

EPHC Mid-Term Review of the National Packaging Covenant: Report 2: Lessons for the Future

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1. Executive Summary

The NPC can potentially provide some benefits but it is ill equipped to continue to be regarded as the primary tool to govern the environmental impacts of packaging. It has produced poor results in terms of packaging waste generation and resource recovery; inconsistent performance across the supply chain and regions of Australia; and shrinking domestic reprocessing capabilities and increasing export of recyclate – to name a few problems.

Our report examines weaknesses in the current approach that promotes a refuge from high quality jurisdictional and company action on packaging and promotes piecemeal actions, leaving a gaping absence of a coordinated and comprehensive strategy. According to the Centre for Responsible Design report commissioned for the mid-term review, stakeholders are clearly lacking in drivers to improve product design for recyclability due to a failure of the action plan process. Further there has been a serious reduction in domestic recycling infrastructure with poor planning and funding to keep and develop further sustainable infrastructure.

The NPCC lacks good governance processes and sufficient resources to deal with signatories and improve their performance.

We reapply the RIS criteria applied to the current NPC at its inception in 2005. Our findings include:

1. With one Territory, the largest local government group and entrenched NGO opposition to the NPC it is clear the original score on stakeholder acceptability was exaggerated.
2. The Centre for Responsible Design report (2008) highlights that labelling remains a significant problem and NPC education programs are very limited and superficial.
3. The administrative burden of the NPC MkII is if anything, higher than the original NPC.
4. The Centre for Responsible Design reports ongoing issues with the take up of the Environmental Code of Practice for Packaging (ECOPP), and quality of action plans and reports, and NEPM enforcement remains piecemeal.
5. There has been little improvement and at the end of 2007 there was more packaging materials being landfilled than was the case in 2005 and the 'baseline' year of 2003 [see our Report 1].
6. The Centre for Responsible Design report indicates disappointing results in terms of in-house environmental change.

We suggest three tiers that should be used for the current review – effectiveness in meeting resource recovery and environmental objectives (50% weight); scope and economic impacts on signatories and role of key packaging polluters (35%); and administrative considerations 15%) such as independence of processes and equity. In regard to the latter consideration we ask - why are state governments and industry allowed to set their own financial limits on their contribution to packaging recycling, yet local government are expected to carry over 90% of the costs (via support for kerbside) and are under-represented at the NPCC level?

The NPC has proven ineffective in delivering its environmental objectives across the board and the assessment of other benefits has been overestimated. As a primary policy instrument it is the least effective option open to any government that is serious about tackling packaging waste. Immediate revision and substantive action is necessary to tackle Australia's growing packaging waste crisis with a more comprehensive set of policies.

The ECOPP could be a very strong tool for the future. It could also form the 'shell' to house future action and intervention.

For brand owners like Kellogs, Sanitarium, Kimberley Clark and many other NPC signatories the vast majority (80+%) of their packaging is of a material that is readily and viably recyclable (cardboard,

aluminium, and PET) and are overwhelmingly sold for “at home” consumption. Visy are also in this category. We believe that it is inequitable that they be expected to make major financial contributions and undertake detailed action plans and reports when a simple annual report on materials consumption and compliance to the ECOPP would more than suffice.

For the more traditional problem packaging (glass, LPB, some plastics, and increasingly steel cans) and convenience products (soft drink, beer, confectionary, take away foods etc) there is a need for a moderate level of regulatory intervention and there is no reason why a model cannot be framed such as a Container Deposit System to address these problems.

For the remaining problem sectors and materials like composite and aseptic packaging, PVC, etc. there are only two choices: a product ban or a mandatory ‘take-back to the point of sale’ scheme.

2. Introduction

After eight years the National Packaging Covenant (NPC) cannot deliver precise information on the consumption and recycling of consumer packaging, let alone on its performance targets. The reasons for these limitations are varied and there are a number of key drivers that need investigation – both to understand the limitations of the NPC and to provide guidance for future directions. While the NPC can potentially provide some benefits it is ill equipped to continue to be regarded as the primary tool to govern the environmental impacts of packaging.

The signs are clear:

- Poor results in terms of packaging waste generation and resource recovery;
- Weak enforcement under NEPM and Environmental Code of Practice for Packaging (ECoPP) provisions;
- Inconsistent performance across the supply chain and regions of Australia;
- Limited and uneven stakeholder participation;
- Shrinking domestic reprocessing capabilities and increasing export of recyclate;
- Weak local markets for recyclate and in many instances declining commodity prices (in real terms);
- Uncertainty about the actual performance of the NPC and a lack of transparency regarding data sources;
- Poor discipline and selective reporting on KPI's and goals.

One of the first questions that anyone reviewing the NPC needs to ask themselves is what would happen to recycling if the Covenant didn't exist - the simple answer is nothing. This is most evident by the substantial quantities of materials that are recovered by systems that are not supported or part of the NPC:

- No NSW local government organisations are NPC signatories, yet NSW remains the largest source of kerbside and other MSW recycling services, collecting some 691,494 tonnes of material in the 2006/07 financial year;
- approximately 33,000 tonnes of beverage containers are recovered via the South Australian CD program each year, with no support or involvement in the NPC;
- The Northern Territory Government has refused to sign the National Packaging Covenant and collects an estimated 5,736 tonnes of packaging each year.

Combined, these three systems alone collect 730,000+ tonnes of packaging p.a. representing 31% of all packaging collected in Australia. There is no evidence that not being part of the NPC has any impact on recycling in these areas. In fact it could be argued that the real recycling rates of the NPC should be reduced by this amount, decreasing the recycling activity of the Covenant from its current level of 2,357,111 tonnes in 2006/07 down to just 1,626,880 tonnes.

Add this to the prominent influence of export demand on growing plastic and paper recovery and it is clear that the NPC is a minor player and there will need to be significant and decisive intervention on the NPC and via other policies by jurisdictions at the November 2008 EPHC meeting to put new policies in place. However, some aspects of the NPC can potentially be harnessed for the future.

While this report does not intend to be exhaustive in terms of detail, it aims to provide something of a roadmap to deliver an effective and improved approach to the management of consumer packaging in Australia. To this end, this report has been divided into three key parts:

1. Weaknesses and deficiencies of the current NPC approach.

In this section of the report we outline the key weaknesses and deficiencies that have led to eight years of poor outcomes, namely:

- poor definitions and accountability for each stakeholder's responsibilities across the production and recovery chain;
- lack of drivers for producers, recyclers, and consumers to maximise efforts to reduce packaging waste;
- inadequate focus on market development conducive to good outcomes;
- poor infrastructure planning;
- poor governance, enforceability and accountability; and
- a lack of resourcing for administration and signatory engagement.

2. Necessary structures and features needed for good regulatory /co-regulatory outcomes. This section identifies the procedural and structural requirements needed, namely:

- a clear framework for action and responsibilities;
- clear accountabilities and an equitable approach for each stakeholders 'share' of the costs of recovery and disposal;
- high levels of transparency around operations and the use of funding;
- strong monitoring and data collection;
- clear boundaries in terms of governance and enforcement, price signals, penalties and incentives;
- cost effectiveness;
- administrative simplicity; and
- the development of lasting legacies in terms of domestic infrastructure and markets.

3. Areas where jurisdictional intervention is required.

This section seeks to identify the areas where jurisdictions will need to intervene and the rationales for such action.

3. Weaknesses in the Current National Packaging Covenant Approach

3.1 Definitions of responsibility and accountability for stakeholders across the supply chain

The National Packaging Covenant described itself as follows¹:

“The Covenant is the voluntary component of a co-regulatory arrangement for managing the environmental impacts of consumer packaging in Australia. It is an agreement based on the principles of shared responsibility through product stewardship, between key stakeholders in the packaging supply chain and all spheres of government — Australian, State, Territory and Local.

The regulatory underpinning is provided by the National Environmental Protection (Used Packaging Materials) Measure (NEPM), designed to deal with free riders and non-signatories and applied at the jurisdictional level.”

Certainly the concept of sharing responsibility across all stakeholders involved in the packaging supply, recovery and disposal chain can be a good approach. However, ‘shared responsibility’ should require each player along both the production and recovery chain to have their individual responsibilities defined with an overlay of coordinated strategy. Instead as with the first NPC, the NPC MkII provides a number of motherhood statements and little or no direction for each player in the supply chain.

This is perhaps the most fatal flaw in the NPC. With no specific responsibilities for each stakeholder there exist significant inequities. For instance Visy Industries are major producers of packaging in Australia and major recyclers. They have invested many millions of dollars to develop their own reprocessing infrastructure and also contribute significantly to Australia’s packaging recycling (in 2007 Visy Recycling collected nearly 2million tonnes of recycling – the equivalent of 75+% of the total material recycled within the NPC). This is a core practice of Visy’s business, it both preceded the NPC and will continue whether it exists or not. Yet under the NPC this investment is not considered and Visy is expected to make financial contributions based on the same formula as other packaging companies that make little to no direct contribution to direct recycling such as Tetra Pak or Carter Holt Harvey.

Key responsibilities that need to be defined for each stakeholder in the packaging supply and recovery chains should include:

- Packaging manufacturers should be required to commit to - only produce packaging materials that are both technically recyclable and have a well developed collection infrastructure; and produce packaging materials that conform to the Environmental Code of Practice for Packaging adopted by the NPC MkII leading to good outcomes such as light weighting.
- Brand owners need to accept that within a Product Stewardship or Extended Producer Responsibility (EPR) approach they are in fact ‘polluters’ in terms of the packaging that is sold. Their products should bear the financial responsibility for any additional costs associated with achieving high levels of resource recovery, i.e. if a beverage filler wants to sell its product in say colored glass they should be required to compensate recyclers for any loss of income that results from lower commodity prices. Brand owners should also be responsible for ensuring all products have adequate disposal and recycling instructions on labeling and high levels of credibility regarding environmental claims regarding packaging.
- Retailers and other businesses like cafés, food courts, hotels etc. that sell packaged products should be required to ensure (within reason) that there are adequate recycling collection facilities at the point of consumption or bear the financial responsibility for a third party to collect same particularly in ‘away from home’ markets.

¹ Preface of the National Packaging Covenant Document. July 2005

- Commercial property owners and managers have no responsibilities for the collection of materials but should be required to provide effective (eg, that avoid contamination) facilities for collection of recycling, at reasonable market based rental prices.
- The direct consumers of packaging (as opposed to ratepayers) should be expected to pay (through the supply chain) the full costs of recovering packaging materials and be expected to dispose of their products in a responsible manner (i.e. face penalties for littering; pay a deposit for certain products, etc.).
- Local governments should be expected to provide a comprehensive recycling service but only for common materials where it is financially viable to do so (namely paper, aluminum, steel, some plastics such as PET and HDPE). The collection of other materials via MSW services requires financial underpinnings through the development of one or more market based instruments.
- Commercial and industrial recyclers can only be expected to undertake recycling services where it is financially viable to do so (e.g. the limitations rolling out collection services in many away from home venues is prohibitively expensive particularly for materials like glass; liquid paperboard and composites).
- State governments should be required to enforce NEPMs and the ECOPP and provide a team of departmental officers to oversee, manage and assist with the NPC. Governments departments should also be required to manage data collection processes advised by an independent committee and undertake environmental education about packaging.
- The Federal Government should be responsible for ensuring a consistent regulatory landscape across jurisdictional borders; overseeing the collection and distribution of funds; ensuring grants programs are managed in a manner consistent with government and strategy requirements; and assisting with importation issues through the Customs Department.

Until the responsibilities of each stakeholder are clearly defined, the NPC will remain a controversial and limited tool. Key voices in national, state, and local governments, the community and industry continue to be critics of the NPC approach.

As a result, rather than promote cooperation to increase packaging responsibility, the NPC's failure actually locks many stakeholders, and most particularly government regulators into a process that delivers the lowest common denominator and weak results. As the Boomerang Alliance identified in its critique of the NPC Mkl 'Say No to the Waste Club':

"Rather than demonstrating a commitment to shared responsibility, the NPC MkII makes government complicit in the shared abdication of responsibility for packaging, causing the continuation of perverse subsidies from rate payers and local government to externalize packaging industry costs."

Consequently there is a lack of a strategy that maximises opportunities and environmental results. It is essential that the EPHC develop a comprehensive strategy.

3.2 Lack of drivers for stakeholders

There is no regulatory or financial underpinning to ensure good outcomes within the NPC approach.

After eight years it is clear that NEPM provisions (beyond having to sign the NPC) are largely unenforceable and do not deliver substantial penalties. The Centre for Responsible Design at RMIT (2008) in its 'Evaluation of NPC signatory action plans and annual reports' for the mid term review found that:

"There is a very low level of reporting among signatories of measurable targets, providing data collection systems or assigning specific resources or responsibilities."

The Centre also found that in the areas of packaging design, production, distribution, disposal and labelling the average score for implementation of the NPC had declined, while for packaging manufacturers there had been a decline in the areas of disposal, research, market development (with scores dropping by over

50%), education, and labelling. Retailer's scores had declined across the board. The following table has been reproduced from the Centre for Responsible Design's report:

Table ES1 Comparison of scoring for activities by sectors between 2003 review and current 2008 review

Activity	Brand owners		Government		Industry associations		Packaging manufacturers		Raw material suppliers		Retailers	
	2003	2008	2003	2008	2003	2008	2003	2008	2003	2008	2003	2008
Design	3.01	2.94	1.38	NA	0.0	1.29	2.22	2.96	2.00	2.25	2.4	2.14
Production	2.93	2.66	0.00	NA	0.0	1.29	2.25	2.68	2.00	2.75	1.8	2.36
Distribution	2.21	2.17	0.00	NA	0.0	0.86	1.22	2.54	1.50	2.25	2.1	1.64
Disposal	2.54	2.35	0.00	1.92	0.0	1.36	2.81	2.63	1.00	2.75	2.1	2.00
Research	1.77	2.08	1.34	1.42	0.0	1.36	2.53	2.03	1.50	2.63	2.4	1.50
Market development	1.48	1.81	2.66	2.08	0.75	1.36	3.56	1.63	1.50	2.19	1.5	1.93
Education	2.03	2.31	2.66	3.79	0.75	1.36	2.81	1.89	2.50	2.75	2.1	1.43
Labelling	2.74	2.50	0.00	0.92	0.0	1.14	1.31	1.54	1.50	2.25	2.1	2.36
Wholesaling and retailing	NA	1.65	NA	0.83	NA	0.64	NA	1.20	NA	1.63	NA	2.14
Recycling and reprocessing	NA	2.36	NA	3.08	NA	1.89	NA	2.78	NA	2.25	NA	2.11

Notes:

- Evaluation of NPC action plans and annual reports for NPC Mark II (Lewis and James, 2003).
- Orange shading indicates that 2008 score is lower than 2003 score, while green shading and bold numbers indicates an improvement from 2003.

Further there are no financial incentives to reward strong performers within the packaging recycling chain or price signals to influence consumer choice or behaviour. Market and infrastructure development has been ignored other than through the provision of a grant program that makes a speculative contribution towards the capital costs of selective projects with little to no ongoing investment to ensure success. Importantly despite the NPC funding (which may result in some future ad hoc or temporary improvement), there has been significant and steady decline in collection and reprocessing infrastructure.

In the Contextual Review Report for the NPC Mid term Review undertaken by Hyder Consulting (2008) it is revealed that:

"As of July 2008 there were approximately 120 MRFs operating nationally, down from 140 in 2003" [a 16% decline]

"Production of de-inked pulp in Australia is limited. Only one wastepaper reprocessing plant (Amcor in Fairfield VIC) sells de-inked pulp to the market, however this mill will close in 2011."

"In 2006 the No1 machine at Shoalhaven NSW was closed, followed by a second machine in 2007 (paper/cardboard and liquid paperboard)."

"BlueScope closed its Port Kembla tin-plate production line in 2007 the associated de-tinning facility also closed. CMA (Southern Recycling) have entered the de-tinning market and purchased the de-tinning facility, which is being relocated overseas."

Further O-I closed the only glass beneficiation plant in Western Australia in 2001 and in 2006 Amcor closed the major paper reprocessing facility in WA.

This means that in 3 out of the 5 major packaging materials there has been a substantial infrastructure decline. This has led to a weakening in recycle value (in real terms) due to increased transport costs and Australia has developed a substantial (and unnecessary) dependency on Asian based facilities with some 35% of all paper and cardboard packaging collected in Australia, exported internationally for reprocessing² and 38% of all plastics recovered also exported.

3.3 Lack of focus on market development

² Industry Edge (2008) reporting for NPCC

One of the drivers for increasing exports of recyclate and infrastructure decline has been the lack of focus on developing end use markets for recovered materials. The Hyder (2008) contextual review of the NPC suggests:

“There has been increased monitoring of market situations and shortcomings by market and by state. This has enabled Covenant project funding to be targeted towards market development priorities.”

However, the only tangible work in this area that could be identified was an investigation into secondary markets for glass and a grant towards increased polypropylene recycling.

A focus on market development is critical for lifting recycling in Australia and the development of the sort of infrastructure that will deliver long term success. Yet there has been little investigation of international solutions for new end use markets.

For example, in California the Department of Conservation used their surplus funds to undertake strong end use development programs via a ‘bounties scheme’ rewarding locally produced manufacturers purchasing recovered recyclate. Discussions with Mr Daryl Young (past Californian Department Head) indicates that in his opinion developments of end use markets for glass would require an ongoing subsidy of between \$8-\$10 per tonne.

A simple analysis of opportunities by the writer revealed that there is a significant shortage of sand for the booming South East Asian construction market. Glass is a well accepted substitute for sand and established European technologies produce ‘glass foam’ - a viable end use that could be developed for excess glass at highly attractive prices. But a \$70million investment needed to establish this industry domestically which will also need surety in terms of consistent and reliable feed stocks and funding support to develop a customer base - that the current NPC arrangement cannot support.

It is difficult not to reach the conclusion that until there is a realistic assessment of the necessary funding to maintain and deliver good packaging recycling outcomes and a significant increase in the charges on polluters, Australia will continue to export its reprocessing capacity to South East Asia.

3.4 Poor infrastructure planning

This area of the NPC has improved somewhat in terms of funding of projects from the first Covenant but remains inadequate and lacks a clear plan. At the time of renewing the NPC an implementation context was outlined that identified the necessary infrastructure and ‘system improvements’ that would be needed for success including:

“System improvements needed to achieve Covenant targets and performance outcomes:

6. Recovery and utilisation of additional quantities of post consumer packaging will require establishment of additional collection, sorting and reprocessing infrastructure.

This is likely to include substantial items such as:

- automated glass sorting plants.*
- advanced commercial sorting facilities (pre-landfill MRF).*
- plastics sorting facilities*
- collection technologies that reduce contamination.*

Facilities may take some time to establish. Assistance will be needed from governments to facilitate planning and siting of facilities in a timely manner. Support will also be needed for local sorting infrastructure development.

7. Substantial increases in recovery of post consumer packaging can only come through a substantial expansion in ‘Away from Home’ collection infrastructure. Collection and recycling systems will need to be established and expanded in high traffic areas (shopping centres, events etc). High volume opportunities will also need to be identified in commercial offices, government buildings, parks and gardens and strip shopping areas.”

The NPCC has taken some steps in this area, as many of the funded projects are directed in the areas identified above, yet the fact remains that:

1. Efforts have been sporadic and piecemeal at best. There is no published plan to roll out the comprehensive reprocessing and collection infrastructure to deliver sustainable capacities.
2. Government assistance to speed up the planning and siting of facilities has not been forthcoming.
3. There are inadequate funds to deliver this level of infrastructure and governments will need to significantly increase their funding contributions or increase charges to NPC brand owners selling products in 'problematic packaging' like glass, plastics 4-7, composites, and more recently steel; or find some other supports.

3.5 Poor governance, enforceability, and accountability

At the time of renewing the National Packaging Covenant MkII a leading ABC Current Affairs programs ran a story about the NPC describing it as "the waste club" outlining that far from being a body to increase recycling it was actually a vehicle to avoid responsibility. There are significant areas of inherent structural flaws within the NPC.

Even after eight years there is no legal entity that houses the NPC and the CEO, secretariat and performance reporting have to date been paid by the NPC Industry Association creating an obvious conflict of interest and a lack of independence within reporting.

Grants programs while established with the best intentions have been shown to have informal criteria and priorities that are not published formally, leading to confusion and suspicions of bias towards decision makers.

Funding and performance reports of projects are not audited annually before publication, and often with errors. When these errors are published there is no formal or transparent process to correct same.

Many NPCC members have significant conflicts of interest between the direct financial interests of their business and the broader need to achieve outcomes under the NPC. NPC Councillors are effectively a board yet basic governance processes to manage conflicts of interests and formal voting process to record the opinions of each member are absent. Both of these simple processes are widely accepted standards of good governance.

Enforceability remains an issue and while jurisdictions have improved in the area of NEPM signing; this means little if action plans are of low quality and ECoPP adherence is ineffective.

3.6 A lack of resourcing for administration

Once again the staffing and resources to manage the NPC are much improved over the first Covenant. Yet if a government department was charged with the responsibility to directly manage the NPC it is likely it would operate with a staff of something like 40-50. While it is true that government processes can be inefficient, even the Packaging Stewardship Forum with just a handful of members has staff located in each state of Australia and a bigger operating budget than the NPCC Secretariat.

We believe that the minimum staffing requirements of the NPCC Secretariat should be significantly expanded and the level of expertise in waste management, company training and recycling also needs significant improvement. Key roles should include:

- a position to engage with the community and local government sectors;
- an in-house expert who can monitor and review the environmental claims of signatories and also liaise with other agencies to develop infrastructure plans for packaging resource recovery;
- ongoing training and education capacity on packaging modification; and
- some expertise in the development of environmental policy.

Jurisdictions also need to significantly increase their resourcing towards supporting the NPC or allied activity areas and increasing the level of enforcement within the NEPM. It is also critical that jurisdictions maintain their independence from the NPCC.

4. Features Needed to Deliver Good Regulatory / Co-Regulatory Outcomes for Packaging

This section of the report seeks to outline what we see as a good regulatory or co-regulatory framework for packaging waste and resource recovery. We have framed this section around a multi-criteria analysis to provide both a context for the future and a methodology that allows us to assess the effectiveness of the current mechanism (the NPC MkII). Information about multi-criteria analysis can be found in the appendices to this report as can the Boomerang Alliance’s submission to the NEPC Corporation regarding the policy objectives and options section of Hyder Consulting’s RIS for the NPC MkII in 2005, which we believe is valuable as a point of comparison in reflecting on the NPC’s now obvious deficiencies.

The features that we believe are critical to the development of a good policy approach follow.

Tier 1: Effectiveness (50% weightage of total assessment)

When the NPC MkII Regulatory Impact Statement (RIS) was prepared by Hyder Consulting (2005) it canvassed most of the major features needed to provide a good framework, yet as Boomerang Alliance highlighted in its submission to the NEPC on the RIS, there needs to be some form of weighting applied to assess what the proposed model for action would be effective. Surely, this is the most important question.

The RIS summary assessment produced by Hyder was as follows³:

Original Assessment for NPC Regulatory Impact Statement by Hyder Consulting		Stakeholder acceptability	Transition impacts and duration	Labelling, education, program	Administrative burden	Flexibility and convenience	Coverage scope	Non-compliance	Competitiveness	Material recovery rates	Net energy usage	Resource conservation	In-house enviro change	Measurement	Total
Do Nothing Option	Voluntary Approach	2	1.5	3	2.5	3	1.5	1	2.5	2	2	2	1	1.5	25.5
Do Nothing Further Option	Current Covenant / NEPM model	2.5	5	5	3	4	3	3	4	2.5	2.5	3	2	2	41.5
Enhanced Approach Option	Updated Covenant / NEPM model	3.5	3.5	4	4	3.5	4.5	4.5	4.5	3	3	3.5	3.5	5	50
Alternative Approaches Options	Advance Recycling Fees	2.5	2	2	1.5	2.5	3.5	4	3.5	4	3.5	4	2	3.5	39
	Mandatory take-back and utilisation scheme (EPR)	2	2	1.5	1	1.5	3	4	2	5	3.5	4.5	3.5	4	37.5
	Mandatory container deposit scheme (EPR)	3	2	2	1	3	1.5	4	2	4	3.5	4	2	3	35
	Increased landfill disposal levies	2	3	3.5	4	2	2	2.5	3	3	3	2.5	1.5	1.5	33.5

The three criteria columns (9, 10, 11) highlighted above represent the features that achieve the environmental objectives of the NPC. It quickly becomes obvious that the NPC MkII (Updated Covenant / NEPM model) was nowhere near the most effective measure with mandatory take-back and utilisations schemes (score of 13), advance disposal fees (11.5), mandatory container deposit scheme (11.5) all scoring significantly higher than the NPC MkII (9.5). In hindsight it is clear that even these NPC scores were optimistic. To this end, it is perhaps unsurprising that the NPC MkII is failing to reach its objectives.

The environmental objectives of any packaging measure should be:

- Substantially improved material recovery rates;

³ The next section recalibrates the scores for NPC MkII

- nett greenhouse gas and energy savings (avoided landfill and embodied energy);
- resource conservation and pollution reduction;
- litter reductions;
- reduced impacts on conservation and biodiversity.

As these criteria represent the core objectives of the NPC they should carry a weightage to ensure that more peripheral issues do not take priority over the core objectives. We would suggest that they should represent 50% of any total score to assess the best policy direction. Any scheme that is not highly effective in these areas should be ignored.

Tier 2: Scope and Economic Impacts (35% weightage)

The second tier of features that should form a future direction to ensure policy effectiveness would revolve around coverage, durability, economic impacts, and distributional impacts. This second tier is relatively important and should also carry a weightage to ensure they receive the attention they deserve (say a total of 35% of overall ‘scoring’). Key characteristics that should be considered would include:

- **Coverage.** The policy framework should be designed to cover the entire packaging sector but only initially at a minimum standard (such as reporting on compliance with the ECOPP and penalties for failing to do same).
- **Selective Discrimination.** Using a number of existing life cycle assessments for packaging recovery and existing economic analysis there is little difficulty identifying ‘problem packaging’. These sections of the packaging supply chain should be subjected to a higher participation assessment and financial contribution, with a highlighted compliance focus There are four basic areas where packaging becomes a problem:
 - High cost to recover and reprocess (nett of material values) This would include glass, aseptics, composites, liquid paperboard and possibly steel.
 - Key products consumed away from home – beverages, confectionary and snacks, take away food, café’s are more difficult to recover and there is limited infrastructure to recover them. These marketplaces are reasonably easy to identify by point of sale (café’s restaurants, takeaway, convenience stores etc.)
 - Products most likely to be littered – including the products consumed away from home along with lightweight packaging such as plastic bags, convenience packaging etc.
 - Contaminants - some packaging causes significant contamination and/or loss of commodity value (e.g. the entire value of recovery glass is less than the value of the paper that is contaminated by glass fines). The most obvious packaging materials in this category are glass, PVC (which is difficult to separate from PET and often causes PET to have to be sold at a lower value for mixed plastic (PET is worth \$600-\$780 per tonne where mixed plastic is worth\$250-\$400 per tonne).

Informing this feature and the viability (or lack there of) to recover packaging, is a calculation by consultant Mathew Warnken of Warnken ISE. As part of his leading work regarding waste and GHG emissions he calculated the costs to process 1 tonne of Commercial and Industrial waste to recover recyclate via a dirty MRF. The table below shows the common packaging materials (please note recyclate values have been adjusted to reflect current commodity values cited by Hyder’s 2008 NPC MkII contextual review):

Cost of Recovery: 1 tonne of typical C&I Waste

Material Type	Kgs in 1		Transport	Additional Processing	Recyclate Value	Net Cost	Cost Per Tonne
	Tonne of C&I	Cost of MRFing					

Paper & Cardboard	213	-\$19.21	-\$3.20	-\$10.67	\$27.69	\$17.02	\$79.91
Glass	28	-\$2.49	-\$0.41	-\$2.76	\$1.96	-\$0.80	-\$28.57
Non-Ferrous Metal (aluminium)	10	-\$0.87	-\$0.15	-\$0.97	\$15.00	\$14.03	\$1,403.00
Ferrous Metal	57	-\$5.09	-\$0.85	-\$5.65	\$3.71	-\$1.94	-\$34.04
Mixed Plastic	122	-\$11.02	-\$1.84	-\$36.74	\$48.80	\$12.06	\$98.85

This analysis clearly demonstrates that glass and steel recycling is not viable without significant intervention; mixed plastics and cardboard are a reasonable prospect where there are sufficient volumes; and aluminium is highly attractive. Further matters that are important under this Tier follow:

- **Economic impacts to achieve equitable and cost effective approaches.** It is important from the outset to note that we support rigorous cost/benefit analysis to consider the economic impacts of good policy measures. However the quality of analysis delivered of late is of poor quality, often framed in a manner that is inconsistent with international economic standards, failing to adequately measure existing externalities and giving too much weight to issues like convenience costs. Notwithstanding the fact that some ‘problem packaging’ will attract a higher charge, it remains important that the overall policy instrument should be cost effective.

However, it is also important to recognise that no policy in waste management or resource recovery entirely stands alone. Impacts on existing costs need to be factored in - for example, an EPR measure may apply a charge to a brand owner but much of this charge may be paid out to existing collectors such as kerbside recycling. This is one of the key weaknesses of the previous assessments of the NPC (including the last RIS - it did not consider impacts across the whole of the packaging supply and recovery chain). For instance, the RIS gave little consideration to the likely increased costs to MSW recycling such as kerbside. To this end, we would suggest that rather than measure the actual costs of the policy instrument itself, the entire waste and recovery process for packaging should be measured and compared. In this way the entire picture will be revealed.

- **Distributional impacts.** A good policy instrument should not only measure the economic impacts, it should also measure the impacts on different sectors. There is some argument that many approaches are inequitable because they create higher charges for different producers and consumers, but this is the very heart of a good policy framework for environmental protection. Unless the packaging is a complex material or consumed in particular locations (as described above) the brand owner should largely be ‘held harmless’ against any charges of an environmental policy for the recovery of packaging resources (such as cardboard, aluminium and possibly some plastics); whereas brand owners that favour more exotic packaging (aseptics, composites, glass, liquid paperboard) that are inherently more expensive to recover should be targeted.

As such it makes sense that those producers should make a higher contribution to the costs of recovery. This has a twofold effect - it not only places the financial burden on the causes of the problem, but also creates a financial incentive for the brand owner to consider whether there is a case to switch to a more ‘recovery friendly product’. This would mean that a low threshold would apply to the majority of brand owners using ‘recovery friendly’ materials and escape large financial contributions or costs and efforts to produce detailed action plans etc.

Tier 3: Administrative considerations (15% weightage)

The third tier of features that need to be entrenched within a framework for effective packaging waste management and resource recovery encompass management, reporting and stakeholder engagement etc. This directs that good processes are developed around whatever policy position is adopted. These criteria should represent around 15% of a total assessment but remain an important feature to ensure the future policy is effective and credible. These include many of the areas where the NPC MkII was (optimistically)

scored highly by Hyder Consulting in the RIS, such as stakeholder acceptability, administrative burden, labelling, flexibility, compliance, and measurement.

We would suggest that other features that should be included are:

- **Independence.** Any co-regulatory approach will have inherent conflicts of interest given that the norm has been to allow the body that approves policy actions and judges performance is heavily dominated by the polluters themselves. The NPCC's failure to improve processes is a significant flaw in its approach. Consequently there should be formally embedded processes to ensure jurisdictional responsibilities are not abdicated and that performance reporting is independent of the vested interests of polluters.
- **Equity.** The NPC continues to 'dismiss' the well established financial inequities entrenched within the NPC approach. Even in these reviews there are assessments of government funding contributions for grants and administration (estimated by Hyder (2008 contextual report) @ around \$5.6 million p.a.) and industry contributions and compliance costs (estimated by Hyder @ around \$11.75 million p.a.) and even a cost to ENGO's.

Yet the major costs to recover and reprocess recycling are borne by local government. While identifying the indirect costs to operate services Hyder makes the controversial statement that based on a very imprecise assessment that "kerbside recycling is generally profitable" and completely disregards the opinions of the vast majority of local government associations who put the annual nett cost of kerbside recycling and other MSW recycling at between \$200-300million per annum. A very serious question needs to be asked - why are state governments and industry allowed to set their own financial limits on their contribution to packaging recycling, yet local government are expected to carry over 90% of the costs and are badly under-represented at the NPCC level?

5. Summary Assessment of the NPC under the Hyder Assessment

Based on the commentary in this report we have revised the original assessment of Hyder Consulting for the RIS that finalised the decision for the NPC MkII. Changes from Hyder’s original assessment are marked in red. Only the Updated Covenant / NEPM model that was adopted has been revised to allow comparison:

Original Assessment for NPC Regulatory Impact Statement by Hyder Consulting		Stakeholder acceptability	Transition impacts and duration	Labelling, education, program	Administrative burden	Flexibility and convenience	Coverage scope	Non-compliance	Competitiveness	Material recovery rates	Net energy usage	Resource conservation	In-house enviro change	Measurement	Total
Do Nothing Option	Voluntary Approach	2	1.5	3	2.5	3	1.5	1	2.5	2	2	2	1	1.5	25.5
Do Nothing Further Option	‘Current’ Covenant / NEPM model	2.5	5	5	3	4	3	3	4	2.5	2.5	3	2	2	41.5
Enhanced Approach Option	Updated Covenant / NEPM model	1.5(1)	1.5(2)	2(3)	2.5(4)	3.5	4.5	2.5(5)	4.5	1.5(6)	2(7)	2(7)	1.5(8)	2.5(9)	27.5
Alternative Approaches Options	Advance Recycling Fees	2.5	2	2	1.5	2.5	3.5	4	3.5	4	3.5	4	2	3.5	39
	Mandatory take-back and utilisation scheme (EPR)	2	2	1.5	1	1.5	3	4	2	5	3.5	4.5	3.5	4	37.5
	Mandatory container deposit scheme (EPR)	3	2	2	1	3	1.5	4	2	4	3.5	4	2	3	35
	Increased landfill disposal levies	2	3	3.5	4	2	2	2.5	3	3	3	2.5	1.5	1.5	33.5

Our rationale follows (see numbers in brackets in red above):

1. With one Territory, the largest local government group and entrenched NGO opposition to the NPC it is clear the original score on stakeholder acceptability was exaggerated.
2. The transition of the NPC from MkI to MkII has been difficult and there is no evidence of a significant contribution to recycling improvements and with less than two years remaining it is difficult to justify any extension without another substantial change.
3. The Centre for Responsible Design report (2008) highlights that labelling remains a significant problem and NPC education programs is very limited and superficial.
4. The administrative burden of the NPC MkII is if anything higher than the original NPC.
5. The Centre for Responsible Design reports ongoing issues with the take up of the ECOPP, and quality of action plans and reports, and NEPM enforcement remains piecemeal.
6. There has been little improvement and at the end of 2007 there was more packaging materials being landfilled than was the case in 2005 and the ‘baseline’ year of 2003 [see our Report 1].
7. While there may have been some efficiency gains, there is no evidence of any significant overall improvement in terms of nett energy use or resource conservation overall [based on our adjusted recycling rates].
8. The Centre for Responsible Design report indicates disappointing results in terms of in-house environmental change.
9. Reporting has often been incorrect and Annual Reports from signatories are often late and incomplete or inaccurate. Consumption and recycling data improved somewhat.

The NPC has proven ineffective in delivering its environmental objectives across the board and the assessment of other benefits has been overestimated. As a primary policy instrument it is the least effective option open to any government that is serious about tackling packaging waste.

Immediate revision and substantive action is necessary to tackle Australia's growing packaging waste crisis with a more comprehensive set of policies.

6. Where Regulatory Intervention is required

Firstly it should be acknowledged that, under the current NPC arrangement, many brand owners and packaging companies are expected to undertake an administrative and financial burden that is excessive and unnecessary.

Packaging companies like Visy Industries who actually recover significantly more material than they produce each year should not be expected to make major financial contributions and to have to submit action plans for review by the NPCC, whose standards are well below their own commercial standards. To a lesser extent Amcor and O-I are in a similar position.

The NPC is a useful forum to discuss options to tackle packaging waste and the ECOPP could be a very strong tool for the future. It could also form the 'shell' to house future action and intervention.

For many brand owners like Kellogs, Sanitarium, Kimberley Clark and many other NPC signatories the vast majority (80+%) of their packaging is of a material that is readily and viably recyclable (cardboard, aluminium, and PET) and are overwhelmingly sold for "at home" consumption. We believe that it is inequitable that they be expected to make major financial contributions and undertake detailed action plans and reports when a simple annual report on materials consumption and compliance to the ECOPP would more than suffice. This reflects performance where cardboard would easily meet its NPC targets if contamination from other packaging was eliminated. We also believe they come under pressure from industry associations like the Australian Food and Grocery Council to adopt some type of 'solidarity' and pay for what is clearly a problem caused by other signatories.

In regard to the remaining 10-20% there is a need for a significantly higher financial and regulatory burden. After eight years it is clear that their voluntary efforts cannot succeed.

For the more traditional problem packaging (glass, LPB, some plastics, and increasingly steel cans) and convenience products (soft drink, beer, confectionary, take away foods etc) there is a need for a moderate level of regulatory intervention and there is no reason why a model cannot be framed where market based instrument system like a Container Deposit System addresses these problems.

For the remaining problem sectors and materials like composite and aseptic packaging, PVC, etc. there are only two choices: a product ban or a mandatory 'take-back to the point of sale' scheme.

Appendices:

Appendix A: About Multi-Criteria Analysis⁴:

What is Multi-criteria Analysis?

Multi-criteria Analysis is a methodology by which the relative merit of different proposals can be compared using a range of quantitative & qualitative criteria.

Why do we need Multi-criteria Analysis?

For most proposals, and waste management proposals are no exception, there are many, many considerations which must be factored in by decision makers. Community awareness of social and environmental impacts is increasing while general expectations of financial and technical efficiency remain strong. However, these considerations are reflected in different ways. Some are measured in dollars or tonnes while some can only be measured in a relative way, for example Option A is somewhat better than Option B. Now if you're a decision maker, you need to give attention to all these kinds of considerations. Multi-criteria Analysis is means of doing just that. Moreover, because it's a systematic methodology, you can replicate the analysis and open it up to public scrutiny.

How Does Multi-criteria Analysis work?

The Multi-criteria Analysis framework used by the Municipal Waste Advisory Council is very simple. Briefly, the steps are as follows:

1. Identify the alternatives to be compared;
2. Identify a set of criteria for comparing the alternatives;
3. Identify the relative importance of each criterion (weighting);
4. Score the alternatives against each criterion;
5. Multiply the score by the weighting for the criterion;
6. Add all the scores for a given alternative and rank the alternatives by their total score.

How do we score alternatives against qualitative criteria?

The methodology used by the Municipal Waste Advisory Council for scoring alternatives against qualitative criteria is again quite simple. Consider the example of the criterion of *Residential Amenity* as used by *iris* in its social assessment. *Iris* supplies five descriptions of the possible impacts upon residential amenity that a piece of waste management infrastructure might have. These five scenarios fit loosely along a continuum with very good outcome at one end and very bad outcome at the other end. When the user selects the best qualitative description of the system in question, *iris* associates a score with the selected description.

Criterion: Residential Amenity

Qualitative Description

Score

⁴ Source WasteNet

No or limited discernible impact; negligible consequences. High level of user-convenience to participate in resource recovery and waste collection programs.	100
Impacts localised to a specific area; impacts can be mitigated and/or managed; low consequences. Medium level of user convenience to participate in resource recovery and waste collection programs.	75
Impacts across several residential areas; impacts can be mitigated and/or managed; moderate consequences. Moderate level of user convenience to participate in resource recovery and waste collection programs.	50
Impacts localised to a specific area; impacts difficult to mitigate and/or manage; high consequences. Low level of user convenience to participate in resource recovery.	25
Impacts across several residential areas; impacts difficult to mitigate and/or manage; extensive consequences. Participation in resource recovery and waste collection programs is inconvenient.	0

It should be noted that this procedure presents some risk of distorting the data. For instance, it might be argued that the decision to equally space the alternatives along the continuum of 0 - 100 is an arbitrary one. It might also be argued that limiting the user to choosing only integer scores from 1 to 5 limits the ability of the system to make fine distinctions between IRR systems. These are valid arguments, but it is submitted that the final effect of such distortions is limited.

How can we combine scores from different types of criteria?

The biggest challenge for Multi-criteria Analysis is how to collate the performance of the alternatives across the different criteria types. This is the old problem of how to compare apples with oranges. **iris** overcomes this problem using a methodology called Concordance Analysis, which is sometimes called ELECTRE.

Concordance Analysis

Concordance Analysis is a pair-wise comparison technique which plays off the alternatives against each other, one criterion at a time. In other words, option A is compared against option B first against criterion 1, then against criterion 2, etc. For each pair of alternatives this comparison results in one option ‘winning’ and the other ‘losing’ for each criterion. A cumulative total of wins is established across all criteria and one alternative will emerge as ‘best’ out of the two alternatives being compared. This procedure is carried out for all combinations of alternatives. The method also incorporates the criteria weightings into the comparison, but we will not explore this in detail here.

Appendix 2:

Boomerang Alliance Submission to NEPC

Review of NPC MkII RIS Submission A (Policy Objectives & Options):

POLICY OBJECTIVES

The RIS identifies the following policy objectives for The National Packaging Covenant:

“... objectives for policy action can be summarised as:

- *Foster the reduction, minimisation and/or management of the environmental impacts in the life-cycle of packaging, including:*
 - *Efficient use of resources in the manufacture and distribution of packaging, and;*
 - *Optimal recovery of resources following packaging’s use.*
- *Have stakeholders in the packaging supply and recovery chains bear due responsibility and costs for the environmental impacts in the life-cycle of packaging;*
- *Facilitate appropriate structural arrangements to address the environmental impacts in the life-cycle of packaging;*
- *Create opportunities for the community and business to address the environmental impacts in the life-cycle of packaging through:*
 - *Purchasing and utilisation decisions and practices;*
 - *Product stewardship initiatives;*
 - *Resource recovery programs, and;*
 - *Litter management programs.”¹¹*

The Boomerang Alliance agrees with this statement outlining the policy objectives required to address the environmental problems associated with packaging, but contends the following should also be considered a critical component of any well constructed policy on packaging:

- ***Establish a collection infrastructure to recover the increasing volumes of packaging generated by the growing trend for Away From Home Consumption***

Nearly 50% of all food and grocery packaging is now consumed away from home in public places and other venues where current recycling facilities either do not exist at all or are inadequate to ensure high levels of resource recovery. This position is supported within the RIS:

“By contrast, research by Government agencies has determined that recovery from small to medium size enterprises (such as “High Street” shopping centres) and office blocks is comparatively underdeveloped. In these sub-sectors, volumes are not concentrated; there are significant logistical issues with recovery, and; there is a lower willingness/capacity to pay for environmental outcomes. Additionally, there have been contractions in the recycle collection industry, as commodity prices have shifted. Hence, there is market failure.

In terms of away-from-home recycling, including recycling in public places, recreational facilities, and at public events, the “system” is essentially in its infancy with very low recovery rates. (The notable exception is South Australia where the container deposit scheme provides a recovery system for beverage containers, but not all packaging.) Brand owner sources report that, while there is no definitive data, it would appear that the amount of packaging going into away from-home consumption is increasing compared to packaging consumed in domestic settings. This would appear largely due to changes in both demographics (eg, smaller family units, increased dining out) and industry practices (eg, access to expanding markets). The development of recovery practices does not appear to have mirrored this trend.”¹²

It is vital that jurisdictions plan the development of this infrastructure in a manner that will allow future expansion, and with a view to this infrastructure serving as a collection point for other problem wastes. By developing effective and comprehensive away from home infrastructure that can be used for packaging, it may be also be used to collect other wastes that are increasingly being nominated for EPR schemes such as mobile phones, I.T. equipment, and used chemical and paint containers. This allows the costs of recovery for all wastes to be spread across the greatest variety of materials.

This approach also ensures that consumers learn new disposal behaviours without difficulty, easily coming to grips with the habit of returning packaging and end of life goods to the collection point.

While broadly supportive of the basic premise of policy objectives stated above, the Alliance is disappointed that the RIS fails to objectively evaluate different options in a manner that delivers these objectives.

The Alliance believes that Section 5 of the RIS “OPTIONS FOR ADDRESSING POLICY OBJECTIVES” is flawed in its methodology and inadequate in its evaluation.

Table 5.10 is based upon a flawed methodology which dragged in a range of criteria of various degrees of importance, overlap and relevance. The problems this generates precede the difficulties which emerge with using the obviously subjective scores that have been ascribed to each criterion. In spite of the reviewer’s claims that their methodology complied with Australian Standards, it is clear that they have ignored or forgotten principles for multi-criteria analysis which are well established by experts in the field.^[3]

While the Alliance supports the objective methods employed in the evaluation, we highlight that the scoring criteria was poorly framed. It is inappropriate to use an evaluation system for an environmental policy that provides equal weighting between those issues that are direct and critical outcomes of the stated policy objectives – such as resource conservation, material recovery rates, and net energy use – and secondary impacts such as administrative burden and transition impacts.

Firstly, the criteria introduce significant redundancy into the analysis. For instance, “Stakeholder Acceptability” will in large part be a function of “Transition Impacts and Duration”, “Administrative Burden”, “Flexibility and Convenience” and “Material Recovery Rates”. When rating “Stakeholder Acceptability”, it is inevitable that one will reflect on these other criteria and hence the same aspects come to be counted a second time. Similar redundancies exist for those aspects which are likely to impact upon “Material Recovery Rates” and “Resource Conservation”. These redundancies distort the result and conflict with a key principle of multi-criteria analysis.

Secondly, the criteria have not been weighted. This introduces significant distortions into the analysis because it places equal emphasis on each option’s ability to achieve the central waste reduction objective and several administrative and mechanistic aspects. It is clear that each option’s ability to achieve improvement’s in material recovery rates is more important than whether it involves transitional dislocations or capacity to engender in-house environmental change. The lack of weighting strengthens the impression that additional criteria have been added to dilute the analysis in favour of particular options.

Rather than further critique the according ‘scores’, we feel it is simpler to offer a revised Policy Options Evaluation Criteria. Any areas where we disputed the actual score provided by Nolan- ITU are shaded in grey and the rationale behind the changed scores is outlined in end notes.

		Material Recovery Rates	Net Energy Use	Resource Conservation	Impact on litter incidence	Effectiveness as an instrument to achieve an environmental outcome	Environmental Outcome(s) score adjusted to represent 50% of total score	Stakeholder Acceptability	Transition Impacts & duration	Labelling, education, program	Administrative burden	Flexibility & convenience	Coverage & Scope	Non-Compliance	Competitiveness	In – House Enviro change	Measurement	Impact on Externalities	Certainty of Environmental Outcome	Social Ecology – ability to impact disposal behaviour	Creation of infrastructure for other problem wastes	Non Enviro Impacts	Non-Enviro Weighted Score represents 50% of total score	Total Score (out of 100)
Do Nothing Approach	Voluntary ^[4]	1	1	1	1	4.00	10.00	1.5 ^[9]	1.5	3	2.5	3	1.5	1	2.5	1	1.5	1	1	1	1	23	16.43	26.43
Do Nothing Further	Current Covenant ^[5]	2	2	2	1	7.00	17.50	2 ^[10]	5	5	3	4	3	2 ^[11]	4	2	1 ^[12]	1	2	1	2	37	26.43	43.93
Enhanced Approach	Covenant with targets	3	3	3 ^[6]	2	11.00	27.50	3.5	3 ^[13]	3 ^[14]	2.5 ^[15]	3.5	4.5	3 ^[16]	4.5	3.5	3 ^[17]	2	2.5	1.5	2.5	42.5	30.36	57.86
Alternative Approaches	Advance Recycling Fees	4	3.5	4	2	13.50	33.75	2.5	2	2	2 ^[18]	2.5	4.5 ^[19]	4	3.5	2	4 ^[20]	5	3	2	4	43	30.71	64.46
	Mandatory Take back & Utilisation	5	3.5	4.5	4	17.00	42.50	2	2	1.5	2 ^[18]	1.5	4.5 ^[19]	4	2.5	3.5	4	4	4	5	4	44.5	31.79	74.29
	Mandatory Container Deposit Scheme	4.5 ^[7]	3.5	4	4	16.00	40.00	3	2	3 ^[21]	2 ^[18]	3	3 ^[22]	4	2.5	3 ^[23]	4 ^[20]	4	4	4	4	45.5	32.50	72.50
	Increased Land Fill Disposal Levies	3	3	3 ^[8]	1	10.00	25.00	2	3	3.5	4	2	2	2.5	3	1.5	1.5	3	2.5	1.5	3	35	25.00	50.00

As a primary point of selection criteria, the Alliance contends each policy option should be evaluated to assess its ability to meet the stated policy objective. Using Nolan-ITU's criteria, this would suggest that Material Recovery Rates, Net Energy Use, Resource Conservation and a new criterion to measure impact on litter should represent a weightage of at least 50% of the total score.

Litter is correctly identified as a major policy objective of the NPC, however the RIS fails to recognise it as an area for evaluation. The Boomerang Alliance would like to stress that all forms of litter are not the same, for example glass in the litter stream has well known social costs through glass injury and as a cause of bush fires. Plastics take considerably more time to break down when littered in the natural environment and research shows have a devastating impact on marine and estuarine fauna. A wealth of independent information supports the case that alternative policy options such as materials take back and container deposits have a significant impact on reducing the incidence of litter, while advance recycling fees and other financial instruments can do much to reduce the toxicity and improve degradability of litter.

To that end, we have added in an evaluation of each policy option's effectiveness in addressing litter problems:

Litter. On a 1 – 5 scale we have reviewed each policy option on its ability to reduce the incidence and impact of litter on the environment. The scores are broadly characterised as: 1 - overall incidence and environmental impact of litter is likely to increase; 2 - status quo; 3 - minimal reduction in incidence of litter or its impact on the environment; 4 - some reduction in incidence of litter and its impact on the environment; and 5 - significant reductions in the incidence of litter and its impact on the environment.

It should be noted that the alternative EPR-based approaches are the only policy instruments that score above the critical pass mark of 12 (average of 3) for limited effectiveness. These are the critical areas of assessment, given that if the above areas of evaluation are not an outcome they will not address the very purpose of the Covenant: "The Covenant aims to improve the total environmental performance and lifecycle management of consumer packaging and paper". Any approach that fails in this area fails to meet policy objectives, and as such should not be considered in terms of its other criteria.

Having established which tools are likely to achieve the desired environmental outcomes, the Alliance believes that other criteria should be evaluated to identify the impacts that the proposed approach may have. The Alliance disputes a number of the scores Nolan-ITU has applied, and has provided a revised scoring on each criterion (all revised scores have been shaded in grey with explanatory notes in endnotes).

Having established which tools are likely to achieve the desired environmental outcomes, the Alliance believes that other criteria should be evaluated to identify the impacts that the proposed approach may have.

Further to these criteria, the Alliance suggests that there are 4 other key areas of assessment that should be added into the evaluation. The first aims to assess the "impact on externalities" that are not factored into the costs of production and pollution created, which is consistent with the RIS's stated policy objective that "stakeholders in the packaging supply and recovery chains bear due responsibility and costs for the environmental impacts in the life-cycle of packaging". The second evaluates "certainty of outcome" i.e. the extent to which jurisdictions and Ministers can be assured that the policy objectives stated earlier are achieved. The third "social ecology" measures the ability to impact on consumers' disposal behaviour both in terms of packaging and on a wider scale. Finally, we evaluate the likelihood that new infrastructure will be properly developed and the likelihood that it will be practically developed to address other problem wastes.

The evaluation criteria used are:

1. **Impact on externalities between the costs of production and pollution created:** On a 1-5 scale we have reviewed each approach on its likelihood to ensure that the 'polluter pays' principle is addressed within the adopted approach. The scores are broadly characterised as: 1 - existing externalities are likely to extend; 2 - status quo; 3 - possible minimal reduction of externality; 4 - some reversal of externality; 5 - significant reversal of existing externality.
2. **Certainty of outcome:** On a 1-5 scale we have reviewed each approach on its likelihood to produce a desired outcome. The scores are broadly characterised as: 1 - overall impact of packaging is likely to increase; 2 - status quo; 3 - minimal reductions; 4 - predictable reductions; 5 - significant and predictable reductions in overall environmental impact of packaging.
3. **Social Ecology:** On a 1-5 scale we have reviewed each approach according to its likelihood to affect disposal behaviour. The scores are broadly characterised as: 1 - no impact; 2 - status quo; 3 - limited change in disposal behaviour; 4 - some change in behaviour; 5 - significant change in behaviour.
4. **Creation of infrastructure for collection:** On a 1-5 scale we have reviewed each approach on its likelihood to develop adequate infrastructure for resource recovery. The scores are broadly characterised as: 1 - no

creation of infrastructure; 2 - status quo, with limited some infrastructure development in reaction to market forces; 3 - limited new collection infrastructure for some packaging; 4 - some new infrastructure for packaging and able to be utilised for other products; 5 - significant new infrastructure for both packaging and other products.

To the Boomerang Alliance, a Covenant with targets – disaggregated and set high with the expectation that they will be strengthened in future Covenants – is the minimum acceptable approach. The Alliance would however note that this approach has been clearly understood to be an instrument that will deliver significantly reduced outcomes than any of the three EPR-based approaches identified within the RIS.

Adjusted total scoring is then based on the total scoring being adjusted to allow a 50% weightage to measure the approaches' ability to deliver on stated policy objectives (4 criterion) and 50% to assess other impacts (15 criterion). The first column in totals indicates the raw score/total possible; the score underneath outlines the adjusted score as a proportion of a possible 50 points.

It should be noted that a score of < 60 broadly equates to a status quo approach, while a score of 60 indicates overall improvement. The Boomerang Alliance therefore formally submits that the only approach likely to result in any significant environmental improvement is one of the suite of Extended Producer Responsibility options, namely the three policy options that score at an average of better than 60 – Advance Recycling Fees, Mandatory Take back, or Container Deposits.

Finally, the RIS evaluation applies no weightage for and fails to recognise that there is no financial underpinning or guarantee that the voluntary signatories to the Covenant will do anything to reach the minimum recycling or land fill reduction targets. While Advance Recycling Fees, Mandatory Take Back and Container Deposit approaches are reliable, proven instruments to drive improved recovery, the Enhanced Covenant with targets approach remains nothing more than a goal that needs to be achieved to avoid future regulation. Unless it is underpinned by sound financial instruments to develop new infrastructure, as well as and mandated minimum materials and performance specifications, the NPC, The NPCC will remain a policy to prohibit rather than improve recycling in Australia.

Recognising that the transition impacts and economic effects need to be properly contained, the Alliance would conditionally accept the preferred option 'Enhanced Covenant with Targets' as a transitional strategy, with the three following conditions:

1. Targets must be fully disaggregated in terms of recycling targets, and directed within the packaging supply chain in terms of recycling phase outs
2. The enhanced covenant is underpinned by a switch to an EPR regime in **2008** if targets are not met. Adopting this concurrent policy approach will improve the overall effectiveness of the enhanced Covenant option to an acceptable level as it provides a certainty of outcome for jurisdictions in the long term and also applies the necessary pressure, through the potential for regulatory intervention, to ensure polluters address existing externalities. In this framework, perhaps, a co-regulatory approach could provide an effective system to capture and recycle the 1.6 million tonnes and more growing of resources lost to our economy.
3. A policy statement undertaking that local government will be protected from additional costs. Local councils, and in turn rate payers, already perform an enormous role for recycling, which creates an existing environmental externality. Allowing this to be extended betrays the polluter pays principle and creates an inequitable market that will ultimately destroy the viability of the recycling industry in Australia.

Endnotes:

^[1] RIS: 4. Policy Objectives - page 35.

^[2] RIS: 3.2 Resource Recovery, Away From Home Systems - page 26.

^[3] See for example Annandale D and Lantzke R (2000), Making Good Decisions: A Guide to Using Decision-Aiding Techniques in Waste Facility Siting, Institute for Environmental Science, Murdoch University.

^[4] Adjusted all scores for voluntary approach to a score of 1 i.e. likely to increase, as jurisdictions' primary rationale for supporting the NPC is that these areas are likely to result in increased resource consumption and energy use and decreased materials recovery rates.

^[5] Reduced all scores for current Covenant approach to 2 i.e. status quo, as to date the Covenant can provide no tangible evidence that any outcomes in these areas have occurred as a direct result of the NPC.

^[6] Reduced resource conservation score for Enhanced approach to 3. Unless the NPC has a specific plan to underpin markets (which the current draft does not) or enforce targets, there will be similar performance between material recovery rates and resource conservation.

^[7] Increased material recovery rates score for container deposits to 4.5 given that the major areas where packaging recovery rates are inadequate are in fact the materials used to manufacture beverage containers such as PET, PVC, HDPE and glass. Evidence shows that container deposit approaches will see these recovery rates double almost immediately under this approach.

^[8] Increased score for resource conservation to 3. An increased price signal on waste disposal prompts resource conservation through pre-consumer and commercial & industrial recycling.

^[9] Reduced stakeholder acceptability in voluntary approach: NGOs, local government and the community would not accept this approach at all.

^[10] Reduced stakeholder acceptability in current Covenant approach: Newspoll survey (enclosed) shows the community requires more action.

^[11] Reduced non-compliance for current Covenant, as there has been no enforcement of NEPM to test non-compliance.

^[12] Reduced measurement from current Covenant: after 5 years the NPC still cannot measure consumption; a complete failure.

^[13] Reduced transition impacts as substantial costs and changes are required under new Covenant – see RIS Submission B: 'Preferred Approach'.

^[14] New ECoPP will require substantial labelling. ECoPP and Labelling requires significant industry and public education.

^[15] Reduced administrative burden as targets will require significant administration and all stakeholders have identified NEPM enforcement as requiring significant action by jurisdictions.

^[16] Reduced non-compliance for enhanced Covenant: no evidence that NEPM will be enforced in new approach.

^[17] Reduced measurement of enhanced Covenant: imports of filled products remain a problem and only signatories report for measurement.

^[18] Increased all scores for administrative burden on EPR approaches: EPR approaches are often administered by industry bodies and trusts.

^[19] Increased coverage and scope for Advance Recycling Fees and Mandatory Take back to 4.5 as scope would apply to the same audience as the enhanced Covenant.

^[20] Increased measurement for Advance Recycling Fees and Container Deposits as reporting for EPR scheme would ensure all packaging is measured.

^[21] Increased labelling and education to 3: all containers currently labelled for SA CDL scheme, most adults remember earlier deposit approaches.

^[22] Increased coverage and scope for Container Deposits: covers majority of segments of all 3 areas, particularly where current recovery is poor.

^[23] Increased in house enviro change for Container Deposits: SA CDL requires that new packaging must be able to be recycled. This provides a strong driver for packaging designers to choose recyclable materials.