

Beverage Container Investigation Peer Review

Prepared for

EPHC Beverage Container Working Group

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1. Key Points

This Section briefly summarises the key points arising from the peer review.

1.1. Objectives

There appears to be some confusion over the objectives for the study and, specifically, whether it is addressing wider questions of:

- the nature of the problem with management of used packaging;
- the rationale, if any, for further government action at the national level;
- the costs and benefits of options

or whether it is more limited in scope, taking as given:

- the desirability of a national measure; and
- the objectives of improving resource efficiency, environmental impacts and litter.

and thus focussing more narrowly on the cost-effectiveness of national instruments to address these issues.

It appears to be the latter, but the discussion in Section 2.4 is somewhat confusing on this.

1.2. Impacts

The analysis of impacts of the different options raises issues about appropriate scope. Two issues appear to be particularly important in this regard:

- the treatment of upstream impacts – to what extent should they be included in analysis when they are being dealt with by other policies (eg Carbon Pollution Reduction Scheme). To some extent this is immaterial as there is a simple assumption that more recovery/recycling is good, but it would be useful to tease out a bit.
- The treatment of consumer benefits versus what might be more easily measurable physical benefits. The discussion of this seems to raise more heat than light (ie it looks like there was disagreement over this issue, and the discussion is not terribly helpful).

1.3. Analysis of Instruments

The analysis of individual instruments is somewhat unconvincing because the assumptions used in the evaluation of costs and effectiveness are not clearly set out. Annexes, that are supposed to hold more detail, do not.

Some of the analysis is undertaken poorly. For example, the approach used to amortise (or annuitise)¹ capital costs over five years simply divides the capital cost by five. It takes no account of interest rates and the need to spread costs as an equivalent annual payment over time; an accounting approach has been taken rather than an economics one. While not significant in terms of total costs, it introduces a degree of scepticism about the robustness of the remaining analysis, particularly because the data are not there to check the calculations made.

¹ They have the same meaning in this context

2. Review

2.1. Background

This report is a peer review of the *beverage container investigation* report undertaken for the Beverage Container Working Group (BCWG) by the BDA Group and Wright Corporate Strategy (hereafter BDA/WCS).

The BDA/WCS report analyses a number of options for a national measure to increase rates of packaging recovery and to reduce litter. It provides background data, an explanation of the problem being addressed, and an analysis of seven separate instruments using criteria that include cost-effectiveness, compatibility with existing systems and suitability as a national measure.

Given the time constraints of this peer review, the terms of reference for the peer review report (see Annex) is limited to comments on the assumptions, methodologies and statements provided in the report. The peer reviewer is not being requested to determine new assumptions or methodologies or to validate the reference data used in the report. Consistent with the 5th task, “*highlight areas that could benefit from further development or explanation, if any,*” we have provided some comments on issues that are broader in scope than the terms of reference for the BDA/WCS report. These are highlighted as issues for the BCWG to consider.

The review below has a number of criticisms of the BDA/WCS report, partly because it is often easiest to identify and note the things with which we disagree. However, we acknowledge also in writing this review that BDA/WCS have brought together a significant amount of material to address a complex issue and that much of what they have produced is both clear and useful. They have organised data and other information into useful tables and found ways to compare very different policies against a consistent set of criteria in a way that provides a clear way to discuss the advantages and disadvantages of the options.

2.2. Objectives for the Investigation

The BCWG has significant expectations for the *beverage container investigation*. The terms of reference for the peer review suggest that there are divergent views on national approaches to packaging waste policy and a clear expectation that the investigation would provide a significant contribution to the debate.

The report by BDA/WCS provides much useful information as an input to this debate, but it has a confusing discussion on the initial objectives. This appears to reflect some differences of view between the consultant and the BCWG, in addition to some mixed messages in the original terms of reference.

2.2.1. Original Terms of Reference

The terms of reference² set out an initial limited scope:

an assessment of potential options for national measures, including container deposit legislation, to significantly improve resource efficiency,³ environmental impacts and litter associated with packaging wastes, with particular emphasis on beverage containers

This suggests that prior decisions have been made on:

- (1) the desirability of a national measure; and
- (2) the objectives of improving resource efficiency, environmental impacts and litter.

However, the more detailed terms of reference suggest that the study will also assist the EPHC to determine, amongst other things:

- the nature of the problem with management of used packaging;
- the rationale, if any, for further government action at the national level;
- the costs and benefits of options

This list suggests that the consultant has a wider brief to question some of the underlying assumptions, eg:

- is there a need for government intervention in packaging management at all?
- if so, what is the best thing to do?

This is a much broader brief.

2.2.2. The Approach Taken

The tension between these seems to be reflected in the report. The issue is addressed in Section A.4 (*The Policy Problem and Rationale for National Action*). BDA/WCS rightly suggest a two-step justification for intervention: the existence of a market failure and benefits exceeding costs for any measure. However, they also note the following:

- that many of the market failures are being addressed through other *legislative platforms*, of which some are works in progress;
- the valuation of benefits is outside the scope of the study.

They go on to note that a revised problem definition was agreed with the BCWG. They do not state what that is but go on to state that “*the BCWG formed the view that both*

² See Attachment 1 in the Annex

³ Resource efficiency means the efficiency with which natural resources are used to generate goods while minimizing the environmental impacts of human consumption by avoiding, reducing, reusing and recycling of waste, with the objective of consuming fewer resources and producing less waste whilst delivering the same end services or products.

container recovery (as a proxy for upstream benefits notably resource conservation) and litter reduction impacts were to be given a similar depth of treatment in the report."

The implication appears to be that a revised objective for the study is a cost-effectiveness analysis, taking account of co-benefits, of national measures with objectives of improved resource recovery and reduced litter.

This is very close to the initial limited scope, noted above, ie

an assessment of potential options for national measures, including container deposit legislation, to significantly improve resource efficiency, environmental impacts and litter associated with packaging wastes, with particular emphasis on beverage containers

But, the confusion returns elsewhere in the report. Whereas in some places they state that benefits assessment is outside of scope, elsewhere they note: "In this study, our focus is on identifying the physical extent of the underlying benefits that increased packaging / beverage container recovery and recycling could deliver *and* which may provide grounds for government intervention" (p46).

To accompany this, BDA/WCS note that the BCWG has taken the view that reduced impacts might be justified by the value placed on these by consumers rather than simply the measured physical benefits. This was clearly an area of difference between the consultant and client. However, it is an issue that relates to the nature and quantification of the benefits, something that they have already stated is not part of the report. It seems to be an inappropriate comment in this section.

2.2.3. Comments

We have two comments:

- the report could state this limited scope much more clearly than it does currently by simply stating what they were asked to do;
- if the BCWG is wanting the investigation to provide a significant input to the current debate on the appropriateness of a national measure, by limiting the scope of the analysis, they are limiting the contribution to the debate.

Important issues that are not addressed in the report, and to a large extent are outside of scope also, but that are important in the national debate include:

- (1) whether a uniform national measure is truly appropriate, eg considering the location of glass reprocessing facilities and or whether regional differences can be tackled within a national measure;
- (2) the extent to which upstream problems are dealt with through waste management and recycling policy rather than more generically, and thus how

these benefits are treated in setting waste management objectives;

- (3) the differences between consumer perceptions of the value of recycling and technically measurable benefits. We elaborate on this more in Section 2.5.1 below.

2.3. Criteria

The criteria used for analysis have been agreed between the BCWG and the BDA/WCS. We note that they can be grouped as follows:

- **Practicality** in achieving desired outcomes
 - Suitability as a national measure
 - Compatibility with existing systems
- **Effectiveness**
 - In overall litter reduction and resource recovery
 - Performance in different locations
- **Cost**
 - Net economic cost, including institutional (transaction) costs
 - Financial impacts on different affected parties
 - Cost-effectiveness, combining the cost and effectiveness results to provide a per tonne analysis

The criteria reflect the decisions taken on the objectives for the study. For example, “suitability as a national measure” assumes a prior decision that a national measure is desirable. Given these prior decisions, including the decision not to address benefits in the study, these appear to be appropriate criteria. Although we note that there is some confusion over whether benefits are in or out.

The way in which these have been used will be addressed under the analysis of the individual options below. However, we have some general comments.

The analysis of practicality, including compatibility was relatively light on analysis. There was little analysis of legislative requirements or component parts, eg the need for enforcement mechanisms or monitoring systems.

The cost analysis could have been more clearly developed in a way that set out the costs for each group, how costs for one were revenues (benefits) for another and the relationship between financial costs and economic costs, including any external costs. Many of the elements are in the analysis but the components are not always clearly set out in this way.

2.4. Waste, Recovery and Recycling Data

Data used as an input to the analysis are set out in Section A.2.

Table A2.2 notes the estimated beverage container recycling volumes. The text explains the process that is used but does not provide data to verify the steps, ie it suggests that:

- firstly, data on packaging collected in kerbside recycling were compiled from State and Territory reports, and
- secondly, the proportion that were beverage containers was assumed.

It would be useful if the Table had set out the data for these two steps, ie the total amount collected in kerbside and the assumed proportion that are beverage containers.

The absence of information to verify data used in the analysis is a recurring theme in this review. It is often difficult to determine whether numbers have been plucked out of thin air or are based on reputable sources.

A small point, but Table A2.3 on page 34 presents data on recovery, recycling and consumption. The percentage performances in the text seem slightly different from the data in the Table, ie at home recovery is 66% using the Table data (490,000/740,000) versus 68% in the text, and the total is 52% versus 53% in the text.

2.5. Impacts (Section A3)

There are two issues here: the treatment of public perceptions of effects and the treatment of upstream impacts.

2.5.1. Public Perceptions

BDA/WCS notes (p46) that “In this study, our focus is on identifying the physical extent of the underlying benefits that increased packaging / beverage container recovery and recycling could deliver *and* which may provide grounds for government intervention.” That is, those benefits associated with market or regulatory failure or the realization of a specific social equity goal.”

They seem to suggest that effects relating to public perceptions would not constitute a market failure, eg if the market failed to deliver an outcome that is consistent with public preferences for recycling. This is an important issue because the measured benefits might be significant. And it is unclear from the analysis whether they are suggesting that the issue is because consumers do not act consistently with their stated values and preferences, ie there is no market failure because consumers are simply stating that they want to recycle but they do not in practice, or if the issue is that these public perceptions are illegitimate measures of benefit.

There is a good discussion in Section A3.2 of some of the research in this area. But they finish by noting some of the community values relating to recycling, without mentioning whether these are valid preferences to take into account. For example, they state on page 46: “*the community may also hold an intrinsic satisfaction from recycling (or guilt avoidance) and a preference for a less ‘wasteful’ society or sense of communal responsibility that may bear little relationship to the underlying benefits such as canvassed in this report.*” But

frustratingly, they do not conclude on whether these are valid considerations in a cost benefit analysis.

In fact BDA/WCS appear to wipe their hands of this issue (“Subsequent valuation of the underlying environmental benefits and any secondary or social benefits that may be held by the community for increased packaging / beverage container recovery and recycling will be a matter for the EPHC”) but it is an important issue that would be useful to tease out more fully.

It may be beyond scope, given the decision not to address benefits,⁴ but rather to examine options that can significantly improve resource recovery. However, we note the following. Impacts on individuals or households, measured in welfare terms, relate to their current preferences. Individuals suffer a loss of welfare (a real economic cost) if they are unable to act in a way that is consistent with their preferences. In this study the relevant issue is households’ preference for recycling. Studies have sought to identify these preferences through, eg willingness to pay (WTP) research. Typically these might show that households are willing to spend time (and money) recycling, and this in turn suggests that they receive a benefit from doing so that is at least as great as this willingness to pay. The level of their willingness to pay may be because they do not fully understand the impacts of waste disposal and recycling, but it may also be because of other associated benefits that we cannot immediately think of, but this does not take away from the existence of the benefits. We rely on consumer behaviour to reveal benefits. New research (eg WTP) is beyond the scope of the study, but it would have been useful, given the space devoted to discussing the research to have made a clear comment. Our own view is that these preferences are valid components of economic value.

2.5.2. Upstream Impacts

The physical impacts are noted but not quantified in any detail. They note some of the issues, eg that GHGs are to be included in the Carbon Pollution Reduction Scheme (CPRS) but do not pursue this, ie what does it mean for recycling policy?

This was an issue that the Productivity Commission has strong views on and this affected its approach to analysis; specifically they stated that “It should not be presumed that governments do not intervene upstream... The Commission considers that ... it is highly unlikely that a waste management policy would be the best way of tackling an upstream environmental externality.”⁵ On the basis of this, questions were raised about the extent to which such impacts should be considered in life cycle analysis, eg emissions associated with displaced raw materials.

⁴ Although this is not clear given the statement on p46 that “In this study, our focus is on identifying the physical extent of the underlying benefits that increased packaging / beverage container recovery and recycling could deliver *and* which may provide grounds for government intervention.”

⁵ Australian Government Productivity Commission (2006) Waste Management. Productivity Commission Inquiry Report No. 38. 20 October 2006

To an extent the issue has been subsumed in the objectives assumed for analysis. Because they have started from the presumption that more resource recovery and recycling is good, without trying to quantify the benefits, the issue is sidelined. It remains an important issue for waste and recycling policy more generally, especially in the context of cost benefit approaches that might be used to address “how much recycling?” We note that this is agreed as being beyond scope.

Figure A3.3 is useful, but it would also be useful to know, within beverage containers, the percentage of litter that is glass, metals, paper etc.

In a similar way to the resource recovery issue, BDA/WCS notes that “rather than establishing ‘acceptable’ levels of litter, governments work towards litter minimisation within the constraint of program costs and community amenity preferences.”

It is likely that there will be diminishing marginal returns to expenditure on litter reduction and this issue would be usefully raised in the policy debate also.

2.6. Cost Data

The cost analyses for both kerbside collection and MRF processing use costs for mixed waste streams, rather than separating out the marginal costs for individual materials, or at least the factors that contribute to costs. This is not necessarily simple, but different policies affect different materials and would have different costs.

The costs for kerbside collection are based on the weighted average cost of a large range (p39). These are important but not really explained. It would be useful to know whether the range of costs reflected differences in materials or locations, or at least to have a table with the source. The weighted average should be explained in terms of the weighting factor used (population, weight of waste or whatever).

For CDS costs, BDA/WCS note that capital costs have been ignored in costs studies of the South Australia CDS but they suggest that costs might have been fully amortised (I assume they mean depreciated) over the 30 years that it has been in operation. They suggest that a notional 1% be added to the system operating cost (ie \$5/tonne) for comparative performance purposes.

It is not entirely clear how these assumptions have been used in the analysis of additional CDS; this issue is discussed below. For the existing CDS in South Australia it is correct that capital costs may be largely irrelevant – they are sunk costs (in economic terms this happens the day that the cost is committed, not after a period of depreciation). However, it is unlikely to be appropriate to ignore the capital costs. The correct approach is to assess either the required ongoing capital spend to maintain the existing capital stock or to use a long run marginal cost approach, eg if the capital stock will simply be replaced in a number of years time then the capital costs should be annualised (amortised) over the expected lifetime at an appropriate interest rate. The resulting annuity is an amount for every year of the expected life of the plant that, when

discounted at the appropriate discount rate for each year, and summed, will equal the initial capital cost.

2.7. Analysis of Individual Schemes

2.7.1. CDS

Predicted recovery rates were based on a review of CDS systems in Canada, New York, South Australia and Hawaii. Using experience elsewhere is appropriate. The predicted recovery rates are included in Table B1.1 but there is no presentation of the data from the overseas schemes that allow us to confirm whether these assumptions are reasonable.

The costs of the scheme are set out on the basis of assumptions in Appendix 7. However, Appendix 7 provides very little detail. For example, they note (p198) that:

Capital costs have been estimated using the general methodology in White (2001) for the three regions of metro, regional and rural and small, medium and large facilities. Capital costs include the costs of plant (forklifts, pick line, conveyor, baler and compactors and storage bins), the average land size, planning and approvals, building works and after hours security and fencing. Capital costs have been annualised over ten years using a 7% discount rate.

However, that unfortunately is it. There is no statement of the actual capital costs; they are just included somewhere in the estimate of handling costs of \$445 million. This provides very little confidence in the numbers. However, we do note that the calculation of an annuity appears to have been undertaken correctly here, based simply on the fact that they have used a discount rate; it would be useful to have more detail on what the capital costs were.

Consumer inconvenience costs are estimated to be \$223 million based on an assumed 2 cents per container; there is no supporting data for this estimate nor any discussion on why inconvenience costs are relevant given the critique of such analysis; they simply state: “in an economic cost benefit analysis, there is a cost associated with the use of these resources and a need to account for these costs.” It would be useful to set out the context for this, eg that consumers make a rational decision when they incur inconvenience costs because the costs of the deposit is sunk; starting from that point, if they need to incur costs to obtain a refund it is rational to incur costs up to the level of the refund.

The impacts on kerbside recycling schemes are assumed to be positive in terms of reduced costs, but these effects can be more complex. For instance, the Southern Waste Strategy Authority of Tasmania has suggested that a diversion of 80% of beverage containers away from kerbside towards a DRS would reduce the value of kerbside materials by A\$11 a year per household.⁶ This would increase the cost of kerbside

⁶ Southern Waste Strategy Authority (2006) National Waste Management Policy: Discussion Draft, <http://files.thereafter.com.au/swsa/NationalWasteManagementPolic.pdf>.

collection to local governments in South Tasmania, in the form of increased subsidy requirements, by 43%. Studies in Tasmania and Northern Queensland have shown that containers to which a DRS would apply constitute 54% and 33% of kerbside collections by volume, but 77% and 59% of by recoverable value.⁷ Note this issue is not about national costs and benefits but about the impacts on local government; at the national level the revenues just pass from one organisation to another. The conclusions at the national level are likely to be correct, ie there are reduced kerbside collection costs while the revenues are not lost. However, the results should be clarified to make clear that this result does not necessarily hold at the local level. This is implied in the analysis under Criterion 3, page 89, where they state: “the national CDS under consideration in this study would have a positive financial impact on local government kerbside systems” – this might not be so from the local government’s perspective, because they may see both a reduction in costs and a greater reduction in revenues. It would be useful to spell this out clearly.

In summary, for CDS, the absence of supporting data to confirm many of the numbers used in analysis reduces confidence in the final result.

2.7.2. Extend Coverage of Kerbside Recycling and Drop-off

This section suffers also from using unsubstantiated data. For example in Section B2.1 on page 101:

Based on kerbside services costs in semi rural regions, and depending on the beverage container types and transport distances involved, these costs could be in the range \$300 to \$350 per tonne, net of any benefits associated with reduced tipping costs.

and

Depending on the beverage container types, contamination rates, and transport distances involved, these costs are also likely to be in the range \$300 to \$350 per tonne to account for depot costs plus the extended transport. An additional capital cost allowance for new or improved drop-off facilities of say \$5 million would be appropriate.

There is no supporting references or information to provide any confidence in these assumptions.

The same is true of the effectiveness estimates. For example, in B2.2 they state: “If the recycling rate could be lifted by (say) 10 percentage points to 78%, then a further 39,000 tonnes per annum of beverage containers would be recycled.” This is true as stated. But one could equally and truthfully say: “If the recycling rate could be lifted by (say) 20 percentage points to 88%, then a further 78,000 tonnes per annum of beverage containers would be recycled!” But this estimate is used in the analysis as part of the “plausible overall improvement.” We

⁷ Martin, R (2005) CDL in a contemporary context – Implications for Tasmania, presentation, Joint Standing Committee Environment, Resources and Development, Hobart, and CDL in a contemporary context – Implications for LAWMAC Region, presentation, LAWMAC.

have no supporting data to confirm whether or not this 10% improvement is a reasonable assumption; it reads as though the number has been plucked out of the air. At the same time, BDA/WCS notes the variation in performance of established schemes; a reasonable approach would be to use the performance achieved by the best performing kerbside schemes as the basis for what is a plausible improvement.

When the final presentation of results is given, there are uncertainties over the costs transposed from the text. Specifically, the \$7 million per year for remote local governments and residents appears to be the \$7.6 million noted in Section B2.1, but it would be useful if this was clarified (either through appropriate rounding, ie to \$8 million or to retain the decimal point, as is used for the \$13.8 million cost for local government with existing services).

2.7.3. Improved Recycling at Core Consumption Centres (Section B3)

The analysis assumes that 50% of packaging material recovered in public place recycling would be beverage containers . the source of this assumption is not stated.

On costs they suggest, B3.2 that (page 109):

This material might be collected and processed in a recycling MRF at a cost in the order of \$400 per tonne, assuming relatively high contamination rates and more intense sorting.

On this basis a capital cost for equipment could be in the order of \$15 million with an annual servicing cost of \$3 million.

The problems here include:

- there is no source provided for the \$400/tonne figure;
- why this provides “the basis for” a capital cost estimate of \$15 million is also not clear; and
- the translation of \$15 million to an annual servicing cost of \$3 million is not explained, although it appears that they have simply divided it by 5.

Further on, page 115, they estimate the cost of the hospitality sector option at \$6.9 million or \$1.4 million amortised over five years. The only way to reproduce this number appears to be with a simple division of \$6 million by 5 = \$1.38 million, ignoring any interest rate. If the 7% rate used earlier is applied, the annual cost rises to \$1.6 million (assuming the first payment is in the same year as the capital cost accrues). This does raise questions over the consultant’s understanding of amortisation in economic analysis. It appears that they have used this as an accounting methodology (a simple straight line depreciation) rather than converting it into an annual equivalent payment over the next (five) years that would result in the same total value when discounted back to the present time at the appropriate rate.

They also do not explain why five years has been used in the analysis. In economic analysis the appropriate figure is the expected lifetime of the asset. There is no discussion of this issue.

2.7.4. Improved Recycling at Workplaces (Section B4)

This analysis suffers from similar problems to the others. Although there is more explanation of the source of data, the annualised capital costs are underestimated through not using an interest rate in analysis.

2.7.5. Residual Waste Processing Systems (Section B5)

Here again data are presented with little explanation. For example, the revenue is estimated on the basis of a value of \$70 per tonne of recovered materials (mainly glass). No explanation is provided for this figure, eg the extent to which revenues are net of transport costs to processing plants, beneficiation and so on.

2.7.6. Advance Disposal Fee (Section B6)

The Advance Disposal Fee (ADF) provides difficulties in analysis because it is not a clearly defined instrument. Rather it is a fee that can be used to fund a variety of activities with the clear expectation that the most cost-effective options will be chosen first. Thus in differentiating it from, say, a combination of the other measures, the key difference is the impact of the way in which the fee is levied.

The analysis examines both the impact of the fee proposed and of the expenditure that might result. However, there is a frustrating lack of explanation, eg BDA/WCS note the price elasticity of demand that they have used and then note:

After accounting for the expected source reduction and reduced beverage consumption in response to price increases, the \$10 per tonne ADF is expected to generate revenues of \$46m per year.

It would be useful to see these calculations to provide confidence in the results.

Administrative costs have been estimated for the ADF but with no justification for the numbers chose. It would be useful for this to have been supported through the analysis of other programs that might be similar, eg why does the funds management component require 5 staff and do we know it won't be ten or two? The sensitivity analysis addresses this to some extent but with no real explanation as to which assumptions might be more realistic.

The administrative costs are based on assumed industry participation under the National Packaging Covenant although this is not explored as an issue, eg if the voluntary system can continue to be used as the basis for revenue raising when it looks increasingly like a tax. This is especially so if, as suggested by BDA/WCS, it is administered by the government. There are both potential legal issues and incentive effects that need to be considered.

The ADF is stated as being compatible with existing arrangements but this raises an important issue of additionality, ie whether it would simply be used for funding existing programs rather than leading to additional recovery.

2.7.7. Voluntary Industry Levy (Section B7)

This is similar to the ADF but more limited in scope. It also raises the issues of the extent to which it is truly voluntary if being pursued as an alternative national policy arrangement. It is likely that voluntary action will need to be backed by additional measures, eg the more certain threat of undesirable government action, eg CDS or other compulsory producer responsibility systems.

2.8. Sensitivity Analysis

The sensitivity analysis is a useful addition to the results. However, at times it seems to have been undertaken in too simplistic a way. For example, administrative costs for the ADF are simply multiplied by ten with no explanation of why either estimate is reasonable.

The issue of inconvenience costs is approached in terms of whether consumers have positive benefits from recycling that counteract the inconvenience costs. However, this is netting off two separate issues. In doing so the applicability of elements to other options is lost. For example, the argument given is that consumers might gain a benefit from recycling, eg because they wish to live in a less consumerist society. But this benefit applies to other forms of recycling and it is likely that those for whom this is most true will be maximising their recycling activity via existing (kerbside) schemes. Thus a CDS may not increase levels of consumer benefit. However, in contrast, the inconvenience costs are additional costs that apply particularly to the CDS because it introduces the incentive to incur additional costs, as discussed above. It is helpful in analysis to separate the two sides of the equation.

2.9. Conclusions

The BDA/WCS report provides some useful analysis as an input to discussion at the national level of the best instrument to use to address resource recovery, environmental and litter impacts of beverage containers.

However, there are a number of shortcomings. Chiefly this includes:

- The limited scope of the study that, in turn limits the contribution that it can make to some of the big policy questions. And note, this is a limitation of the terms of reference, not of the BDA/WCS report in response.
- The paucity of supporting material to validate many of the assumptions used in analysis.
- Wrong approaches, particularly the way in which annuities are calculated to spread capital costs over time.

Annex Terms of Reference for the Peer Review

Environment Protection and Heritage Council

Beverage Container Investigation

Terms of Reference for Peer Review

BACKGROUND

On 17 April 2008, the Environment Protection and Heritage Council (EPHC) agreed to conduct an assessment of potential options for national measures, including container deposit legislation, to address resource efficiency, environmental impacts and the reduction of litter from packaging wastes such as beverage containers.

EPHC also agreed to establish a working group - the Beverage Container Working Group - to oversee the project. This working group is jointly chaired by the Queensland Environmental Protection Agency and the Western Australia Department of Environment and Conservation.

Working Group members are:

- Department of Environment and Climate Change (New South Wales)
- Department of Natural Resources, Environment, the Arts and Sport (Northern Territory)
- Environment Protection Authority (South Australia)
- Department of Environment, Water, Heritage and the Arts (Commonwealth)
- Environment Protection Authority (Victoria)
- Environment, Parks, Heritage and the Arts (Tasmania).

A Stakeholder Reference Group has also been established. The purpose of this Group is to provide advice to the jurisdictional working group in response to requests for information and input into particular issues. Members of this group are:

- Keep Australia Beautiful Council (South Australia, Queensland and Northern Territory)
- Recyclers of South Australia
- Australian Local Government Association (represented by Western Australia and New South Wales LGAs)
- Australian Council of Recyclers
- Environmental Defenders Office
- National Australian Retailers and Grocers Association
- Australian National Retailers Association
- National Packaging Covenant Industry Association
- Boomerang Alliance
- Total Environment Centre
- Australian Food and Grocery Council
- Department of Environment, Water, **Heritage and the Arts (C'wlth)**
- Department of Environment and Climate Change (NSW)
- Environment Protection Authority (Vic)
- Environment Protection Authority (SA)
- Department of Environment and Conservation (WA)
- Environmental Protection Agency (Qld) – Chair.

In August 2008, the BDA Group and Wright Corporate Strategy were commissioned to undertake the assessment of potential options for national measures. The Terms of Reference for this work are provided in Attachment 1.

SCOPE OF SERVICES

Purpose of evaluation

The management of packaging wastes, and in particular container deposit schemes, is a complex and potentially contentious issue.

Due to the potential for highly divergent positions on potential options for a national approach, assessment methodologies and recommendations for options for further consideration, the Beverage Container Working Group agreed to commission a peer review of the Beverage Container Investigation report prepared by BDA Group and Wright Corporate Strategy.

The Beverage Container Working Group requires the successful consultant to:

1. comment on the overall feasibility of the assumptions and statements on the potential options for national measures and how the work generally meets the requirements of the Environment Protection and Heritage Council
2. comment on the rationale used to select options for assessment (A4 of the Report)
3. comment on the appropriateness of the methodology for comparative assessment of new national measures (A6 of the Report)
4. highlight positive ideas or suggestions proposed in the report
5. highlight areas that could benefit from further development or explanation, if any.

A copy of the Beverage Container Investigation final report will be provided to the consultant on a confidential basis.

Limits of assessment

Given the time constraints of this project, the successful consultant will limit the review to comment on the assumptions, methodologies and statements provided in the report. The consultant is not being requested to determine new assumptions or methodologies or to validate the reference data used in the report.

The successful consultant will be expected to work closely with the Beverage Container Working Group through a project steering committee.

Deliverables

The primary deliverable for this project is a report reviewing the Beverage Container Investigation Report, which is due for consideration by EPHC in May 2009. The Beverage Container Investigation Report and a report by the working group will be considered by EPH Standing Committee in April 2009.

Attachment 1

Environment Protection & Heritage Council

Consultancy Brief – Beverage Container Investigation

BACKGROUND

In Australia, all packaging materials, including beverage containers⁸, are currently managed under a national co-regulatory scheme in the form of the *National Packaging Covenant 2005-2010*. The Covenant is supported by the *National Environment Protection (Used Packaging Materials) Measure* (NEPM).

The NEPM is given effect through regulation in each state and territory which prevents brand owner signatories to the Covenant from being disadvantaged in the marketplace by non-signatories. A mid-term review of the Covenant is currently underway to determine its overall effectiveness in meeting packaging recovery and recycling targets. The National Packaging Covenant Council is due to report on the findings of the review during the last quarter of 2008.

Beverage containers comprise around three percent by volume of the domestic waste stream⁹. Studies have found that beverage containers make up around seven percent of items found in the litter stream¹⁰. As they are a highly visible component of the litter stream, their impact is probably compounded. Around 50 percent of beverage containers are consumed away-from-home¹¹.

South Australia is currently the only Australian jurisdiction with container deposit legislation (CDL). Western Australia has undertaken an investigation of container deposit systems (CDS) and several other jurisdictions have undertaken independent assessments of the application of CDL in those states. Tasmania has recently announced an investigation of CDS for that state. CDSs are also in place in most of Canada, eleven states in the USA, eight countries in Europe, Israel and Kiribati.

On 17 April 2008, the Environment Protection and Heritage Council (EPHC) agreed to conduct an assessment of potential options for national measures, including container deposit legislation, to address resource efficiency¹², environmental impacts and the reduction of litter from packaging wastes such as beverage containers.

⁸ A beverage container means a container of any kind made for the purpose of containing a beverage, being a container that when filled with the beverage is sealed for the purposes of storage, transport and handling prior to its sale or delivery for the use or consumption of its contents.

⁹ Australian Food and Grocery Council Packaging Stewardship Forum, '*Stats and Facts*' available: <http://www.afgc.org.au/index.cfm?id=565>

¹⁰ Keep Australia Beautiful National Association, *2006/7 National Litter Index Tabulations*, available: http://www.kab.org.au/_dbase_upl/c%20NLI%20tables%200607.pdf

¹¹ Referenced in Beverage Industry Environment Council and Community Change (2001) '*Non residential beverage container recovery feasibility study*' p. 2. available www.afgc.org.au/psf

¹² Resource efficiency means the efficiency with which natural resources are used to generate goods while minimizing the environmental impacts of human consumption by avoiding, reducing, reusing and recycling of waste,

The EPHC also agreed to establish a beverage container working group to be jointly chaired by the Queensland Government (through the Environmental Protection Agency) and the Western Australian Government (through the Department of Environment and Conservation). Working group members also include:

- Commonwealth Department of Environment, Water, Heritage and the Arts
- EPA Victoria
- New South Wales Department of Environment and Climate Change
- Northern Territory Department of Natural Resources, Environment and the Arts
- South Australia Environment Protection Authority.

The assessment of potential options suitable as national measures¹³ will take into account:

- the experiences gained from operation of the South Australian container deposit legislation scheme
- information from the investigations into container deposit systems undertaken by Western Australia and Tasmania and other jurisdictions
- information from existing studies, including the current mid-term review of the National Packaging Covenant and the Complementary Economic Mechanisms Investigation
- Council of Australian Government Best Practice Regulation Guidelines (October 2007).

SCOPE OF SERVICES

Purpose of Study

On behalf of the Beverage Container Working Group (BCWG), the National Environment Protection Council (NEPC) Service Corporation is seeking quotes from suitably qualified and experienced consultants to undertake an assessment of potential options for national measures, including container deposit legislation, to significantly improve resource efficiency, environmental impacts and litter associated with packaging wastes, with particular emphasis on beverage containers.

The primary outputs of the study are twofold, a preliminary report (a scoping document) for consideration by the EPHC in November 2008 and a final report for consideration by the EPHC at its first meeting in 2009. The outputs from this consultancy should be framed in such a way as to potentially integrate with a more detailed assessment of options in the future, should EPHC decide further analysis is required.

The assessment is aimed at assisting the EPHC to determine:

- the nature and extent of problems that might presently exist with the management of used packaging, with particular emphasis on beverage containers, and to present evidence on the scale and scope of the problem
- the effectiveness of existing legislation as it relates to the problem
- the rationale, if any, for further government action at the national level
- options to potentially improve the management of used packaging, with particular emphasis on beverage containers

with the objective of consuming fewer resources and producing less waste whilst delivering the same end services or products.

¹³ Suitable as a national measure means the suitability of an option for implementation in all Australian jurisdictions whereby people can enjoy the benefit of equivalent outcomes wherever they live.

- which of these options are likely to be most effective and efficient for implementation at the national level, including the potential costs and benefits associated with each option.

The consultancy will be overseen by the BCWG and managed by the NEPC Service Corporation. The consultant will clarify the scope of works with the BCWG, and will be expected to seek input from a stakeholder reference group (SRG) established for the purposes of the investigation as well as other relevant parties.

It is expected that each identified option will be accompanied by a description of the option outlining its key features and the general assumptions underpinning the option.

Specific Requirements

The consultant is required to undertake an assessment of potential options for national measures, including container deposit legislation, which addresses sustainability (environmental, social and economic costs and benefits).

The work should include an analysis of current arrangements for the management of used packaging wastes, with particular emphasis on beverage containers, in both the household and away-from-home sectors, and the development of a 'statement of problem' on which to base the assessment of potential options.

The work should also consider options as they relate to urban, regional and remote areas.

The range of potential options to be assessed should include, but is not limited to:

- container deposit schemes
- voluntary industry levies
- advance disposal/recycling fees
- government levies and charges
- national packaging covenant-type framework
- extended coverage of kerbside recycling
- landfill bans on packaging items, including beverage containers
- improved public place and commercial premises recycling
- mandating new or emerging technologies that facilitate recovery such as remote frequency identification devices (RFIDs).

This list is not exclusive and any option should be considered which has potential to be applied nationally and significantly improve resource efficiency, environmental impacts and litter associated with packaging wastes. The options are not mutually exclusive and could be complementary.

In discussion with the Beverage Container Working Group, the Consultant should describe in detail any issues and limitations of the current arrangements as well as any benefits and strengths.

The 'statement of problem' should set out the issues that jurisdictions may seek to address by means of the options to be analysed. Based on the 'statement of problem', the consultant should identify appropriate measures of success that will form the basis for assessing the different options suitable for national implementation.

Preliminary Report

This report should pose the problem, identify a suite of potential options for national measures (including container deposit legislation) and outline the approach and research materials that the consultant will use to conduct the assessment, which will be finally reported on at the first EPHC meeting in 2009.

Final Report

Having posed the problem, identified a suite of potential options, outlined the approach and research materials, the Consultant will conduct an assessment of each option against relevant criteria. The assessment criteria for options may include, but are not limited to:

- suitability as a national measure
- demonstrated ability to deliver significant improvements and contribute to sustainability
- compatibility and potential for synergy with existing (or planned) waste and recycling systems
- complexity of implementation and operation
- positive/negative impacts on affected stakeholders (all levels of government, the beverage, packaging and retail industries, the waste collection and recycling industry, small business, environment and community groups and consumers). The analysis of positive/negative impacts on consumers should differentiate between consumers who utilise each option and those who do not
- varying impacts and applicability between jurisdictions and between regional/remote and metropolitan areas
- indicative cost.

On the basis of assessment against the criteria, the Consultant will provide a final report with conclusions about the most promising options for addressing the identified problems.

The report should be ready for presentation to the first EPHC meeting in 2009. The final report should place EPHC in a position to determine whether there is a need to commence a more extensive assessment process, including regulatory impact work, if required.

Potential Additional Work

As indicated above, the consultant should be cognisant of the possibility that a more exhaustive assessment process, such as a formal regulatory impact assessment, with subsequent production of a regulatory impact statement (RIS), may follow this stage. This more exhaustive assessment process would be the subject of a separate consultancy.

Note: A RIS is produced according to rules and guidance set out in the COAG Guide to Best Practice Regulation (see www.obpr.gov.au).

Limits of Assessment

The consultant should limit the scope of work to issues relating to used packaging waste, with particular emphasis on beverage container waste. To avoid duplication with the mid-term review of the National Packaging Covenant, which covers packaging materials broadly, the consultant will be provided with the terms of reference and scope for the review of the Covenant.

However, there are recognised links with the National Packaging Covenant and broader actions to address resource efficiency, environmental impacts and the reduction of litter from packaging wastes generally.

This project will necessarily reflect information from the mid-term review of the Covenant and the associated complementary measures study. However, the outputs of this project should also reflect that the mid-term review of the Covenant and the complementary measures study relate to measures aimed at achieving improved packaging waste management and recycling outcomes up to 2010. Therefore, the assessment of options in this study would be focused on potential options beyond 2010.

Methodology

The consultant should provide:

- a methodology for ensuring that key stakeholders are consulted and their views and issues are considered
- the assumptions used in determining the most feasible options for further assessment as national measures
- a methodology for integrating the assessment of environmental and social impacts with the economic impacts of options.

Peer Review

The consultant should be cognisant of the fact that the BCWG may contract suitably qualified persons to undertake a peer review of the final report.