the Government’s threat of in-store take-back been implemented. Without the retailers’ input it is not clear whether all materials and product sectors would have signed up to the plan.

Austria’s system was designed with considerable help from German officials, and followed the same basic principles.

In France, packaging waste management was not the political issue it was in the German-speaking countries, but here too the brand owners were keen to take charge of the Green Dot scheme. They were concerned to show that the objectives of the system could be achieved more cost-effectively than in Germany. They were worried that the emphasis on recycling all packaging materials in Germany would result in hard-to-recycle materials either being banned or being priced off the market, reducing their freedom to choose the most suitable packs for their products. Reflecting this, the French Decree on household packaging waste places its obligations on packers/fillers and importers and a number of other member states adopted the same principle.

Although the brand owners pay the Green Dot fees, it is not true that the Green Dot system involves a ‘single-point obligation’. Brand owners are not just packer/fillers. Retailers pay the Green Dot fees in respect of imports and own-label products. In most jurisdictions, packaging manufacturers pay the fees for point-of-sale packaging (carrier bags, delicatessen wrappers etc).

And the packaging manufacturers are bound into the system, either by law or by contract, through their commitments to take back specified or unlimited quantities of post-consumer material provided it meets specification.

Why Not Place the Legal Obligation and/or Funding Burden on Retailers?

A levy would be most transparent and simple to operate if imposed at the interface between the packaging chain and the consumer - namely, at the retailer. A 'checkout levy' would be relatively simple to administer, in that it would automatically include imports and exclude exports. There would be no need for cross-checking to avoid levy payments being evaded or double-counted. In principle, it also involves members of the packaging chain in only one set of payment arrangements (between the company paying the levy and the organisation collecting it) whereas a levy at an earlier stage involves two (with the organisation collecting the levy and with the customers to whom it is passed on). Consumers, unlike business customers, do not generally negotiate terms.

There is no need for the price of every product to be increased by the value of the smallest coin (5c in Australia). The choice would be to:

- aggregate the levies attributable to all packaging handled and show the total as a separate item on the consumer's till slip (tills could be programmed to show the total of the levies payable on each unit sold); or
- treat the levies paid as just another operating cost and set retail prices according to strictly commercial criteria. This is the more likely.

Involving wholesalers as well as retailers would reduce the burden on the enforcement authorities that would result if maybe 100 000 retailers selling through 250 000 outlets had to be monitored. However a checkout levy would not have the enforcement backstop offered by a levy earlier in the chain. Commercial pressure from the retail trade can reinforce a legal obligation on packers/fillers and importers but there is no equivalent pressure which can be brought to bear on retailers and wholesalers.

Whatever the system, packaging manufacturers will be involved in respect of their recycling operations. If the legal obligation and funding arrangements are centred on the packer/fillers, this part of the chain also has a role, and retailers are caught in respect of their private label sales and direct imports.

But with a checkout levy, packers/fillers and importers are by-passed. They have no part in reprocessing operations (except maybe as specifiers of packaging with recycled material content) and no part in raising the levy. With no responsibilities, they are not part of the system and have no reason to identify with its success or failure.

No jurisdiction has targeted the retailer *per se* for implementation of packaging waste management legislation.¹⁶ There is no objection in principle - throughout Europe and North America it is fully accepted that the retail sector is a part of the packaging chain. The problem is one of practicality:

- in the Australian context, the constitutional difficulty of introducing a levy at State level which could be regarded as an excise tax; and
- the undesirability of bypassing the packer/filler who is most likely to be the packaging specifier.

It is however possible to involve the retailer in respect of the total amount of packaging he handles if some form of 'shared responsibility' is put in place.

Shared Producer Responsibility

On the mainland of Europe in Austria, Belgium and Germany, trade and industry have *total* responsibility for packaging waste management. In that context, 'shared responsibility', the approach taken elsewhere in Europe, means sharing costs between industry and local government. This is an important distinction - if the private sector takes on total responsibility, this is a permanent cost burden, whereas a commitment to fund the additional costs of separate collection and sorting may turn out to be only a temporary cost.

The European Commission takes no position on whether the packaging chain should have total or partial responsibility. Each member state can decide that for itself. However, it says that:

*producers, material suppliers, distributors, consumers and public authorities all have waste management responsibilities, but the product manufacturer has a predominant role since his decisions largely determine his product's waste management potential.*¹⁷

United Kingdom and Ireland

In the United Kingdom and Ireland, 'shared responsibility' has a second meaning. It is assumed that the local authority waste collection and disposal services will continue. It is also assumed that industry's financial and operational contribution to recycling is about providing a boost to push waste management from the traditional pattern (where waste is disposed of unless there is an economic reason to re-use or recycle it), to a new way of thinking in which disposal is the last resort. It follows that once this transition has taken place, there may be no further need for

¹⁶ The in-store take-back requirement in the German Packaging Ordinance, which would come into effect if DSD failed to meet its targets, was intended as a mechanism to ensure that retailers put pressure on their packer/filler suppliers to take part in the Green dot system.

¹⁷ Review of the Community waste management strategy, July 1996.

industry subsidies. Thus ‘sharing’ responsibility between the private sector and the public authorities is implicit. The British and Irish only talk about ‘shared producer responsibility’ when they want to stress the involvement of all parts of the packaging chain, rather than just the branded goods manufacturers who are often singled out by packaging legislation.

The packaged goods industry in the English-speaking member states was much less sanguine about bearing the burden of taking primary responsibility for meeting the targets than their Continental colleagues. The fear was that they would be able to pass on none of the extra costs to the powerful retail chains.

United Kingdom

With no agreement in sight between the various parts of the packaging chain, an independent study was commissioned. This was carried out by a QC who was a former chairman of the Monopolies and Mergers Commission. The study proposed that packaging manufacturers should in principle be responsible, but with certain rights to pass on responsibility to packer/fillers. The packaging manufacturers were equally afraid that they would not be able to pass on the cost to their customers, and pointed out (with some justice) that any levy would constitute a far higher proportion of packaging manufacturers’ total turnover than of packer/fillers.

Thus the idea of ‘shared responsibility’ emerged. Many of those involved in the discussions found it hard to take on board that a task-based sharing of responsibilities already existed in the Green Dot countries, where brand owners look after the collection and sorting aspects and the packaging industry the reprocessing and expansion of end-use markets. The packer/fillers in particular saw only where the Green Dot fees were levied not the contractual and legal obligations on the reprocessors. Thus the United Kingdom approach was not to share out the tasks, but to divide each task according to some formula.

The Regulations eventually implemented placed a duty on every individual company above the thresholds to meet its share of the targets, either through individual action or through collective activity. Raw material producers bear 6% of the responsibility, converters 11%, packer/fillers 36% and sellers to the final end-user (whether the end-user is a private household, a business or the public sector), 47%.

Thus by January 1999 a packaging manufacturer must hold certificates from a recycler showing that material equivalent to 4.18% of his output of converted packaging (i.e. 11% of the 38% interim recovery target) has been reprocessed on his behalf. ‘Reprocessing’ means recycling (which includes composting) and energy recovery. The packaging manufacturer would also carry a 36% obligation as the packer/filler of the transport packaging he uses, and a 47% obligation as the supplier of this transport packaging to the end-user.

This 38% recovery target is not material-specific, but within this overall target, the obligated company must also meet a recycling target applicable to each of the packaging materials used. Thus if it produces plastics packaging and ships it out in board, it will have a responsibility of

0.77% (i.e. 11% of the 7% interim recycling target) for the plastics packaging it produces, and 5.81% (i.e. 36% + 47% of the 7% interim recycling target) for its board transport packaging.

Importers pick up a legal obligation for any activities that have previously taken place outside the United Kingdom. Thus a packer/filler of imported converted packaging will take on the material producer's and packaging manufacturer's obligations as well as his own obligations as a packer/filler and as a supplier.

Money is intended to flow into the system through the issue of Packaging Recovery Notes (PRNs). Individual companies or collective schemes can purchase PRNs from reprocessors (recyclers or energy recovery facilities) as evidence that they have taken responsibility for ensuring that a certain tonnage of packaging material has been recovered. The idea is that recyclers will pay attractive rates for collected material, in order to be able to use the material to sell PRNs.

This system is not working well, and is already being reconsidered within the United Kingdom but in any case is far too costly and complex to be appropriate for Australia's needs. The principal objections to it are as follows:

- It involves very high overheads, at the centre and within individual companies, since the system is dependent on provision of reliable data. In the Green Dot countries, only the manufacturer responsible for placing the packaged product on the market is responsible. In the United Kingdom, forms have to be completed and payments made at four stages, and information has to be passed up and down the chain. For instance, a can manufacturer needs to know whether its customer or its customer's customer has exported any beer packaged in its cans, as exported product should be deducted from his obligations.
- The idea of the careful mathematical share-out was 'fairness', but this is illusory. Companies in a strong bargaining position can negotiate away the costs of their obligations with their suppliers and/or customers, and the converse applies to the weak. Also, because this complex system would impose a severe cost penalty on small companies, the obligations do not apply to companies handling less than 50 tonnes of packaging p.a. or with a turnover less than A\$10 million (A\$2 million from January 2000).

The PRN system does not necessarily generate funds. It was invented as a means of injecting money into the system by Valpak, the largest compliance scheme. Valpak is writing into its PRN purchase contracts requirements about how the reprocessors spend the money. However, these are commercial contracts which could be enforced only through expensive court action. Other schemes and individual companies which purchase PRNs are not specifying how the money is spent.

Further, a powerful customer may insist that its packaging supplier gives it PRNs free of charge. Issuers of PRNs are not obliged to spend the revenues on expanding recycling facilities. It is known that some are taking it as compensation for what they have spent developing recycling in

earlier years. In the Green Dot system, by contrast, fee income is spent supporting local authority collection and sorting, and does not cross supplier/customer relationships.

Ireland

The Irish system of shared responsibility is less complex. Ireland, along with Greece and Portugal, has been set much lower targets in the Directive (25% recycling + energy recovery by 2001, and no per-material recycling target) and there are no targets for collective organisations in its Regulations. Targets are agreed privately as part of the approval process for these organisations (as in the French Green Dot system). Companies, whether importers, manufacturers and distributors of packaging material, packaging or packaged products, which do not want to take on the additional obligations imposed on individual compliers, may join a collective organisation which will act on their behalf, contributing to the funding of Kerbside Dublin and to glass collection through Bottle Banks.

The collective organisation, REPAK, charges fees on a turnover basis, but hopes to move to a material-specific fee structure in 1999. The turnover-based fees make no distinction between different parts of the chain, and so hit high-value products like whiskey much harder than low-value products like bleach, and also bear proportionately on retailers and packer/fillers (where packaging is only part of what they are selling) than on packaging manufacturers. This will be rectified when the more refined funding system comes into play.

Like the United Kingdom, Ireland exempts small players from these obligations, which apply only to companies placing more than 25 tonnes of packaging per year on the Irish market and having a turnover exceeding A\$2 million. The Green Dot countries, by contrast, have no legal thresholds, but it is understood that they will not pursue companies when the costs of bringing them in exceed the revenues to be gained.

The Netherlands

The Dutch approach (Covenant plus back-up legislation) has some lessons for Australia, and is examined in more detail in section A1.4. However, there are important differences between the two countries. The Netherlands is a densely populated country with a high water table and consequent shortage of landfill sites. Government, industry and the public are agreed that waste minimisation is a major environmental priority. There have been some bad experiences with air pollution from dirty incinerators in the past, and few are keen to see an expansion of energy-from-waste capacity.

The second generation Dutch Covenant involves some funding commitments, but these are small by European standards. The Dutch see no need for a Green Dot symbol or any other central funding arrangement, as any recycling deficits will be small enough to be internalised. The factors that make this so are specific to the Netherlands:

- the landfilling of packaging is banned by law, so is not an option;

- high-yield energy recovery is permitted but gate fees make it more expensive than recycling;
- the public sector is sharing responsibility; and
- sorting costs will be minimised.

Thus the idea is that the scheme will actually save local governments money by guaranteeing to take back household packaging waste provided it meets specifications. Where the material has a value, industry will pay it. Thus for glass, the maximum cost to local governments will be A\$50 per tonne, against landfill costs which average A\$172 per tonne and can be as high as A\$290 per tonne.

The Government accepts that the first Covenant has resulted in reduced municipal spending on waste management and so accepts the principle of shared responsibility. Local authorities will be responsible for the collection of household waste and for the incineration of contaminants. Industry will be responsible for delivering the collected materials to the reprocessor. Research into the best way of recovering energy from used plastics packaging will be shared between the public and private sectors.

Trials of separate collection systems were carried out and it was concluded that segregated home collection of plastics, metals and beverage cartons in bags involved high cost for little ecological benefit: a 1.7% diversion rate cost A\$162 million per annum, so this will not be continued. Since separate collection of the lightweight packaging fraction from households is not economic, it is planned that metals will be separated at incineration plants, with some 'bring' collection also. Plastics from household waste will be incinerated with the other refuse, except where market demand justifies separation or separate collection is needed in order to meet the targets; and beverage cartons will be collected through 'bring' systems.

Much of the household plastics waste would go to power stations for use as a fuel, doubling or trebling the amount of electricity currently obtained from refuse in the Netherlands. Deducting the value of the feedstock from recovery costs, the overall deficit should be no more than marginal.

The ultimate aim is that packaging should become both an integral part of a company's environmental management system, and an integral part of the country's material waste management system. Then, once the second Packaging Covenant has come to the end of its life – at the end of 2001 – packaging should disappear from the political agenda.

A1.2 NORTH AMERICA

Canada

Geographically and socially, Australia has much more in common with Canada than with Europe. Like Australia, Canada is seeking industry funding to support kerbside collections of packaging and other materials available in large quantities in the household waste stream (newspapers, for example). By contrast, European legislation focuses on the collection and recycling *only* of packaging, but irrespective of whether the packaging waste arises in the household waste stream or on commercial/industrial premises.

Other things being equal, therefore, Canadian experience would provide a better guide. However, Canada does not as yet have the breadth and diversity of experience available in Europe.

Environment Canada and the ten Provincial Environment Ministries set a target of reducing municipal solid waste by 50% between 1988/9 and the year 2000. A National Packaging Protocol was drawn up as part of this program. The 50% target reduction also applies to packaging, and interim targets were set to reduce the packaging sent for disposal to 90% of the base level by end 1992, 80% by end 1994, 70% by end 1996 and 60% by end 1998.

At the time the 50% target was introduced, packaging legislation focused strongly on beverage containers, and Container Deposit Laws are still an important policy instrument. Alberta, British Columbia, Saskatchewan and the small Atlantic provinces of New Brunswick, Newfoundland and Nova Scotia have CDLs on all beverages except milk. The big provinces of Ontario and Quebec, and also Prince Edward Island, have CDLs on beer and soft drinks. Manitoba has voluntary deposits on beer bottles and cans. Containers are usually returned to 'bottle depots' which redeem consumers' deposits on the empties (and charge the bottlers/canners a handling fee which is typically 1.50c-3c per container).

There are also various mechanisms by which consumers' beverage purchases fund multi-material recycling. New Brunswick pioneered the 'half-back' deposit system under which consumers pay a 2c deposit on beverage containers, but receive only 1¢ back when they return the empties. The remaining cent is used to fund recycling programs for non-beverage containers. This raises nearly A\$15 million per annum from a population of 750 000.

'Half-back' systems are also in place in Newfoundland, where consumers pay a 6c deposit and get 3c back (20c deposit and 10c refund on liquor containers). They are also in place in Nova Scotia, the Yukon (10c deposit and 5c refund on containers up to 1 litre, 35c deposit and 25c refund on 2-litre PET), and on Prince Edward Island (for wine and liquor).

'Half-back' is intended to compensate local governments for material revenues they lose through aluminium and PET containers being diverted away from the Blue Box programs and returned through the deposit system. Since these are the only really valuable materials in the waste stream, the effect of the mandatory deposit system is to ensure that the revenues from Blue Box

collections are negligible. When Newfoundland announced its 'half-back' scheme late in 1996, the province's Environment Minister promised that the system would be self-financing, with no cost to government. At the same time, Nova Scotia was finding that despite the province's 940 000 consumers paying out A\$11 million in deposits, the cost of running the system was such that only A\$530 000 was left to compensate the municipalities.

Manitoba has a 2c tax on non-deposit beverage containers which is intended to fund multi-material collection systems. This raises A\$5.25 million per year from a population of 1.1 million. Manitoba is now in the process of extending this tax onto other forms of packaging and paper fibre products. The new rate is expected to be much lower than 2c.

As of mid-1996, 80% of collection costs in Winnipeg, capital of Manitoba, were funded from the recycling tax, and the program was not costing the municipality any money provided market prices for recyclables did not fall from the average A\$63 per tonne they were fetching at the time. Ontario has a 10c tax on beer cans. In Saskatchewan, in addition to the mandatory deposit of 10c-40c charged on each beverage container, consumers pay an additional 5c-7c container recycling fee which is added to the price of the product.

Ontario was the first province to introduce multi-material kerbside collection. OMMRI (Ontario Multi-Material Recycling Incorporated) was formed in 1986 to manage the beverage industry's contribution to the development of this system. In return, the Government lifted the ban on aluminium cans and PET bottles. OMMRI agreed to contribute A\$21 million between 1987 and 1990 to fund the procurement of Blue Boxes for each household to use to set out their used packaging, recycling vehicles and processing equipment such as balers, conveyors and magnetic separators. OMMRI also helped fund publicity for the program and provided technical advice on collection system design and marketing the collected materials, but did not otherwise contribute to direct operating costs. As a general rule, OMMRI contributed one-third of these costs, matching the contributions of the Ministry of the Environment and the local authority.

Once the beverage industry's original commitment had expired, the intention was that broader-based industry funding would be sought. By 1992 the need for this was urgent. It had originally been expected that once the five-year development phase was over, funding from OMMRI and the provincial government would no longer be needed, as the revenues from the sale of materials would cover operating costs. In fact markets for secondary materials remained weak, and municipalities were typically receiving an average of A\$32 per tonne for materials it cost A\$190 to collect through the Blue Box system. By this time local governments were paying 60% of the costs, the Ontario government 22%, and industry just 4%, with the remaining 14% covered by the sale of materials. Many municipalities were threatening to cut back or abandon their Blue Box program unless a new funding arrangement could be introduced.

Other provinces were also looking at industry funding for kerbside collection, and industry leaders were anxious that this should be done on a harmonised basis. Hence CIPSI (the Canadian Industry Product Stewardship Initiative) was put forward to establish a set of common principles, while still allowing some flexibility to take account of local conditions.

In 1994, when the CIPSI proposal was finalised, OMMRI served more than 80% of Ontario households by the kerbside collection system. 460 000 tonnes of material were collected at a cost of A\$91 million (A\$200 per tonne)¹⁸ – 39% of this was packaging and 61% ‘other recyclables’ (newspapers and magazines). 33% of the funding came from the provincial government, 39% from the municipalities, 13% from the sale of packaging materials, 9% from the sale of other materials and 5% from OMMRI grants. Regulations adopted earlier that year required all but the smallest local governments to put recycling programs in place by mid-1996.

In the first two-year phase, CIPSO (the funding organisation within CIPSI) would have paid the local governments a flat A\$69 per tonne for all qualifying materials. In Phase 2, local governments’ share of the costs would have been held to one-third, with industry funding the rest. Industry would have paid the ‘true cost’ of each material. The industry payment would have been calculated on the basis of an efficiency benchmark, the ‘operating cost standard’, according to the formula:

$$\text{payment} = \text{operating cost standard} - \text{revenue from sale of material} \\ - \text{local authority share}$$

Thus the total cost to the municipality would depend on its own costs above or below the operating standard and its actual revenues from the sale of collected materials.

CIPSO would have been funded by the brand owners, or in the case of imports, the first company in the province to sell the packaged product (by the packaging manufacturers in the case of point-of-sale packaging). In the first two years there would have been a flat A\$25 per tonne levy based on the overall weight of packaging used by the company in Ontario. Members of CIPSO would have been eligible for rebates of up to 50%, based on the average collection and recycling rate for each packaging material.

Material-specific levies would have been introduced from year three. If no agreement could be reached on how to allocate true costs by material, a default formula would have come into play. This would have calculated an average levy, based on the total packaging obligation to municipalities, adjusted up or down according to the effective recycling rate for each material.

The CIPSI proposal, like the Australian Covenant, envisaged a regulatory safety net to catch free riders. Provinces would adopt legislation requiring companies not joining the system to establish and fund a method of diverting at least 50% of their packaging waste from disposal, and submit a plan to the authorities showing how this target would be achieved. Non-CIPSO brand owners would not have access to the municipal recycling system.

CIPSI first foundered in Manitoba, where local manufacturers were unwilling to take on the financial burden implicit in a plan devised by national trade associations and major companies from out-of-province. Municipalities were disappointed with the level of funding commitment

¹⁸ This is CIPSI’s estimate of the 1994 *gross cost*. The Recycling Council of Ontario says that municipal recycling programs in the province are now diverting around 507 000 tonnes of material per year at a *net cost* of A\$91 per tonne.

offered by the scheme. Government at all levels was concerned at the lack of public control and accountability of the proposed industry funding organisation. Some commentators have suggested that the Manitoba Government would never have been satisfied with anything other than a program funded by industry but run by the Government. Hence the beverage container tax (see above) was introduced instead.

In the key province of Ontario, CIPSI failed largely because of timing. The proposal arrived on the Cabinet table just as the Government changed from the New Democrats, which had a very prescriptive approach to legislation, to the Conservative Party. Significant industry players who had not been part of the CIPSI process seized the opportunity to challenge the concept. The electronics industry was particularly unhappy about the requirement to report sales data, a very sensitive issue in that sector. To these newcomers to the issue, and to small business in general, CIPSI was seen not as a self-regulatory body charging membership dues, but as an unelected and unaccountable organisation which would effectively have quasi-taxation powers.

The economic viability of the Blue Box program continues to be controversial – is it or is it not a burden on public funds? – and the Recycling Council of Ontario recently put forward four options to the Ontario Minister of the Environment:

- 1) Status quo – the system is funded by the municipality through property taxes and user fees on householders (unacceptable to local government);
- 2) Provincial funding from a tax on specified products or containers at point of sale, or from a levy per product or container paid by packaged goods manufacturers and importers (probably unacceptable to the provincial government, which believes that this is a local issue for which provincial subsidy is inappropriate);
- 3) Industry funding of a portion of municipal costs through voluntary or legislated industry contributions (a revival of the CIPSI model);
- 4) A 100% industry-funded and operated kerbside recycling program, or industry funding for municipal recycling while operating complementary recycling systems such as a deposit-return system for liquor and wine containers (more or less the Belgian model).

The report notes that these options are not mutually exclusive, since user fees (Option 1) and deposit-return systems (Option 4) are compatible with municipal recycling funded through environmental levies under Options 2 or 3.

The Association of Municipal Recycling Coordinators has put forward another option:

- 5) Packer/fillers, importers and retailers to pay 50% of municipal collection and handling costs for 1998 and 1999; municipalities to continue to operate the Blue Box system but industry to part-fund the system (a cost-plus formula unlikely to be acceptable to industry).

More and more local governments across Ontario are moving either to garbage bag limits or to 'pay-as-you-throw'.

According to the Canadian Soft Drink Association, the shift to a two-bag limit in Barrie led to a 35% increase in diversion from its waste disposal site. Whitby cut their bag limit from eight to four per week and helped generate a recycling tonnage which was 50% higher than in the previous year.

'Pay-per-bag' fees range from C\$1 to C\$2.50. On average the result is a 50% reduction in the waste put out for disposal, and a 50%-150% increase in recyclables recovery as well as increased use of composting facilities.

The United States

Up to now, US jurisdictions have legislated on packaging waste management with a much lighter touch than in Europe. The physical environment has more in common with Australia than with Europe, and they have demonstrated that market-based mechanisms can be made to work provided they are properly designed and the targets are realistic.

Table A.1: United States Recycling Performance

U.S. RECYCLING	% OF TOTAL MSW BY WEIGHT		
	HOUSEHOLD SOURCES	COMMERCIAL SOURCES	TOTAL RECYCLING
Corrugated boxes	0.1%	8.7%	8.8%
Newspapers	3.4%	0.1%	3.5%
Office paper	-	1.6%	1.6%
Other paper	1.5%	0.5%	2.0%
Glass containers	1.2%	0.3%	1.5%
Steel cans & appliances	1.0%	0.9%	1.9%
Aluminium cans	0.4%	0.1%	0.5%
Plastics packaging	0.4%	-	0.4%
Rubber & leather	-	0.2%	0.2%
Textiles	0.2%	0.1%	0.3%
Wood packaging		0.7%	0.7%
Yard waste	3.3%	0.2%	3.5%
Other	0.3%	0.9%	1.2%
TOTAL	11.8%	14.3%	26.1%

Source: J Winston Porter, 'Recycling in America' (1996)

If collection is subsidised, but demand for collected materials does not increase, the situation will continue to deteriorate. Industry will be asked to take a bigger and bigger share of the costs, and losses will mount as unprofitable schemes grow.

Restricting collection to materials which have a buoyant end-use market is the most economic solution. This is the approach which tends to be adopted in jurisdictions where waste management costs are internalised (Denmark and the Netherlands, as well as the USA). It may

mean less focus on household packaging waste than legislators would like – used board and plastic film from commercial sources being among the easiest materials to collect and reprocess – but it is how the United States has achieved its 25% recycling target (see table A.1).

Apart from Container Deposit Laws (CDL) and laws imposing Advance Disposal Fees (ADF) in a few states, state legislation has tended to concentrate on mandating local government recycling effort rather than requiring industry funding for municipal collection programs. Thus a few states banned certain types of packaging from landfill but exempted those cities and counties which had an ‘effective’ recycling program. Some states require municipal collection of designated types of packaging, or set recycling targets to be met by a due date. These targets usually had an ‘aspirational’ character rather than being backed by penalties for non-achievement.

CDLs are in place in nine states: Connecticut, Delaware, Iowa, Maine, Massachusetts, Michigan, New York, Oregon and Vermont. They originally covered only beer, carbonated soft drinks and waters, but some states have extended their scope to other beverages (though not to milk). No new CDLs have been adopted since 1983, though several states have extended the coverage of their mandatory deposit systems since then.

CDLs operate alongside any municipal collection systems, and do not contribute to their funding (indeed, they divert relatively high-value material into this parallel system). There have been a number of legal battles over the ‘escheats’ principle, which declares that unredeemed deposits are the property of the state, rather than remaining in the hands of the originator of the deposit (the soft drink bottler or beer wholesaler).

From October 1993, Florida law imposed a 1c ADF on every bottle, can, jar or beverage container of 5 oz - 1 gallon, unless a 50% recycling rate was achieved by July 1993 or the container had the following minimum recycled content: glass 35% (50% by 1998), plastics 25%, and paper 30% by 1994 (40% by 1997, 50% by 2002). From January 1995 the ADF was increased to 2c, but the law’s sunset provision came into effect in October 1995 and the system came to an end.

In its first year of operation, aluminium and steel cans were exempted from the ADF as they met the required 50% recycling rate. By mid-1994, 105 companies had petitioned for exemption by certifying that they would meet either recycled content or material recovery goals by July 1996: these exemptions, which included virtually all soft drink containers, all glass made or filled in the US and all milk cartons, represented more than 70% of containers subject to the ADF.

There was something of a conflict between the twin aims of raising revenues for environmental purposes and encouraging recycling and the use of secondary raw materials. In the first full year of implementation, the ADF generated nearly A\$67 million. In its second and final year, thanks to the exemptions, revenue fell to A\$39 million. All the money flowed into a Solid Waste Management Trust Fund, but only 12% of it was spent on recycling (specifically, improving recycling markets).

In any case, the law does not appear to have had much effect on recycling trends within the state. Although Florida was the only state to have such legislation, its recycling rates ‘approximate national averages, with some exceptions’. The recovery rates for aluminium cans and PET carbonated soft drink containers are less than the national average. On the other hand, the recovery rate for steel cans in Florida is greater than the national average.¹⁹

Since 1995, the Florida legislators have been keen to make savings in their recycling program wherever they can. The recycling and education grants program was discontinued in 1996, saving A\$34 million annually – it was argued that with the state’s municipal solid waste recycling having risen from 4% to 33% over the life of the program, the main objective had already been achieved. A Bill has now been introduced into the State Senate to discontinue recycling in counties with a population of less than 50 000 (31 of Florida’s 67 counties fall into this category, but they account for only 1% of MSW).

In California, fillers have to pay a recycling fee into a state-administered fund for every aluminium, glass and plastic beer or soft drink container they sell in the state. This fee now stands at 2.5c into the fund for containers of up to 24oz, and 5c for larger sizes (i.e. PET). On returning the empties to redemption centres, consumers receive 5c for one large bottle or two small packs.

The law also requires glass manufacturers to pay a ‘reprocessing fee’ which in 1992 amounted to A\$38 million, less than 1c (US) per bottle. Plastics avoided a A\$24 million fee by instead guaranteeing a floor price for PET bottles. And because operators are paid by the state, there is little incentive to improve collection and sorting efficiencies.

Legislation prescribes a minimum recycled content for glass containers which rose from 15% in 1992, through 35% in 1996 to 65% in 2002. By 1995, all rigid plastic packaging holding between 8 oz and 5 gallons either had to be reusable 5 times, reach a 25% recycling rate, contain 25% post-consumer content or be source-reduced (e.g. light-weighting) by 10% over 5 years. Material substitution does not count towards the source reduction target. Even if the overall target is not met, any company’s products are deemed to comply if they meet the criteria. ‘Easily-recycled’ products like milk jugs or soft drink bottles had to achieve a 45% recycling rate by 1995, either on a company basis or generically. PET bottles had to achieve 55% recycling, but this recycling rate would count towards the overall plastics recycling target. In return, the state was obliged to offer beverage container kerbside collection to 60% of single-family households by 1994.

Similar provisions apply in Oregon, where the law stipulates that cities only have to pick up used plastics from households if stable end-use markets exist which pay at least 90% of collection costs.

By early 1996 there were nearly 7400 kerbside collection schemes and more than 9000 drop-off recycling programs across the US. There were also around 2800 local government programs

¹⁹ Source: Second Annual Report of the Florida Packaging Council.

with variable rate pricing systems, for as program costs have expanded, there has been more and more interest in finding new ways of paying for solid waste collection, recycling and disposal that reflects true costs.²⁰

‘Pay-as-you-throw’ pricing systems can be based either on weight or volume:

- In volume-based systems, householders are charged according to the level of service they subscribe to, i.e. the number of cans or bags they leave out at the kerb each week, or else they buy special garbage bags at a price which covers collection and disposal costs.
- In weight-based systems, trucks are fitted with scales and bar codes to track addresses – a study by the Institute of Public Affairs, University of South Carolina²¹, comments that this offers greater perceived fairness but is costly to implement.

Another mechanism, tried by the City of Tacoma, Washington State, rewards householders for increased recycling by giving rebates on waste collection fees according to the neighbourhood’s recycling rate.

The South Carolina study identifies the following variables which affect the success of a variable rate pricing program:

- the charging structure (there should be a small price differential between the charges made for collection of solid waste on the one hand and recyclables on the other²²);
- whether recyclables are collected at kerbside or at drop-off centres (kerbside collection increases householder participation by 15%-25% and as it generates higher yields at higher cost);
- whether or not collection containers are provided by the municipality;
- whether recycling is mandated or voluntary; and
- the willingness of a community to recycle (which is usually related to household income, gender and education level).

²⁰ Sources: Skumatz (1996), *National Diversion Rate Study - Quantitative effects of program choices on recycling and green waste diversion*; Steuteville (1996), *The state of garbage in America*.

²¹ *Forecasting change in the effectiveness of local recycling programs: a predictive model* (1997).

²² German experience suggests that if the differential is too great, the recyclables collected will be badly contaminated with waste that should have gone into the garbage collection.

A1.3 SOME PRICE SUPPORT SYSTEMS IN OPERATION

European experience shows the importance of avoiding 'cost-plus' financial support. It is essential that payments are made according to a formula which gives the local authority every incentive to seek continual improvements to its operating efficiency.

Belgium

FOST Plus, the Green Dot recovery organisation, was running projects covering half the population at the end of 1997 and plans to collect packaging nationwide by 2000. In 1998 it expects to recover about 1.05 million tonnes of used packaging, two-thirds of the total non-reusable packaging placed on the Belgian market.

Glass is collected through bottle banks (at least 1 site per 1 000 inhabitants and separated into at least 2 colours). There is a monthly door-to-door collection by waste paper merchants of paper and board along with old newspapers and magazines; and there is a twice-monthly multi-material door-to-door collection of the lightweight materials, including beverage cartons, using blue transparent plastic bags, sold through retailers at A\$1.25 per bag. Belgium also has some 400 guarded container-parks, where all three fractions can be brought.

Local authorities decide what to collect themselves and what to sub-contract. They all sub-contract sorting of the lightweight fraction (metals, plastics and beverage cartons), but collection of materials is evenly divided between direct and sub-contracted collection.

Since the whole population contributes via the Green Dot licence fees (which are reflected in consumer prices) but only part of the population benefits from intensive collections, there is a temporary (up to 5 years) subsidy for the rest of the population. Any amount of household packaging collected through any system gets A\$16 – A\$400 per tonne support against a written statement of sale of recycling. The scale of payments is the same as that applied to all FOST Plus support before the 'full cost' rule was introduced in September 1995:

Table A.2: Payment Scale Applied to FOST Plus Before 1995

MATERIAL	A\$ PER TONNE
Glass	20
Paper/board (packaging only)	20
Steel (magnetic extraction from incineration or composting)	16
PVC, PET and HDPE containers	400

Contracts with the contractors who carry out the physical collections are awarded by competitive tender, so the prices quoted will vary according to whether the area is urban or rural, the population density, typical size of family, etc. The contract price includes the cost of transporting the material to the designated reprocessor.

The reprocessors' organisations have given a ten-year guarantee that material meeting quality specifications will be accepted for reprocessing. Where a local authority wishes to handle the collection itself, a price is negotiated with FOST Plus which takes into account the local situation and the results of competitive tenders in areas where conditions are similar. Contracts have so far mainly been awarded to the cheapest bidder, although quality criteria, such as references or relevant experience, and transport costs to reprocessing plants, are also taken into account.

Once the contract has been awarded, FOST Plus pays the contractor directly for each tonne of material collected and sorted, based on information about tonnages supplied by the *intercommunale* (group of local governments), and cross-checked with tonnages received by reprocessors. Paper and board packaging is collected together with other waste paper. It is assumed that 25% of this is packaging, so the contractor is paid by FOST Plus for a quarter of the total amount collected, the rest being funded by the local authority. The local authority receives 75% of the revenue from the sale of the paper to reprocessors, with 25% going to FOST Plus.

The plan is that there will be only one contractor per 'market', i.e. for each material per *intercommunale*. Contracts are awarded for five years except the contracts for delivering the bags to collect the PMC fraction which are shorter. Costs in September 1997 were as follows:

- the average cost of glass collection through 'bring' containers had increased from A\$71 per tonne in 1995 to about A\$84– though this was significantly less than for kerbside collection;
- paper/board is collected together with newspapers and magazines. FOST Plus pays for 50% of the weight of these collections, which by coincidence was also an average of A\$84 per tonne (unchanged from 1995);
- the lightweight fraction (plastic containers, metals and beverage cartons) is collected together at an average cost of A\$360 per tonne (A\$458 in 1995). This high cost is due to the relatively low weight of these materials and the need to sort them after collection, a task which costs about the same as collection. A further cause of these high costs is mis-sorting by the public and inclusion of non-packaging items in the sacks; and
- the cost of collecting all materials (counting 50% of the paper/board only) and of sorting the lightweight fraction was A\$192 per tonne of material, or A\$9.50 per inhabitant per year. This is three or four times lower than in Germany, which FOST Plus ascribes to uniform collection arrangements, the option of putting collection out to competitive tender, and the gradual development of the projects. As expected, there is a certain correlation between collection costs and population density.

Despite the development of kerbside collection, 'bring' systems continue to develop in Belgium, albeit not focusing specifically on packaging. The new Flemish waste management plan requires every community with a population of over 10 000 to have a container park. The proposed

Walloon plan also aims to increase the number of container parks and to make them available to small businesses as well as the public.

The areas working with FOST Plus have container parks to complement the kerbside collection. FOST Plus has decided that the plastic/metal/beverage carton fraction can be collected in these 'bring' containers together in one sack just as for kerbside collection. This is to simplify the message and to ensure uniformity of collection arrangements.

Results as of January 1997 were as follows:

- 80%-90% of consumers with access to intensive selective collection were using it;
- the new projects were collecting and sorting an average 45 kg of used packaging per person per year, a recycling rate of over 50%;
- including newspapers and magazines, intensive selective collection accounted for 75 kg per person per year, a diversion rate of 18% of total household waste;
- average cost to the consumer was then A\$10 per year (though additional legislative requirements and changes in how recycling rates are calculated will probably double this);
- FOST Plus revenues were 93% from Green Dot fees and 7% from sale of materials. By 2000 the proportions were expected to be 87% and 13%, but in fact by September 1997, largely due to the fall in waste paper prices, income from the sale of materials had dropped to only 1% of revenues.

More encouraging was that the quantities collected were increasing steadily. Public enthusiasm did not wane after the first few months. Also, kerbside collection had not adversely affected collections in 'bring' systems. The public continued to make use of 'bring' containers after a kerbside scheme was introduced.

The arrangements for awarding contracts and paying for collection/sorting are separate from those for reprocessing in the FOST Plus system. Reprocessing organisations guarantee that materials will be taken back and recycled. It is these organisations which are responsible for awarding reprocessing contracts. They work on the principle that materials collected and/or sorted will be fairly allocated between individual reprocessors at competitive prices on the basis of free competition.

Using the example of paper/board, the procedure for selecting a reprocessor is that a call for tenders for taking back waste paper from source-separated collections is sent out by the reprocessing organisation mentioning the local authority area, estimated tonnage of paper/board each year, and the population size. The contract is concluded for one year and is renewable. It includes a formula to adjust the price quoted each month to market price fluctuations. The market prices for mixed waste paper in France, Germany and The Netherlands are averaged. The

price quoted by the reprocessor will be adjusted each month so that it remains the same percentage above or below the average market price.

In the case of FILGLAS, the glass reprocessors' organisation, the contract is for five years with an annual price revision. STALUPACK (metals) contracts are for one year, with the price adjustable monthly if the market price moves up or down by at least 10%. With BEVAPLAST (plastics) and BEPET (PET bottles), there are renewable two-year contracts with a monthly price revision linked to virgin prices. With EMC (beverage cartons) there are fixed-price one-year contracts.

Any revenue from the sale of materials goes to FOST Plus, except for paper/board, which is divided between the *intercommunale* (75% because of the non-packaging paper) and FOST Plus (25%). FOST Plus is also funding the development of new technologies.

France

The fees per tonne of material collected paid to local governments by Eco-Emballages, the Green Dot organisation, relate to the collection service. They are not, therefore, related to changes in the market price of the secondary material, though the more local governments collect per capita per annum, the higher the payment per tonne they receive. This is intended to encourage better productivity, and to recognise that higher yields mean better sorting, which will be more expensive.

However, the waste paper reprocessors who buy the material from the local governments have been operating a price support system for some years through their organisation, Revipac. Revipac is the only recovery organisation for paper and board in France, and all the French paper mills are members. Membership consists of recyclers reprocessing used paper and board packaging, converters and raw material producers.

Revipac gives Eco-Emballages a take-back guarantee for material meeting specification. There is no limit to the quantity of material accepted, and Revipac undertakes to recover from anywhere in France, irrespective of transport distance to the nearest paper mill. Used packaging from households must be baled separately and marked. Local authorities, which have a monopoly on collecting from households in France, have the option of taking advantage of the take-back guarantee or selling the material on the open market. About 80% have opted for the guarantee. If they choose the guarantee, Revipac nominates a recycler. Because there was no market price for waste paper collected from households, it was decided that recyclers would pay 90% of the average market price for grade A2 in France, Germany and the United Kingdom. A2 is currently worth A\$6.10 per tonne, so recyclers are paying A\$5.49.

Revipac, Eco-Emballages and the Association of French Mayors agreed an intervention fund system for material collected from households. As the market price has been positive, the local governments receive 50% of the average A2 market price from the recycler and the remaining 40% goes to the fund. If the price goes below zero, recyclers receive 110% from the fund (i.e. if

the price is A\$12 per tonne, they would receive A\$13.20) and the local governments receive no payment from the recyclers.

As waste paper prices have been positive since the fund was launched, there should by now be considerable funds available. However, Revipac points out that although prices were high when the arrangement started, tonnages collected were low. Subsequently, tonnages have increased and the price has dropped. Revipac stresses that the fund would be used up very quickly if prices did drop, given the tonnages now being collected.

In a recent review, consideration had been given to increasing the proportion of the price paid to local governments, but it has been decided to maintain it at 50%. This is because waste paper prices are currently falling and may go below zero.

Netherlands

The Dutch Covenant for Paper has been agreed and gazetted, and so is now binding on industry. It applies to all cellulose-based products placed on the Dutch market, and all types of paper and board, irrespective of whether they are made from virgin fibres or from recycled material. (There is no special deal for products with a high recycled content).

Local authorities will offer all the waste paper and board separately collected from private households, to a waste paper merchant affiliated to Stichting Papier Recycling Nederland (SPRN). They can choose which merchant to use, and can freely negotiate the price and terms of trade with that merchant. SPRN in turn guarantees to accept all the waste paper and board offered that meets the quality requirements laid down. SPRN will ensure that local governments signing an agreement with it will bear no financial responsibility for any 'chain deficit', i.e. when the international market prices for waste paper and board do not cover transport and reprocessing costs.

Parties placing paper products on the market (the final converter of the packaging material, and the newspaper and magazine publishers) pay into a 'disposal fund' managed by SPRN which is designed to cover the cost of collection for when the price of waste paper is insufficient to pay collection costs. The levy is formulated according to the tonnage of paper each company places on the market, using a (confidential) formula based on the market price for mixed waste paper and for fine papers. The formula uses the international market price, a weighted average of Dutch prices (60%), German prices (30%) and prices in the Far East (10%). It has been agreed by all industry players i.e. converters, publishers, waste paper merchants and packers/fillers.

When the Fund Board decides that there is a 'chain deficit', payments from the fund will be made to local governments to enable them to compensate the merchants for such deficits. The Covenant says that for this purpose, SPRN will set up contracts of a minimum duration of 5 years with local governments. Local authorities can only join this system at times when the disposal fund is not operational or is in surplus.

Negotiations are now under way with the local governments to agree a contract regulating how the fund would pay out. (The local governments stopped negotiations in March to take legal advice and formulate their position; the industry side hopes that negotiations will resume soon.)

No price support fund is needed for glass, the other material local governments are obliged to collect, because local governments only pay the costs of collecting used glass from households and emptying the contents of the Bottle Bank into the collection vehicle.

The Metal Recycling Federation undertakes to ensure that local governments are freed from any responsibility for any 'chain deficit', but in this case that is very unlikely to happen and Covenant II is silent on any price support mechanism.

The view was that since the market price for glass and metals is nearly always above zero, there is no need for a mechanism for funding the 'chain deficit'. In any case, the guarantee that recyclers will take material collected and sorted by local governments applies only to materials meeting an agreed material specification.

Plastics recycling is economically more precarious, but the plastics industry has given no blanket guarantees. Local authorities are not obliged to collect plastics and the implication is that they will only do so when bilateral negotiations have been concluded which assure them of a financially acceptable outlet.

Under the Packaging Covenant, the entire packaging chain undertook to fund the development of plastics recycling. No monies have yet been collected for this, and work is still under way on developing suitable R&D and other projects.

A1.4 THE OTHER COVENANT – THE DUTCH SYSTEM

History

The first Dutch Covenant, concluded in 1991, committed signatories (mostly major companies) to:

- eliminate the disposal of packaging waste through landfill or incineration without energy recovery by 2000;
- reduce the weight of packaging placed on the market in 2000 to below that placed on the market in 1986;
- avoid over-packaging, try to eliminate multi-packs and materials and material combinations difficult to recycle, reduce the range of polymers used, reduce heavy metals and solvent usage; and
- substitute reusable for one-trip packaging wherever environmentally beneficial and economically feasible.

At least 40% of used packaging was to be recycled by 1996 (in fact 46% was recycled in 1994). There were also material-specific collection and recycling targets, but no funding commitments.

The Netherlands was obliged to revise this arrangement to bring Dutch law in line with the requirements of the EC Directive on Packaging and Packaging Waste. The Dutch approach follows the provisions of the Directive while leaving open the option of using new Covenants to achieve targets more in line with Dutch policy. The legislators intended that compliance through a Covenant should be a more attractive option than compliance via the Regulations. This time the Covenant was negotiated on behalf of the whole of Dutch industry.

The new Dutch Packaging Regulations specify recovery and recycling targets at the upper level provided for in the European Directive: 65% recovery and 45% recycling, with no material recycled at less than 15%. These rates must be achieved by August 1998 - not July 2001 as in the Directive. (The 1996 recycling rate was 51% across all materials and in both household and commercial/industrial waste streams.)

Local authorities will carry out and fund the separate collection of used packaging from households. From August 1998 this will be mandatory for glass and paper and board packaging, but not for the lightweight materials. 'Producers and importers may reach agreement with the local governments on how the other packaging materials will be separately collected', depending on local conditions. The Regulations impose no duties on local governments to seek such agreements. Industry's financial responsibility starts 'from a place to be determined by the municipality' (i.e. industry pays for transport from the bottle bank). End-users of commercial/industrial packaging will be responsible for the costs associated with disposal.

Companies not signing Packaging Covenant II must meet specific obligations. The legal obligation to meet the targets and to 'take measures relating to quantitative and qualitative prevention' will fall on packer/fillers and importers. However, everyone in the packaging chain must 'take every measure that can reasonably be required of them to enable the packer/filler or importer to fulfil these obligations'. For instance, the packaging chain must guarantee to take back all collected and sorted used packaging; raw material suppliers must ensure that sufficient reprocessing capacity is available to achieve the targets and must share equally in the costs of meeting the obligations. Converters are responsible for point-of-sale packaging.

Packer/fillers and importers were selected as the 'standard addressees' because this link in the chain usually decides which form of packaging is used and can influence other links in the chain. In practice, every part of the packaging chain is to some degree a packer/filler or importer, as even the producers of raw materials, semi-finished products, packaging materials and packer/fillers in general supply the goods they place on the market in packaging as well.

Packer/fillers and importers must report on the measures taken, the contribution made to them by other parts of the packaging chain and the results of their prevention measures.

The Regulations transpose provisions of the Directive, i.e. the heavy metals limits and 'essential requirements' of packaging composition and design which must be complied with. These provisions apply to Covenant signatories and non-signatories alike.

The most attractive option for packer/fillers and importers, on efficiency, administrative and financial grounds, is to collaborate within the framework of a Covenant. Another advantage of the Covenant approach is that ‘the percentages of material recycling of the various substreams can be offset against each other. If a material recycling rate of 65% can be achieved jointly for all packaging materials, no complicated and expensive financing systems need be set up for compensating local governments.’

However, the Ministry warns that the Covenant approach places considerable demands on industry’s self-regulating capability, and if it does not work effectively the Environmental Management Act gives the Government powers to impose mandatory deposits, retailer take-back or eco-taxes.

All individual obligations lapse for businesses which are party to a Covenant. These companies will contribute to achieving the targets agreed but will not be held individually responsible for meeting the targets, notifying the measures taken, reporting on these and monitoring the final results.

The Provisions of Covenant II

Covenant II consists of one umbrella Covenant supported by individual agreements for the various materials and for different parts of the packaging chain. The main provisions are as follows:

- an overall material recycling target of 65% by 2001. This is higher than in the Directive and the Dutch Regulations. The Netherlands have already exceeded the maximum recycling target in the Directive (45%) and are confident that there will be sufficient recycling capacity within the country to recycle at this level.
- material specific recycling targets. These relate to the Dutch 1995 recycling rates in table A.3:

Table A.3: Dutch 1995 Recycling Rates

MATERIAL	1995	2001
Glass	74%	90%
Paper/board	62%	85%
Metals	56% steel 11% aluminium	80%
Plastics	11%	27% (+ 9% chemical recycling)
Wood	-	15%

- no separate energy recovery target, although the Regulations set one. Dutch industry opted to focus on recycling rather than on energy recovery. Negotiators took the view that recycling was more cost-effective, provided that enough time was allowed to reach the targets and provided they are based on market forces to avoid distortions. Also behind this position is the fact that local governments pay the full cost of collecting and sorting packaging waste,

with industry bearing the cost only of recycling. In contrast industry would have to pay for incineration.

- a packaging reduction target of 10% by 2001 against 1986 levels. The previous Covenant contained a similar reduction target, but this time Covenant II will allow for the target to be revised in line with economic growth, and in line with increased use of secondary raw materials.
- a measure of protection for refillable beer, soft drinks and mineral waters containers (see below).

Different parts of the packaging chain signed different sub-covenants.

The sub-covenant signed by packers/fillers and importers (and retailers) focuses principally on achieving the packaging reduction target:

- Signatories must implement within their business operations a systematic approach to the environmental improvement of the packaging they use, e.g. the official SVM Prevention Guidelines or companies' own method, e.g. based on ISO 14 001 or the EC Environmental Management and Auditing System (EMAS).
- Signatories must make an annual environmental impact assessment of a number of their packaging items, and investigate and introduce possible improvements. During the life of Packaging Covenant II (which expires at the end of 2002), most of the packaging types used should be assessed in this way.
- The functional demands of the packaging system used must be set against aspects relevant to environmental impact, so as to assess minimum use of packaging material, the possibility of recycling the packaging after use, the use of secondary materials in the packaging and minimum use of heavy metals.
- Importers must instruct their foreign suppliers on the systematic approach to prevention required.
- Signatories with more than four employees and placing more than 50 tonnes of packaging material on the Dutch market must report annually on the prevention measures taken. The Prevention Guideline contains a model for reporting.
- Any beverage manufacturer or importer wishing to introduce a new, non-refillable pack to replace an existing refillable container. Alternatively, those wishing to introduce another new non-refillable pack, as a result of which existing refillable systems may be impaired, must report this plan to the Commodity Board for Beer (PB), to the Commodity Board for Soft Drinks and Waters (BFW), or to the Central Bureau for the Provision Trade (CBL).

- If the manufacturer or importer already places products in refillables on the market, it is mandatory to carry out an environmental analysis if the producer's share of refillables in the relevant product category falls by at least 2%. If the manufacturer or importer does not currently use refillables, the PB, BFW or CBL will advise the company whether the expected impact on existing refillable systems is sufficient for an environmental analysis to be needed.

Under the sub-covenant on paper fibre, it is agreed that:

- Local authorities will improve and intensify their collection systems so that by 2001 at least 85% of waste paper and board, including paper and board packaging from private households, is collected separately.
- Local authorities will offer all the waste paper and board separately collected from private households, to a waste paper merchant affiliated to Stichting Papier Recycling Nederland (SPRN). They can choose which merchant to use, and can freely negotiate the price and terms of trade with him. SPRN in turn guarantees to accept all the waste paper and board offered that meets the quality requirements laid down.
- SPRN will ensure that local governments signing an agreement with it will bear no financial responsibility for any 'chain deficit', i.e. when the international market prices for waste paper and board do not cover transport and reprocessing costs. SPRN will set up a 'disposal fund', fed by a levy on the final convertor of the packaging material. When the Fund Board decides that there is a 'chain deficit', payments from the fund will be made to local governments to enable them to compensate the merchants for such deficits. For this purpose, SPRN will set up contracts of a minimum duration of 5 years with local governments – local governments can only join this system at times when the disposal fund is not operational or is in surplus.
- Local authorities will however bear any costs incurred by the merchants in dealing with 'non-inherent product contamination' (e.g. paper clips and other non-paper materials, contaminated paper and non-reusable paper such as sanitary paper, wallpaper, carbon copy paper and photographs).
- Through statutory instruments and environmental permits, the Environment Ministry and SPRN will ensure that companies in the commercial and industrial sectors keep their waste paper and board separate from other waste and offer it separately. The disposal fund does not apply to commercial and industrial packaging.
- SPRN will ensure that by 2001, at least 85% of the collectable waste paper and board offered it is recycled (subject to its meeting quality standards). It will also ensure that by 2001 at least 85% of the total weight of paper and board packaging placed on the market will be recycled as a material, provided the organisation is offered sufficient quantity of material meeting specification. (Dutch estimates of the 1995 waste paper collection and recycling rate range from 52% to 62%. 62% of waste paper and board packaging was collected, mostly from commercial and industrial sources.)

- If there are no sales outlets for the collected material, the industry will stockpile the surplus if at all possible. Only as a last resort will it be incinerated. Disposal of surpluses will not be financed from the disposal fund.

Under the sub-covenant on the material recycling of glass packaging, it is agreed that:

- Local authorities will improve and intensify their collection systems so that by 2001 at least 90% of packaging glass from private households, is collected separately (through 'bring' systems).
- Local authorities will offer all the packaging glass separately collected from private households, to a company which is a member of the Glass Recovery Association (SKG). They can choose which glass collector or reprocessor to use, and can freely negotiate the price and terms of trade with him. The industry guarantees to accept all the packaging glass offered by local governments contracting with SKG members, provided it meets the quality requirements laid down.
- In principle local governments only pay the costs of collecting used glass from households and emptying the contents of the Bottle Bank into the collection vehicle. However local governments will also bear any costs incurred by the merchants in separating and disposing of 'non-inherent product contamination' (e.g. non-glass material, non-packaging glass and hazardous and small-scale chemical waste such as glass with residues from nail polish, photo chemicals or medicines).
- Through statutory instruments and environmental permits, the Environment Ministry and SKG will ensure that companies in the commercial and industrial sectors keep their packaging glass separate from other waste and offer it separately. The take-back guarantee does not apply to commercial and industrial packaging.
- SKG will ensure that by 2001, at least 90% of the total weight of glass packaging placed on the market will be recycled as a material, provided the organisation is offered sufficient quantity of material meeting specification. (Dutch estimates of the 1995 glass recycling rate range between 74% and 81%. Only 15% of local governments had achieved the target collection level of 25 kg per inhabitant, and only 20% of glass from the catering sector was collected for recycling).
- The 50% colour separation target in the 1991 Covenant will remain (in 1995, 53% of collected glass was separated by colour).

Under the sub-covenant on the material recycling of metal packaging, it is agreed that:

- The Environment Ministry and the Steel Recovery Association (SKB) will ensure that companies in the commercial and industrial sectors keep their metal packaging separate from other waste and offer it separately where applicable.
- The Environment Ministry will use all reasonable efforts to create the conditions to promote the creation of an infrastructure for the separation of metal packaging – preferably prior to incineration – from the totality of collected household waste.
- The Metal Recycling Federation (MRF) guarantees to accept all metal of packaging origin that is supplied separately, provided it meets the quality requirements and minimum consignment size laid down.
- The MRF will ensure that local governments are freed from any financial responsibility arising from any ‘chain deficit’ occurring in respect of metal packaging from households that meets the specified quality requirements, and has been collected by a local authority and supplied to a waste processing plant that has an agreement with an MRF member.
- The MRF undertakes to recycle as a material, at least 80% of the total weight of metal packaging placed on the market in the Netherlands, provided this is supplied to it separately and meets the quality requirements laid down. (In 1995 the recycling rate for metal packaging was 53%; 48% of metal packaging waste in the commercial sector and 82% in the industrial sector was collected separately).

Under the sub-covenant on the material recycling of plastics packaging, it is agreed that:

- The Association for Plastics Packaging and the Environment (VMK) will try to promote the use of secondary raw materials originating from packaging waste in conformity with market conditions.
- The Environment Ministry will ensure that companies in the commercial and industrial sectors separate plastics packaging waste and offer it separately (this will be done by means of information sheets rather than legislation).
- The Environment Ministry will use all reasonable efforts to create the conditions to promote the creation of an infrastructure for the separation of plastics packaging from waste streams that have been integrally collected.
- In order to intensify the separate collection and mechanical recycling of plastics packaging waste from the commercial and industrial sector, VMK will take measures that support and encourage end-users to supply their packaging waste separately to a collector or reprocessor of plastics waste. The aim is that sufficient plastics waste of appropriate quality being supplied so that by 2001, at least 27% of total plastics packaging (by weight) can be mechanically recycled (at present more than 10% is recycled as a material).
- Projects will be carried out to develop the mechanical separation of plastics waste from mixed household waste.

- The reprocessors of plastics packaging waste undertake, under market conditions, to take back and mechanically recycle the plastics waste supplied separately, provided it meets the quality standards laid down.
- VMK will take all reasonable measures to ensure that a further 8% recycling is achieved by 2001, in addition to the 27% previously mentioned. This will be done through a mixture of mechanical and feedstock recycling.

A2 *SYSTEM COSTS AND EFFICIENCIES IN EUROPE AND CANADA*

A2.1 EUROPE

Targets

Table A.4 shows some EU member states recycling rates and targets. However, the operating costs of the various household packaging recovery systems are not strictly comparable.

The EC Directive on Packaging and Packaging Waste allows considerable leeway. Except in Greece, Ireland and Portugal, by July 2001 50%-65% of used packaging must be 'recovered' (recycling/ composting + energy recovery), 25%-45% must be recycled (excluding energy recovery), and no material may be recycled at less than 15%.

Thus the cost of the system represents the cost of reaching whatever targets are set at national level, from whatever recycling rates were the starting-point. Thus European costs include an element of system development costs which are not present in the mature Australian system.

Member states with sufficient capacity available are allowed to set higher targets than the upper levels in the Directive, provided they can satisfy the European Commission that the measures taken do not distort the Internal Market and do not hinder other member states' ability to comply with the Directive.

The plastics recycling rates include substantial quantities of material collected from households and exported for recycling abroad. 'Export recycling' accounted for 31%-50% of total plastics recycling in Belgium, Germany, Ireland and Sweden, and 14%-27% in Denmark, France, Italy and the United Kingdom. Austria and the Netherlands were on 10%, and only Portugal and Spain carried out all their plastics packaging recycling within their own borders. Note that PET beverage containers are refillable in Austria, Denmark, Finland, Germany, the Netherlands and mostly in Belgium, and so contribute much less to the overall critical mass.

The cost and availability of energy-from-waste (EfW) facilities enters into the European equation (table A.5). The EC Directive allows considerable latitude for waste paper and plastics to be collected unsegregated and incinerated, and still contribute towards the 'recovery' target: in particular EfW is a low-cost alternative to plastics recycling.

Table A.4: EU Member States Recycling Rates and Targets

COUNTRY	RECYCLING RATES				RECYCLING TARGETS
	Glass (1996)	Rigid & flexible plastics (1995)	Aluminium cans (1996)	Steel cans (1996)	
Austria	n/a	22%	50%	47%	70% glass, 60% paper/board, 50% metals, 20% plastics from 1996
Belgium	66%	13%	25%	30%	40% for each material in each Region in each waste stream by 1997
Denmark	66%	11%	0	n/a	80% glass, 40% C/I PP, 50% C/I LDPE, 50% C/I EPS, 70% C/I HDPE by 1997
Finland	63%	n/a	80%	n/a	53% paper/board, 48% glass, 25% metals, 15% plastics by 2001
France	50%	9%	14%	44%	Range as in EC Directive
Germany	79%	43%	81%	81%	72% household glass, steel and aluminium, 64% household paper/board and plastics from 1995
Greece	39%	n/a	35%	17%	not set yet
Ireland	46%	2%	20%	n/a	25% <i>recovery</i> by 2001, & 55% glass recycling
Italy	53%	7%	37%	n/a	>25% overall, >15% for each material by 2001
Netherlands	81%	12%	25%	58%	90% glass, 27% plastics, 80% metals, 85% paper/board by 2001
Portugal	43%	1%	17%	n/a	25% <i>recovery</i>
Spain	35%	6%	17%	19%	>25% overall, >15% for each material by 2001
Sweden	72%	9%	91%	54%	90% al & pet bev containers, 70% glass & non-bev metals, 65% corrugated, 40% other paper/board & other plastics, by 2001
UK	22%	7%	31%	16%	>52% <i>overall recovery</i> , >15% recycling for each material by 2001

Sources: industry recycling estimates; Perchards, 'Packaging legislation in Europe' (1998)

Table A.5: EfW Capacity of EU Member States

COUNTRY	1997 EfW CAPACITY AS % OF MSW	1995 COST (A\$ PER TONNE)
Austria	12%	\$170
Belgium	40%	n/a
Denmark	80%	\$150
Finland	4%	\$52
France	38%	\$80
Germany	(35%)	
Greece	0	
Ireland	0	
Italy	14%	\$80
Netherlands	40%	\$152
Portugal	0	
Spain	6%	\$40
Sweden	55%	\$70
UK	4%	\$68

Source: European Energy from Waste Coalition (1998)

However, the recycling targets set by some member states are higher and more specific than the EC's and largely preclude this. Six of the 15 member states have little or no EfW capacity, and in Germany EfW does not count towards the targets set in the Packaging Ordinance (which predates the Directive and has not yet been brought into line with it).

The wide difference in gate fees from country to country cannot all be explained by differences in technical standards and how far the cost of the plants has already been written off. There is a fairly close correlation between EfW costs and landfill costs, which suggests that incinerator operators charge what the market will bear.

Table A.6: Weight-based Costs in EU Member States

MATERIAL	FEE RATES (A\$ PER TONNE)		
	BELGIUM	PORTUGAL	SPAIN
Glass	12.3	2.4	<i>(per unit)</i>
Paper & board	13.1	16.0	39.4
Steel	53.2	28.0	49.3
Aluminium	117.5	112.0	81.1
Rigid plastics	328.3	64.0	187.8
Flexible plastics	541.1	64.0	187.8
Beverage cartons	226.3	120.0	133.2

Costs

European funding systems for consumer packaging charge either by weight (Belgium, Portugal, Spain), per unit (France, Norway), by a combination of the two (Germany) or, as an interim measure pending identification of the 'true costs' attributable to each material, by turnover

(Finland, Ireland). Table A.6 shows the current weight-based costs in the countries that calculate their fees in this way.

Impact of Scheme Efficiency on Costs in Each Country

‘Scheme efficiency’ relates not just to the ability of the national compliance organisation(s) to contain costs, but also to the legislative underpinning which may well impose heavy costs (table A.7). For example, the German requirement to establish a nationwide collection system within 18 months and to work with contractors nominated by the local authority, versus Belgium’s longer period of notice (but still tough targets) and willingness to allow competitive tendering.

Table A.7: Scheme Efficiency

COUNTRY	HOUSEHOLD PACKAGING SYSTEM	COSTS (A\$M)	POPULATION COVERED (M)	PER CAPITA COST (A\$)	RECYCLED (000 TONNES)	RECYCLING COST (A\$ PER TONNE)
Germany	DSD (1997)	3 420	82	41.50	5 322	643
Belgium	FOST + (1997)	50	5	10.00	289	173
France	E-E (1996)	104	12	8.65	581	179
Spain	Ecoembes (2001 est.)	575	39	14.75	n/a	n/a
Sweden	REPA (1997)	95	9	10.50	n/a	n/a

This suggests the following:

- Belgium (FOST Plus) has the most efficient system, but per capita costs are likely to rise by 40% as the very tough targets bite even harder. Costs should be stable after 1999 unless the EC imposes higher targets (very unlikely).
- Sweden (REPA) is almost as efficient as Belgium, and is already meeting its 2001 targets for rigid packaging and probably also for paper/board, but still has some way to go on plastics – from 9% in 1995 to 40%. There is no cross-subsidy, so fees can be expected to remain stable for all other materials but to rise by (say) 40% for plastics.
- France (E-E) positioned itself as a high efficiency achiever with its gradualist approach, giving maximum time to learn from experience, but E-E is now lagging behind target and is likely to come under pressure from the new (Green Party) Environment Minister to accelerate. E-E could end up throwing a lot of money at the problem to meet its objectives. However on balance not much change to French costs is expected – probably a small increase.
- Spain (Ecoembes) is only just getting under way, and Italy has not really started yet (except for beverage containers).

- Germany (DSD) has notorious efficiency problems, but its costs have already peaked. The targets have been met, and will not be increased unless the EC increases them, which is highly unlikely. Recent renegotiation of DSD's waste management contracts promises lower costs in the next year or two (a per capita reduction to A\$34.50). DSD claims that the forthcoming amendment to the Ordinance will help it combat free riders and this will reduce costs by a further A\$6.50 per head.

Costs in countries not shown in table A.7:

- Austria's (ARA) costs are of the same order of magnitude as Germany's, but there are no identifiable big cost savings on the way.
- The PRN system has created a total lack of transparency in the UK. It is not easy to identify system costs or achievements. The cost to packer/fillers may rise by 5 times between now and 2001; maybe by 10 times if the Government takes drastic action to ensure that there is no shortfall against the targets (which otherwise looks inevitable).
- Costs in the Netherlands are likely to be similar to Belgium, but this is impossible to determine as costs are internalised. Its recycling rates are where Belgium expects to be in a couple of years, so costs are probably already at their maximum.

System Efficiencies: The Lessons from Germany

The Germans, as the pioneers of a new style funding system, inevitably made a number of mistakes in their scheme. Other similar systems which followed have considered the German experience and have tried to avoid these mistakes. Considering where Germany went wrong makes it easier to understand how other European systems have developed as they have, and also serves as a cautionary tale.

The German Packaging Ordinance required, in principle, in-store take back of used packaging from consumers. Industry felt that an industry operated, close-to-home collection system would recover used packaging more efficiently and more cost effectively than in-store take back. They proposed the DSD (Duales System Deutschland) system, which was included in the law as an exemption from take back by retailers. The system was to run in parallel with local authority collections for other waste (hence 'dual'). Collection and sorting would be funded by packers/fillers, who would license the use of the Green Dot logo (a registered trade mark) to show the public that they were participating in DSD and to indicate which packs should go in DSD's special yellow collection containers.

The intention was that the licence fees paid by packers/fillers would be passed on to retailers and thus to final consumers in the product price. For their part, the producers of packaging raw materials and the packaging converters guaranteed to take back all materials collected by the DSD and ensure it was recycled.

The German Packaging Ordinance gave the DSD very little time to organise itself and also required that local governments approved the collection arrangements DSD made in their area. Finally, DSD had to operate throughout each Federal State to gain approval, so leaving out low population rural areas was not an option, even if the collection targets could be met without collecting everywhere. This meant that the DSD had to negotiate many contracts in a short period of time from a weak bargaining position and was forced into unfavourable terms.

Further, it was agreed that recyclers would guarantee to take back all materials collected and sorted through the DSD and recycle them. All materials would be free, even those with a positive market value. The materials were made available free in recognition that recyclers would have to invest in new reprocessing capacity.

Problems quickly emerged. The quantities of material collected vastly exceeded projections, but they were of poor quality and contained many non-packaging items. This was partly because whereas waste collection charges in Germany are notoriously high, use of the DSD system was 'free' (the costs having been paid in higher product prices on consumer goods). This created a clear incentive for householders to put non-packaging items, such as telephone directories and plastic toys, in the DSD receptacle.

Such mis-sorting was not only the result of high waste charges however. Environmental awareness is very high in Germany, and disproportionately focused on waste issues. It was a commonly held belief that Germany had a 'landfill crisis' and that the packaging ordinance would go a long way to relieving this. Many Germans placed what they saw as recyclable items in the DSD container in the hope that they would also be recycled.

The situation was exacerbated by the collection and sorting contracts negotiated by DSD with local governments or private waste contractors. These contractors were paid according to the weight of sacks delivered to MRFs, i.e. including the weight of the contaminants. After the materials had been sorted, the DSD had to pay to dispose of non-packaging items at commercial waste rates. A high level of contamination meant that contractors were paid more, and local authority contractors in addition were saved landfill charges. Thus, the contractors had no incentive to encourage consumers to sort more accurately.

Further, the guarantee by recyclers to take back material from MRFs was not connected to a quality specification. This meant that sorters were paid even if the materials were poorly sorted.

The recyclers did not necessarily spend their windfall from free materials on increasing recycling capacity. At the time, it was thought that industry would all pull together in the face of a hostile government. This was certainly the case for the retailers who had most to lose if the DSD failed. They in turn put pressure on packers/fillers, refusing to take products not licensed for the green dot, and asking for packs to be minimised and made of easily recyclable materials. However, for the converters, protecting their bottom line was probably more important than an indirect risk. The problems were greatest for plastics, where the greatest investment was needed, because plastics recyclers are usually outside the packaging chain and had nothing to fear whatsoever.

The plastics recycling guarantor organisation failed and its activities were taken over by DSD. DSD's fees for plastics now cover not only collection and sorting but also recycling.

The DSD had now corrected most of the errors within its control. Others require a change in the law. An amendment to the ordinance has been under discussion for several years, but has so far failed to get through the Bundesrat, the upper chamber in the parliament which represents the federal states.

Lessons learned from Germany and changes made in other member states in response to the German experience include:

- local authority or private contractors are now paid for each tonne of material made available (i.e. on output, not input), but only if it meets an agreed quality specification. This creates an incentive for contractors to do their job properly, avoiding materials being wasted because they are considered unusable by recyclers or having to resort them.
- recyclers pay for materials at market prices, or at an agreed minimum price. A range of different arrangements is in place. Some member states have created structures to cope with fluctuating prices or prices which may be below zero (discussed below). The revenue may go to the local authority or to the recovery system.
- the financial contribution made by recovery organisations to recycling should be strictly controlled. It is negotiated with organisations representing each material. Assistance is usually in the form of support for agreed R&D projects or new infrastructure.
- accepting a wider range of recovery options for packaging than material recycling, particularly energy recovery (*not an option in some Australian jurisdictions*). German insistence on very high material recycling rates has proved very expensive, particularly for plastics.
- concentrating activities on the most cost-effective way of maximising recovery. This means focusing collection in areas with an appropriate socio-demographic profile and in areas of high population density. It also means concentrating on specific materials, for example collecting plastic bottles from households, but not films.
- anticipating how businesses would respond. It was widely assumed in Germany that all businesses would do their bit to ensure the targets were met. The DSD underestimated the number of free riders. Its only recourse is to pursue offenders in the courts, an expensive option. Other countries were more realistic in realising that businesses would look after themselves first. In France, for example, the feared trading standards officers enforce non-compliance with the legislation and penalties include imprisonment of directors.
- The need for competition in the system. The requirement that the DSD operates everywhere in each state effectively ruled out competition and the need to obtain local authority approval

and the short time allowed for it to establish made it difficult to select contractors on the basis of competitive tenders. Other countries have injected competition in their systems to ensure costs are minimised.

- Some have allowed more than one recovery system to operate. This may not generate real competition – the prices charged for household packaging waste in France by Eco-Emballages and its competitor Adelphe are identical, and the prices charged for transport packaging in Austria by ARA and its new competitors are remarkably similar. The existence of more than one system also complicates the organisation of communications campaigns.
- Competition within the system may be a more effective way to ensure costs to industry are minimised. For example, in Belgium, where FOST Plus is the only approved system, contracts for collection, sorting and recycling are awarded on the basis of competitive tender.
- Anticipating how the public would respond and the importance of public education campaigns. The DSD initially said that the green dot on a pack meant the pack would be recycled, which created unrealistic expectations among the public and opened the DSD to attack from environmentalists. It also created an association between the yellow sacks and recyclables, encouraging the public to put non-packaging recyclables in DSD containers. Other systems have communicated the admittedly more complex message that the green dot means that the producer has made a financial contribution towards the development of recycling systems. Recovery systems devote considerable resources to communications, both to encourage a high participation rate and to ensure that consumers sort accurately.

The Administrative Costs of the Green Dot Organisations

The Green Dot organisations take over the legal obligations of their members for meeting the recycling targets laid down. They handle large sums of money and control the use of the green dot trademark. They have therefore developed a formidable administrative machinery, as table A.8 shows.

Processing members' licence fee payments is unlikely to be population dependent, since there are roughly the same number of medium-sized or large brand owners in each Western European country. On the other hand, the staff needed to handle relations with local governments depends on how many authorities they have to deal with (this is not necessarily a function of population, since local governments may be of very different sizes – and may be grouped together for waste management purposes). How many staff are needed to handle communications depends on how much the organisation needs to do at local level.

DSD has to manage the Green Dot trademark, of which it is the ultimate owner. It also has to deal with powerful regional governments as well as federal and local government. It needs a vigorous communications program to counter its opponents at home (the Greens and others who believe that Germany needs less packaging, not more recycling) and abroad. It has opted for a very precise system of measuring members' financial obligations. Nevertheless, it is difficult to see why DSD needs as many staff as it has.

Table A.8: Administrative Costs

ORGANISATION (COUNTRY)	POP'N (MILLION)	STAFF NUMBERS (1996)	ADMIN COSTS (A\$M) (1996)	TURNOVER (A\$M) (1996)	STAFF PER MILLION POP'N	TURNOVER (A\$M) PER STAFF MEMBER
DSD (Germany)	82	343	Operating: 106 Staff: 25	3306	4.2	9.6
Eco-Emballages (France)	58	60	Operating: 16 Staff: n/a	139	1.0	2.3
FOST+ (Belgium)	10	44	Operating: n/a Staff: 3	62	4.4	1.4
ARA (Austria)	8	43	Operating: 16 Staff: n/a	297	5.4	6.9

Note: The operating and staff costs are taken from the 1996 annual reports of each organisation and may not be strictly comparable. For instance, how far they outsource to consultants varies from one organisation to another.

Outside Germany, the general pattern has been for new organisations to move quickly to a staffing level of 20 or so, and then to expand to a little more than double that as the system reaches full speed. The same thing is happening with the new Green Dot organisations in Spain and Portugal and the non-Green Dot organisations in Scandinavia (aggregating the central fund collecting organisation and the material specific disbursers of the funds) and the United Kingdom. The one exception is Ireland, where the plan was that companies would internalise costs as far as possible – but REPAK is struggling to cope with a staff of two, and does not have the financial and human resources to meet the demands placed on it.

Waste Paper Collection and Utilisation Rates

Paper and board recycling is complicated by each member state's balance between imports and exports of the various grades. A net importer of packaging grades may achieve a very high utilisation rate (the proportion of new product made from recycled material) but a much lower recycling rate. The utilisation rates and collection/sorting rates for paper and board products (*NB not just packaging*) in Western Europe in 1996 are shown in table A.9.

The explanation for utilisation rates above 100% is that significant quantities of fibres (up to 40%) are lost during the recycling process. As table 4.7 shows, utilisation rates have substantially improved over the last five years. However within each national market, utilisation is dependent on productive capacity. Portugal is the only Western European country to record a decline in waste paper utilisation (measured in tonnage) between 1991 and 1996. This is probably due to closure of a paper mill.

Once utilisation rates approach 100%, the recycling rate can be increased in only two ways:

1. *Build a new mill.* This is expensive and has a long lead-time. Unlike plastics recycling, paper mills are large-scale production units which demand assurance that there will be a large and permanent increase in domestic demand (if only through import substitution or creation of a new export market); or

2. *Export the surplus collected waste material.* But other member states are playing the same game. Exports to the Far East come into competition with surplus American waste paper, and increasingly with surpluses from Asian countries which are introducing their own recycling mandates.

Table A.9: Paper Utilisation, Collection/sorting Rates

COUNTRY	PAPER & BOARD UTILISATION RATE	PAPER & BOARD COLLECTION/SORTING RATE
Austria	42%	71%
Belgium	27%	38%
Denmark	123%	54%
Finland	6%	62%
France	49%	41%
Germany	60%	71%
Greece	87%	33%
Ireland	127%	12%
Italy	50%	31%
Netherlands	71%	65%
Norway	11%	50%
Portugal	31%	39%
Spain	74%	41%
Sweden	17%	66%
Switzerland	65%	67%
UK	70%	40%

Source: CEPI

There may be limits on the achievable *recycling* rates, but *recovery* rates are much more flexible – at least, in those member states which have significant energy-from-waste capacity (Belgium, Denmark, France, Luxembourg, Netherlands and Sweden. Germany also has EfW but this does not count towards meeting the targets.)

The snag is that while incinerating used packaging paper may help meet national recovery targets, it prevents used corrugated board from contributing cheaply and efficiently to any overall recycling target. There are overall (i.e. not material-specific) recycling targets in Belgium, France, Italy, Portugal, and Spain.

Thus in Belgium and France, which have overall targets and EfW, the household packaging materials will probably not be baled out by corrugated board.

The European paper industry achieved an overall collection/sorting rate of 50% in 1996. Five years previously the collection/sorting rate was 39%. Waste paper utilisation has grown over the same period from 23.6 million tonnes to 32.0 million tonnes, an increase of nearly 36%. The overall European utilisation rate for packaging papers in 1996 was 71%.

Table A.10: Waste Paper Utilisation Rates in EU

COUNTRY	1991 WASTE PAPER UTILISATION (‘000 TONNES)	1996 WASTE PAPER UTILISATION (‘000 TONNES)	% INCREASE
Austria	1 184	1 537	30%
Belgium	286	361	26%
Denmark	307	395	29%
Finland	443	575	30%
France	3 367	4 192	25%
Germany	6 110	8 888	45%
Greece	N/A	307	N/A
Ireland	N/A	45	N/Aa
Italy	2 703	3 515	30%
Netherlands	1 896	2 106	11%
Norway	174	240	38%
Portugal	339	315	-7%
Spain	2 222	2 774	25%
Sweden	1 038	1 502	45%
Switzerland	582	948	63%
UK	2 954	4 323	46%

Source: CEPI

Europe is currently self-sufficient in waste paper. However, the situation varies from country to country, and almost 20% of the paper recycled in Europe has to cross a border. The use of waste paper is most attractive for the paper mills in densely populated areas where large supplies can be transported over short distances. Meanwhile, countries with rich forestry resources provide the high quality virgin fibres needed to maintain these high recycling rates without loss of performance.

A2.2 CANADA

At the time the OMMRI Blue Box system got under way in Ontario at the end of the 1980s, landfilling Toronto’s waste (300,000 tonnes of waste per annum) was costing A\$53 per tonne, and municipal waste collection A\$26-A\$52 per tonne.

The program quickly proved popular with householders, but by 1992 it was being heavily criticised by some commentators as economically unsustainable. The cost of collecting Blue Box material was estimated as A\$210-A\$315 per tonne, the net cost after sales of the material being A\$204 per tonne. If garbage collection and disposal was costing up to A\$105 per tonne, this meant a net on-cost of at least A\$100 per tonne. One critic (Terence Corcoran of *The Globe and Mail*) suggested that ‘if each household had to pay a flat monthly fee of [A\$16] for basic garbage pickup and an extra [A\$1 or A\$2] for each extra bag of garbage and Blue Box collection, the price system and the market system would at least have a chance of operating.’

The demise of the Blue Box system has continually been predicted by its opponents, and the size – and very existence – of the ‘funding gap’ in Ontario has been hotly contested. However the

numbers now look rather healthier than those cited several years ago, when it first became clear that only aluminium cans could be collected and recycled at a profit:

- Early in 1998 Toronto Councillor Judy Sgro claimed, on the basis of a leaked city document, that the Blue Box system costs a net A\$143 per tonne recycled, compared with a landfill cost of A\$102 per tonne – a deficit of A\$41 per tonne;
- This, she says, is very different from the information she was officially given by Toronto Metro staff at the end of 1997, which was A\$55 per tonne for recycling and A\$63 for landfilling – a saving of A\$8 per tonne;
- Corporations Supporting Recycling (CSR – the successor to OMMRI) challenged this, stating that the cost of recycling in Toronto ranges from A\$58-A\$62 per tonne, versus landfill costs of A\$93 per tonne – a saving of more than A\$30 per tonne;
- City of Toronto Works Department issued a press release confirming the CSR figures, and explaining that the leaked document was comparing historical waste management costs with current costs.

More than 80% of beer in Ontario is sold in refillable bottles and so is not a participant in the Blue Box system. There is however a 10¢ tax on beer cans which raises A\$39 million each year, a sum almost equal to the annual net cost of the province's Blue Box systems (A\$42 million).

By contrast, an internal report by the Ontario Government has shown that a CDL on carbonated soft drinks would cost A\$250 million 'for even the most efficient system'.

A recent study by RIS found that Canada and Germany are both diverting about 15% of their solid waste – in Germany, at a cost of A\$845 per tonne, and in Canada, at a cost of A\$63-A\$84 per tonne.

