

**National Packaging Covenant
Jurisdictional Working Group:**

**PEER REVIEW OF MMA/BDA REPORT ON
COMPLEMENTARY ECONOMIC MECHANISMS**

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14 January 2008

NATIONAL PACKAGING COVENANT JURISDICTIONAL WORKING GROUP:

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INDEX

1.	OBJECTIVES OF THE STUDY	1
2.	SUMMARY OF CONCLUSIONS						
2.1	Timing and complementarity	2
2.2	Encouraging source reduction	...	...	...	...	...	3
2.3	Sourcing packaging waste from businesses	...	...	...	...	...	4
2.4	Incentivising householders	...	...	...	...	...	4
2.5	The report's preferred options – ADFs and recycling certificates	...	...	...	...	...	5
3.	JUSTIFYING RADICAL CHANGES BEFORE 2010						
3.1	Timing and 'complementarity'	...	...	...	...	...	6
3.2	Individual responsibility	...	...	...	...	...	7
4.	KEY ASSUMPTIONS						
4.1	Economic instruments and source reduction	...	...	...	...	...	8
4.2	Source reduction and the preferred options	...	...	...	...	...	9
4.3	Contamination and marketability	...	...	...	...	...	11
5.	FOCUS OF AUSTRALIA'S RECYCLING EFFORTS						
5.1	Recycling and landfill reduction	...	...	...	...	...	12
5.2	The 'critical materials'	...	...	...	...	...	12
5.3	Sourcing packaging waste from businesses	...	...	...	...	...	13
5.4	Recycling and sustainability	...	...	...	...	...	15
6.	CHOICE OF OPTIONS						
6.1	Advance Disposal Fee (ADFs)	...	...	...	...	...	16
6.2	Recycling certificate schemes	...	...	...	...	...	21
6.3	Deposit-refund schemes	...	...	...	...	...	26
6.4	Landfill taxes and variable waste charges	...	...	...	...	...	27

1. OBJECTIVES OF THE STUDY

The National Packaging Covenant is based on a more holistic approach to the environment than packaging policy measures elsewhere in the world. Companies are required to identify how they can best contribute to environmental improvement, document this by way of Action Plans, implement the plans and report the results.

Covenant II, which runs from 15 July 2005 to 30 June 2010, has a greater focus on quantifiable results than its predecessor. It includes an overarching performance target of a national recycling rate of 65% for post-consumer packaging, supported by material-specific packaging recycling targets; a standstill in the amount of packaging waste landfilled (setting the 2003 level as the ceiling); and a range of 29 KPIs for signatories to address (where relevant to them).

The packaging chain promised to raise a minimum of \$3 million per annum over five years to support Covenant projects (subject to review in Years 2 and 4 to assess the rate of project approval). Covenant funding will not be used to support prices or collection costs, nor will it be used to support activities or practices which are uneconomic or which do not represent good practice.

A mid-term review of the Covenant is due to be completed by the end of 2008. The present exercise is aimed at identifying, investigating and evaluating economic instruments that may be useful in assisting and supporting the objectives of the Covenant should the mid-term review show that it would otherwise fail to deliver satisfactory outcomes. Economic instruments recommended as part of this project shall not undermine or replace the Covenant, but instead help it achieve its objectives up to 2010.

2. SUMMARY OF CONCLUSIONS

2.1 TIMING AND COMPLEMENTARITY

It is now January 2008. The mid-term review of the Covenant must be completed in less than 12 months. After that, there are only 18 months until the Covenant expires. Many of the options discussed in the report cannot achieve demonstrable results before the Covenant expires, even if they can be put in place by that time.

In view of the timeframe constrictions, the report concludes that the realistic choice is between renegotiating NPC project funding arrangements under the current Covenant, or establishing a parallel advance disposal fee (ADF) and competitive tender subsidy programme to allocate revenue to upstream source reduction and downstream recycling activities.

It adds, rightly in our view, that while either of these mechanisms could be developed and implemented by 2010, it is unlikely that the projects funded in this way could deliver a significant increase in recycling volumes by that time. Perhaps the only means to deliver on the targets would be if government provided full funding and initiated a tender programme immediately, it concludes.

We agree that on the basis of the evidence presented in the report, these are the most promising funding options. However, the project brief specifically stated that the economic instruments recommended shall not undermine or replace the Covenant, but instead help it achieve its objectives up to 2010, so in our view ‘complementarity’ is a fundamental concern. Any measures that fundamentally change the structure of the present agreement or the scale of industry’s financial commitment should not be introduced until 1 July 2010 unless the Covenant has proven a catastrophic failure.

If it is already clear that the overarching 65% recycling target will be missed by a wide margin, then Covenant signatories might feel honour-bound to increase their financial commitment quite significantly. But if the 2010 outcome is still far from clear, any options involving a massive increase in funding should be ‘parked’ until discussions on the post-2010 era begin. And on the basis of what was achieved between 2003 and 2005, achievement of the 2010 recycling target should be within reach, despite the obstacles which have been identified.

This suggests that in the short term, this project should be content with modest proposals for fine-tuning Covenant commitments and/or introducing flanking measures which do not impact significantly on Covenant signatories. More far-reaching measures could be developed and considered in the context of the findings of the mid-term review.

In our view the report’s assessment is only valid over a longer timeframe. Although the report stresses that its assessment and recommendations might have been very different if the focus had been on a mechanism to provide incentives applicable to broader Covenant objectives and/or over a longer timeframe, we believe that its real value will be in informing the debate about what happens after 2010 and in concentrating stakeholders’ minds on future possibilities.

Thus we are pleased to see that the final report concludes that *“given the time limitations for implementing any measure, it may better to consider the long term merits of these mechanisms as part of a broader review, which considers the Covenant’s successes and limitations, then assesses all options including economic mechanisms to achieve long term*

(post 2010) outcomes. Consideration of long term implications may also result in a range of economic mechanisms being adopted in the long term to overcome a range of barriers impeding the achievement of Covenant objectives.”

Hopefully the discussions on a post-2010 framework will embrace the whole issue of sustainability. We see the key questions for the post-2010 era as being the following:

- i) In view of the shift in environmental concerns towards a more holistic focus on environmental sustainability, should recycling rates and/or landfill reduction continue to be the overriding priority, or should recycling be given equal status to other issues?¹
- ii) Taking account of the outcome of that discussion, are the recycling rates for packaging in Australia still too low?
- iii) If so, what can be done about it?

This report will help address question (iii).

2.2 ENCOURAGING SOURCE REDUCTION

The report says that the assumed levels of source reduction are an important determinant of the relative merits of different mechanisms. For the purpose of assessing compliance costs the report assumes that a performance-based ADF could encourage source reduction of around 2% between now and 2010, while the obligations under a certificate recycling scheme would encourage source reduction of around 5% between now and 2010.

We believe that these assumptions are unrealistic – nothing in European experience suggests that a producer responsibility charge would have this effect so quickly, if at all. Indeed, we are puzzled as to why the authors think that a certificate recycling scheme, which would impact purely on the cost of using packaging, would have a greater effect than an ADF which could raise revenues to subsidise source reduction projects.

The main economic incentives to lightweighting are procurement costs and transport costs. These will far outweigh any producer responsibility costs imposed through an ADF or recycling certificate scheme, unless that scheme is far more expensive than any we have seen in Europe. But the report has also identified these two policy options as those leading to least-cost recycling, which means that the incentive for source reduction would be minimal.

The report suggests that some of the funding raised by an ADF could be used to subsidise source reduction projects, but policymakers need to be careful about this. Companies could end up being compelled to subsidise their competitors – and in the worst case, to subsidise

¹ Are the EU's objectives appropriate for Australia? As Professor Jacqueline McGlade pointed out in a 2004 paper cited in the draft report, the EU Packaging and Packaging Waste Directive's focus on recycling may well be sub-optimal. Perchards have previously argued that the Australian Packaging Covenant is superior to the EU Directive because it addresses wider environmental issues.

And even if the EU's objectives are appropriate for Australia, does Australia need the mechanisms that have been put in place in Europe? In a peer review of the Boomerang Alliance report, *National Packaging Covenant – say no to the Waste Club* – we suggested that having regard to the different definitions of 'recycling' in Australia and Europe, Australia's recycling rates are probably of a similar order of magnitudes to Europe's. We questioned whether any marginal improvement would be sufficient to justify the expense of setting up a levy system for packaging.

competitors' source reduction projects that would have been carried out even if NPC funding had not been available.

2.3 SOURCING PACKAGING WASTE FROM BUSINESSES

The report is disappointingly lukewarm about the potential for increasing recycling by focusing on packaging waste from commercial and industrial sources.

We share the market barriers report's view that there should be a new focus on collecting used packaging from the C&I sector. We do not believe that the local authorities should finance this – collection charges should be based on the costs incurred in each case, and there is no reason in principle why the public sector should be responsible for these collections.

We have previously suggested imposing a duty of care requirement on end-users and a data-gathering system to ensure that material sent for recycling is recorded, is in the spirit of the Covenant. Alternatively, there could be through a landfill tax which makes recycling a better economic option than disposal.

However, the authors of the report say that the C&I sector is highly diverse, fragmented and may not necessarily represent the most viable and efficient target for increased recycling. Had they given more attention to contamination and marketability issues, they might have taken a different view – certainly in Europe C&I packaging is regarded as 'low-hanging fruit'.

Some stakeholders have argued that a landfill tax would breach the 'complementarity' principle, and the authors of the report also say that landfill taxes could undermine the Covenant's intent of placing the emphasis on producer responsibility. Our answer to that would be that the extent of producer responsibility has been defined by the Covenant. A landfill tax would be open to the opposite objection to that the report puts forward, namely that insofar as it applies to companies within the packaging supply chain, it *extends* rather than undermines producer responsibility – though since such taxes and charges would apply both to packaging and non-packaging, it could be argued that they are completely outside the Covenant debate.

In any case, since time would be needed to decide upon the tax system and put the necessary administrative structures in place, there is no reason why it should not be announced during the term of the Covenant but introduced after the present Covenant has expired.

Being broadly-based, disposal taxes are non-distortive and the income from them is substantial even if the tax is successful in encouraging the recovery of large quantities of material. Thus such taxes can be used to fund environmental improvements or for other social and economic purposes.

2.4 INCENTIVISING HOUSEHOLDERS

The report dismisses variable waste charges because they have limited potential to improve engagement with stakeholders along the supply chain. This is true, but surely the most important question is whether or not they would be a complementary economic mechanism effective in helping meet the objectives of the Covenant. They can in fact be highly effective in improving recycling rates.

A disposal charge imposed on waste management companies or local authorities would be passed back to the household generating the waste. This provides the waste-holder with an

economic incentive to direct the waste towards recycling rather than disposal, and thus ensures that recycling facilities are used more intensively.

It would also generate income which could be used to upgrade collection, sorting or recycling facilities or to reduce the waste management costs of households which do use recycling facilities well.

There are objections – variable charges also provide an incentive for illegal dumping, and may need fine-tuning to avoid placing an unreasonable burden on poorer families. Nevertheless, this concept might be worth trialling in a few communities to see how it works in practice in Australia. It should not be dismissed merely because it could not have an effect before the present Covenant expires – if that were a prime consideration, the report would have been a lot shorter.

2.5 THE REPORT'S PREFERRED OPTIONS – ADFs AND RECYCLING CERTIFICATES

The preferred options are discussed in some detail and some illustrative cost comparisons are provided, but the report does not go into detail on the design of these models. It comments that the relative performance of the various economic instruments would be dictated by the detail of design and implementation, and we strongly agree.

European experience has shown that measures designed around the same general principles can have very different outcomes. This means that the compliance cost comparisons offered in the report should be approached with extreme caution.

We believe that an ADF would produce much more predictable outcomes than a tradable certificate scheme. The ADF approach has been widely adopted in Europe and has been shown to be very robust. There is much less experience of the recycling certificate concept, which has not advanced far beyond the UK where it has had many unintended consequences.

An ADF with a competitive tendering process for the funding of recycling activities could be useful, *if a national producer responsibility system can be shown to be needed.*² *Local authorities* could put forward plans for an enhanced collection and sorting system, and the most cost-effective could be part-funded. This might help solve the quality and contamination problems referred to in the report – if the material collected is of unacceptable quality, no support funding would be given.

² As indicated above, we have yet to be convinced that it is.

3. JUSTIFYING RADICAL CHANGES BEFORE 2010

3.1 TIMING AND ‘COMPLEMENTARITY’

The MMA/BDA report ³ concludes that viable options are, in descending order of cost-effectiveness,

- an advance disposal fee (ADF) linked to competitive tendering for funding support;
- a recycling certificate scheme;
- subsidies based on competitive tendering;
- an ADF without competitive tendering.

It is now January 2008. The mid-term review of the Covenant must be completed in less than 12 months. After that, there are only 18 months until the Covenant expires. Many of the options discussed in the report cannot achieve demonstrable results before the Covenant expires, even if they can be put in place by that time.

The authors of the report share our concerns. **In view of the timeframe constrictions, the report concludes that the realistic choice is between**

- *renegotiating NPC project funding arrangements under the current Covenant*, with additional funding from both government and industry and an amended funding approval process. That would involve competitive tendering for projects that offer the lowest cost per tonne reduction in packaging volumes, through either upstream source reduction or downstream recycling activities; or
- *establishing a parallel ADF and competitive tender subsidy programme* – introducing a legislated government managed ADF (e.g. payable based on weight of packaging sold) as well as a competitive tender subsidy programme to allocate revenue to upstream and downstream recycling activities.

If Covenant signatories are unwilling to adopt the first proposal, the report says, then governments would need to consider the introduction of new legislation as a means to secure a revenue source for a complementary recycling subsidy programme. If this were the case, then as shown under the second proposal, government should take the opportunity to establish performance-based liabilities to provide maximum incentives for supply chain engagement and source reduction initiatives.

“However while either of these mechanisms could be developed and implemented by 2010, it is unlikely that the subsequently funded projects could deliver the necessary increase in recycling volumes for the Covenant target to be met by 2010. Perhaps the only means to deliver on the targets would be if government provided full funding and initiated a tender programme immediately.”

We agree that on the basis of the evidence presented in the report, these are the most promising funding options.⁴ However, the project brief specifically stated that “*economic instruments recommended as part of this project shall not undermine or replace the Covenant, but instead help it achieve its objectives up to 2010,*” so in our view

³ Hereafter, “the report”, except when there is some danger of ambiguity.

⁴ Though as we shall explain later, we have some reservations about the report’s recommendations on how this new funding should be disbursed.

‘complementarity’ is a fundamental concern. Any measures that fundamentally change the structure of the present agreement should not be introduced until 1 July 2010 unless the Covenant has proven a catastrophic failure.

The Covenant contains two overriding commitments – to meet the recycling targets, and to raise at least \$15 million to support appropriate projects. This financial pledge is subject to review, but it would be against the spirit of the Covenant for sums of an entirely different order of magnitude to be demanded within the lifetime of the present agreement.

This raises the question of proportionality. If it is already clear that the overarching 65% recycling target will be missed by a wide margin, then Covenant signatories might feel honour-bound to increase their financial commitment quite significantly. But if the 2010 outcome is still far from clear, any options involving a massive increase in funding should be ‘parked’ until discussions on the post-2010 era begin.

The analysis in the report is based on the assumption that there is no further progress towards the targets in the absence of new economic mechanisms, but this is an unrealistic scenario used for illustrative forecasts rather than a realistic assessment of the prospects for 2008-2010.

According to Appendix C of the report, recycling advanced by eight percentage points from 48% in 2003 to 56% in 2005. This suggests that achievement of a further nine percentage points in the following five years should be within reach, despite the obstacles which have been identified – limits on kerbside collections, declining recycling from hotels and clubs, an increase in the amount and variety of packaging materials, a reduction in buy-back prices of materials (specifically glass) and lack of financial drivers for brand owners.

The potentially most effective mechanisms discussed in the report would involve an expenditure way beyond \$15 million, and would take two years or more to bring into force. As the report indicates, it is unlikely that we would see positive results from them before July 2010.

This suggests that in the short term, this project should be content with modest proposals for fine-tuning Covenant commitments and/or introducing flanking measures which do not impact significantly on Covenant signatories. More far-reaching measures could be developed and considered in the context of the findings of the mid-term review.

3.2 INDIVIDUAL RESPONSIBILITY

Section 4.2.3 rightly says that the present Covenant framework does not measure the relative performance of signatories who are complying with the Covenant or reward individual signatory performance.

A change from collective responsibility to individual company responsibility would fundamentally alter the existing understanding but would not in itself change the Covenant philosophy. In our view this change would be justified if the mid-term review shows that the Covenant is failing, but it is too great a step to be regarded as simply a way of helping the Covenant along.

4. KEY ASSUMPTIONS

4.1 ECONOMIC INSTRUMENTS AND SOURCE REDUCTION

Section 6.2 of the report says that the assumed level of source reduction is an important determinant of the relative merits of different mechanisms. Unfortunately we believe that these assumptions are unrealistic.

For the purpose of assessing compliance costs the report assumes that

- a performance-based ADF could be crafted to encourage source reduction of around 2% between now and 2010 (*section 5.2*) and that
- the obligations under a certificate recycling scheme would encourage source reduction of around 5% between now and 2010 (*section 5.4*).

These assumptions appear to have been based on evidence from Germany and the UK which does not stand up to close scrutiny:

- Appendix D.3.2 of the report cites an Öko-Institut report which claims that packaging volumes in Germany declined by 4% during the period 1990 to 1999, compared to a growth of around 15-20% in the Netherlands.

But following reunification in 1990, Germany's average annual GDP growth between 1991 and 2000 was only 1.3%⁵ whereas the Netherlands' was 3.2%.⁶ The change in the relative purchasing power of Dutch and German consumers seems much more likely to be the explanation for any difference in packaging consumption.

- The report adds that Quoden (2004) found an 18% reduction in the quantity of packaging used in Germany in 2000 compared to what would have happened without the Packaging Ordinance and investments in recycling capacity, including sorting and processing facilities of around €20 billion. We have checked with Joachim Quoden, Managing Director of PRO Europe, the association of national "Green Dot" recovery organisations,⁷ and find that the 18% reduction related to the quantity of packaging *disposed of*, not the quantity of packaging *placed on the market*.

In fact packaging consumption in Germany fell by 5% between 1991, the year the Packaging Ordinance was adopted, and 2000. Arguably, since the Ordinance did not come into force until January 1993 and it takes time to implement design changes, the true comparison is between 1993 and 2000, in which case the result was a 2.7% *increase!*

- Appendix H cites a UK study which included case studies showing packaging reductions of 21% for soft drink packaging, 38% for cat food containers and 7% for detergent packaging in recent years. *"The packaging regulations in the UK are not necessarily responsible for these changes, for example they may reflect other factors such as shifts in*

⁵ H. Siebert (2005): *The German Economy – Beyond the Social Market*.

⁶ Source: EUROSTAT.

⁷ The non-profit compliance organisations set up by industry, plus DSD, which was formerly non-profit.

product markets. However, it does provide a guide to the magnitude of reductions that may be possible”, says the MMA/BDA report.

We would argue that such changes are made when technology and market opportunities permit, and are unlikely to be prompted by the availability of a subsidy. Source reductions may take the form of a “great leap forward” in lightweighting or packaging substitution such as the examples given here, or of shaving off a few grammes here and there, but achieving source reduction as large as even 2% of the total market within 18 months seems highly optimistic.⁸ Achieving major source reductions in one product or packaging sector is certainly possible; achieving them across-the-board is another matter entirely.

UK packaged goods producers are now under extreme pressure from the Government and the supermarket chains to reduce the amount of packaging they use. In July 2005 WRAP, the Government-funded Waste Resources Action Programme, launched the ‘Courtauld Commitment’ with 13 leading retailers to design out packaging waste growth by 2008 and deliver absolute reductions in packaging waste by March 2010. Packaging is increasing by an average of 1.2% per annum, so this highly focused programme is aiming at a considerably more modest achievement than the MMA/BDA report expects to be achieved through the introduction of a low-cost producer responsibility scheme. Results have not yet been reported.⁹

4.2 SOURCE REDUCTION AND THE PREFERRED OPTIONS

4.2.1 Section 5.5 of the report concludes that a recycling certificate scheme and combined ADF with competitive tender would both provide the least cost outcome.

A low-cost funding mechanism would however create minimal incentive for source reduction and probably none at all, so the two advantages claimed for a recycling certificate scheme are contradictory. The same applies to a low-cost ADF.¹⁰

Germany’s producer responsibility system is notoriously expensive in comparison to other European systems.¹¹ According to the latest official data, Germany’s per capita

⁸ For example, lightweighting opportunities may often be identified but can only be implemented when new filling machinery is installed. It may not be economically feasible or environmentally desirable to replace this machinery ahead of time. See for example Perchard and Overton (2003): *Impacts of the Packaging (Essential Requirements) Regulations – a brief survey*, BERR website (www.dti.gov.uk/sustainability/packagingfinalreport.pdf).

⁹ The targets announced by the retail chains are as follows: Asda – 25% packaging reduction target for own-label food products by 2008; Marks & Spencer – 25% reduction in non-glass packaging by 2012; Morrisons – 15% reduction in own-label packaging by 2010; Sainsbury – 5% overall packaging reduction by 2008 and 25% packaging reduction for fresh produce by May 2008; Tesco – 25% reduction in all packaging, branded as well as own-label, by 2010; Waitrose – to keep future packaging levels below 2002 levels and to cut *growth* in packaging waste by 15% in 2006.

¹⁰ The report is a little confused about this. In spite of the cost assessment being based on the assumption that an ADF would generate 2% source reduction within 18 months, section 4.2.5 comments that empirical evidence suggests that ADFs can have at best only a limited influence on product design – but goes on to say that “*if brand owner obligations were dependent on their share of the total weight of consumer packaging sold then there would be an incentive to reduce packaging in order to minimise their obligations under the scheme.*”

consumption of packaging in 2005 was 188 kg, against an average in the 15 “old” member states of 183 kg.¹² The UK, which has the cheapest system, consumed 171 kg of packaging per person.¹³ We are the first to admit that comparisons of per capita packaging consumption are unreliable because of differences in methodology, but the data certainly do not support the notion that the higher the producer responsibility cost, the less packaging is used.

A scheme which actively encourages companies to seek out source reduction opportunities for external funding would be much more likely to achieve results than an economic instrument which is simply designed to encourage source reduction through the price mechanism. Thus an ADF which was used to fund source reduction projects would be much more likely to have an impact (though not necessarily within 18 months) than a recycling certificate scheme intended to promote source reduction purely through the price mechanism. As the report concedes, an ADF or recycling certificate is not the only cost factor involved in packaging design and purchasing decisions.

4.2.2 Section 4.2.5 comments that empirical evidence suggests that the influence of ADFs on packaging minimisation is limited at best. The costs to producers of product failure through lighter packaging may be greater than the additional cost of paying waste disposal fees.

Not only the economic cost to producers, but also the cost to the environment of spoiled products. The presumption should not necessarily be that lightweighting packaging will always benefit the environment.

If Australia wants improved packaging design, the best way to approach it is not through economic incentives but through a systematic evaluation of what the packaging needs to do in terms of safety; product protection; handling and storage requirements; openability, resealability and tamper-evidence; presentation and marketing and so on.

There is a suite of European standards setting out a methodology on designing for the environment,¹⁴ and there is some interest in Asia in adopting them as ISO standards. We recommend that their suitability for use in Australia is considered.

¹¹ The DSD compliance organisation charges EUR 0.074 per kg for glass, EUR 0.175 for paper & board, EUR 0.272 for steel, EUR 0.733 for aluminium, EUR 1.296 for plastics, EUR 0.752 for liquidpaperboard cartons, EUR 1.014 for other composites and EUR 0.102 for wood and other natural materials, i.e. a maximum of \$2 per kg for the most expensive material.

¹² If we exclude Greece (96 kg), which has rather different social conditions, the range was between 132 kg in Finland and 225 kg in Ireland

¹³ According to the National Packaging Covenant 2005-2006 Annual Report, 4.2 million tonnes of packaging was consumed in Australia in 2005. The population was 20.7 million (source: Australian Bureau of Statistics). That equates to per capita consumption of 203 kg. This is higher than the EU average, but we must stress that the methodologies for estimating packaging consumption may not be comparable.

¹⁴ EN 13427:2004, *Packaging – Requirements for the use of European Standards in the field of packaging and packaging waste*; EN 13428:2004, *Packaging – Requirements specific to manufacturing and composition – Prevention by source reduction*; EN 13429:2004, *Packaging – Requirements for relevant materials and types of reusable packaging*; EN 13430:2004, *Packaging – Requirements for packaging recoverable by material recycling*; EN 13431:2004, *Packaging – Requirements for packaging recoverable in the form of energy recovery, including specification of minimum interior calorific value*; and EN 13432:2000, *Requirements for packaging recoverable*

4.3 CONTAMINATION AND MARKETABILITY

Section 5.7 of the report presents a quantified illustration of the relative overall costs of different mechanisms, and estimates of the recycling outcomes by sector and material so as to show how the different mechanisms would meet the overall recycling gap (assuming no further progress in recycling in the absence of any new mechanisms).

The report explains that no consideration was given to the contamination levels and marketability of recovered materials in the assessment of the various instruments as this was considered a second order issue and data to allow for the analysis was scarce. However, it comments that further research in this area may be warranted.

Whilst recognising that the report is a screening exercise and that further work would be needed once it is decided to consider a particular mechanism in detail, we think that the report should have flagged up that contamination and marketability is an issue that will need a great detail of attention at the detailed system design stage.

The UK example shows that unless targets and economic instruments are correctly designed, a market-based system can encourage perverse outcomes.

5. FOCUS OF AUSTRALIA'S RECYCLING EFFORTS

5.1 RECYCLING AND LANDFILL REDUCTION

Section 2.2 of the report states that the Covenant's 65% packaging recycling target by 2010 is the main focus of the study, because if this target is achieved, it is likely that the target relating to disposal of packaging to landfill will also be met.

The report arrives at this conclusion by calculating the impacts of a 5% increase in the Australian population between 2005 and 2010. However, population growth is probably less relevant than the growth in the number of households or the growth in GDP. A UK study¹⁵ found that a four-person household uses 70 kg of packaging per person per year, whereas a single-person household uses 120 kg, so the report's assumption needs to be tested against the trend towards smaller households and well as changes in consumption patterns and developments in the lightweighting of packaging.

Taking these considerations into account, European studies¹⁶ assume that packaging consumption will grow at half the rate of increase of GDP. This would imply an 8% increase in the amount of packaging placed on the market,¹⁷ which would mean that packaging consumption would be 4.58 million tonnes in 2010 rather than 4.46 million tonnes. With 65% recycling, 1.60 million tonnes would be landfilled in 2010 rather than the 1.56 million tonnes projected in the report. This is however still less than the 1.82 million tonnes landfilled in 2003, so the report's conclusion that the landfill target will automatically be met still holds true.

However, we would stress that landfill diversion is not necessarily Australia's most important environmental priority for the longer term. Thus any mechanisms selected should not conflict with – and should ideally help provide the foundation for – any more holistic approach to environmental sustainability that might be adopted later.

5.2 THE 'CRITICAL MATERIALS'

Section 2.3 of the report adds that the critical materials for achieving the 65% recycling target are paper/cardboard and glass as these two materials represent over 80% of packaging material consumption.

The authors of the report are confident that plastics and aluminium will meet their recycling targets, and although steel is lagging behind (with recycling currently at 38% against a target of 60%-65% by 2010), this is not seen as a significant factor in achievement of the overall 65% target because of its relatively low volume.

¹⁵ J M Kooijman (2000), *Environmental Impact of Packaging: Performance in the Household*, published by INCPEN.

¹⁶ See Perchards et al ((2005), *Study on the progress of the implementation and impact of Directive 94/62/EC on the functioning of the Internal Market*, published by the European Commission at http://ec.europa.eu/enterprise/environment/reports_studies/studies/report_packaging_direct.pdf.

¹⁷ The CIA World Factbook reports a 3.5% growth in GDP in 2005 and 2.7% in 2006 and 2007; the Economist Intelligence Unit forecasts 3.4% in 2008 and 2.9% in 2009 – compound growth of 16.1%.

Chapter 5 of the report discusses the option of applying an ADF restricted to paper/cardboard and glass only. This, it says, would save administrative costs of around \$100,000 to \$200,000 per annum but would add \$1.5 million per annum to compliance costs.

In principle, we believe that it is objectionable to discriminate *ab initio* between Covenant signatories on the basis of the material they use. We can foresee a situation where users of plastic or metal packaging are criticised for doing less to minimise packaging waste than users of glass or paper & board. The report has already warned that the target recycling rate for steel cans may not be met.

If all applications are scrutinised according to the same criteria, then those projects which would potentially remove the largest tonnage from the waste stream, either through recycling or through source reduction, would be more likely to secure funding. But a plastics project offering certain success should have a fair chance against a less robust glass project.

5.3 SOURCING PACKAGING WASTE FROM BUSINESSES

The report says that the C&I sector is considered the most significant in terms of realising the 65% target as it generates the largest volume of potentially recyclable target materials.¹⁸ It cites Perchards' comment that C&I packaging from some large concentrated sources can be collected and recycled at much lower cost than household packaging, and so offers the prospect of maximum diversion from landfill at minimum cost.¹⁹ Insofar as C&I packaging is always under the control of business, then including as part of a complementary mechanism a duty of care requirement on end-users and a data-gathering system to ensure that material sent for recycling is recorded, is in the spirit of the Covenant. However, the authors of the report say, "*the sector is highly diverse, fragmented and may not necessarily represent the most viable and efficient target for increased recycling.*"

¹⁸ Section 5.7 says that 60% of the additional paper recycling and around 20% of the extra glass recycled is expected to come from the C&I sector.

¹⁹ However, section 5.7 of the report says that "*in general, C&I collection is more expensive than MSW collection, and the costs of each increase as the amount of waste collected increases.*" We accept that collection and sorting systems for household waste are well established in Australia, with most areas now serviced with multiple bin systems, but we are also aware that glass contamination is a problem. Thus we still find this statement in the report surprising – conventional wisdom in Europe is that the collection and sorting of household packaging waste is up to ten times as expensive as the collection and sorting of C&I packaging waste, since C&I waste is relatively clean, relatively homogeneous and each pick-up produces much larger quantities, and even if the ratio is much lower in Australia we would still expect it to be in favour of C&I collections. Perhaps the key is the statement in section C.4.2 that there is a high cost for "*the current uncoordinated effort*" to collect recyclables from SMEs – maybe a coordinated effort would not have such a high cost.

At some stage the cost of both C&I and MSW collections does increase as the amount of waste collected increases, but this is not always the case. It depends on vehicle capacity in relation to the amounts collected, the amount of idling time, distances between stops and so on. The more high-quality homogeneous material is collected, the more cost-effective collection will be; the more *types* of material collected – i.e. the greater quantity of low-value material that needs sorting – then certainly the cost of collection will inevitably increase.

We note that no consideration was given to contamination levels and the marketability of recovered materials in the assessment of the various instruments – this seems to us a crucial factor which must always be taken into account. Section B.3.2 says that the Chinese are reportedly willing to take all waste paper and board, regardless of quality – but this situation cannot be expected to continue.

It is true that the C&I sector is diverse and fragmented, but the packaging materials available for collection there are less diverse than those found in the household waste stream and there are fewer C&I sites than households. The market barriers report ²⁰ noted that *“while the coverage of kerbside services to Australian households is very high (91%), the extension of contracted kerbside collections beyond households is limited. There are some widespread attempts to include community facilities such as schools, libraries and council buildings. The provision of contracted services to SME’s, including retail, has been very limited. Where this has occurred a high yield of recyclables has been achieved indicating this could be an area of significant lost opportunity. A review of the waste stream at most SME’s including retail outlets shows a very high composition of recyclables in the waste stream.”*

The market barriers report goes in to say that *“one of the barriers to local government seeking to service SME’s with recycling is the uncertainty about the cost of the service. There is now a high degree of certainty about residential kerbside collection costs with both local government and contractors accurately knowing their per household costs. As there is little experience with the contracting of commercial area collections there is uncertainty about the per site costs. There is also greater variation in service area and needs which adds to the complexity together with the issue of services being paid by ratepayers but benefiting business (often tenants). There is a clear pathway of best practice for kerbside recycling from households. This includes contract structure, program scope and educational support. There is not a similar best practice approach for the provision of services to non-household sites in relation to container type, frequency, contract, vehicle type and education.”*

This supports our view that there should be a new focus on collecting used packaging from the C&I sector. We do not believe that the local authorities should finance this – collection charges should be based on the costs incurred in each case, and there is no reason in principle why the public sector should be responsible for these collections.

What is needed is a mechanism to ensure or at least encourage C&I site operators to contract with somebody to take away their recyclable packaging materials and get them recycled. This could be through a duty of care requirement, or it could be through a landfill tax which makes recycling a better economic option than disposal. There could be provision for exemptions to avoid businesses in isolated communities being penalised unnecessarily.

Glass from pubs, clubs, restaurants and hotels is a special case. The market barriers report explained that collections can no longer be funded from the value of the collected material due to a fall in both the tonnage of used glass containers available and the value per tonne. The report notes that there has been a push for a requirement to operate recycling onsite – in effect, a duty of care requirement.

²⁰ Hyder Consulting Pty Ltd (2007), *National Packaging Covenant Structural barriers Investigation, final report 15 June 2007.*

5.4 RECYCLING AND SUSTAINABILITY

5.4.1 In advocating a performance-based ADF or recycling certificate scheme as a way of improving packaging design, Section 4.2.5 of the report suggests that increased recyclability should be one of the goals.

Increased recyclability is indeed a valid goal, but its desirability varies from case to case. There are instances where material usage, fuel consumption and even number of vehicle movements can be reduced through the use of lightweight composite packaging which is relatively difficult to recycle.²¹ There also examples where increased recycled content offers a better environmental option than improved recyclability.

A one-dimensional focus on recycling may not be the best route to achieving the Covenant's overriding objective of *"improving the total environmental performance and lifecycle management of consumer packaging and paper."*

As Appendix C.4.6 of the report admits, *"there is a lack of information available on the environmental performance of packaging materials, especially new materials and also where multiple materials are used."*

5.4.2 Footnote 17 recorded a comment that we made on the 7 October draft in a manner which might suggest the opposite meaning to that we intended: *"As Perchards (2007) ibid states there may be some instances where material usage and fuel consumption can be reduced through the use of lightweight composite packaging that is relatively difficult to recycle, which may be counter to the overriding goal of the Covenant to improve overall environmental performance."*

What we actually said was, *"recyclability is not the only environmental goal for packaging design and may often not be the overriding one. Lightweighting reduces fuel consumption and sometimes the number of vehicle movements needed."*

²¹ Appendix C.4.6 comments that *"the use of flexible plastics and composites that are more difficult to efficiently recover and recycle further exacerbates the problem. The net impact of these trends is more packaging and less recycling."* It is important not to lose sight of the ultimate goal – sustainable production, distribution and consumption, and a reduction in the overall environmental impact of packaging and packaged goods. Packaging made from flexible plastics and composites is used because it can be carefully tailored to the protection requirements of the product concerned. This means maximum protection and minimum material use. These pack types are in most cases relatively difficult to recycle but it is hard to understand why they should be said to lead to *more* packaging.

Whatever their impact on recycling rates, they can only "exacerbate the packaging problem" if they are not resource-efficient though their complete lifecycle.

6. CHOICE OF OPTIONS

6.1 ADVANCE DISPOSAL FEES (ADFs)

- 6.1.1** Section 4.2.5 says that *“if brand owner obligations were dependent on their share of the total weight of consumer packaging sold then there would be an incentive to reduce packaging in order to minimise their obligations under the scheme.”*²² Moreover, *“if the system was brand specific then they would also have an incentive to make their packaging more recyclable as it would be easier to meet their own individual recycling obligations.”*

The report has already cited Perchards’ conclusion from European experience that reduced procurement costs and transport costs are usually a bigger incentive for packaging minimisation than any possible savings in companies’ weight-based producer responsibility charges.

Brand-specific recycling obligations would incur sorting and reporting costs quite out of proportion with any possible benefits from lightweighting and increased recyclability. How would this be done? By reading the bar-code of every pack delivered to a recycler, or at least of a sufficiently large and representative sample? There are better uses for everybody’s money.²³

As we explained in our peer review of the 7 October 2007 draft, there is no brand sorting or tracking back of individual products’ recycling costs anywhere in Europe. This would be prohibitively expensive. Individual producer responsibility (IPR) has been mooted for waste electrical and electronic equipment (WEEE) in the EU, but even in this sector, which generates far fewer units of waste and where there is a much higher value per unit, nobody has (as yet) found a way of making IPR work.

- 6.1.2** Appendix E.1.1 concludes that a product charge (alone) payable by manufacturers of consumer packaging on the number of units or weight of packaging sold will not encourage recycling. It may lead to a reduction in production or lightweighting of packaging by providing an incentive to reduce the units or weight of packaging sold, but it provides no direct incentive for the recovery and recycling of packaging waste (indeed recycling could even fall if output is reduced in response to the fee).

An ADF where fee revenues fund subsidies to recyclers/reprocessors would increase the competitiveness of recycling and should lead to increased recycling rates. Identifying fee levels and revenues necessary to prompt a specific increase in recycling levels would present a challenge and may necessitate some adjustments to fee levels over time.

We agree that the value of an ADF is not in its (negligible) encouragement of minimisation, but in its ability to raise funds from industry in an equitable manner to support recycling.

²² This appears to contradict a statement earlier in section 4.2.5, which said that ADFs can have at best only a limited influence on product design.

²³ Brand sorting is also put forward as an option in section 4.3.3. Our objections apply there too.

The report demonstrates more interest in subsidies to recyclers/ reprocessors (as in the UK) than in subsidies to local authorities and other collectors (as in the tried and tested systems in place in almost the whole of Europe).

Section 6.1.3 of the report says that stakeholders claim that new infrastructure would be needed for the targets to be met, but in Europe the real bottleneck is collection, not reprocessing – all the material collected that is of sufficient quality to be worth recycling can be recycled, either in Europe or in Asia. Thus, systems were set up to pay all or a proportion of the costs incurred by the local authorities or their contractors.

We note that Australian local authorities have set up kerbside collection systems even without this funding assistance, so the European example may not be relevant here. But we also note that Australian local authorities are complaining about the cost of running kerbside collections. If these costs become unsustainable, then collection subsidies would indeed be necessary to support the maintenance of current recycling rates, let alone increase them.

Subsidising the collection of material (payment for a service, the delivery of material of a quality that meets recycling specifications) should avoid the nonsensical situation described in the report, where 25% of the glass collected is unusable because of unsuitable collection methods and because container glass is often contaminated in kerbside collections by plate glass and ceramics. If collection were subsidised, there would be no problem if the market value of the material is low – the market value being set by the cost of procuring virgin material. It would also avoid subsidising recyclers, which risks distorting competition since paper and glass recyclers are an integral part of the packaging supply chain.

The report supports this point of view in Appendix E.2, which says that “*where subsidies are provided according to the quantity of material recycled, price signals will be more direct and the mechanism more effective in promoting desired levels of recycling.*”

6.1.3 Who would pay an ADF? Section 4.3.1 identifies the main options as supply chain signatories of the Covenant; all brandowners; only supply chain signatories or brandowners not meeting expectations under the Covenant; or only supply chain signatories or brandowners not meeting expectations for the target materials (glass and paper).

The report rightly points out that applying the fee to brandowners for target materials is likely to be perceived as inequitable and the costs of applying the fee to supply chain signatories for all materials may not be much greater.

We have already commented that in principle, we believe that it is objectionable to discriminate *ab initio* between Covenant signatories on the basis of the material they use.

On the other hand, given that in reality all costs are passed up and down the supply chain according to the relative negotiating strength of the respective buyers and sellers, we believe that there is no advantage in complicating matters by involving raw material suppliers or packaging converters in the ADF (retailers should of course be responsible for their private-label output). For the same reason we do not agree with the statement in section 5.2 that for equity reasons, an ADF applied to supply chain signatories is to be preferred to one applied only to brandowners.

We would agree that a performance-based ADF paid by all brandowners²⁴ on top of a basic contribution to cover administrative costs could be an equitable and effective solution for the period after 30 June 2010, should further measures be needed to achieve Australia's recycling objectives.

Offering fee offsets to companies that could demonstrate that they have increased recycling is a possible option. We commented previously that

- as far as household packaging waste is concerned, rebates would be easier to apply if the ADF was paid by packaging producers than by brandowners – but this would be open to the objection that as packaging is 100% of the added-value of a packaging producer, but only a small proportion of the added-value of a brandowner, it would impose an unreasonable burden on the packaging industry if market conditions made it impossible for them to pass the cost on. And could a mechanism be applied to ensure that the ADF was applied to foreign converters exporting packaging to Australia?
- A fee offset for companies sending their backdoor waste for recycling could be less problematic. This done in some European countries, but is only possible in countries where the 'Green Dot' organisation is allowed to cover C&I packaging waste as well as household packaging waste.

6.1.4 Section 4.3.2 discusses an option based on increasing the funds allocated to NPC projects to a level that will allow them to 'purchase' recycling to close the gap between current recycling and the 2010 target level. This would open up the scope of the NPC project funding process to allow for *any* projects to be put forward to compete with funds allocated as a direct subsidy per tonne of packaging material recycled, reused or avoided.

Opening up the funding criteria should make it possible to achieve more incremental recycling per dollar spent. However, a significant increase in the funding already agreed would seem to fail the 'complementarity' test.

6.1.5 Section 5.3, in assessing the various mechanisms identified, comments that broadening the availability of subsidy funds to a wider set of applicants would allow upstream projects such as source reduction to be funded as well as downstream projects for collection and reprocessing.

We see great dangers in allowing funds raised by Covenant signatories to be used in this way. Companies could end up being compelled to subsidise their competitors – and in the worst case, to subsidise competitors' source reduction projects that would have been carried out even if NPC funding had not been available.

6.1.6 Section 4.3.2 goes on to discuss three approaches that could be employed to competitively 'purchase' recycling/reuse services – bilateral negotiation between government and one or more sellers; a competitive tendering process where government retains significant flexibility in how the successful seller will be chosen and can allow negotiation on final terms with that bidder; and a more structured auction format, with a clearly defined commodity and clear rules on how prices will be struck and bidders chosen to complete the sale.

²⁴ Though there could perhaps be a *de minimis* exemption for companies handling less than a certain tonnage of packaging and with less than a certain turnover.

The authors conclude that initially a competitive tendering process is more likely to be suitable. As under the current application process, companies would indicate the amount and type of waste material to be recycled as part of their bids and the level of funding sought.

A competitive tendering process could be used as the precursor to a national producer responsibility system. *Local authorities* could put forward plans for an enhanced collection and sorting system, and the most cost-effective could be part-funded. This might help solve the glass quality problems referred to in the report.

6.1.7 The account of the German system in Section D.3.2 is not very clear or well-focused on issues relevant to Australia. It is also incorrect in some respects.

Germany was the first European country to adopt legislation imposing producer responsibility on all packaging waste, and the basic concepts have been adopted in all of the 27 EU member states except Denmark and the UK. The same approach has also been adopted by some countries outside the EU.

The basic obligation in the German Packaging Ordinance of 1991 is for all stages of the supply chain to take back used packaging and get it reused or recycled, but for sales packaging supplied to private end-users there is an exemption to the take-back requirement if a 'dual system' is established that meets the recycling targets laid down.

Industry set up DSD (Duales System Deutschland) in 1990 to take over companies' obligations for sales packaging. It decided that brandholders (branded goods manufacturers and retailers for private label) were the most appropriate stage in the chain to pay fees. The payment mechanism was a licence fee for use of an on-pack logo, the Green Dot, to demonstrate that a pack was participating.

The Ordinance required a nationwide take-back system to be set up within 18 months, and very higher targets were imposed from the outset. Germany's overall packaging recycling rate reached 81% by 1997, but by 2005 had fallen back to 68%.

DSD operates a recovery system for non-refillable sales packaging from 'private end-users', i.e. households and sites where packaging waste is similar to household waste, such as restaurants, schools, hospitals and sports facilities. It does not physically carry out any operations itself, but appoints waste contractors through a competitive tendering process.

The Ordinance was amended in 1998, and the changes opened the way for other organisations (mainly waste management companies) to compete with DSD:

- Since 1998 the Ordinance has permitted 'self-compliance'. This is a slight misnomer, as it actually means that groups of self-complying companies use a third party to meet their combined obligations. Self-compliers do not need to recycle material which they themselves placed on the market. Waste management companies collect more packaging waste from end-users like hotels and restaurants than is needed to meet the targets, and the surplus is used to meet the obligations of other self-compliers (e.g. small retailers).²⁵

²⁵ A further amendment to the Ordinance which is due to come into effect in November 2008 will rule out self-compliance for household packaging by requiring all sales packaging supplied to the end-user to be covered by a dual system.

- Two waste management companies now operate dual systems throughout Germany, and others are currently undergoing the lengthy approval process.²⁶ To obtain approval from each *Land* (federal state), dual systems must show that they can collect used packaging throughout the territory. Collection facilities are not duplicated – the rival dual systems use DSD’s sacks and bins, and pay for them according to their market share.

For transport packaging, the Ordinance places legal responsibility for take-back on the manufacturers and distributors that supplied it. Collection systems operate for particular types of commercial and industrial packaging, and for specific product sectors. Otherwise, end-users organise collection and recycling themselves. They sometimes claim back the cost from their suppliers by deducting an appropriate amount from suppliers' invoices.

The Ordinance originally required market shares for refillable beverage containers to be maintained at 1991 levels. If the reuse quota was not met, mandatory deposits would be imposed on those beverage sectors falling below the 1991 level. The containers affected would have to be returned in-store and would no longer participate in the Dual System. In 1997 the market share of refillables fell below the 1991 level for the first time, and after prolonged discussions and legal proceedings, mandatory deposits on non-refillable containers for packaged water, beer (and drinks containing beer) and carbonated soft drinks, finally took effect in 2003.

Although Germany provided the original model for European packaging legislation and implementation systems, it is not entirely typical:

- Many European ‘Green Dot’ systems pay only the additional cost rather than the total cost of separate collection and sorting of household packaging waste. There have been complex negotiations to determine what is the basic cost to be funded by the local authority and what is the additional cost to be funded by the ‘Green Dot’ system, but as local authority collection services are mostly contracted out nowadays it has become much easier to establish what the true costs of collecting packaging waste are.
- Many national ‘Green Dot’ organisations deal with some or all C&I packaging as well as household packaging.
- DSD, like the ‘Green Dot’ organisations in other European countries, was set up as an industry self-help organisation. However, DSD in Germany is now the only ‘Green Dot’ organisation not run by the packaging supply chain, as it was sold off to a US private equity house in 2004 following pressure from the German competition authority. Thus it is no longer a non-profit organisation.
- In Western Europe, the UK is the only country other than Germany to have profitmaking competitors to the national ‘Green Dot’ organisation for household packaging, though individual compliance is an option everywhere except Italy. However, there are profitmaking competitors to the national ‘Green Dot’ organisation in seven of the 12 new member states.

The report says that although the German scheme has achieved high rates of recycling, it has been criticised for leading to significant exporting of materials in the absence of

²⁶ The MMA/BDA report refers to “the dual system”, whereas in fact here are several. The authors undoubtedly meant DSD, the original dual system.

domestic markets. This was certainly true in the early days, but the comment is out of date. When Germany's high recycling targets first came into effect in 1993 there was certainly insufficient reprocessing infrastructure and a great deal of material was exported to recyclers in neighbouring countries.²⁷ However, DSD's fee for plastics included a subsidy for plastics reprocessing and faced with complaints from neighbouring about its waste exports, the German Government agreed to refrain from deliveries of waste plastics to recyclers in EU member states after January 1994. Thus Germany has been the one EU member states which has made great efforts to maximise the amount of recycling taking place within its own borders. In 2001, 95% of mechanical recycling took place within Germany.

Admittedly, the focus on recycling within Germany has more recently been eroded in favour of exports where reprocessing abroad can offer a better price,²⁸ but this is part of a general European trend and Germany is still less reliant on exporting packaging waste for recycling than its neighbours.

6.1.8 Section 3.1.10 argues that Extended Producer Responsibility (EPR) is primarily a cost-sharing principle akin to polluter-pays. *“By effectively engaging manufacturers and signalling to them the impacts associated with consumer use of their products, appropriate commercial arrangements to better manage the post-consumer waste impacts can be crafted and improved market outcomes achieved.”*

We agree. The producer has to pay the operating costs of the system, and, this, rather than any notional incentive to lightweighting, is the point of it.

6.2 RECYCLING CERTIFICATE SCHEMES

6.2.1 Appendix E.1.2 remarks that a recycling certificate scheme should, in principle, impose the lowest compliance costs as it provides greatest flexibility in how the recycling target could be met (though it admits that in practice, compliance costs will be strongly influenced by how the recycling certificate scheme is structured).

Section 4.2.2 comments that quantity based mechanisms generally provide greater certainty as regards achievement of outcome than price based mechanisms. For example, a tradeable recycling certificate scheme could be crafted to yield the specific target recycling levels under the NPC. The ADF, deposit refund scheme, variable charges for waste disposal and subsidies would set a price/subsidy to encourage recycling, but there would be uncertainty over the magnitude of the price necessary to promote the desired recycling levels. Price incentives could be

²⁷ The effect of this is described in Perchards et al ((2005), *Study on the progress of the implementation and impact of Directive 94/62/EC on the functioning of the Internal Market*, published by the European Commission at http://ec.europa.eu/enterprise/environment/reports_studies/studies/report_packaging_direct.pdf.

²⁸ There are three reasons for this: (1) Like the rest of Western Europe, Germany takes advantage of the huge demand from the Far East for secondary materials (EU rules do however insist that to count towards achievement of the originating country's recycling targets, packaging waste recycled abroad must be reprocessed under conditions broadly equivalent to those within the EU); (2) the growth of competition in the packaging waste management market in Germany has led to more used packaging material being controlled by international waste management companies rather than by DSD; and (3) the mandatory deposit system introduced in 2003 means that the retailers now receive (and sell for the best possible price) PET and aluminium which would formerly have been collected by DSD and its competitors.

adjusted over time to align observed recycling levels with the target rate, but this will introduce uncertainty and additional compliance and administrative costs.

With a European-style ADF, there is some uncertainty as to the price needed to achieve the outcome. However, since there is a direct linkage between payment and outcome, it is always possible to improve the outcome (increase recycling) by increasing the price paid (per tonne of material delivered to a recycler).

With a tradeable recycling certificate scheme such as the UK's PRN system, the linkage between payment and outcome is less direct and there is a serious danger of unintended consequences. These are discussed below.

6.2.2 Section 4.3.3 explores some of the key features that a recycling certificate scheme could have, but the authors stress that they have not attempted a detailed instrument design. The liable parties could be all parties in the packaging supply chain, or could be limited to brandowners to simplify the system. The obligations (to recycle any packaging material or target materials only) could be allocated according to position in the packaging chain (if liable parties included different parties in packaging chain); in line with share of turnover; or in line with share of packaging handled/supplied/sold (as in the UK scheme). Credits could be issued to or created by recyclers/reprocessors (as in the UK scheme); or brandowners.

The UK system has not been a great success. It has met UK and EU legal requirements, but by focusing on collecting material at the lowest possible cost, it has not visibly addressed the recycling of household waste. Also it has encouraged the export of UK-generated packaging waste for recycling abroad, rather than increasing UK reprocessing capacity

Since it represents an almost unique approach to packaging policy,²⁹ it is difficult to determine whether the entire concept is intrinsically flawed, or whether it is the design of this particular system that is defective.^{30,31} Adoption of the same basic principles in another jurisdiction might help to answer that question, but as the UK system has been rich in unintended consequences Australian policymakers need to be careful.

We are sceptical, therefore, whether there is any value in a discussion of a recycling certificate scheme that is *not* based on detailed instrument design.

²⁹ Lithuania also has an element of tradeable permits in its system, and this does not seem to be working well.

³⁰ The report's footnote 24 says that according to Perchards, "*it is difficult to determine whether the lack of success is due to system design or the fact that a certificate scheme is intrinsically flawed.*" We did not say that it is a fact that a certificate scheme is intrinsically flawed, but merely a possibility. We do however agree with the footnote's conclusion, that a more detailed cost benefit analysis would be needed if this type of scheme were to be pursued further.

³¹ It certainly has not helped that the UK approach does not fit well with the producer responsibility systems in place in the rest of Europe, but we do not believe that this is its fundamental flaw. Nevertheless, the fact that the mainstream European approach has been refined and adapted for use by more than 25 countries in different geographical situations and at different levels of economic development, indicates that this model has a proven robustness which the UK system lacks.

6.2.3 Section 5.4 says that the creation of a market for recycling activity would ensure that the least cost recycling of materials would result.

In a perfect market, yes, but economically rational behaviour might take account of issues outside the plan. Packaging policies are not implemented in a vacuum, and wider considerations may distort the intentions of the designers of the system.

Also, least-cost recycling might counter other policy objectives, for instance encouraging the export of packaging waste for recycling in Asia, to the detriment of domestic recyclers. This is what happened in the UK.

6.2.4 Appendix D.3.1 is a description of the packaging waste management system in the UK. Unfortunately, despite the considerable attention that the report gives to the tradable permits concept, it does not describe in any detail how the UK's unique tradable permits system works. In particular it ignores the important relationship between PRNs (Packaging Recovery Notes) and PERNs (Packaging Export Recovery Notes).

In the UK system, each obligated company³² is responsible for a share of the packaging it supplies, expressed in tonnes, depending on where it is in the packaging chain – producer of packaging raw materials, converter (packaging producer), packer/filler, or seller (selling packaged goods to the end-user). The ‘activity obligation’ is different for each stage of the chain so a packaging producer has a 9% obligation for example, but a packer/filler 37%.

A company's legal obligation is expressed as *(tonnage supplied) x (activity) x (target)*. Thus by January 2008 a packaged goods producer needs to obtain evidence showing that material equivalent to 25.715% of the tonnage of packaging he has supplied (i.e. 37% of the 69.5% recycling target for 2007) has been recycled on his behalf.

Dividing responsibility for the targets mathematically between all stages of the packaging supply chain rather than allocating each stage different tasks adds to administrative costs, but was intended to be ‘fair’. Unfortunately, it overlooked the fact that when companies are negotiating with suppliers and customers, those in a strong market position will always be able to pass costs on and resist costs being passed on to them. Thus the theoretical fairness is illusory.

‘Evidence’ takes the form of PRNs (Packaging Recovery Notes) and PERNs (Packaging Export Recovery Notes). PRNs are issued by accredited reprocessors, and PERNs by companies accredited as exporters of material for reprocessing. It was not thought practicable for the UK enforcement authorities to accredit and monitor the activities of non-European reprocessors, so it was decided to accredit the exporters instead. Thus, while PRNs are issued by the companies that recycle or recover material, PERNs are issued by the companies that collect and/or undertake the preliminary sorting and processing stages prior to transport to a reprocessor abroad.

The intention was that reprocessors and exporters would use the revenue from PRNs and PERNs to develop reprocessing capacity and/or boost collection of materials as necessary to meet the targets. The price of the certificates would vary by material, determined by the costs of collection and sorting, and by supply and demand of reprocessing capacity and of recyclable material. It was generally expected that certificates for materials with well-established recycling and collection facilities (paper,

³² There are de minimis exemptions.

glass) would be plentiful and thus cheap, while those for hard-to-recycle materials (plastics) would be scarce and thus expensive.

Income from the sale of the certificates was supposed to give reproprocessors an incentive to ‘pull’ more material from the waste stream into recycling. If the certificates for materials achieving low recycling rates were expensive, there would be a greater financial incentive to increase collection and develop recycling capacity. This contrasts with the Continental European model where the funds from the recovery organisation are paid directly to collectors, so material is ‘pushed’ towards recycling.

The first problem with this is that it is difficult to determine what investments have been made with the PRN money and what would have happened anyway in the normal course of business. However, in practice PRN prices are too low to be of great significance. The following table compares current PRN/PERN prices with the rates of financial support paid to local authorities by the recovery organisations in France and Ireland:

\$ per tonne	UK		France		Ireland	
	Min	Max	Min	Max	Min	Max
Paper & board	6	8	206	482	103	109
Aluminium	68	90	396	568	103	109
Steel	16	20	77	138	131	138
Plastics	18	27	533	1445	103	314
Glass	56	68	5	12	87	92

The UK price trend for plastics is the most remarkable and unexpected. When the system started back in 1998, there was a wide variation between maximum and minimum prices, with some reproprocessors setting prices as high as \$375, reflecting the fact that plastics needed the most effort and investment to achieve the target, while other plastic PRNs sold for \$150. Prices then fell sharply and the variation between maximum and minimum prices narrowed significantly. The price of plastic PRNs have remained low because the market has responded to the need to meet the targets less by investing in increased capacity at home than by exporting more for recycling abroad.

Thus, as the report notes, a perverse effect of the UK Regulations has been that reprocessing in the UK has actually declined. The proportion of UK packaging recycled that was reprocessed abroad increased from 12% in 2001 to 34% in 2006.³³

The obligations are linked solely with reprocessing. Collection is bypassed and there is no definition of the relationship of the obligated companies with household waste collection. The local authorities have a waste diversion target based on weight which encourages them to focus on heavy materials like green waste, newsprint and glass – they have no incentive to help the packaging sector meet its targets for metals and plastics.

³³ One possible explanation is that raw material prices have been higher abroad than in the UK, enough to offset the higher transport costs of shipping material abroad. Another explanation is that the PERN system can shift the economic balance in favour of exporting material rather than getting it reprocessed within the UK. Waste collectors and companies undertaking the preliminary stages of reprocessing have a choice between exporting the material (in which case they issue the PERN and earn the income from it), or supplying the material to a UK reproprocessor (in which case another party, the UK reproprocessor, issues the PERN). The income from selling a PERN can make it more financially attractive for waste collectors to export the material than to ship it to a UK reproprocessor.

Moreover, since the local authorities' aim is to divert material from the waste stream as cheaply as possible, they are increasingly collecting material commingled and leaving it to be separated later. Thus while industry-run bottle banks in the UK, like 'Green Dot' systems elsewhere, collect glass colour-separated, glass is increasingly collected commingled at the kerbside, which is resulting in the same quality problems as are being experienced in Australia.³⁴

Because the system is market-based and the market is blind, the system cannot focus on political priorities. Thus, it has concentrated on recycling C&I packaging and has done relatively little to promote the recycling of consumer packaging.³⁵ Hence the recent attacks on the UK packaged goods sector and the retail trade for 'overpackaging' – the local authorities are alarmed at the rising cost of household waste management and argue that if they are not going to receive any significant financial support, then packaging should be minimised at source instead.

As a market-based system, it focuses on compliance at minimum short-term cost, which has led to short-term thinking rather than a strategic build-up to long-term goals as in the 'Green Dot' systems. It also means that the recycling rate is close to the minimum allowed by law.

And it is difficult for obligated companies to budget, since they do not know what the market price of PRNs and PERNs will be since they change from week to week. 'Green Dot' fees are generally set a year at a time and in some countries remain stable for several years.

6.2.5 Appendix D.3.1 claims that the UK system does provide incentives for downsizing, some material switching and dematerialisation as the lower the packaging tonnage for a business, the lower the recycling obligation.

Prices paid by producers per obligated tonne under the PRN system are currently no more than \$4 for paper & board, \$12 for steel, \$25 for plastics, \$18 for glass and \$159 for aluminium.³⁶

Under the UK system – unlike the other European producer responsibility systems – companies do not pay for every tonne of packaging they place on the market, but only for the tonnage on which they have recovery and recycling obligations. Thus by January 2008 a company filling glass bottles must be in possession of PRNs showing that 25.715% of the tonnage of glass containers he supplied in 2007 has been recycled. The PRNs on 25.715% of his output will cost no more than \$4.63 per tonne of packaging placed on the market.

³⁴ We are aware that glass has always been collected at the kerbside in Australia.

³⁵ In any case, local authorities are not in the risk business and if there is financial support, it needs to be secure and structured. PRN revenues are too unpredictable to be a reliable source of funding.

³⁶ December 2007 data from *Materials Recycling Week*, 4 January 2008.

This is less than 0.2¢ for a 330g beer bottle, which is hardly a serious incentive to packaging minimisation.³⁷ A weight reduction of 10% would save less than 0.02¢ per bottle.

6.2.6 Appendix D.3.1 notes that in the UK there is no incentive to make packaging more recyclable because there is no brand sorting or tracking of products' recycling costs back to producers.

There is no brand sorting or tracking back of individual products' recycling costs anywhere in Europe. This would be prohibitively expensive. Individual producer responsibility (IPR) has been mooted for waste electrical and electronic equipment (WEEE) in the EU, but even in this sector, which generates far fewer units of waste and where there is a much higher value per unit, nobody has found a way of making IPR work.

In any case, recyclability is not the only environmental goal for packaging design and may often not be the overriding one. Lightweighting reduces fuel consumption and sometimes the number of vehicle movements needed.

6.3 DEPOSIT-REFUND SCHEMES

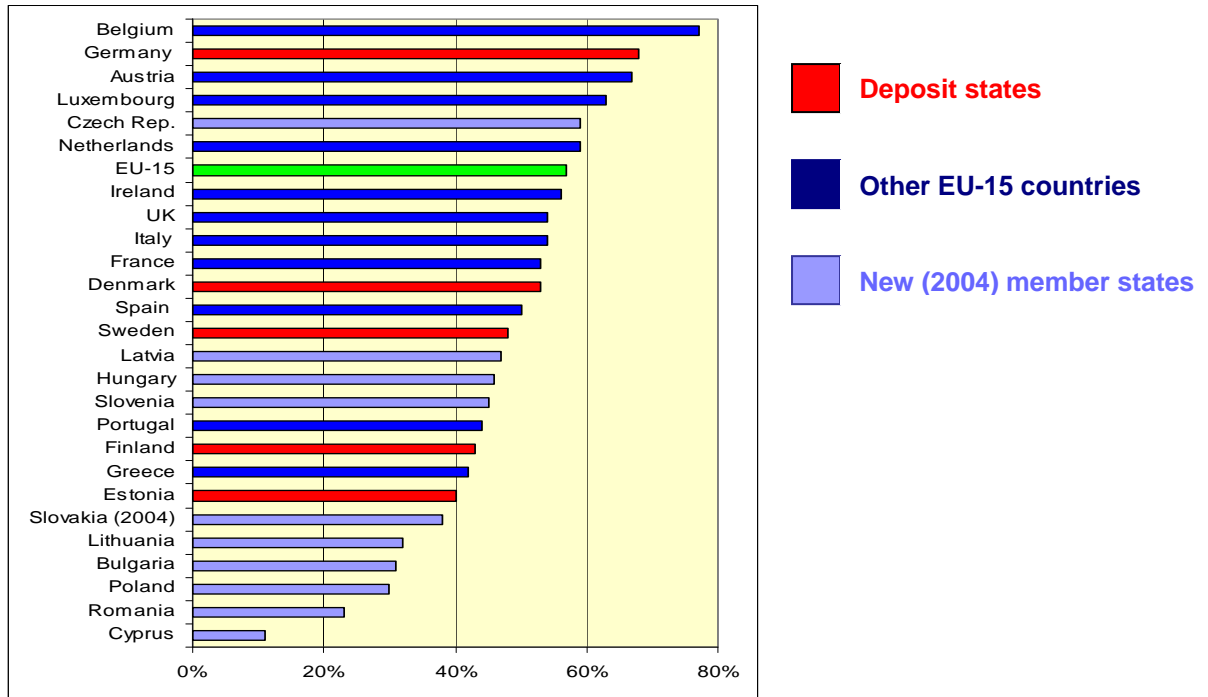
6.3.1 Section 4.2.7 says that “*deposit refund schemes have been successful in targeting discrete products such as glass, plastic, aluminium and steel containers from the household sector.*”

It would be truer to say that deposit refund schemes have been successful in targeting discrete products such as *some* glass, plastic, aluminium and steel containers from the household sector. They do not collect glass jam or coffee jars, plastic containers for personal care or cleaning products or metal food cans, for example.

In Europe, countries with deposit refund systems for beverage containers have higher costs but do not have higher recycling rates. Collection arrangements for non-beverage packaging are still needed, and one system is cheaper to run than two. Where CDL operates, valuable aluminium beverage cans and PET soft drink bottles are diverted into a parallel collection system, and to avoid costly collections of low-value material, the systems provided for non-beverage packaging are less comprehensive. The only EU member state whose recycling rate is above the EU-15 (i.e. Western European) average is Germany, whose recycling rate is now less than it was when CDL was introduced in 2003.³⁸

³⁷ When we made exactly the same point in our peer review of the 7 October 2007 draft report, the values we cited were no more than \$8 for paper & board, \$20 for steel, \$27 for plastics, \$68 for glass and \$90 for aluminium, and the PRN price for a 330 ml beer bottle was less than 0.6¢. This shows the volatility of such a market-based system. PRN prices in July 2007 were at their highest level since mid-2006, except for aluminium, but the December 2007 values were at a low point (against, except for aluminium). Thus these two sets of data represent the current range of PRN prices.

³⁸ Germany's overall recycling rate increased rapidly from 1992 to 1997, but subsequently fell from 81% in 1997 to 70% in 2004 and to 56% in 2005. There are a number of factors explaining this, of which the most important is the dismantling in 2004 of the quasi-monopoly of DSD, the national recovery organisation that handles packaging waste from households and certain business sites. But CDL certainly did nothing to reverse the downward trend.

European recycling rates, 2005

6.3.2 Appendix E.1.1 notes that separate collection of containers may indirectly have a positive impact on paper recovery by reducing contamination.

It is true that glass will not be collected together with paper in a deposit-refund system – but then glass need not be collected together with paper in any system. This is bad system design, aimed at low-cost collection rather than creation of an efficient closed-loop system.

6.4 LANDFILL TAXES AND VARIABLE WASTE CHARGES

6.4.1 Section 4.2.1 reports that some stakeholders have expressed the view that ‘complementarity’ means that new mechanisms must not require new regulation, or that any new mechanism must not mandate a greater contribution from Covenant signatories. The report says that this would rule out all mechanisms apart from increasing government funded subsidies to increase recycling levels.

As the report notes, we have previously disputed this. The introduction of a landfill tax in the UK was an important contributor to an increase in recycling and composting in England from 12% of municipal waste in 2000/01 to 27% in 2005/06. There are also landfill taxes in at least twelve other European countries.

We believe that a landfill tax could be introduced without undermining existing Covenant arrangements, and so could variable waste charging for households and a duty of care requirement on business end-users of packaging to ensure that material is sorted and sent for recycling and that records on that are kept.

The report says that “*while this might be true, even landfill taxes or variable waste charges could undermine the intent of the Covenant of placing the emphasis on producer responsibility.*” Our answer to that would be that the extent of producer responsibility has been defined by the Covenant. A landfill tax would be open to the

opposite objection to that the report puts forward, namely that insofar as it applies to companies within the packaging supply chain, it *extends* rather than undermines producer responsibility.

However,

- 1) since such taxes and charges would apply both to packaging and non-packaging, it could be argued that they are completely outside the Covenant debate, and
- 2) since time would be needed to decide upon the tax system and put the necessary administrative structures in place, there is no reason why it should not be announced during the term of the Covenant but introduced after the present Covenant has expired.

6.4.2 Section 4.2.6 of the report comments that “*variable charges have limited potential to improve engagement with stakeholders along the supply chain as they are levied at the disposal stage. Subsidies for recycling are generally limited to engaging collectors and recycling businesses. However, subsidy programs could be tailored to engage a wider set of participants.*”

It is true that variable charges would not improve engagement with stakeholders along the supply chain, but surely the most important question is whether or not they would be an economic mechanism effective in helping meet the objectives of the Covenant. In fact they can be highly effective in improving recycling rates.

A disposal charge imposed on waste management companies or local authorities will be passed back to the generator of the waste, whether a company or a household. This provides the waste-holder with an economic incentive to direct the waste towards recycling rather than disposal, and thus ensures that recycling facilities are used more intensively.

It also generates income which can be used to upgrade collection, sorting or recycling facilities or to reduce the waste management costs of companies or households which do use recycling facilities well.

Subsidy programmes to engage a wider set of participants should be considered only if they too would be effective in helping meet the objectives of the Covenant.

6.4.3 Appendix E.1.2 says that landfill levies would be blunt in targeting packaging wastes, and hence lead to unnecessary economic costs, which would be compounded through any increases in illegal dumping or enforcement costs to prevent it.

In terms of meeting the objectives of the Covenant, this is true; in terms of meeting national environmental objectives, not so. If packaging represents 5%-6% of the total waste stream, there is merit in taking action to encourage the diversion from waste of the other 94%-95%. Construction and demolition waste is an enormous source of potentially recoverable material; because the construction industry is a major driver of the economy it is important not to impose too great a burden on it, but a landfill tax that is charged at a lower level on inert waste than on other waste can take account of this.

It is true that any increase in the cost of landfilling leads to an increase in illegal dumping and in the enforcement costs to prevent it, but any measure is open to abuse and needs policing – including subsidies and other economic mechanisms aimed at waste generators or recyclers.

A recent EUROOPEN publication³⁹ has commented that “disposal taxes are much more broadly based than packaging taxes – household waste represents only about 15% of total waste arisings, and packaging represents only 20%-30% of household waste. Disposal taxes are therefore non-distortive.

Being broadly-based, the income from a disposal tax is substantial even if the tax is successful in encouraging the recovery of large quantities of material. Thus such taxes can be used to fund environmental improvements (as in France) or for other social and economic purposes such as reducing payroll taxes (as in the UK). By contrast, packaging eco-taxes generate relatively little revenue and may even produce a negative fiscal result if they are designed to change behaviour.”

6.4.4 Section 4.3 concludes that variable user charges should not be on the shortlist of potentially useful mechanisms as they are too indirect to address packaging waste and there is also limited potential for them to address key barriers to increasing recycling.

It concedes that variable waste charges could theoretically induce a higher rate of recycling if the variable charges imposed on waste management companies or operators were passed back to waste generators, but say that this would need a complete change in some current waste collection systems and new monitoring procedures, both of which would be prohibitively expensive within the timeframe required.

Appendix D.2.1 reports that in the US, a growing number of communities are now charging for solid waste collection based on the volume generated by the household (“Pay-as-you-throw”). The same is true in Europe.

This encourages consumers to (1) ensure that they use the collection systems available to them, or (2) dump some of their garbage illegally and hopefully (3) avoid buying things they don’t really need. (1) is probably more likely to happen in European countries, which rely to a greater extent on ‘bring’ systems where consumers have to make more effort than with kerbside collections, so the potential downside of (2) is probably greater in Australia.

Nevertheless, this concept might be worth trialling in a few communities to see how it works in practice. It should not be dismissed merely because it could not have an effect before the present Covenant expires – if that were a prime consideration, this report would have been a lot shorter.

6.4.5 Appendix E.1.1 concludes that variable waste collection charges provide incentives for reducing waste disposal, including via reducing the generation of waste and via diverting waste to recycling. In effect, these charges work to reduce the cost to recyclers of sourcing and collecting recyclate, increasing their cost-competitiveness and promoting increased levels of recycling. Landfill levies will have a similar impact in increasing the competitiveness of recycling.

We agree – but this contradicts statements in the main body of the draft report.

³⁹ EUROOPEN (2007), *Economic instruments in packaging and packaging waste policy*. This could usefully be added to the report’s bibliography.

6.4.6 Appendix E.1.1 comments that like other price mechanisms, establishing user charge or landfill fee levels that would yield any specific level of recycling presents challenges. However the difficulties will be greater with these mechanisms than say recycling subsidies, as the price signal is not direct. Waste generators have a choice between paying the higher charges, reducing their generation of wastes or illegal disposal, so increased waste collection and disposal charges may not necessarily lead to more recycling.

Reducing waste generation may be no bad thing, even if it does not lead to more recycling.

In any case, we know of no mechanism that can ensure that a given level of recycling can be achieved by spending a given sum of money. The European ADFs, where payment is made to collectors per tonne delivered for recycling, comes closest. But we do know that the more expensive landfill becomes – either because gate fees are high through a shortage of sites, as in Germany, or because a tax has been imposed to raise the price – the greater the incentive to find another outlet for the material. Waste *generators* may be unresponsive to landfill costs, but waste *managers* will look for the optimum economic solution, which will be recycling rather than disposal if the cost of landfilling is high enough.

6.4.7 Appendix E.1.2 comments that the costs involved in imposing a variable charge or tax on C&I wastes are likely to be significant, and would impose economic costs on non-packaging wastes while not contributing to the policy target.

We see no benefit in imposing a special charge on C&I packaging waste. Collectors will charge an economic cost, which will be based on quantity, value and transport costs, so the price is already variable.