

## Response ID ANON-BMZD-WHE9-A

Submitted to Review of the waste levy  
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### Introduction

#### Your Details

1 What is your name?

Name:  
Elan Energy Matrix

2 Do you want to remain anonymous?

No

[REDACTED]

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[REDACTED]

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[REDACTED]

6 Do your views officially represent those of an organisation?

Yes, I am authorised to submit feedback on behalf of an organisation

If yes, please specify the name of your organisation.:  
Elan Energy Matrix

7 Which of the following best describes the group or person you represent?

Company

If other, please specify.:

8 Are there specific parts of your submission that you want to keep confidential?

No

If yes, please outline which specific parts of your submission must be kept confidential and explain why:

### Objective of the waste levy

1 Are there any beneficial outcomes that can be achieved by a levy beyond those identified in the objectives of Waste Strategy 2030?

Waste Tyres

End-of-Life (EOL) tyres remain one of Australia's most serious waste management challenges and present a growing problem. Tyres play a fundamental part in our everyday life, expediting industries worldwide. In fact, a world without tyres is almost impossible to imagine. In Australia passenger tyres account for 42% of sold tyres (based on weight), whilst truck tyres make up 32%. Off-the-road (OTR) tyres account for 25% of the market. Moreover, the number of new tyres is continuously growing (Randell Consulting 2017, p. 22).

The average lifespan of tyres is 3.5 years for a passenger tyre, 1.5 years for truck tyres, and only 1 year for OTR tyres (Randell Consulting 2017, p. 26). At the end of their lifespan, i.e. once tyres are deemed to be no longer suitable to perform their original function, tyres are commonly referred to as End-of-Life (EOL) tyres. Throughout this document, 'end-of-life/EOL tyres' are interchangeably referred to as 'waste tyres' and 'used tyres'.

The latest data from 2015-2016 shows that Australia currently generates over 447,000 tonnes of waste tyres, or two tyres per person, every year. (Randell

Consulting 2017, p. vii). More than 66,000 tonnes of waste tyre in Australia were generated in Western Australia. Of these, the vast majority - approximately 48,400 tonnes - ended up in landfill or unknown.

By 2024-25, the number of new car tyres is expected to increase dramatically - equalling close to 500,000 tonnes of waste tyres for passenger tyres alone, not accounting for truck tyres and OTR tyres (Randell Consulting 2017).

On an international level, Australia's tyre recycling rates are comparatively low and in urgent need of improvement, as the World Business Council for Sustainable Development (WBCSD) paper, titled: Global ELT Management – a global state of knowledge on collection rate, recovery routes, and management methods, reveals (WBCSD, 2018).

"Australia has been historically poor at managing the risks associated with EOLT and in maximising their recovery and recycling." (Randell Consulting 2017, p.1).

Evidently, 90% of all EOL tyres are not being recycled in Australia (Randell Consulting 2017, p. vii). Most of these waste tyres end up in landfill, illegally stockpiled, burned or dumped in public parks, quiet streets and in our waterways, where, over time, they will turn into hazardous waste (Hyder 2015).

Western Australia's Local Government Association (WALGA) identified a comprehensive list of the risks and hazards linked to EOL tyre stockpiles, in their Research Paper: 'End-of-life Tyre Management in Australia' (2012):

Table 2 Hazards and risks associated with used tyre stockpiles.

Environmental:

- Fire
- Leaching
- Mosquitoes
- Weeds
- Vermin
- Visual impact
- (Loss of resource)

Social and Cultural:

- Health issues
- Fire hazards
- Aesthetics

Financial:

- Liability costs
- Degradation of used tyres
- Disposal costs
- Site closure and remediation
- (Costs of clean-up, transport, end-use gate fee also enforcement, investigation and prosecutions).

Source: WALGA (2012), p.4

Evidently, there are many different ways waste tyres can present a lethal threat to the environment and human health, and they can also present a financial burden, if not processed correctly. At the same time there are many benefits involved in the correct disposal and subsequent processing of waste tyres.

In fact, waste tyres are composed of valuable materials (TyreStewardship, 2018): Each tyre contains steel, carbon char and oil, and these waste tyre-derived resources, can be recovered, reused and repurposed, therewith, prolonging the lifespan of our natural resources. The repurposed yields of waste tyres are themselves able to deliver re-usable raw products with a variety of possible value applications - protecting the environment in a sustainable manner, at the same time, creating a circular economy, with significant environmental, social and economic benefits.

In Europe, for example, waste tyres are not permitted in landfill. "According to the waste management hierarchy, landfilling is the least preferable option and should be limited to the necessary minimum." (European Commission 2020)

As a result, tyre recycling rates in the European Union are close to 100% (Sebola et al. 2018). Sending recyclable materials to landfill depots is a lost opportunity with regards to a circular economy and the possibility to derive value from waste products. This holds especially true for waste tyres. There is a real opportunity for us in Australia to get to similar tyre resource recovery rates and achieve the objectives stated in the Waste Strategy 2030.

In order to ensure waste tyres are brought to accredited tyre recycling facilities to maximise tyre resource recovery opportunities, the best course of action would be to make landfill the least attractive option, now and in the future.

An increased waste levy would be a great start.

## QUESTIONS

### Chapter 2 – Consultation questions

Are there any beneficial outcomes that can be achieved by a levy beyond those identified in the objectives of Waste Strategy 2030?

With the increased levy, waste tyres would be less likely to end up as waste (avoid), Western Australians would be able to recover the valuable resources within tyres (recover) and the environment would be protected (protect):

Problems associated with landfilled and stockpiled waste tyres are manifold. The valuable materials are not being used and therefore wasted. Tyres are a burning hazard, which are notoriously difficult and expensive to extinguish (Randell Consulting 2017). Incorrectly disposed waste tyres also act as perfect breeding ground for mosquitoes and other insects transmitting dangerous diseases to humans (WALGA 2012).

However, there are better solutions:

Recovered raw materials within certain waste products, as those derived from waste tyres, present a great opportunity.

Our experience has proven that there is a market for recovered materials within waste tyres, namely steel, char and crude oil.

Beyond the beneficial outcomes outlined in the Waste Strategy 2030, utilising the resources within waste tyres, can create jobs supporting our communities.

As mentioned in the Waste Strategy 2030, data from the Australian Bureau of Statistics 2014 confirms that for every 10,000 tonnes generated waste, 9.2 full-time employments directly linked to recycling are created, compared with a mere 2.8 jobs created for each 10,000 tonnes in landfill operations (Waste Strategy 2030, 2012).

To bring this into perspective: With approximately 50,000 waste tyres ending up in landfill, generated in Western Australia alone, there is a possibility to create 46 full time jobs, purely based on the tyre recycling component – not taking into account additional employment opportunities associated the repurposing of the tyre-derived end products. Especially now, after the Covid-19 aftermath, new workplaces are urgently needed. Furthermore, the increased levy and the resulting diversion from waste tyres to recycling plants, can also enable new manufacturing streams and business opportunities within Western Australia, using reclaimed natural resources, therewith propelling a new circular economy.

Moreover, in addition to protecting the environment by avoiding waste ending up in landfill, waterways, stockpiled, burned ect., recovering the raw resources within waste tyres also means that less mining operations for natural resources would be needed, as existing resources will be repurposed and become available for boundless uses.

## How the levy can help achieve the objectives of Waste Strategy 2030

### 1 Are there any other strengths or weaknesses of a waste levy as an instrument for achieving the objectives of Waste Strategy 2030?

#### Chapter 3 – Consultation questions

The department would appreciate your feedback on the following question:

#### 1. Are there any other strengths or weaknesses of a waste levy as an instrument for achieving the objectives of Waste Strategy 2030?

If you can provide evidence or more detailed information to support your views, this may help make a stronger case for appropriate action.

1. Waste levies are a monetary contribution payable by licensed waste agencies per tonnage of waste received. The intention of waste levies is the diversion of waste items from landfill sites to recycling facilities (Parliament of Australia 2017).

As outlined in the Waste Strategy 2030, one of the key objectives is that “Western Australians recover more value and resources from waste” which is congruent with the concept of a circular economy.

Using the waste levy as an instrument for achieving the objectives of the Waste Strategy 2030, appears to be right strategy.

As identified in the Waste Levy Consultation Paper, “The price signal provided by the waste levy makes landfill disposal more expensive and less attractive to waste generators and managers” (DWER, Review of the waste levy 2020, p.5).

On behalf of the World Business Council for Sustainable Development (WBCSD) in 2018, the report Deloitte created Global ELT Management, confirms this, stating that the cost to send ELT (End-of-life) tyres to landfill has been identified as one of the main “opportunities and drivers” (p.23).

Accordingly, people will be more encouraged to dispose of waste more carefully, whilst putting more thought into it, as opposed to carelessly bringing waste to landfill. Wherever there are opportunities to recycle products in a commercially viable way, the increased landfill levy allows for the recycling practices to then become financially competitive compared to landfill disposal.

The strengths entailed in recycling waste materials and re-purposing these into valuable materials, as opposed to sending them into landfill, are therewith clearly supporting the Waste Strategy 2030.

Other countries have demonstrated that a higher waste levy, used as an instrument for achieving higher waste recycling rates, have proven to be successful. An example therefore would be the Netherlands.

## Rate of the levy

### 1 How has the waste levy benefitted or affected your waste business or operations?

1. How has the waste levy benefitted or affected your waste business or operations?
  2. Can you advise of any recycling and waste diversion opportunities that would become viable if the waste levy was increased or applied in a different way? What rate of levy could be required to make these viable?
  3. Please provide information on potential impacts which may result from increasing the waste levy.
  4. If you knew when the waste levy was going to be varied, how would it affect your decisions about managing waste or related investments?
- If you can provide evidence or more detailed information to support your views, this may help make a stronger case for appropriate action.

1. Being aware of the inherent dangers associated with incorrectly disposed waste tyres, deemed a priority waste product by the NSW Extended Producer Responsible Priority Statement list, in Australia, tyre disposal in mixed landfill sites are already known to cause severe waste management issue (Matthews 2006). Whole tyres take up vast amounts of landfill space and also contain voids, allowing the movement of inherent gases as well as liquids. It has been reported that buried tyres rise to the surface and are capable of destabilising compacted landfills (Matthews 2006).

As outlined in the Waste Levy Consultation Paper (2020), a major element targeted by the waste levy is the diversion of valuable waste away from landfill and towards resource recovery by ensuring recycling becomes more economically attractive, compared to landfilling.

The waste levy would not affect us directly but indirectly, in form of waste diverted from landfill to us. This would entail various benefits, as the resources within the tyres could be used and repurposed, whilst jobs will be created, that otherwise, would not exist. The environment would be protected, as the mining of raw materials would not be required, given that the materials within waste tyres would be extracted and became available.

Due to the pronounced value in relation to the inherent recovery cost, other countries are achieving extremely high recovery rates. In Europe, for example, waste tyres are not permitted in landfill. "According to the waste management hierarchy, landfilling is the least preferable option and should be limited to the necessary minimum." (European Commission 2020)

As a result, tyre recycling rates in the European Union are close to 100% (Sebola et al. 2018). Sending recyclable materials to landfill depots is a lost opportunity with regards to a circular economy and the possibility to derive value from waste products. This holds especially true for waste tyres.

There is a real opportunity for us in Australia to get to similar tyre resource recovery rates and achieve the objectives stated in the Waste Strategy 2030.

2. Can you advise of any recycling and waste diversion opportunities that would become viable if the waste levy was increased or applied in a different way? What rate of levy could be required to make these viable?

2. With regards to waste tyres, there are different recycling opportunities available and all of these would be more beneficial and in line with Waste Strategy 2030, compared to landfill.

Types of waste tyre processing include shredded tyres, crumb rubber, granules/buffings. However, bailed tyres can also be used as a fuel source, for example in cement kilns (Randell Consulting 2017).

Our recycling technology (Tyre Resource Recovery Facility), for instance, transforms waste tyres into valuable materials by extracting the raw materials within. The regained resources are repurposed and subsequently reused in a variety of applications, therewith saving the environment and decreasing the need for newly mined resources.

Transport costs are proven to be a barrier. This is particularly true for rural and regional areas.

In many cases, the transport costs are the reason people resort to easier landfill or dumping/burying/stockpiling practices, which can pose a major threat to us and our environment.

"A nationally or regionally integrated system for the collection and transport of end-of-life tyres to specific storage facilities would provide the level of monitoring and control that, given the literature, appears to be required to manage end-of-life tyres. An integrated system would also maximise the number of tyres that could be used in tyre reprocessing operations" (Norquay 2004, p.32).

Converting the increased landfill levy into transport subsidies would allow for even remotely located waste tyres to be transported to a verified tyre recycling centre and processed correctly. This would ensure the valuable materials within waste tyres would not be buried away.

So, which rate of levy would be required to make it viable? The ideal solution we envisage would see a transport subsidy implemented, using the surplus funds. With regards to Western Australia, the proposed solution would be as follows:

In addition to the state's capital Perth, Western Australia is divided into nine defined regions, namely:

- Gascoyne
- Goldfields-Esperance
- Great Southern
- Kimberley
- Mid-West

- Peel
- Pilbara
- South West
- Wheatbelt

(Government of Western Australia, 1993).

The distances between some of these regions and the Perth metropolitan area are vast, and the road connectedness varies hugely, making accessibility a variable. Accordingly, a 'flat rate' levy would not be advisable. However, a subsidy worked out as a percentage of the transport costs, passed on as a subsidy, would be a huge help in increasing the number of recovered resources with waste tyres across WA.

For example, transporting a 45ft semi-trailer of tyres - which can hold approx. 220 truck tyres or a mixture of up to 400 passenger & 4x4 tyres - from Port Hedland to Welshpool, costs \$1,620 + GST. The trailer can be parked at a collection site and loaded for up to 10 days free of charge. Each subsequent day would cost \$65 + GST until the trailer is picked up.

Based on this example, a waste subsidy to transport this end-of-life tyre load will ensure the materials within are processed to their maximum capacity.

3 Please provide information on potential impacts which may result from increasing the waste levy.

3. The WA Government Used Tyre Strategy (2005) states that "the aim of tyre landfills should be to manage tyre so they can be economically recovered" (Matthews 2006, p.37). Accordingly, all tyres are supposed to be recovered from landfill sites at some stage. Avoiding waste tyres ending up in landfill and instead making sure they are recycled in an efficient way, are therefore paramount. At the same time, this desired practice of recycling tyres at designated waste tyre processing facilities, will save a lot of money and time in the future.

Potential consequences linked to an increased waste levy are listed below:

Potential negative impacts:

- Illegal dumping and stockpiling could increase in an effort to avoid the waste levy altogether
- If waste levies are administered differently across the state, unnecessary transport of waste tyres between cities could occur to minimise levy costs to be paid - similar to what happened over East, where waste tyres from NSW were driven all the way to Queensland via road and train just to avoid paying the high NSW landfill levy, as documented by Four Corners in 2017 (ABC 2017).
- High administrative costs and other costs associated with the implementation of complex levy schemes could arise, if the waste levy increase is not kept fairly simple and straight-forward
- Unless waste tracking abilities improve, there is the potential for fraud through mislabelled waste

Potential positive impacts:

- Increased public awareness
- Disincentive for disposal of waste by landfill
- Increased waste avoidance
- More waste repurposed/recycled
- More landfill space available
- Longer landfill life spans
- Less money spent on creating landfill sites (e.g. cost of cells)
- Saved costs associated with landfill operations even post site closures (i.e. fencing, rehabilitation, aftercare, devalued land)
- Less land areas contaminated
- Fewer environmental risks due to greenhouse gas emissions
- Fewer environmental risks due to leaching
- Less noise, visual disturbances and odours associated impacting nearby amenities
- Less waste tyre degradation
- Avoiding the negative value of landfill
- Reduced long-term post-closure management due to extended landfill life span
- Better waste tracking (improved data on waste flows ensures we can deal with the new waste even more efficiently)
- More conclusive data (e.g. specifically on the fates of end-of-life tyres in Australia)
- Reduced impacts on cultural values and traditional use of land
- Enabled financial value based on recovered end-of-life tyres
- Additional employment opportunities associated with recycling of goods, which will no longer end up in landfill
- Emphasis will be placed on alternative waste processing technologies
- Investment opportunities for improved waste and recycling management initiatives

4 If you knew when the waste levy was going to be varied, how would it affect your decisions about managing waste or related investments?

4. Knowing when the varied waste levies would be taking effect, would not affect our decisions about managing waste, as we already strive for best practise waste tyre processing, above and beyond the current Australian recycling standards. However, in terms of related investments, we would be likely to start looking for additional workers in order to cope with the increased waste tyres, assuming that the waste levy boost will be large enough to be a competitive alternative to landfill.

Moreover, it is foreseeable that industries will be withholding funds for recycling while landfill is seen as the easier and cheaper option. Therefore, the announcement of an increased waste levy is likely to lead to more investments with regards to waste recovery in Western Australia.

Regarding the waste levy implementation, it is important to create a fair pricing structure as varied waste levy increases could have unwanted site effects, such as advantaging certain landfill sites over others, which may become more attractive due to the lower costs, as a result. For example, a systematic network of waste levy evasion was uncovered by Four Corners, showing tonnes of waste tyres being transported from NSW to Queensland via road and train, simply to avoid paying the high NSW landfill levy (ABC 2017). This is a great example to learn from.

Overall, recycling options should become the most cost-efficient option available, not only in the Perth metro area, but also across the rest of Western Australia.

## Setting future levy rates

1 How might the Government best balance the need for responsiveness to emerging knowledge about best practice waste management with the benefits of providing the confidence about future waste levy rates?

### Chapter 5 – Consultation questions

The department would appreciate your feedback on the following question:

1. How might the Government best balance the need for responsiveness to emerging knowledge about best practice waste management with the benefits of providing the confidence about future waste levy rates?

If you can provide evidence or more detailed information to support your views, this may help make a stronger case for appropriate action.

1. Perception is key.

The low value assigned to waste tyres poses a critical barrier. In Australia the perception towards EOL tyres is negative, as most do not see the valuable resources within, which is congruent with Australia's low waste tyre recovery rate, which is estimated to be only 31% (WBCSD 2018). In contrast, waste tyres are seen as valuable material in India. In line with this positive perception, India's Recovery Rate was 98% in 2015. (WBCSD 2018).

"ELT's should be considered as a resource and not labelled as a waste" (Managing End-Of-Life Tires, 2008 p.13).

The Department of Water and Environmental Regulations has clearly identified "valuing waste as a resource" as an essential first step in achieving that Western Australia becomes a sustainable circular economy, shielding public health and the environment from the negative, waste-related impacts (DWER 2020, Issue Paper – Waste not, want not: Valuing waste as a resource, p.1).

In order to combat our enormous waste tyre problem, there is a growing need to spread awareness and educate the broader Western Australian community on behaviours, relating to better waste and resource management.

The suggested approach for the Government to share knowledge regarding best practice management whilst also providing confidence in relation to the updated levy rates, would be based on a targeted awareness campaign implemented across Western Australia. Using a well-designed and executed campaign, the consistent messages would be featured on a variety of marketing vehicles (such as online media, print media, out-of-home media ect.), in order to reach a broad WA-based audience across different age groups. Communicating best practices waste management and the benefits involved for our communities and our environment, would be the perfect start. Showing that there are viable alternatives (e.g. Tyre Resource Recovery Facility), will naturally steer people away from using landfill as their first choice, but rather their last resort. It will fuel the collective responsibility and the need to preserve our environment for our children and future generations (Waste Strategy 2030, 2012).

In the past, awareness campaigns - for example the National Tobacco Campaign -educating on the harms of smoking and aimed at reducing smoking rate in Australia, have been highly successful. Within 5 years of running the campaign, the number of adult smokers had been reduced by 3.7% (Australian Government Department of Health).

Like in this example, other campaigns have proven to be incredibly successful, if executed correctly.

Additionally, a panel consisting of industry experts should be established to configure the direction of where we should be heading in the future regarding waste management.

This panel made up of knowledgeable industry leaders, representing different waste streams would meet on a regular basis. These expert advisers would be contactable by the general public and share their insights, in order to strengthen the confidence about future waste levy rates. This collaborative approach would ensure a better cooperation and create useful synergies across the various waste streams, as demonstrated by other countries who have implemented a similar strategy with great success.

For example, the Netherlands, implemented these strategies and the results speak for themselves. Today, the country is known for its extremely efficient recycling rates, across the various waste streams.

## Geographical area of the levy

1 Are there opportunities for the recovery of regional waste that would be made more viable by a regional waste levy?

## Chapter 6 – Consultation questions

The department would appreciate your feedback on the following questions:

1. Are there opportunities for the recovery of regional waste that would be made more viable by a regional waste levy?
2. Where are these opportunities most likely to be viable?
3. What rate of waste levy could be required to make them viable?
4. Under specific circumstances, it is possible that an expanded waste levy area could make evasion less financially attractive. How does the cost of transporting waste over long distances compare with the cost of the levy?
5. What other advantages or disadvantages could arise from a regional waste levy?

If you can provide evidence or more detailed information to support your views, this may help make a stronger case for appropriate action.

1. Yes, there are opportunities for the recovery of regional waste that would be made more viable by a regional waste levy. Based on our research, we are convinced that a regional waste levy would lead to increased regional waste recovery.

However, in saying that, an increase in waste levy could potentially also result in illegal waste tyre dumping and stockpiling activities across the state, unless the waste levy was used to cover transportation costs – in this case people could see that due to the additional costs, the tyres can now be transported to waste tyres processing centres to ensure they are properly recycled.

The perception of end-of-life tyres as waste product in combination with the lower costs of bringing EOL tyres to landfill, are both issues that have to be addressed in order for the situation to improve. The Western Australian Local Government Association acknowledges that, “as end-of-life tyres do not have a monetary value, it is difficult for many Local Governments to justify paying higher costs for recycling, when the cost of sending tyres to landfill is much less (especially in the non-metropolitan area)” (WALGA 2012, P.5).

In the end-of-life tyre industry, transport costs are often seen as additional hurdle to bringing regional waste tyres to recycling facilities for processing. Using the levy as part of a subsidy to transport recyclable waste from landfill sites to designated waste processing facilities, would present a major milestone.

An increased regional waste levy would make the transport seem more viable and the perception to do good by bringing waste tyres to processing facility. Moreover, economies of scale, i.e. more individuals and companies acting that way, will reduce the cost of transport.

People will know that the funds will go towards the transport of recycling products and would therewith be more accepting, knowing that they would help the environment.

Therefore, in addition to the environmental improvements, not only economic advantages could be achieved but also social benefits.

### 2 Where are these opportunities most likely to be viable?

2. These opportunities would be viable all around the Perth metro area and non-metro regions in Western Australia, namely: Gascoyne, Goldfields-Esperance, Great Southern, Kimberley, Mid-West, Peel, Pilbara, South West and the Wheatbelt.

### 3 What rate of waste levy could be required to make them viable?

3. It would be nearly impossible to decide on a flat rate waste levy for all regions. Instead, different drop off rates - based on the different regions - would apply, depending on the distance and ease of access. As suggested, the resulting transport subsidies would need to be aligned.

4 Under specific circumstances, it is possible that an expanded waste levy area could make evasion less financially attractive. How does the cost of transporting waste over long distances compare with the cost of the levy?

4. As demonstrated in the above-mentioned example, transporting a 45ft semi-trailer of tyres - which can hold approx. 220 truck tyres or a mixture of up to 400 passenger & 4x4 tyres - from Port Hedland to Welshpool, costs \$1,620 + GST. An additional drop off fee of \$2,140.60 excl GST would apply.

The cost in this scenario is estimated to equal a total of \$3,760 + GST. This entails the transport of the fully loaded semi-trailer to Perth, where the entire amount of waste tyres, would be fully recycled.

In comparison, the price for dropping of a commercial load tyres (as it would in this case), would be \$660 + GST. per tonne (Port Hedland Landfill Pricelist). The semi-trailer load of 220 tyres, equals approximately 11 tonnes and would add up to \$7,260 + GST., plus the additional transport costs, which varies according to the distance to transport the waste tyres to the landfill site.

Interestingly, during our research, we also found that some landfill sites were able to decrease the fees for waste tyre drop offs significantly between 2018/2019 and 2019/2020, such as the Karratha landfill facility.

The total fee for one tonne of waste tyres went down from \$708 to \$450, a drop of over 36%. This trend goes against any attempts to improve recycling rates, and it would be in the community's best interest to reverse this trend.

Whereas if the levy went towards transporting the tyres to designated waste tyre recycling stations, they could be recovered and repurposed. This would also change the public's perception – based on research conducted with regards to paying higher prices for more environmentally friendly outcomes, it is expected the higher payments will be accepted in a more positive way, knowing that the waste will be recycled.

## 5 What other advantages or disadvantages could arise from a regional waste levy?

5. Based on our calculations, a regional waste levy applied across Western Australia's regions would present huge advantages, on a financial and environmental basis.

The disincentive for disposal of waste through landfill would lead to higher recycling rates and a better re-use of existing materials.

Less waste in the ground / on landfill sites would equal less costs in terms of creating and maintaining landfill cells. Significantly reduced long-term post-closure management would be needed, due to extended landfill life spans.

Less land would be contaminated, and the economic value of the land value would be higher.

The decreased use of landfill facilities will ensure more landfill space becomes available and by the same token prolong the life of existing landfill sites. As a result, we would be faced with fewer environmental risks due to greenhouse gas emissions and leaching.

On a social scale, less noise, visual disturbances and odours associated would be impacting nearby amenities.

In terms of tyres, there would be less waste tyre degradation – instead tyres would be recycled/re-purposed straight away (thereby also saving costs in relation to recovering the landfilled tyres in the future, as envisaged).

Better waste tracking mechanisms could be enacted – i.e. improved data on waste flows ensures we can deal with the new waste even more efficiently.

More conclusive data (e.g. specifically on the fates of end-of-life tyres in Australia) could be obtained.

We, as a community, could reduce the negative impacts, based on lost cultural values and traditional use of land.

The processing of waste tyres and the creation of new/repurposed materials within, would increase the financial gains based on correctly processed end-of-life tyres.

Additional employment opportunities associated with recycling of goods, which will no longer end up in landfill.

As emphasis is placed on alternative waste processing technologies, investment opportunities for improved waste and recycling management initiatives will arise, stimulating the wider WA economy.

Western Australia could lead the way to a circular economy (The West Australian, 2020).

Public awareness would ensure support from the wider community and the want to make a difference. Evidence has shown, people are prepared to pay more, if environmental benefits are offset by the higher price.

More jobs, especially full-time work would be created based on the alternative recycling methods, re-purposing the waste materials.

However, if the levy changes are not communicated correctly, through public awareness campaigns etc, the amended levy rates could lead to an increase in illegal dumping activities, which in most cases would lead to hazardous risk factors and ultimately clean-up costs, paid for by the taxpayers.

Example: The Netherlands

The Netherlands, the country in West Europe, is a great example of what can be achieved. Faced with severe space problems regarding their waste disposal, the comparatively small country which literally translates to "lower countries", had to find alternatives to landfill sites in order to deal with their waste issues. Only half of the country's land exceeds 1 metre above the sea level, whilst about 17% actually falls below the sea level (Eupedia Netherlands Guide, 1994).

Based on the size of the land available, in combination with its low elevation and close proximity to the ocean, the Dutch had to be innovative in turning their problem into an opportunity.

The country increased landfill prices and encouraged recycling. The national and community-driven recycling programs proved to be hugely successful, with the country's recycling rates soaring.

As presented by Herman Huisman at last year's Waste and Recycle Conference, this achievement was based on a Government-driven evolution: Based on the Government's strong focus on a circular economy and the subsequent policies and strategies, such as massive increases in the landfill taxes and imposed bans on certain waste materials, in combination with the implementation of adequate planning systems and a cooperation between the various government authorities, involvement of waste management industry and non-governmental organisations, a consensus on data and an ongoing monitoring and enforcement system, were paramount in achieving the country's incredible waste success story.

Today, the Netherlands exceed the European Union's recycling targets by far, across the different materials. In fact, the Dutch are not only able to cope with their own waste, moreover, they are able to import tonnes of waste from other European countries (Dijkgraaf & Gradus, 2016).

And that is not enough: Objectives of the Dutch government include the creation of a complete circular economy by 2050 and 50% reduction in the use of raw materials by 2030.

As the Senior Advisor Herman Huisman mentioned during his presentation at 2019's Waste Conference: "Australia is today where Holland was 30 years ago." And we can learn so much from the Dutch success story.

## Waste management options to be levied

1 Waste Strategy 2030 proposes that by 2020, only residual waste will be used for energy recovery. How will this requirement affect your waste management operations?



## Chapter 7 – Consultation

The department would appreciate your feedback on the following questions:

1. Waste Strategy 2030 proposes that by 2020, only residual waste will be used for energy recovery. How will this requirement affect your waste management operations?
  2. Would a waste levy on energy recovery have a different effect on your operations?
  3. Are there any other waste management options where applying a levy could help achieve the objective of Waste Strategy 2030?
- If you can provide evidence or more detailed information to support your views, this may help make a stronger case for appropriate action.

1. The more waste can be recovered, repurposed or reused the less waste ends up in landfill.

We would like to see more waste streams, for example in form of more bins (general, green, recycling), possibly more containers like it is the case in other countries (e.g. paper, glass), for more targeted and streamlined recycling processes.

In many industrial pockets around Western Australia, including Welshpool for example, there is only one bin provided – no recycling takes place, despite the vast amounts of commercial waste. We would be happy to separate our waste, knowing a big part can be recycled or converted to energy.

2. Would a waste levy on energy recovery have a different effect on your operations?

2. We do not believe that a waste levy should be imposed on energy recovery. Instead, this should be managed through the rates and taxes. The increased waste levy should be going to companies recovering the resources.

3. Are there any other waste management options where applying a levy could help achieve the objective of Waste Strategy 2030?

3. Based on the worldwide examples available, levies lead to the avoidance of landfill, and the creation of innovative solutions. Accordingly, with regards to waste tyres, we are of the opinion that a levy should be imposed on any waste tyre disposal methods unless the waste tyres are brought to a recycling plant / processing facility.

In other words, a levy for improper waste disposal, versus a non-levy for recycling techniques, where materials will be recovered or reused, especially with Australia.

## Other improvements to the waste levy

1. What other changes to the design or implementation of the waste levy could help make it more effective or efficient in achieving the targets of Waste Strategy 2030?

## Chapter 8 – Consultation

The department would appreciate your feedback on the following question:

1. What other changes to the design or implementation of the waste levy could help make it more effective or efficient in achieving the targets of Waste Strategy 2030?
- If you can provide evidence or more detailed information to support your views, this may help make a stronger case for appropriate action.

Changing people's perception to see waste materials as potentially valuable resources as the base to create brand-new goods, would be essential. Informing the broad population of the endless economic, social and environmental advantages we can all benefit from, if we adapt our considerations and behaviours towards waste.

As mentioned, a state-wide awareness campaign, educating on the risks and benefits involved in improved waste management, and how each of us can contribute to this change, is vital in achieving the targets, outlined in the Waste Avoidance and Resource Recovery Strategy 2030.

In addition, the creation of an industry panel, to discuss and further advance waste practices, would be another important milestone.

Imposing higher waste levies (and potential bans on landfill disposal) from landfill and instead ensuring the recyclable waste - which includes waste tyres - end up in recycling centres for processing, would be a crucial tool in achieving change and fulfilling the set objectives.

Learning from other nations (such as The Netherlands, as per the above-mentioned example), who have faced the same problems and found sustainable, long-term solutions, are a great opportunity for us to learn from. We do not have to reinvent the wheel - we can simply apply what has been proven to work and learn from mistakes others already made.

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