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NATIONAL WASTE AND
RECYCLING INDUSTRY COUNCIL
ABN 22 617 891 899

Mr Jim Betts
Secretary - DPIE
NSW Department of Planning, Industry and Environment
Locked Bag 5022
Parramatta NSW 2124

27 May 2020

Via email: 20YWS@dpie.nsw.gov.au

Dear Mr Betts,

The National Waste Recycling Industry Council's (NWRIC) is the national industry body for commercial waste and recycling operators Australia wide. Its vision is for a fair, safe, transparent, sustainable and innovative national waste and recycling industry that serves all Australians.

The NWRIC brings together national and state businesses to develop and promote policies and actions that will advance the waste and recycling sector in Australia. Its mission is to represent its members priorities to the government and to promote its members' contribution to the community, environment and the economy.

National members and state affiliates of the NWRIC are committed to keeping materials circulating in the economy and out of the environment, by turning waste into resources and ensuring the safe treatment, recovery of energy and disposal of materials that cannot be recovered.

With an estimated turnover of more than $6 billion per annum, over 15,000 employees and more than 8,000 trucks our members collect, sort, process and treat more than 8 million tonnes of waste from households and businesses per year.

Founding members of the Council, Cleanaway, J. J. Richards and Sons, Solo Resource Recovery, Sims Metal Management, Remondis, ResourceCo and Veolia own and operate many of the waste collection, transport, processing, recycling, treatment and disposal services and facilities nationally.

This includes landfills for hazardous, inert and putrescible wastes; soil recovery; medical, liquid and hazardous waste treatment; thermal destruction; fuel manufacture; energy recovery; anaerobic digestion; composting; material recycling facilities; aggregate recycling plants and oil recovery plants.

The Council welcomes the opportunity to comment on Cleaning Up Our Act: The Future of Waste and Resource Recovery in NSW. Issues Paper - March 2020. Our responses to the issues paper and questions are in the attached submission.

Yours sincerely,

Rose Read

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CEO, NWRIC
ceo@nwric.com.au

MEMBERS
Cleanaway | JJ Richards and Sons | Remondis Veolia | Solo | Resource Recovery | Sims Metals and ResourceCo.

STATE AND TERRITORY AFFILIATES
Waste Recycling Industry Queensland (WRIQ) Waste Contractors and Recyclers Association of NSW & ACT (WCRA) | Victorian Waste Management Association (VWMA) | Waste Recycling Industry of South Australia (WRISA) Waste Recycling Industry of Western Australia (WRIWA) | Waste Recycling Industry Northern Territory (WRINT)

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Response to NSW Government's *Cleaning Up Our Act: The Future of Waste and Resource Recovery in NSW. Issues Paper - March 2020.*

Introduction

To drive a more sustainable, affordable and reliable waste and recycling sector the NWRIC considers action across the following seven priority areas as a priority.

1. Stronger markets for recovered materials. Greater development of markets for recovered materials including reuse in products, packaging and construction materials.

2. Increased adoption of best practice across the sector. Stronger state and local, government enforcement of regulations and standards to ensure best practice across the sector.

3. Securing sites for necessary waste and recycling infrastructure. Better planning regulations and instruments that provide for waste and recovery facilities at local, state and national level e.g. landfills, energy recovery, fuel production, sorting and processing facilities, composting, C&D, scrap metal and MRFs.

4. Cleaner inputs into recycling systems. Greater separation of wastes at source to reduce contamination and pollution and to increase resource recovery.

5. Greater national consistency in state waste policies, landfill levies, collection standards, and planning approval and environmental licensing. Harmonise landfill levies and landfill management. Consistent resource recovery / end of waste specifications. Consistent collection standards. National and state policies common objectives and outcomes. Consistent planning approval and environment license conditions.

6. Banning and removing hazardous substances (such as unnecessary plastics, asbestos, PFAS). Designing out hazardous, non-recyclable and non-compostable materials and substances from products, packaging and construction materials.

7. Greater recovery of energy from waste to manage residual waste. Recovering energy from materials and products that can't be recycled is an important part of best practice waste management

Response to Issues Paper Questions

Question 1.1: State-Wide Targets

1.1.1 - What targets and metrics would be most effective in driving waste avoidance, reuse and the circular economy?

The current targets and metrics used by NSW need to go beyond the existing set and include targets and metrics that better measure progress towards a circular economy. There are many leading approaches internationally to measuring performance in the context of waste and the circular economy. The NWRIC recommends NSW adopt the ten (10) indicators used by the European Union Eurostat program. These are:

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Production and consumption (NEW - Generate less waste & Create end markets)
1. Self-sufficiency of raw materials for production in the EU,
2. Green public procurement (as an indicator for financing aspects),
3. Waste generation (as an indicator for consumption aspects),
4. Food waste,

Waste Management (EXISTING IN NSW - Improve collection and sorting, Plan for future infrastructure)
5. Recycling rates (the share of waste which is recycled),
6. Specific waste streams (packaging waste, biowaste, e-waste, etc.),

Secondary Raw Materials (NEW - Create end markets)
7. Contribution of recycled materials to raw materials demand,
8. Trade of recyclable raw materials with the rest of the world,

Competitiveness and Innovation (NEW - Create end markets, Plan for future infrastructure, Improve collection and sorting)
9. Private investments, jobs and gross value added,
10. Patents related to recycling and secondary raw materials as a proxy for innovation.

1.1.2 - How can these be implemented so they are most effective?

It is important that the targets and metrics used align with other state jurisdictions and the Commonwealth government's National Waste Report and Waste Accounts currently being developed.

Robust data collection and live reporting to the industry and the community in a timely manner will be key to ensure effective implementation of actions to deliver the objectives of the 20-year waste strategy. This will include aligning data collection with other jurisdictions and to link with existing data collection via the Australian Bureau of Statistics and the Australian Taxation Office.

1.1.3 - What limitations should be considered?

N/A.

1.1.4 - What additional targets and metrics could be used to drive emissions reductions from the waste system?

- Energy recovery from waste
- Bioenergy production
- Gas capture and energy production from landfills.
- Reuse and repair of products
- Percentage of recycled content in products, packaging and construction projects

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1.1.5 - What are other opportunities to reduce greenhouse gas emissions from waste, while supporting the economy? Please provide examples and data where possible.

To deliver significant reductions in greenhouse gas emissions from waste the most effective way is to increase organic resource recovery. Along with consolidating small regional landfills into larger well managed landfills that have better gas capture and energy recovery systems. This will not only reduce emissions but also increase the state's amount of renewable energy generated through bioenergy.

Energy recovery from residual waste also has significant potential to reduce emissions and substitute the State's reliance on fossil fuels.

Other opportunities for decreasing emissions include, greater use of renewable energy by facilities, increased use of electric vehicles and increased energy efficiency.

From a product use perspective extending the life of products in particular electronic and electrical equipment by one or more years can reduce emissions by 20% to 30%. Similarly, harvesting and reusing parts especially those with high embodied energy such as cameras and screens contributes 17 to 20 times more value to the economy than recycling the materials.

Question 1.2: Designing out waste

1.2.1 - How do we better design out waste?

To prevent waste generation through better product design the government should focus on initiatives that mandate greater use of recovered materials in products and encourage greater product durability and reuse.

For example, the NSW government's CDS could require minimum recycled content levels for all beverage containers placed on the NSW market e.g. PET 70%, HDPE 40% Glass 50%, Paper 50%. An incentive by way of a rebate on the deposit could also be provided for every beverage container kept in circulation.

Another area of priority from a product perspective would be to either ban or incentivise the designing out of non-recyclable, compostable or hazardous materials from products. By doing this you can decrease waste and recycling operational costs and increase the value of recovered materials recovered. Hazardous materials that should be targetted include PFAS, brominated retardants, multilayer plastics, non-compostable plastics, oxo-degradables.

The food sector should also be a priority area to design out / prevent waste. Actions should align with the National Food Waste Strategy and Roadmap including increasing food collection and processing capacity.

1.2.2 - What priorities should inform product stewardship schemes and extended producer responsibility?

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The NWRIC believes the highest priorities for product stewardship are batteries, all electronic products, cars, tyres, wine and non-beverage glass containers. These products add significant costs to the current waste and recycling system due to contamination and increased sorting costs and lack of markets.

All product stewardship / extended producer responsibility initiatives should be regulated to ensure no free riding by those companies placing products onto the market whether they be a manufacturer, an importer, a brand owner or retailer.

These initiatives also need to go beyond simply collective take back programs. They need to encourage producers through regulation to avoid waste by improving product durability and repairability, as well as substituting virgin materials with recovered materials to increase recycled content. This may be better done at product level (e.g. through product safety regulations) rather than as collective industry led schemes regulated under the federal Product Stewardship Act.

While preference would be to implement such EPR initiatives nationally to ensure consistency, the NWRIC considers the NSW Government should regulate these initiatives at a state level through the Waste Avoidance and Resource Recovery Act when the federal government won't, as they have been done for beverage containers. For product stewardship to be effective it must be underpinned by regulation to prevent free riding by manufacturers and brands.

1.2.3 - How do we drive uptake of materials and products with lower life-cycle emissions?

For those creating products or building infrastructure, being incentivised to substitute virgin materials with recovered materials and sourcing materials produced using renewable energy.

The Green Building Star Rating system has been an effective tool in driving more efficient buildings, along with the associated product rating systems including Green Tag, Good Environment Choice and the Infrastructure Sustainability Council of Australia's ISupply network.

A material star rating for products similar to the energy and water star rating would assist consumers in selecting products with more recycled content and less emissions. The greater the recycled content, materials produced using renewable energy and durability of the product the higher the rating. This star rating could be combined with the water and energy rating to become a product stewardship star rating.

Similarly replacing fossil fuels with renewable fuels such as recovered organics to generate electricity and heat can substantially reduce emissions in manufacturing products and services. Therefore, the NWRIC encourages the government to support greater recovery of energy from non-recyclable waste, in particular renewable organics.

Question 1.3: Awareness and behavioural change

1.3.1 - What are new and innovative ways to engage consumers to reduce waste generation and increase recycling?

While education is always key to encouraging consumers to change behaviours, the most effective way to generate step wise consumer behaviour is through financial incentives (e.g. deposits) or penalties (e.g. pay as you throw) that are underpinned by appropriate regulation. The container deposit scheme is a great example of how a financial incentive with the appropriate regulatory backing has changed behaviours. Similarly, banning plastic bags is another good example of step wise consumer behaviour change.

To increase recycling, contamination needs to be reduced. Like Western Australia and Victoria, NSW needs to implement a consistent statewide bin system for domestic and commercial premises, that includes strict guidelines on what can be accepted in each bin. This should be agreed and applied by all local councils, commercial premises and waste and recycling service providers.

Greater source separation is also key to increasing recycling. The focus should be on separating glass from plastic and paper through either expanding the container deposit scheme and or adding a fourth bin. As well as separating organics from general rubbish by rolling out food and organic collection systems statewide.

Without financial incentives or penalties supported by statewide consistency on bin colour and content standards and appropriate education consumer behaviour change will be incremental at best and will not assist the government in achieving its current targets let alone future targets.

1.3.2 - How can these be implemented so they are most effective?

See above. Statewide consistency is key and alignment with other states is essential.

Question 1.4: Targets for government agencies

1.4.1 - Would mandating waste reduction targets and data reporting requirements be effective?

State government is a major purchaser so what it procures can go a long way to reducing waste and increasing recycling. Therefore, setting targets for government agencies will help change behaviours and provide greater insight on how and where government agencies can help reduce waste.

Key waste reduction metrics should focus on what is being purchased in terms of life span of products, repairability, reuse, avoiding single use items, products made from recycled content as well as what waste is being produced or recycling achieved. Similarly, governments involved in the construction of infrastructure should be reporting on the volume of recovered materials used in each project with the goal to increase this by a given percentage per annum.

1.4.2 - What issues or limitations should be considered?

No response

Question 1.5: Regulatory safeguards

1.5.1 - What are the key opportunities for improving current waste regulations and regulatory processes in NSW?

The NWRIC considers there are three priority areas of regulatory reform.

Revise resource recovery order and exemption process. The ability for these orders and exemptions to be revoked without genuine industry consultation disincentives investment due to the lack of certainty.

The NWRIC considers a more market-based approach to determining end-of-waste needs to be developed and should be done in collaboration with all states and territories and industry and be consistent with the COAG Waste Export Ban. The NWRIC considers a national approach is more appropriate to improve the overall quality of material being recovered, developing markets, its reuse and keeping materials in the economy.

This approach should be based on nationally agreed recovered material specifications between government and industry (both waste and recycling and manufacturers/construction sectors) that align with the COAG Waste Export Ban.

Alignment of planning and environmental approval and licensing conditions.
The current pathway for planning and approval and environmental licensing is very convoluted, slow and often at odds with each other.

Review of license threshold levels for recyclers.
The NWRIC is concerned that there are many waste and recyclers operating outside the licensing system which leaves the door open for businesses to not operate responsibly. This not only puts the environment, the community and employees at risk, but also reduces recycling rates and results in the export of unprocessed waste such as baled cars, baled white goods, ewaste and mechanical lubricant oils.

Question 2.1: Recovering food and garden organics

2.1.1 - What are the key opportunities and challenges associated with mandating food and garden organics source separation?

The opportunities are the production of high-quality soil conditioners and compost, reducing emissions, regenerating soil health and extending the life of landfills.

The challenges are contamination, siting of organics recovery facilities and markets for recycled compost.

The NWRIC supports mandating food and garden organic source separation for households and businesses and strongly advocates for a nationally consistent approach on what is accepted in the GREEN Bin. Supporting public awareness campaigns, education on compostable standards and banning oxo-degradable plastics as key steps to preventing contamination.

2.1.2 - What other options could be considered for recovery of food and garden waste?

Where organics are too contaminated for land application they should be used as a source for generation of electricity heat and liquid fuels. Therefore, planning for sufficient energy recovery capacity in NSW to convert these materials is essential.

2.1.3 - What are the key opportunities and challenges with reducing emissions from food and garden waste to achieve net zero emissions from organics by 2030?

With sufficient composting and energy recovery capacity, it could be possible to divert most organics from landfill. However, the biggest challenges are markets for recovered compost, contamination in compost, and tenure sites for composting facilities. To develop markets, the government should facilitate greater collaboration across the supply chain including agriculture, horticulture, nursery and landscaping sector.

Question 2.2: Standardise collection systems for households and businesses

2.2.1 - How could collection systems (including bins and drop-off facilities) be designed to improve the separation of materials for recycling in your area and/or business?

The NWRIC recommends the following actions to improve source separation

- Expanding the CDS to include other glass bottles including wine and spirit bottles.
- Establish a fourth kerbside bin / drop off option for glass consistent with the approach taken by Victoria, leaving the yellow bin just for plastics, paper and metals.
- Agreement of Statewide bin system applied consistently by all local governments and industry for both household and business services. As being applied by SA, WA and Victoria including agreed guidelines adopted by all local councils and waste and service providers on what is accepted in each bin, no variations
- Consistent Statewide education and messaging adopted by all local councils
- Readily accessible retail drop-off points for problematic products and materials including batteries and e-waste.

2.2.2 - Should some sources of waste, e.g. multi-unit dwellings and small business, be considered separately? If so, why?

Yes, novel systems are needed for source separation in MUDs. However, the agreed bin colour coded system and what is accepted in these bins should be applied consistently. MUDs should also have access to shared neighbourhood drop off points for certain materials where on site bin space and vehicle access is limited, e.g. see European pod examples.

2.2.3 - What would work best for multi-unit dwellings and small business and why?

Development applications should include a provision which makes the creation of space for appropriate bins mandatory. Truck access to multi-unit dwellings and shared neighbourhood drop off points must be maintained.

Large residential developments, including public housing, could include shared neighbourhood drop off points for all material types as well as batteries, e-waste and CDS machines. They should also look to host small scale composting technologies, such as dehydrators.

Question 2.3: Network-based waste drop-off centres

2.3.1 - How do we further optimise NSW's network of waste drop-off centres and collection points?

Household chemicals, batteries and ewaste remain a key contaminant in kerbside collections. Additional collection points can be funded from waste levy proceeds. CDS access could be improved, especially in regional areas.

Question 2.4: Waste benchmarks for the commercial sector

2.4.1 - How can National Australian Built Environment Rating System (NABERS) Waste ratings be used as an effective tool to drive better waste management practices in the commercial sector?

The NABERS waste tool encourages better source separation for recycling onsite. This is a useful standard for the waste recycling industry. Minimum NABERS standards should be introduced for new buildings.

The GECA waste collection service standard also provides a mechanism to ensure best practices for waste collection providers.

2.4.2 - What opportunities and challenges do you anticipate if the NSW Government were to introduce minimum NABERS Waste requirements for the buildings it leases and owns?

The NWRIC supports this initiative. Minimum NABERS waste requirements form part of a broader program to enhance and standardise source separation. This is an opportunity to improve the quality and quantity of recovered materials from commercial premises.

However, challenges will include increased costs and space inside premises to store additional bins. Further education will be required to ensure new recycling services are not contaminated.

2.4.3 - Are there opportunities to roll out similar requirements to other sectors?

Yes, there should be a requirement for standardisation of bin colour and material acceptance across all local councils. That is, all 128 NSW local councils should move towards a standardised bin collection system over time. This includes bin lid colours and local council collection contracts that include State agreed bin material acceptance criteria.

Question 2.5: Innovation and 'waste-tech'

2.5.1 - What are the key barriers to innovation in the waste and resource recovery sector?

Key barriers to innovation in the sector include:

1. **The lack of markets for recovered materials.** There are many existing products, infrastructure projects and agricultural practices that could replace virgin materials with recovered materials. By prioritising the use of recycled content in products, construction and agriculture you can grow demand and increase value. This will stimulate innovation and new waste technologies. If there is no financial reward or incentive, then change will be incremental at best.

2. **Substandard and illegal practices by recyclers operating outside the licensing system.** Licensing threshold levels for recyclers should be reduced to prevent this occurring. While poor and irresponsible waste and recycling practices are continued to be allowed to occur, investment in new technology and innovation will be stymied.

3. **Lack of tenure certainty for existing sites, sourcing suitable new sites and overly complicated planning approval and licensing processes.** This reduces the ability for the industry to be agile and responsive to new opportunities and implementing new waste and recycling technologies.

4. **Lack of commitment by local councils and state government to reduce contamination of kerbside collections.** This increases operation and separation costs, diverting possible investment in innovative and new technologies, especially where market opportunities are limited, and best practices are being undercut by illegal operations.

5. **Lack of investment of state waste levy in research and development and trials to pilot new waste technology**. The NSW government invests less than 20% of the $770 million waste levy

collected annually in waste avoidance and resource recovery activities with the majority of these funds returned to general revenue for investment in non-related activities, contrary to the objects of the levy.

6. **Leaving the responsibility for hazardous materials with the waste and recycling service providers and not the generator.**

7. **Lack of commitment to energy recovery from waste by the state government.** The current policy lacks clarity on whether the development of energy recovery facilities is a preferred solution that the government supports.

2.5.2 - How can the NSW Government help to foster innovation and partnerships in waste management?

It is important that

- the NSW Government proactively encourages the use of recovered materials in their infrastructure projects to create market demand and regulate recycled content packaging targets
- the DPIE and the EPA identify and incorporate into state and regional environmental plans appropriate sites for future waste infrastructure, as is done for transport, energy and other utilities
- Invest a greater proportion of the state waste levy into research and development and piloting new technologies
- Provide greater clarity on how energy recovery can help manage the state's waste that is not recyclable
- Require retailers to provide free take back for batteries and electronic and electrical products

Question 2.6: Joint local council procurement

2.6.1 - How can local councils best be encouraged or supported to collectively procure waste services?

The NWRIC supports combined procurement of waste services where the tendering process is fair, transparent and maximises competition. The current Whole of Government Waste Services EOI process being led by Healthshare, is a poor example where the services put out for EOI have been incomplete and the regional and smaller operators have been pushed out of the opportunity to submit pricing. Quite contrary to the State's NSW Government's Small and Medium Enterprise and Regional Procurement Policy.

Tenders should also consider broader criteria than lowest price, including quality of service and environmental performance.

2.6.2 - What are the key issues that should be considered?

One of the key issues with a joint procurement approach is in the past some councils have pulled out during the process and therefore reduced the volume and services up for tender. This is commercially unfair.

The NWRIC would be supportive of public private partnerships where a collective of councils' partners with a waste and recycling operator (through an open tender process) to build and operate a facility such as a material recycling facility, glass or plastic processing plant or composting facility.

Question 2.7: Combining commercial and industry waste collection services

2.7.1 - What are your views on the opportunities and challenges of combining commercial and industrial waste streams?

The NWRIC does not support the combining of commercial and industry waste collection services with household services. This will disadvantage commercial land industrial businesses in accessing competitive and fit for purpose waste and recycling services.
The NWRIC believes this, 'one size fits all' approach to waste collection stymies innovation in the marketplace. Further, many businesses have unique waste collection needs. A competitive market allows companies to tailor their services to the needs of individual businesses.

Local Governments should not attempt to mandate or aggregate commercial waste collection services in a manner which reduces market choice or competition.

2.7.2 - What are your views on the potential solutions of creating commercial waste zones, or combining municipal solid waste and commercial and industrial waste collections?

The NWRIC does not support the combining of commercial and industry waste collection services with household services. This will disadvantage commercial land industrial businesses in accessing competitive and fit for purpose waste and recycling services.

The NWRIC believes this, 'one size fits all' approach to waste collection stymies innovation in the marketplace. Further, many businesses have unique waste collection needs. A competitive market allows companies to tailor their services to the needs of individual businesses.

Local Governments should not attempt to mandate or aggregate commercial waste collection services in a manner which reduces market choice or competition.

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Question 2.8: Economic incentives and waste levy

2.8.1 - What are your views on the right settings for these waste levy parameters?

The *NWRIC White Paper - Review of State Levies in Australia 2019* found that while waste levies have resulted in new resource recovery businesses and increased resource recovery, especially in the construction and demolition market. It has also driven potentially recyclable materials out of NSW into landfills in Queensland due to significant price differences and failure to implement the proximity principle of the levy.

The report also found that NSW has the highest levies and raises the most levy annually across Australia (over $770m / year). But only reinvests less than 20% of these funds back into waste and recycling activities. In comparison Victoria, South Australia and Queensland invest over 70% of their state levies annually (see table below).

Summary of 2019-20 waste levy rates for all types of waste (i.e. MSW, liquid hazardous) estimated revenue and expenditure

State	Levy Rates* ($ / t)	Estimated Levies ($ m)	Estimated spending ($ m)	Revenue per capita**	Hypothecated to waste & recycling activities[1]
NSW[2]	$0 to $143	$771	$154.3	$100	19.9%
Queensland[3]	$0 to $155	$443	$343	$88	77%[4]
Victoria	$31 to $250	$239	$170	$34	72.4%[5]
South Australia	$55 to $110	$70	$50.8	$36	72.5%[6]
Western Australia	$0 to $70	$88	$22	$35	25%[7]
TOTAL		**$1,541**	**~$569**	**$58**	**36.9%**

[1] Includes State EPA/agency funding.

[2] The levy is used to fund the *Waste Less Recycle More* program, that started in 2014 and runs to 2021 an estimated $802 million over 9 years.
[3] Introduced 1July 2019.
[4] 10% of the levies raised are returned to industry, and 105% of the levies raised by Local Government are returned. The mass of waste levied by local government is unknown by this whitepaper.
[5] While a large percentage of the Victorian levy is returned to the Sustainability Fund, much of this money remains unspent.
[6] The South Australian Waste Levy funds the EPA and GISA, but none is directly available to industry or Local Government.
[7] Based on 15/16 figures from the Waste Authority.

Specifically, the NWRIC recommends that NSW:

1) works with other states and territories to develop a National Levy Pricing Strategy through COAG or the Treasurer's Board that
- prevents the inappropriate disposal and movement of waste between regions and states and
- ensures the resource recovery industry remains viable and competitive by removing significant geographic levy differentials and
- provides recycling residual discounts or recycling rebates where justified.

2) works with other states and territories to develop National Waste Levy Protocols for
- which wastes should be levied (i.e. solid, liquid, hazardous and prescribed),
- where the liability for the levy sits (i.e. at point of generation and is portable across regions and states),
- how far waste can be moved (i.e. proximity within or across states) and
- how the levy is administered (e.g. payments, bad debts).

3) Is more transparent and accountable for the total amount of levies it collects by;
- setting up a separate Levy Trust Account where all levies are retained;
- guaranteeing a minimum percentage of levies (NWRIC recommends a minimum of 50%) to be spent annually on activities to implement the jurisdiction's waste avoidance and resource recovery strategies, resource recovery and remanufacturing industry development plans, market development initiatives and infrastructure plans; and
- reporting annually on the total amount of levy funds collected and spent (including non-waste and recycling related expenditure) and outcomes achieved, this should be audited by the State's auditor general.

2.8.2 - What other price-based incentives should be considered?

Where recycled materials are exported, levy discounts on recycling residuals should be provided to prevent the export of unprocessed recyclable materials. This is specifically relevant to scrap processors (e.g. to prevent the export of baled cars and white goods); e waste processors (prevent the export of whole waste electronics and electrical equipment) and manufacturers of solid fuels (i.e. RDF/PEF) and waste oil processors (prevent export of unprocessed machine lubricants).

2.8.3 - Which would work best in practice?

The NWRIC considers the following four actions need to be implemented simultaneously to have the best impact

- Minimising levy rate differences and enforcing the portability principle within and between regions and states prevents the disposal of potentially recyclable materials into landfill.
- Discount on recycling residuals means local processors can compete more effectively with those recyclers who simply bale up and export unprocessed scrap, ewaste, fuels and machine lubricant oils.
- Investing a much greater share of the waste levy back into the sector, even as loans similar to the approach taken by the Clean Energy Finance Corporation to fast track development of the resource recovery industry in NSW.
- Levy costs are transparent in charges to the waste generator (i.e. businesses and households).

2.8.4 - Please provide evidence for your response, if possible

Residual from scrap car processing and material recovery facilities can be as high as 40%. The *NWRIC landfill levies whitepaper* describes how when levies rise, they can reduce the competitiveness of certain material recovery sectors.

Question 3.1: Long-term waste and resource recovery infrastructure needs.

3.1.1 - What data and information needs to be included in a waste infrastructure needs assessment to ensure it will effectively support planning and investment?

Realistic extrapolation of future waste volumes by material type, if hazardous or not and source; current infrastructure processing and treatment capacity and throughput including current energy recovery and landfill capacity; potential markets for recovered materials (locally and overseas) and fuels; carbon emissions reduction potential.

Other important information includes current and future population distribution; transport networks; land use; major infrastructure projects; accessibility to markets; and physical geography especially in regard to future landfill sites and shared resource recovery sites.

3.1.2 - What role should the NSW government, local councils and industry play in meeting landfill and recycling capacity needs?

Sydney has constrained putrescible landfill capacity. Only two facilities, Lucas Heights and Woodlawn, provide a large proportion of the essential disposal capacity for the city. This is a major health risk if supply to one of these facilities is cut. The NWRIC recommends the development of a third major putrescible landfill site to service Sydney. Therefore, provision should be made for suitable sites in State and Local Environmental Plans with planning approvals streamlined as currently it will take an estimated

10 years to locate, approve and build a landfill. Suitable sites need to include good transport access (rail and road) and permanent buffer zones.

Sydney has only one landfill licensed to receive hazardous waste. The NWRIC recommends the provision of a second facility to ensure the security of hazardous waste disposal in Sydney.

Current recycling capacity shortfalls are predominantly in organics and plastic processing. These facilities need to be close to population centres to keep transport costs down. Co-location of resource recovery facilities is strongly recommended.

As a way to further extend the life of existing landfills, the NWRIC supports the development of energy recovery for waste facilities. The key issue that needs to be addressed by state and local government is social license to operate these facilities in the community. State and local government must work with industry to build community trust that energy recovery facilities can operate safely, will be managed to the highest standards and will only use non-recyclable waste materials.

3.1.3 - How can the government and industry better encourage innovation in waste infrastructure, to ensure it is sustainable, adaptive and responsive over time?

To really drive innovation in waste and recycling infrastructure we need to increase the economic value of waste by making it a resource. To do this government needs to work with industry to develop markets for recovered materials.

This can be done by

- prioritising the replacement of virgin materials with recovered materials in construction, products and packaging, through government procurement requirements, mandating recycled content levels in certain packaging types
- investing a minimum of 10% of the State waste levy into material and supply chain research and development in the areas of textiles, ewaste, shredder floc, solar panels and batteries
- addressing supply chain challenges such as certainty in resource supply, consistent quality and price parity with virgin materials.

3.1.4 - What are the barriers and opportunities to reducing greenhouse gas emissions from waste collection, processing, recovery and disposal?

The Australian waste and recycling sector contribute approximately 2% of Australia overall greenhouse gas emissions[1] or approximately 12MT per year. Further, emissions from Australia's waste industry have been falling over time, despite increasing waste volumes. Please note, reducing emissions from transport is not covered here, as general strategies to reduce emissions from road transportation would equally apply to the waste recycling industry.

[1] Australian Department of Industry, Science, Energy and Resources. *Australia's emissions projections 2019.*

Emissions reduction opportunities in the waste recycling sector fall into five categories;

1. Diverting organics from landfill - emissions abated through diverting organics away from landfill including paper, cardboard, garden organics, food waste, wood and timber.
2. Capturing landfill gas – emissions can be avoided through capturing landfill gas, which can be used for electricity generation or flared.
3. Increased recycling – emissions can be avoided through recycling of high embodied energy materials like metals, paper, cardboard, glass, and plastics (i.e. avoiding the emissions associated with the extraction and processing of raw resources).
4. Energy recovery and fuel manufacture – emissions can be abated through the production of energy from solid waste derived fuels. These serve as cleaner fuels than coal, and also reduce landfill gas emissions.
5. Increasing energy efficiency of operations by upgrading equipment and energy management systems technology.

The primary barriers are that much of the current government funding for emissions reduction is targeted towards larger scale projects and that carbon credits are not issued for recycling.

3.1.5 - What are the barriers and opportunities to improve waste transportation and logistics issues?

Building access, operating hours and use of digital technology are key challenges for waste collectors. Development applications should require building access for waste trucks, and space for at least four different material streams for recycling. Operating hours should be more flexible. Assistance should be provided to help the industry transition more quickly to a digital economy, through training support and equipment upgrades.

Question 3.2: Place-based developments

3.2.1 - What are the key opportunities and barriers to developing place-based waste infrastructure?

The Department of the Agriculture, Water and the Environment study - *Place-based approaches to commercial and industrial waste and recycling* (2012) provides a comprehensive overview of the key opportunities and barriers to adopting this approach.

Broadly, the NWRIC believes that place-based approaches can greatly assist to improve resource recovery. However, without minimum standards for new and existing developments, there exists little commercial incentive for businesses to adopt these approaches.

3.2.2 - What would a modern waste precinct look like and where in NSW could this work?

There are many ways to quantify what a modern waste precinct would include, but key elements are;

- Truck access to all areas of the precinct.

- A minimum source separation into four streams; organics, glass, mixed recyclables (paper, metals, plastics, and residuals.
- Access to drop off points for e-waste, chemicals and batteries.
- Access to CDS machines.

3.2.3 - What is the role for government in achieving the desired outcomes and what are the most effective levers it can apply?

The existing initiative described in 'option 3.2 Place-based developments' will all deliver value. However, delivering these leading approaches will require close collaboration between local and State Government, as well as new regulations to ensure minimum standards for new developments.

Question 3.3: Making it easier to do business

3.3.1 - What mechanisms could be used to improve regulatory and financial certainty for investors and how could these be implemented?

Ensuring a level playing field for all waste operators. Unfortunately, cases of illegal dumping or substandard operators undermine investor confidence in the sector and can increase insurance costs for legitimate operators. Therefore, the sector needs to be appropriately policed. The NWRIC believes that all waste facilities, irrespective of size and ultimate ownership should be licenced by the EPA.

Waste and recycling infrastructure require appropriate sites that can support infrastructure for its entire lifecycle. Poor planning, or premature closure of recycling infrastructure can reduce investor confidence in the sector.

The NWRIC recommends the NSW Government develop a solid waste and resource recovery infrastructure plan that is integrated into existing state, regional and local environmental planning policies. To be effective, this plan needs to be endorsed and adopted by local government and the planning approval and environmental licensing processes need to be streamlined to remove unnecessary administration and inconsistencies in conditions of operations.

3.3.2 - What are the priority measures that could be introduced to make it easier to do business?

Streamline planning approval and environmental licensing processes and remove inconsistencies in conditions of operations. Planning approvals in NSW for waste and recycling facilities can take 1.5 to 2 years on average, and 3 years or more for major infrastructure. This planning bottleneck is too slow to allow for NSW to keep up with increasing waste volumes and to transition to a circular economy.

Question 3.4: Innovative Financing Models

3.4.1 - What are your views on the opportunities for innovative financing models in the waste and resource recovery sector?

There are a number of innovative financial models available to fund waste and recycling infrastructure, such as the Clean Energy Finance Corporation which provides debt and equity finance to projects, in turn leveraging industry funds and at the same time getting a financial return on investment.

The NSW Government should invest a greater proportion of its state waste levy into the sector as debt and equity financing for infrastructure projects as well as allocate a minimum of 10% of the levy into research and development including funding commercialisation of startups.

The NWRIC also recommends that levy funds be put into a government trust fund rather than general revenue, mirroring the approach taken in Victoria, South Australia and Western Australia. Businesses and communities who pay this levy have a right to know how much is raised, how it is spent and how it is performing in improving NSW's waste avoidance and resource rec targets. This is not a general tax to generate revenue for the state government. It was specifically set up "to increase recycling, to limit the need for new landfills, reduce landfill disposal and turn waste into valuable resources."

3.4.2 - How can the government best facilitate investment in infrastructure and services that contribute to circular economy objectives?

See 3.3.1.

Question 4.1: Recycled content in government procurement

4.1.1 - What are the main challenges and opportunities for using recycled content in state and local infrastructure projects and major development areas?

Effective procurement of recycled materials is essential to transition NSW to a circular economy. However, key challenges remain. These challenges include contamination in recycling streams and the ratification of standards for procurement of recycled materials by the construction and infrastructure industry. Once standards are created and adopted, recycling systems can then be standardised and improved to meet these requirements.

4.1.2 - Should procurement targets be established and what is the best way to develop and implement them?

Yes. The NWRIC supports procurement targets, particularly for major construction and infrastructure projects. Tyres, plastics, glass and construction aggregates can all be used in new road construction. All packaging should include a minimum amount of recycled content.

There are three key steps to ensure that procurement targets can be met. Firstly, identify minimum standards necessary for the procurement of recycled materials, to set a clear benchmark for recycling processors. Then, improve recycling infrastructure, education and sources separation to ensure that recovered materials meet these specifications. Finally, set minimum values for the use of recycled materials in construction, packaging and manufactured goods.

Question 4.2: Standards for recycled content and materials

4.2.1 - What are the priority areas that standards and certifications should focus on?

There are two priority area that should be focussed on:

1. Facilitating the joint development of recovered material specifications by manufacturing, packaging, construction and agricultural sectors in association with the waste and recycling industry. These specifications should clearly outline the material qualities needed, and would cover aspects of size, contamination, performance criteria.

2. To assist the waste and recycling sector to deliver these recovered materials to the required specifications and to give end users confidence in the quality of materials provided they should be certified/ accredited against agreed industry / Australian Standards. Such as the AS 4454-2012 Composts, soil conditioners and mulches, ACOR and ISRI Scrap specifications.

The NWRIC is currently undertaking a project to develop national recovered material specifications to
- assist Australian recyclers in meeting market demands for recovered materials locally and overseas,
- improve the quality of recovered materials as tradable commodities
- stimulate domestic re-use of recovered materials by improving market information and greater confidence in the quality of recovered materials.

The specifications are grouped under the following material types.
1. Masonry materials
2. Metals
3. Organics
4. Paper and Cardboard
5. Plastics
6. Glass
7. Tyres
8. Ash

Across these eight streams, these recovered material specifications will cover approximately 90% of all the materials generated in the Australian economy and more than 95% of the embodied energy of production captured. Excluded will be; medical waste, liquids, hazardous waste and contaminated ash, due to the complexity of these material steams.

The process being undertaken to develop these is;

1. Literature review of existing local and overseas recovered material specifications, map current material recovery flow pathways, material quality, volumes and values
2. Consult with representatives from recycling, manufacturing, packaging, construction and agricultural sectors to confirm pathways and recovered material specifications and process to maintain and update specifications
3. Final draft national recovered material specifications and training tools
4. Peer review by industry sectors
5. Finalise national recovered material specifications and associated website, training and information support for waste and recycling sector
6. Publication and promotion

4.2.2 - How critical do you think standards and certification are to developing markets for recycled content?

They are important in developing certainty for waste and recyclers on knowing what specifications to deliver and confidence with end users in the quality of the material being supplied.

Question 4.3: Match supplier with markets

4.3.1 - How can industry and government best work together to foster partnerships and address information barriers to the uptake of recycled materials?

There are currently a number of existing approaches that have the potential to drive greater update of recycled materials if supported and promoted better. This includes the Infrastructure Sustainability Council of Australia's ISUPPLY; the Green Tag and Good Environmental Choice Marks and ASPIRE.

Likewise, the Green Building Council is an excellent example of how the Green Star Rating system has driven more uptake of recycled materials, reusing products, greater product durability and designing out waste.

The key barrier to uptake recycled materials is ability to compete both in price and quality with virgin materials. To address this the government needs to bring together the major supply chains e.g. packaging, construction, manufacturing, agriculture with industry to develop roadmaps to transition each supply chain to increased circularity, with step one being too fast track the replacement of virgin materials with recovered materials. Without a commitment or intent to purchase substantial volumes of particular materials e.g. PET or HDPE, or crushed sand, the waste and recycling industry cannot scale up to meet the supply and quality required.

The only way to address this is through a collaborative process and to progress this without disadvantaging businesses along the supply chain an independent not for profit organisation with no

vested interests needs to facilitate this. The NWRIC believes that the State Government is the best placed organisation to achieve this.

Another key barrier is the lack of transparency on how materials move through the supply chain and what the material specifications that are required to meet demand. This is why NWRIC Is developing national recovered material specifications to make this information more accessible and transparent. The NWRIC would welcome the support of the NSW Government in developing and maintaining this set of specifications.

Question 4.4: Best practice regulatory environment for energy from waste projects

4.4.1 - Are there policy and regulatory improvements that can be made to facilitate innovation and market development in the energy from waste sector, that do not compromise best practice environmental standards?

Energy recovery from residual waste materials can play an important role in creating new jobs, providing a renewable energy source, reducing emissions and extending the life of landfills. In order to help to build new energy recovery facilities, the State Government can help industry to;

- Secure appropriate sites for energy recovery plants,
- Access international markets for recovered fuels.
- Provide subsidies to water authorities to ensure that contaminated biosolids are not stockpiled.

From a policy and community trust perspective that recyclables wont be used for energy recovery the NSW government should consider putting a cap on the amount (tonnes) of materials available for energy recovery (as in Victoria). This would need to be reviewed every three years. As well as requiring local councils to achieve a minimum recycling rates before waste can be sent to an energy recovery facility without paying a landfill levy (as in South Australia).

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