AUSTRALIAN TYRE RECYCLERS ASSOCIATION

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Delwyn Lanning
Waste Generation & Resource Efficiency Inquiry
Productivity Commission
LB2 Collins St East
Melbourne VIC 8003

Dear Delwyn,

I am pleased to submit the attached submission to the Commission's Inquiry into Waste Generation and Resource Efficiency in Australia, on behalf of the Australian Tyre Recyclers Association (ATRA).

ATRA represents the collective interests of the major tyre recycling companies in this country. ATRA's members account for the bulk (over 80%) of tyre recycling in Australia and collectively have more than 50 years experience in this activity. Resource recovery applications range from civil engineering to sports, leisure, playground and road surfacing, industrial adhesives and blending with virgin materials. In the past 5 years ATRA member companies have collectively invested more than $10 million in latest plant and technology and in new market development.

ATRA was specifically established, in April 2003, with the principal objectives of:

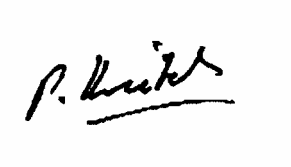
1. Promoting environmentally safe and beneficial recycling of waste tyres

2. Generating a high level of waste tyre recycling and resource recovery, to replace over time, land fill disposal

3. Providing the basis of a collective voice for the industry and to promote the common interests of the association's members.

You will note that our submission has been specifically structured, for your ease of reference, in response to the questions raised in the Productivity Commission's Issues Paper. We trust this will serve to help clarify the issues from our perspective, but if you require any further information please do not hesitate to contact me.

Yours sincerely,



Peter Kreitals
National Director

ATRA Response to

Productivity Commission Issues Paper on

WASTE GENERATION AND RESOURCE EFFICIENCY

This paper is offered specifically in response to the call for submissions to the Productivity Commission's Inquiry into Waste Generation and Resource Efficiency, and as such it follows the format of the Commission's Issues Paper.

The submission represents the views of the Australian Tyre Recyclers Association which is comprised of the leading suppliers of waste tyre recycling services in Australia.

While the nature of the questions raised in the Commission's Issues Paper is such that in the main it requires generalisations in the responses provided, the views presented in this document are confined specifically to waste tyre recycling (albeit many would be relevant for many other areas of waste generation and resource recovery).

The Commission should be aware that a National Tyre Product Stewardship Scheme (reflecting a certain Recycling "Policy" within the context of Extended Producer Responsibility), has been in development for many years under the aegis of the EPHC and with the full support of all key stakeholders in this sector of industry. The process is well documented and the many submissions by the various stakeholders can most likely be obtained from the Federal Department of Environment and Heritage should the Commission be interested.

A more detailed economic analysis has recently been completed on behalf of the manufacturers and importers of waste tyres, which provides considerable information about the structure of the waste tyre disposal and recycling industries. While much of the underlying data contained in that report is of necessity flawed (simply because full information is not available) and thus extreme care needs to be taken in considering the more quantitative conclusions, it does provide an overview of the major issues confronting this area of resource recovery (and we would expect that this Report would have been made available to the Commission by the responsible parties).

Response to specific questions raised in the PC Issues Paper:

1. What are the economic, environmental and social costs and benefits of waste and waste-related activities?

The issues paper has in large part adequately covered this point – that is:

- Waste disposal is an unproductive cost as compared to commercially viable and self sustainable recycling. However there are many factors that impede the development of recycling demand and the uptake and development of related recycling technologies.

- Waste disposal consumes land/resources that could be better employed. In the case of tyres the annual rate of disposal is about 29,000,000 tyres PA (equivalent passenger vehicle units) representing about 230,000 tonnes of material available for recycling of which about 30% is recycled, 60% is disposed of by legal landfill disposal and an estimated 10% is illegally dumped (NB the latter figure is not considered a reliable estimate and is undoubtedly overstated).

- Resource recovery can serve to minimise resource depletion and particularly non renewable resource recovery. Rubber tyres are principally comprised of petroleum extract materials. To the extent that recycled tyres serve to minimise the use of non renewable resources, there is a long term economic benefit to be gained.

- Recycled materials are typically less energy intensive and therefore assist GHG abatement.

The fully allocated cost of landfill disposal is in the order of $1.00 - $1.50 per tyre ($100.00 - $150 per tonne)[1]. The cost of disposal of the 60% that goes to legal landfill is in the order of $ $17.4 M PA and the cost of illegal disposal may be $3.00 per unit or $8.7 M PA for a rough total disposal cost of $26.1 M. Most of this cost is incurred by Government owned land fill and remediation budgets.

The vast majority of this material could be recycled and the cost of recycling would be borne by industry / tyre user with the resultant savings then being able to be passed on to the public purse. Importantly, many of the recycled materials have been shown to deliver cost savings to the user of the recycled material – a further source of economic efficiency. In addition there are GHG savings that are not easily estimated but could well be in the order of 150,000 tonnes per annum in reduced GHG emissions.

The economic value of GHG savings depends on the availability of a carbon credits program that enables tyre derived products to claim the credits. It is not clear that such a program exists in Australia today.

[1] The fully allocated cost of landfill disposal is a cost that contains many variables and is not a figure that is easily derived. The actual cost can vary from a very low figure where for instance a safe waste disposal facility is available to an urban centre where the cost id driven by the value of land and its remediation for other use in the long term.

2. *What are the market failures (including externalities) associated with the generation and disposal of waste?*

Regulatory Settings

In general the primary source of market failure is regulatory settings that:

- do not reflect the full cost of waste disposal,
- cause waste disposal to be a more preferable and economic solution (lower cost) than recycling,
- do not encourage the development of appropriate markets to ensure recycling demand more than offsets the ease (pragmatism) of resorting to landfill disposal.

Demand for Legal and Illegal Disposal

As long as it is possible for the user of waste disposal services to pay an artificially low price for landfill disposal there is a clear economic incentive to use land fill disposal rather than recycling. The cost of landfill disposal can be as low as $20.00 per tonne or $0.20 per waste tyre (Equivalent Passenger Unit – epu) in non urban municipal landfill centres and as high as $180.00 per tonne in urban landfill centres (albeit the vast majority of tyres that are disposed of by landfill incur a cost of less than $50.00 per tonne). The availability of low cost landfill disposal is a positive disincentive to recycling.

Similarly, as long as legal disposal is not enforced and the perceived risk and cost of illegal disposal is considered low there is an economic incentive in favour of illegal disposal. As a simple example, the retail cost of disposing of a truck tyre is $8.00 to $10.00. This is a strong economic incentive in favour of illegal disposal.

In addition, in Western Australia there is a lot of product being baled whole and carted to be landfilled in cells so that it can be made available to dig up for recycling later on. This “mono fill” is facilitating cheap tyre disposal (usually of truck tyres) and is artificially lowering the gate fees that are necessary for commercial recycling activity. The existing (apparent) National tolerance to mono fill runs the risk of promoting a huge level of stockpiling, in a very short time.

The best deterrent is enforcement of legal disposal and/or recycling solutions. There are about 4000 tyre retailers in Australia, about 30 licensed and operating tyre disposal organisations and less than ten recyclers (five recyclers – all ATRA members - handle over 80% of recycled tyres in Australia). These are the organisations that face and deliver the primary economic alternatives of recycling vs landfill disposal. Tyre retailers simply make the decision to call for legal disposal from the 30 licensed collectors. The Licensed collectors make the decision on how best to minimise their cost of disposal and/or delivery to a recycler.

It is not considered a difficult regulatory task to provide these organisations with a regulatory framework and incentives in favour of recycling as opposed to landfill and illegal disposal.

A key regulatory consideration is the incentives offered to recycle. This is a demand driven phenomena. Where there is low demand for recycled materials (tyre derived products), there will be low demand for recycling solutions.

The key sources of demand for tyre derived products are construction and energy recovery solutions. Energy recovery is a low value, but high volume, tyre recycling solution, whilst many construction directed uses of tyre derived products are higher value solutions.

We use the term construction to refer to the use of tyre derived products as being:

a. commercial adhesives

b. soft surfacing/flooring

c. an additive to asphalt

d. for civil construction

e. for a series of construction related activities like mining and waste management facilities development.

There are many tyre derived products and solutions that have been widely demonstrated, and are fully documented in Australia and in international markets. A significant proportion of these solutions are directed towards government construction and the potential exists to increase this market considerably.

These reports demonstrate that tyre recycling can be commercial, technically effective and environmentally beneficial. Many international markets have achieved much higher levels of recycling than has been achieved in Australia. A key driver in this regard has been the implementation of regulatory settings that promote recycling over legal and illegal waste tyre disposal.

In Australia, however, for lack of clear regulatory provisions that encourage the use of recycled materials, the markets represented by these solutions have not yet been developed to the point of being commercially self sustaining. A major factor in this regard is the lack of encouragement (or incentive) for procurement authorities to use tyre derived solutions. Specifically government procurement policies make no reference to the use of recycled materials. In the absence of procurement policies that call for the consideration of using recycled materials, let alone for preference to be applied to such use, there is a strong tendency for procurement authorities to favour conventional virgin materials even where tyre derived products offer better value over the longer term.

By way of example, two case studies are provided in Appendix A that show the true economic value of tyre derived products (without even taking into account the desired social and environmental benefits associated with such applications). Yet, despite the economic and performance benefits associated with these kinds of applications, Government and industry procurement policies provide no direction to encourage the use of tyre derived products.

Consequently, as noted in the case studies, even though the tyre derived solutions offer direct cost savings, government procurement authorities remain resistant to the adoption of such solutions primarily due to risk averse procurement policies which tend to favour conventional solutions.

Moreover, the cost savings that accrue to government owned waste management services, by way of waste disposal avoidance, are not reflected in procurement policies. That is, there is no connection drawn between waste disposal cost savings and procurement policies.

The reality is that by valuing recycled commodities on the basis of their secondary raw material value alone, waste policy initiatives are doomed to failure as the value of recovered materials drop and the complexities (and costs) of waste streams increase. It is imperative that the true value of recycling activities is recognised, not simply in terms of its direct material but also in terms of the corresponding benefit of waste avoidance (and the "social" savings associated with this) as well as the energy savings involved. Otherwise, industry will be forced to focus purely on direct commercial value, ignoring the benefits to be derived from high resource recovery and waste minimisation.

Of equal importance, where industry has demonstrated the value of tyre derived products, there is no mechanism for such success to be promoted to other procurement authorities. In fact, there appear to be distinct disincentives for such promotion with regulatory limitations imposed on government authorities against promoting success in the use of tyre derived solutions.

Waste Disposal Pricing

Historically, there has been a failure to recognise the full cost of disposal in assessing the impact of waste generation. Generally, the price incurred for disposal is below the actual cost of disposal and this is usually at the expense of the responsible government instrumentality. Thus, the taxpayer is paying for disposal rather than the generator of the waste.

As an example, tyres can be disposed of at a cost of $20.00 per tonne (100 passenger tyres) at landfill centres in areas of NSW outside of the Greater Sydney area and Extended Metropolitan Area. This rate is clearly well below the long term fully allocated cost of disposal.

Many waste disposal facilities appear to price their service in whole or in part on a basis that does not reflect the long term fully allocated cost. This has two outcomes:

- It makes disposal a low cost alternative.
- It undermines recovery for the purpose of recycling.

At the same time where recycling facilities are in place and available to enable waste to be recycled rather than disposed of, there is a saving to publicly funded waste disposal facilities. This saving to the public purse could in part be used to subsidise recycling. This does not occur in the tyre industry – despite the savings to governments in waste disposal, no incentives are offered by government to promote recycling of waste tyres.

Price is not the only effective incentive. Where governments are able to reduce waste disposal costs the amounts saved could be used to promote the diversion of waste products to recycling activities in addition to, or even rather than, providing price incentives.

One of the arguments for not adopting full cost recovery pricing of waste disposal is that doing so might lead to illegal disposal. Whilst this risk is real, the solution is to enforce adherence of disposal laws rather than underprice disposal.

Enforcement

A costly and environmentally damaging waste management issue is illegal waste tyre disposal. Tyres do not degrade over time and should only be considered a permanent source of environmental harm in so far as they represent a loss of visual amenity and/or a fire hazard.

It is critical though that States and municipal authorities enforce waste tyre disposal legislation. However, uniformity in regulations across the States is vital. At the moment we have regulated waste streams in Queensland, NSW and South Australia, but this is not the case in Victoria. There need to be uniform and consistent regulations applied across all States, and then these need to be properly enforced to ensure full compliance.

Procurement

A major market failure is the lack of support for recycled solutions by both public and private purchasing. Tyre recycling is a relatively new industry. There are many solutions all seeking to gain threshold demand and become commercially viable.

Many tyre recycling solutions are relevant to uses that involve government purchasing either directly or by way of suppliers of construction services. Government procurement is therefore in a position to generate a high degree of tyre recycling by specifically calling for the use of tyre derived products.

This does not occur in the vast majority of cases. In fact Government procurement guidelines and policies do not even highlight the desirability of, let alone call for, the use of sustainable resource recovery solutions. The federal government procurement policy is “silent” on the need to show preference for sustainable solutions and to the best of our knowledge, so are State based procurement policies.

Whilst the environmental agencies may call for the use of sustainable solutions the fact is that they have little impact on procurement activities. There is a need for procurement policies to reflect environmental objectives. This will provide the necessary pull through demand that will drive a change in attitude and help change the underlying economics currently restricting full and effective resource recovery.

Demonstration Projects

It is also important to recognise that government procurement organisations have downsized and outsourced their product assessment functions. They rely on their suppliers to conduct new technology assessment. As a result new sustainable technology is not considered in the way it may have been in the past when procurement authorities possessed their own in house R&D functions.

Moreover, in the absence of such R&D activities, the validation and demonstration activities that were once provided by government procurers are no longer available. Not only does this shift the validation, demonstration, documentation and accreditation responsibility to the recycler (or their users), it discourages the government procurement authority from willingly considering new recycled solutions.

It also causes all of the participants in the design and supply process – ie. engineers, contractors, sub- contractors - to be less likely to participate in the consideration of new recycled solutions as they know how difficult it will be to attain the support of their target market (ie Government). Further, because the demonstration projects do not involve government authorities, the validity of demonstration projects via private industry tend to be questioned with their credibility unduly discounted.

Thus, there is a need for collaboration by government and industry to validate and accredit recycled solutions. Central to this matter is the fact that most tyre derived products deliver value because they are either lower cost or perform better than the products they replace. Despite this fact there is resistance by procurement agencies to properly engage in the consideration of the use of recycled materials.

The result is that government not only misses out on the waste disposal avoidance cost savings but also misses out on the greater overall value benefit of the recycled product.

Promotion

Governments have adopted the stance that they should not endorse companies or products because doing so is seen as delivering an unfair advantage to the endorsed supplier as compared to its competitor. There is also a corruption concern.

This stance may be appropriate to the vast majority of products and services but it has the effect of inhibiting recognition of success in new sustainable solutions – ie. recycling. A related matter is that recycled materials have a reputation for being higher cost and sometimes suffering performance shortfall. These negative preconceptions have tended to persist well beyond their resolution. Despite advances in many tyre derived technologies negative preconceptions continue to exist that can only be changed by way of education.

Government and industry need a vehicle for recognising sustainable solutions and ensuring that potential users are aware of their current alternatives and their credentials. Given the lack of product assessment capabilities within government this requirement falls to private industry and represents a high cost. This is particularly true in the case of SME sourced new technology where funding for business development may not be available. To ensure that such new technologies reach threshold there is a need for promotion of their value.

A central element of such a campaign is the need to overcome preconceptions that recycled products cost more or lack functional performance. This perception reflects the early stage of development of recycling technology - and whilst many technologies no longer suffer these disadvantages the perception persists.

There is a need for education and promotion of the value of recycled materials. One approach to this is the concept of Good Demonstrated Practice. Government and industry should be encouraged and forums should be made available within which such Good Demonstrated Practices can be recognised and promoted.

A related matter is the need for environmental claims verification – Eco-labelling that is endorsed by government. See below.

The Role of the EPAs and the need for Accreditation Systems

A central issue in this area is the role of the EPAs in validating recycled solutions. The average potential users of recycled materials have every right to ask – "is this EPA approved?".

This is a very common question even though it is not entirely appropriate. Most people expect the EPAs to be able to tell them what they can do because they know the EPA has the responsibility to tell them what they cannot do. The fact is that EPAs do not approve products or technologies. This is a serious problem for the marketing and supply of recycled products.

The solution to this dilemma is Eco-labelling – constituting environmental claims verification and certification. This is an extensive topic in its own right. For further information in the regard we recommend the Productivity Commission seek the advice of the Australian Ecolabelling Association.

However, there is also the issue of "disinformation" in the field of tyre derived product validation. In the absence of government endorsed eco-labelling there is a tendency for mis-information to persist. As an example the NSW DEC commentary on Waste Tyre EPR refers to aggregated waste tyres as a leachate risk. This is not an accurate assessment and yet the misconception persists. The fact is that tyres have been shown to have a low leachate risk and the normal use of new tyres has a far greater impact on the environment through tyre wear. Nonetheless the leachate issue is consistently raised as a concern.

The real issue here is the need for informed authority on the environmental impact of tyre derived products and the importance of such authority being adhered to by procurement authorities.

GHG Credits

The current GHG programs are highly oriented to direct energy savings and renewable energy development as opposed to support for recycled products that replace energy intensive virgin materials. There is a need for a carbon credit scheme that specifically recognises recycled products that deliver GHG savings.

3. What strategies should be adopted by government and industry to improve economic, environmental and social outcomes in regard to waste and its management?

The key strategies are:

a. Full cost recovery of waste disposal services regardless of the source, particularly in the case of government owned landfill.

b. Uniform regulation across all States and enforcement of legislation to minimise illegal disposal.

c. Government and industry procurement of recycled products and development of mechanisms to cause this to occur, including education and promotion, tenders that show preference for recycled products, possibly price incentives funded by waste avoidance cost savings and subsidies by way of levies on the user in line with EPR principles.

d. Government procurement agency involvement in demonstration projects that serve to validate, qualify, demonstrate, document and accredit the value of recycled solutions.

e. Joint Government and Industry promotion of recycled solutions

f. Research into the systemic barriers to the consideration and adoption of new sustainable technology by public procurement agencies.

4. Are there any items (either specifically noted above or not listed) that should be included or excluded from this inquiry? What are they and why should they be included/excluded?

No comment

5. To what extent is the lack of disaggregated data (that is, the lack of information about quality and composition of waste) a problem?

The Waste Tyre industry has been frustrated in the context of the development of the national tyre recycling policy by the paucity of data on the volume of waste tyre disposal.

This information should be readily available from the manufacturers and retailers of tyres. In so far as the vast majority of tyres are disposed of by tyre retailers and in so far as their suppliers are relatively small in number this should be easily available data.

Data on the extent of illegal waste tyre disposal is a further issue. Illegal tyre disposal is frequently reported as exceeding 10% of total tyre disposal PA. If this were true it would represent about 3M tyres PA and the rate of accumulation would lead to very large numbers of tyre stock piles. From practical experience this figure seems high, yet it is frequently quoted to suggest a major cause for concern.

Nonetheless, once a Product Stewardship Program is up and running, the necessary data should be able to be easily derived and assessed, enabling any policy parameters to be readily refined (see response to Q7 below).

6. What are the most significant data gaps?

Volume by Tyre disposal by type PA.

Level and rate of increase of illegal disposal PA.

7. What are the costs and benefits of collecting more comprehensive and disaggregated data?

In the absence of the data, policy formulation relies on estimates based on unreliable data. As a result policy formulation is not conducted with confidence and is consequently pursued with a lack of vigour.

The cost of collecting this information is low – the data is easily available from manufacturers and importers and the distributors.

Nonetheless, this should not be considered a major deterrent to the establishment of appropriate Product Stewardship Schemes. The reality is that the relevant resource recovery statistics will become readily available under such scheme (as full disclosure and close monitoring of activities will be required to determine both levy impositions and benefit allocations). These data can then be used to benchmark all activities and encourage full resource efficiency at all stages of the recycling supply chain. The level of recovery can then measured and if it is too low, the necessary stimuli can then be applied. Thus the scheme guidelines and mechanisms should be iterative in their development and the lack of initial data should provide no excuse if the commitment is there from all parties to maximise resource recovery.

8. How would the data set be used?

To measure the volume of tyres by type and based on that knowledge, specify the cost of disposal and the benefit of recycling and disposal avoidance.

Similarly the cost of illegal disposal avoidance can be better specified.

9. What countries collect and use data on waste more effectively than we do and what are the lessons for Australia?

Whilst many countries report this data we are not aware of any that does so with a high degree of confidence.

10. What role can web-based exchanges play in promoting the efficient disposal of waste and the recovery of recyclables? What role should government play in developing such exchanges?

The waste tyre disposal industry is reasonable concentrated. A web based exchange would have little impact on efficient waste disposal given the existing industry structure and extent of communication between all key players.

11. How has the waste hierarchy influenced waste management policy?

The waste management hierarchy is past its due date. It was relevant when the issue was waste disposal cost avoidance. The waste management hierarchy has a tendency to cause users to believe that the issue is waste management rather than resource recovery.

The primary issue today is resource recovery. The chart would serve better if it were focussed on a resource use and recovery hierarchy.

12. What are the advantages and disadvantages of using the waste hierarchy approach to waste management?

It is a very simplistic representation that merely serves to communicate that resource recovery is a better way to manage waste then waste disposal.

13. Under what circumstances, and for which wastes, is it appropriate to proceed sequentially through this hierarchy?

14. When would it be more appropriate to consider these approaches as options rather than an ordered sequence? For example, under what circumstances would it be appropriate to forgo reuse or recycling in favour of energy recovery?

In the waste tyre industry there is a significant risk that energy recovery will have the effect of impeding higher value recycling uses of waste tyres over the longer term. This may occur because energy recovery requires significant investment by the energy recovery facility and entity. In the presence of levies and funding to make this investment such organisations may be in a position to call for and command high volume contracted supply of waste tyre supply from waste tyre disposal organisations.

Nonetheless there is clearly a role for energy recovery in the waste tyre recycling mix at least during the early stages of recycling market development, as it provides the opportunity to pull through larger volumes of tyres.

15. Are there any other interpretations of resource efficiency that should be taken into consideration when considering policy in the waste management area?

There are a number of considerations that are not easily balanced. These include:

- The need to recognise and specify the long term fully allocated cost of waste disposal
- The environmental impact of the recycled material including for instance GHG emissions caused by recycling as compared to the GHG emissions of virgin materials
- The need for cost savings in disposal to be reflected in recycled material economics
- The cost effectiveness of the recycled products – there may be no point in subsidising recycling if the effect is to subsidise a material that can never be self sustaining on an economic basis.
- The need to recognise that recycled products (like all products) have a life cycle where in they may be high cost when volume is low but low cost when volume is high, There is a need to accelerate market development to ensure that new recycled materials survive the early stage of development.

16. How can Australia improve the economic efficiency with which resources are used in waste management and disposal?

Implement nationally consistent waste disposal regulations, ensuring that waste tyre disposal is fully costed and such cost is borne by the user of waste disposal services.

Increased government procurement of recycled materials

Development and adoption of Eco-labelling

Research the systemic barriers to consideration and use of new recycled materials by procurement authorities.

Promote recycling to overcome negative preconceptions about recycled materials

17. ***Are the levels of waste generation and disposal in Australia too high? If so, what is the basis for assessing this?***

This is not relevant to tyre waste management. Tyre disposal at the end of the life is an important public policy on safety grounds. The rate of disposal is determined primarily by this factor.

The cost of disposal is in the main lower than it should be. Our impression is that tyre waste disposal prices do not reflect the fully allocated cost of disposal.

18. ***What are the costs and benefits of the different approaches to waste management (such as reuse, recycling and energy recovery)?***

Tyre derived products have been shown to be high value materials that reduce the cost to the user as compared to virgin materials. ATRA has many case studies supporting this proposition.

In view of the fact that tyre derived products also perform at a high level in functional terms and deliver waste disposal avoidance and GHG abatement benefits, one would expect that there would be high demand for these products.

It is ATRA's view that the primary barriers to higher demand for recycling of tyres are constraints in procurement systems and that these constraints need to be fully examined in order to generate optimal policy development.

19. ***How large are the external costs of properly constructed and managed landfills and other types of waste disposal in Australia? What types of costs are involved? How do these costs vary according to the type of waste?***

The key issue for waste tyres in this regard is the need to shred or cut the tyres prior to landfill disposal. Whole tyres are a high cost landfill disposal material because they occupy a far greater amount of space than shredded materials. As a result tyres should be required to be shredded before landfill disposal.

Regulatory requirements in this regard are not complete – whole tyres are accepted for land fill disposal in some constituencies.

20. ***What externalities are associated with other waste disposal options, such as incineration and composting?***

The main externality is the failure to achieve resource recovery and that the true value of resource recovery is unrecognised (in that it ignores the community/social cost of waste generation and disposal).

21. ***Do these externalities warrant a government policy response?***

Government policy is required as described above.

22. ***How large a problem is illegal dumping and littering? What types of waste cause most of the problems?***

Illegal disposal of waste tyres can be a major problem because tyres do not degrade and can be considered a permanent material – they have a life in the thousands of years.

The volume of illegal disposal is not reliably known. However the economic incentives in favour of illegal disposal are significant and the enforcement of legal disposal is not aggressive. As a result it seems likely that a degree of illegal disposal occurs, but not to the extent commonly quoted.

23. What are the main costs of illegal dumping and littering?

The main damage created by illegal disposal is loss of visual amenity and fire / infestation risk. The need for illegal stockpile removal represents a cost in the order of $2.50 – $5.00 per epu depending on the accessibility of the illegal stockpile.

24. What are the most cost effective policy and enforcement mechanisms for limiting illegal dumping and littering?

EPR theory postulates that illegal disposal will be minimised to the extent that demand for recycling causes tyres to have a positive value. We are not aware of a study that supports this view and we believe that in the absence of aggressive legal disposal enforcement there will remain a positive incentive supporting illegal disposal.

We believe the most effective deterrent to illegal disposal is the imposition of penalties applied to the perpetrator. We believe that a few high profile cases would have a strong effect and that State and local Governments need to allocate the minimal funds required to achieve this outcome.

25. To what extent do negative externalities associated with resource extraction and materials processing (and other stages of the product life-cycle) result in non-optimal levels of waste?

The primary issue in this regard is the lack of national consistent regulations on waste handling and the enforcement of these policies and regulations so as to provide positive incentives for recycling.

26. How important are market power issues in waste management? Are there barriers to entry in the markets for collecting and recycling waste and what are they?

The waste tyre collection and recycling industry is a concentrated industry with low barriers to entry. We do not see a policy issue in this respect.

There are however high barriers to the design, development, demonstration, validation, documentation, accreditation and promotion of recycling solutions. It is insufficient to adopt the stance that these costs should be met by private industry.

There is a need for government and industry collaboration to address these costs, as well as the issue of overall market development.

27. What competitive discipline do exports have on the market power of domestic processors?

Some used tyres are exported for use in developing countries, predominantly as casings for the retreading industry. Whilst there may be an issue in the destination market of the safety of used tyres, from an Australian point of view there is no policy issue and the export of used tyres is a valid use.

Australia does not export an important volume of recycled tyre materials. As a result competitive disciplines do not pertain. It is however the case that Australia's ability to export recycled tyre materials will be affected by high subsidies in other countries as they reduce the price paid for tyre derived materials in export markets. In the absence of EPR based levies Australian sourced tyre derived products may be less competitive.

28. Are institutional or regulatory barriers preventing the uptake of better waste management practices and how?

As discussed above, this is a key factor in regards to waste disposal pricing. Where waste disposal facilities are owned by municipal governments there is a positive political incentive to reduce waste disposal prices. The impact of this pressure is to undermine recycling and cause the tax payer to subsidise the users of waste disposal services.

29. Are local governments sufficiently aware of best practice approaches to waste management that would suit their circumstances? What institutional constraints are preventing the adoption of best practices?

Local Government is a significant potential source of construction uses of tyre derived products. The systemic barriers to adoption of tyre derived products are the major institutional problem.

Local Government is frequently the owner of local landfill facilities that under price tyre disposal.

Local Government could be a significant user of tyre derived products but for the lack of access to expertise in relation to the use of tyre derived products and an unwillingness to take the perceived risks associated with the use of tyre derived products.

An important target for education and promotion of tyre derived solutions is local government.

30. What regulatory and institutional barriers are impeding the development of markets for recovered resources? What is the case for removing these barriers?

The annual savings in waste disposal avoidance and tyre derived resource use is considered to be in the order of $50 - $100 M PA.

31. What case is there for using waste management policies to improve the sustainability of 'resource use?

The annual savings noted above are available on an incremental basis and therefore should be seen as a direct benefit from sustainable resource use. The GHG abatement benefit depends on the value placed on GHG abatement – currently an externality that is not reflected in tendering practices.

32. How effective has the mix of policy instruments been in achieving efficient levels of waste? What policies have produced the most efficient outcomes?

The waste tyre recycling market as it exists to date is primarily the result of economic and technical factors without any major influence derived from policy impacts. In so far as the industry is achieving sub optimal levels of resource recovery the current policy framework is insufficient.

Whilst the presence of regulations that require licensing of tyre transporters has served to improve the professionalism in this field, it is inconsistent as not all States require licensing (eg Victoria).

33. How are targets being set? What consideration is given to the social, environmental and economic costs of achieving these targets? How should targets be set to optimise social, environmental and economic outcomes?

The Product Stewardship Program currently being developed, supported by the stakeholders in the industry, has called for at least 90% of tyres to be recycled within 10 years.

This is an arbitrary target, and it is ATRA's view that it will definitely need the support of appropriate regulatory settings to be achieved.

34. How should Australia's performance in waste management relative to other countries be measured? What role is there for key performance indicators in making such comparisons and which key performance indicators are the most useful for public policy purposes?

Australia has achieved about 30% recycling of waste tyres. The USA, Japan and a number European countries have achieved 85% + levels of recycling, albeit a high proportion of the achievement has been based on energy recovery.

The key performance indicators should include:

1. Proportion of tyres recycled PA / proportion of tyres disposed of by landfill.
2. Proportion of tyres illegally disposed of.
3. Net value of resource recovery – retail selling price less cost of production including subsidies from industry or government.
4. GHG savings.

35. How well have these policies worked in generating economically efficient levels of recycling? What policies or mix of policies are likely to work best in this regard?

The current policies are not effective.

The required policies are as described above.

36. How useful is full life-cycle analysis in determining the environmental and economic costs and benefits of recycling various products?

It is the best option available. Adoption of full life-cycle analysis requires development of government endorsed eco-labelling.

37. Are there particular products or locations for which disposal rather than recycling might be a more efficient option?

There are many tyre recycling options in terms of technologies and a very long list of products. These many options should compete in an open and transparent market for development and acceptance, subject to the consideration provided above.

Whilst some solutions have greater merit than others, in various regards none in themselves provide the total solution. A mix of tyre recycling applications is required to deliver a comprehensive solution.

This includes the consideration that some solutions minimise transport costs whilst other require a high transport component. These costs are part of the cost and market mix.

38. How has government procurement policy affected recycling levels? How important is the demonstration effect of government actions?

In the waste tyre recycling industry government procurement is very important. It is important to recognise in this context that whilst government may outsource construction services the policy of the procurement authority has a fundamental impact on the extent of use of recycled materials. As a result it is inaccurate to say that because supply of services has been outsourced it is no longer driven by government procurement policy and demand.

During the formative stages of tyre derived product markets, government's role in demonstrating, validating, documenting, and accrediting is vitally important. Once this evidence is in place, private industry demand will increase.

Conversely in the absence of government demonstration, validation and accreditation the rate of adoption of new tyre derived solutions will be much slower for a number of reasons:

1. Government authorities represent a large proportion of the potential market. In the absence of demand from government procurement, new tyre derived products will take longer to develop and to reach a point where they achieve economies of scale in production. As a result they may be seen as more expensive when in fact they are simply operating on low demand cost parameters.
2. Government authorities are considered to be particularly important as independent assessors of product performance.
3. Government authorities require a high level of documentation that lends credence to their assessment (and provides justification for their decisions)
4. Private industry often embraces technologies that it knows will deliver government demand and ignores solutions that they fear will be ignored by government.
5. Decentralisation of procurement and outsourcing of technology assessment has made it expensive for new technologies to gain government acceptance.
6. It is expensive, and duplicative, to generate business with decentralised procurement authorities.
7. Government authorities resist endorsing new products which has the effect of increasing the cost of validating new tyre derived products.

39. What are the economic, environmental and social benefits and costs of recovering energy from waste?

This is a matter that should be addressed to the cement production industry which is the primary potential source of energy recovery demand.

While energy recovery as a lower value use of recycled tyres, it is a driver for higher volume recovery in the immediate term.

40. *What is hindering the greater use of recovering energy from waste in Australia?*

There are significant capital investment costs associated with tyre energy recovery operations. This necessitates high volume throughput and the low cost fuel alternatives in Australia (coal, gas, other waste streams) makes this application marginal in some cases.

41. Are there particular products or locations for which recovering energy from waste would be the most efficient approach to waste management?

The highly populated areas eg Sydney, Melbourne, where there is a high concentration of tyres.

42. To what extent do local government pricing arrangements for waste collection lead to undesirably high levels of waste disposal?

As discussed above

43. Where unit pricing has been introduced, has this proved efficient and effective? Has it lead to a reduction in waste disposal and/or an increase in recycling?

No comment

44. What is the purpose of landfill levies? How should they be set?

Levies should be used to fund regulatory enforcement. Inconsistent levies and regulations create market distortions between regions.

45. What impacts do landfill levies have on the illegal dumping of waste?

Landfill levies do run the risk that they increase the "incentive" for illegal disposal. Thus it is important that effective monitoring and policing of the waste stream is undertaken.

46. Is it appropriate to hypothecate levies to other waste management activities? Does this provide the correct level of funding for such activities?

One can make an argument for hypothecating levies to fund recycling and particularly market development of recycling solutions. The adequacy depends on the level of the levies and the alternatives.

As stated above, the levies should be used to fund regulatory enforcement.

47. What are the advantages and disadvantages of extended producer responsibility and product stewardship schemes?

The two have the intent of forming policy and regulation such that the manufacturer makes a contribution to full life cycle costs including disposal and recycling.

Product stewardship particularly captures the idea that manufacturers (and importers) have a role to play in recycling. While in Australia they no longer have a direct investment in waste tyre recycling, they do have a clear leadership role in initiating such programs.

However in the waste tyre recycling industry, the reality is that for a Product Stewardship Scheme to work, it must of necessity involve the commitment of all stakeholders within the 'end-of-life' tyre supply chain. That is, it is the recyclers and their ultimate market that will ensure that such product is ultimately removed from the waste stream – not the so-called producers.

It should be recognised though that a voluntary industry led EPR is doomed for failure unless it is coupled with a co-regulatory aspect that ensures there is no free-rider "erosion" of the scheme's operations. If there is scope for any one player to avoid the impact of the Scheme, it will immediately place them at a competitive advantage and thus discourage all other "producers" from contributing to the scheme.

48. How effective have they been in achieving optimal levels of waste?

Tyre manufacturers have contributed to extending the life of tyres and therefore reducing the rate of disposal.

Beyond this contribution manufacturers have little to contribute to the waste tyre industry in this regard. The primary factor is that rubber tyres are omnipresent and an inevitable waste material that can not be reduced in its volume. To the contrary it is important in safety terms that tyres are replaced when they are no longer suitable for use.

49. Which products are most amenable to these arrangements?

The key to solving the waste tyre disposal issue is the development of recycling solutions, development of demand for tyre derived products, facilitation of aggregation of waste tyres to facilitate recycling, development of regulatory settings and policies that have the effect of promoting tyre recycling.

The primary role of manufacturers in this regard is ensuring their distribution systems handle waste tyres in a way consistent with recycling and where necessary collecting funds from tyre users to subsidise and promote recycling.

50. How should importers be treated under these schemes?

Importers should be treated in such a way that their responsibilities are identical to manufacturers and that parallel importers bear the same responsibilities. That is, no party should be allowed to avoid the scheme, as any free-rider will immediately undermine the effectiveness and sustainability of the scheme.

51. Who should bear the responsibility for the disposal of 'orphaned' products (that is those products in circulation before the scheme is introduced)?

This is not a major issue. If the new waste tyre recycling problem is solved it is likely that historical stock piles (legal and Illegal) will be removed in time.

There is a need to prioritise stock pile remediation. It is likely that the major stock pile issues could be resolved within a moderate budget.

52. What are the advantages and disadvantages of the different regulatory options for setting up extended producer responsibility or product stewardship schemes: self regulation, co-regulation and explicit legislation?

It appears that a mix is required:

- Explicit legislation to capture free riders
- Co regulation to ensure nationally consistent waste management regulations apply
- Co regulation to ensure the levies are used in an effective and transparent way and to ensure the full range of uses of funds is addressed, including the need to generate change in procurement practices.
- Self-regulation may have a role to play particularly in causing the tyre manufacturers and importers to play a positive role in causing their distribution systems (wholesalers and retailers) to facilitate waste tyre aggregation and recycling.

53. What should be the relative roles of industry and government in the development of such arrangements?

Government has a central leadership role in:

1. Forming consensus among the stakeholders including State and local government. The strategic analysis offered by government has not been sufficient to generate consensus. To

a large extent this is because government has seen its role as one of facilitation rather than strategic leadership.

The waste tyre disposal and recycling solutions are not terribly complex and there is substantial information available. Moreover, it is not necessary to have full information or certainty about the accuracy of base data. As long as there is full commitment from all relevant parties, a scheme can be introduced and modified as necessary. However, Government can play a real catalytic role in getting the scheme introduced in the first place.

2. Determining and implementing regulatory settings that are required including enforcing legal disposal and full cost recovery of waste disposal on a user pays basis.

3. Using its procurement role to demonstrate, validate, and accredit recycling solutions.

4. Promoting the use of tyre derived products to other levels of government and private industry.

5. Adopting Eco-labelling

Industry has a central role in:

1. The EPR sense where the producer includes all stakeholders – not just manufacturers.

2. Developing and investing in tyre collection facilities and recycling solutions technology and production facilities.

3. Promoting these solutions in the context of government procurement that embraces its responsibility to assess and use tyre derived products.

54. How effective has the National Packaging Covenant (in both its initial and subsequent forms) been in promoting optimal levels of packaging wastes?

No Comment.

55. What is the most appropriate way of collecting products covered by an extended producer responsibility or product stewardship scheme?

In the tyre industry there are existing collection services made available by industry and in line with waste management regulations for the safe transport and disposal of waste tyres. To a large extent these organisations meet the collection need. However, this needs to be reinforced with uniform regulation across the States that is vigorously policed.

56. What is the role of levies in extended producer responsibility and product stewardship schemes?

The role of levies is to:

1. Cause the user (of the original product) to pay for the safe and beneficial disposal or recycling of the subject product.

2. Fund the early stages of tyre derived market development. In the tyre industry this means promoting and subsidising tyre derived products during the early stages of development but on a basis that is equitable among alternative recycling solutions.

3. Fund the promotion and to a moderate extent demonstration of tyre derived solutions.

4. Promote waste tyre management practices within tyre distribution systems

57. If producers are required to pay a mandatory levy, what other obligations should be placed upon them?

This phrasing of the question implies that producers are paying the levy. In the tyre industry, as no doubt would be the case in other industries, the inevitable tendency would be for such a levy to be passed on to the consumer. Whilst there would be a very minor negative affect on producers due to price elasticity, one would not expect the levy to have a negative affect on producer profits and therefore it seems more accurate to see the levy as being met by their customers rather than themselves.

It is in fact theoretically important that the levy be passed through to the users because it is the users we are trying to get to pay for best practice recycling.

It is very important that the use of the levy be directed and adjusted in a way that achieves the objectives of the levy. These objectives have been largely agreed by the tyre industry (refer to the Federal Department of Environment and Heritage for copies of the latest Issues Paper and draft Product Stewardship Agreement for tyres).

Similarly the governance mechanisms applied to the use of levy funds must be tightly managed by government and be transparent to all stakeholders in the tyre recycling industry.

This includes that the levy is accurately raised and accounted for but also that the use of levy funds serves to promote recycling and is equitable among all participants (existing and potential) in the recycling industry.

58. What is the appropriate mix of producer levies and post consumer charges (including local government rates and tipping fees)?

In the tyre industry there is no need to use levies to pay for collection of waste tyres – the waste tyre collection industry meets this need and does not require subsidies for this function.

The uses of levies should be primarily directed towards activities to promote and subsidise waste tyre recycling. There should be significant emphasis on promotion. Price subsidies will not overcome some of the institutional barriers to adoption of recycled materials. But once the demand is generated this will provide a pull through effect to enhance all collection activities.

The approximate mix for the tyre industry is currently being determined by participants in the National Tyre recycling industry round table.

59. To what extent has greater regulation of landfill efficiently ameliorated the external costs of waste generation and disposal? Is further or better targeted regulation necessary? What costs have these regulations imposed on landfill operators?

Greater regulation is required to deliver a nationally consistent regulatory regime that includes:

- a national ban on land fill disposal of whole waste tyres,
- the full cost recovery of landfill disposal,
- the enforcement of regulations,
- national regulation on collection and disposal of waste tyres,
- a single stance on the safe aggregation of tyres in preparation for recycling,
- the adoption of eco-labelling to validate tyre derived products with EPA support
- Increased demonstration and promotion of tyre derived solutions.

60. What constraints are urban planning requirements placing on the efficient disposal and recycling of waste?

The primary constraint of urban planning is the failure of procurement authorities to adopt tyre derived products in construction.

61. How can or should waste disposal and recycling facilities be treated in an urban planning context?

Urban planning authorities should show preference for tyre derived products at least in so far as they enable a full and transparent assessment of those products including their eco-labelling credentials and by ensuring that waste disposal avoidance is taken into account in assessing the value of tyre derived solutions.

62. What are the main costs of littering and how substantial are they? What sort of litter is the most costly or problematic to deal with?

As above

63. What are best practice examples of using enforcement and education to reduce the extent of littering?

In the main we believe that licensed tyre collection agencies generate legal tyre disposal and facilitate recycling.

It appears that insufficient resources are allocated to enforcement of legal disposal.

There is a need for a concerted campaign directed to tyre retailers to cause them to recognise the risks of illegal disposal, to make them liable for illegal disposal where such involved an unlicensed supplier.

64. What are the advantages and disadvantages of container deposit legislation in reducing litter and increasing recycling? What part do they play in optimising waste management outcomes?

No Comment

65. ***Do the benefits of community and business education programs on the creation and disposal of waste justify the costs involved? Which types of programs are more successful in this regard?***

66. ***Are government programs to reduce waste cost effective for the agencies concerned? Do they provide effective signals to the wider community?***

Governments have often developed waste reduction and recycling strategies for their departments and agencies, in part to provide a lead to the community. However their procurement authorities do not embrace these practices to the extent they might and as such fail to provide the necessary leadership on environmental issues.

A significant constraint on education campaigns is the resistance to promote success. The exhibitions and promotion adopted by governments tends to be so generic as to be ineffective.

There is a need for promotion campaigns to recognise Good Demonstrated Practice – thereby avoiding the undesirable elements of Best Demonstrated Practice but allowing for specific and forthright promotion of environmentally sustainable solutions including the Company and Brand Name that delivered the result.

67. What effect is international trade having on the level and disposal of waste in Australia? What effect is international trade having on recycling?

68. What effects are international agreements (including but not limited to the Basel Convention and the GATT) having on the level and disposal of waste in Australia? What influences are such agreements having on exports and imports of recyclables?

Imported tyre derived crumb has the potential to undermine the local tyre recycling industry, especially if it has been made possible by subsidies in international markets that are not in line with international trade agreements.

69. Are there any significant regulatory differences between the states and territories in waste management? What are the costs of these differences?

There are significant regulatory differences that reflect the lack of national consensus as to the best regulatory framework. The main problem is the lack of any regulation in certain States (eg Victoria).

The differences also include urban vs rural regulatory differences that are unnecessary and counter productive such as the allowance for storage of waste tyres on unlicensed premises and the allowance of disposal of whole waste tyres.

The cost of these differences is to require state variations in any given recycler's operational policies which in and of itself is expensive.

Suboptimal regulations have a direct negative effect on recycling as discussed above.

Amongst the most pervasive of these is the lack of a national eco-labelling program and the associated high degree of variance in procurement authority assessment of tyre derived products. Some procurement authorities adopt excessively restrictive positions that impede adoption of tyre derived solutions.

70. How could national coordination be further improved?

The EPHC needs to call for one set of regulations and guidelines based on a single assessment of the situation.

71. When is it appropriate to implement uniform national approaches and when is it appropriate for the jurisdictions to pursue their own agendas?

The vast majority of tyres are disposed of in locations and jurisdictions where they can be recycled economically. Where such is the case national uniform policies and regulations should apply.

However, in the tyre industry one can make the argument that towns and cities and production centres (such as mines) that are located at a significant distance from urban centres will lack the resources and demand to afford waste tyre recycling.

For example, Western Australia is possibly a little unique to other states in that it has a lot of disused mine sites, quarries and of course "space". Coupled with this are the substantial distances between regional areas and the capital city, Perth. An old DOE strategy in the State is to structure the recycling/disposal of tyres by zones working out from the city.

Whilst ATRA has shown that there are in fact solutions that can be made available on a highly decentralised basis there will always be a small proportion of tyres that can not be economically recycled. Thus, rather than a blanket ban of all tyres to landfill, a national approach may need to give the basic guidelines for the local authorities to work within, but with some scope for adjustment, as not all tyres can be recycled for various reasons, including those reasons unique to WA which add significant cost to the movement of those tyres.

In this situation it should be legal to landfill even whole tyres but there is a need to specify under what conditions and how such land filling can be done so as to be environmentally safe.

72. What role should the Australian government play in pursuing uniform national approaches when this is the appropriate course of action to take?

The Federal Government's primary role should be to provide the strategic leadership to analyse and recommend a uniform position and regulations.

Where states and territories elect to vary from this recommendation for reasons that are not justified the Federal Government should consider providing incentives for conformance, or penalties for non-conformance.

73. How well is the Environment Protection and Heritage Council functioning in developing waste management policies that are in the national interest? What other models for developing policy should be considered?

The EPHC has taken primary responsibility for encouraging the development of a National Tyre Recycling Policy – and this has been facilitated under the Chairmanship of the Federal Department of Environment and Heritage.

However, this work has been underway for about four years and it appears that a further year will be required before a policy is resolved. It is unfortunate that it has taken this long, and the various delays have been unduly frustrating. But perhaps this is inevitable given the many conflicting views and objectives of key stakeholders, and the difficulties associated with a co-regulatory scheme which of necessity must meet the collective commercial concerns of industry and policy objectives of all tiers of government.

Given the progress made by the tyre sector, perhaps it does lend itself to providing a good case study for other sectors to be alert to.