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18 July 2019

RE: Inquiry into the Recycling Industry

The Environmental Defenders Office (SA) Inc (“the EDO”) is an independent community legal centre with over twenty-five years of experience specialising in environmental and planning law. EDO functions include legal advice and representation, law reform and policy work and community legal education. The EDO appreciates the opportunity to provide a submission.

The EDO’s submission will focus on the legal and policy framework around waste management and resource recovery in the context of China’s National Sword Policy. This submission will examine the current policy and legislative frameworks that govern waste management in South Australia. We also examine several leading practice examples from other jurisdictions and make recommendations for reform.

Examining current policy and legislative frameworks that govern resource recovery in the context of China’s National Sword Policy

1. What is China’s National Sword Policy?

China’s National Sword policy has restricted imports of particular types and grades of waste materials for recycling. The 2018 [National Waste Report](#) explains that many processors of domestic recyclables had come to rely on exporting low-grade mixed materials to China and other countries with lower labour and environmental compliance costs. China decided the environmental costs of importing these materials from Australia, USA, Europe and other countries were too high, therefore it established policies restricting the allowable levels of contaminants in waste material loads to 0.5%.

Green Industries SA describes the policy as such:

In 2017, the Chinese Government announced the introduction of its National Sword program to crackdown on the illegal smuggling of foreign waste into China, targeting industrial waste, electronic scrap and plastics. On 18 July 2017 China announced to the World Trade Organisation that it will no longer accept certain kinds of solid wastes from 31 December 2017. This includes plastics waste, unsorted waste paper and waste textile materials. China will adopt strict ‘contamination thresholds’ in bales of these materials from 1 March 2018. Contamination can mean the material is dirty, or contains other materials incorrectly mixed in with the bales. Materials can still be exported to China if they have a contamination rate of 0.5 per cent or less.¹

There have been global consequences as a result of China’s restrictions. There has been a reduction in prices for sorted waste commodities causing market blockages, stockpiling and some instability in recycling collection and processing services.

¹ <https://www.greenindustries.sa.gov.au/chinas-new-policy-on-waste-and-recycling>

According to the National Waste Report, some state governments responded with assistance funding to local governments and recyclers, as well as programs supporting innovation, market development and processing infrastructure to clean and increase the value of recyclables. There has been an increased recognition of the benefits of on-shore recycling, tying in with the notion of the circular economy. The National Waste Report data shows the quantity and value of waste-derived exports in 2017-18 was higher than the previous year, with exports to Indonesia, Vietnam, India, Malaysia and Thailand increasing as those to China declined. The National Waste Report suggests that the Australian market, broadly, has overcome the problems caused by the Chinese restrictions. However, many companies have been forced to absorb financial losses, and many local governments and ratepayers have faced higher costs. It has also been reported that Indonesia and Malaysia are considering phasing out waste imports.²

2. Is there a current crisis in waste management exists in South Australia as a result?

Green Industries SA explains the progressive steps South Australia has taken to address waste in the State. The EPA states that South Australia is a leader in recycling and the amount of recovered materials exported is relatively small in comparison with the amount reprocessed locally, with 87% of all recovered material reported reprocessed within South Australia, 8% processed interstate and 5% exported overseas. The honourable Ian Hunter MP highlighted that South Australia has some of the best recycle rates in the world, but noted the need to address long-term complex problems associated with waste, including waste reduction:

*while we have become better at disposing of and reusing our waste, we continue to generate too much of it. We must also continue to identify innovative solutions and new responses to waste management, and to more efficiently manage our scarce resources.*³

South Australia and Australia's reliance on China as a major export destination for some of our recyclable materials means China's decision to implement bans and new standards on a range of imported recyclables will have a global impact. The National Waste Report states that the SA waste management and resource recovery industry faces challenges as a result of the restrictions associated with China National Sword Policy and associated increasing operating costs and distance to markets for recycled material.⁴

Green Industries SA highlights some short-term solutions to the problem:

As a result it is likely that some of our recycling facilities will need to adjust to meet the new contamination specifications set by China for recycled paper, cardboard and plastics if they want to regain entry into that market. Some of our recycling facilities that export materials to reprocessing plants interstate will be less affected. Alternative overseas markets for South Australia's recyclables such as Thailand,

² <https://www.theaustralian.com.au/nation/world/bid-to-ban-imports-of-scrap-plastic/news-story/44c903779a4f437902a1b5fee9d9fd78>;

<https://thenewdaily.com.au/news/world/2019/03/30/australia-recycling-crisis/>

³ *South Australia's Waste Strategy 2015–2020* page 4

⁴ *National Waste Report* page 46

Malaysia, and Vietnam may offer a partial or interim solution but developing local and national solutions will need to play a greater role into the future.⁵

3. What is the current framework for waste management in South Australia?

Local Government

Local government derives the power and responsibility to provide waste management services under state government legislation.⁶ Local government and state government overlap in waste management and resource recovery.

According to the Local Government Association (“**LGA**”), councils own and operate most of South Australia’s waste management facilities and manage the fleet of trucks that collect household waste.⁷ Waste management is one of the largest expenses for councils, with more than \$191 million spent in 2015/2016.

Solid Waste Levy

The LGA have expressed concern with an increase in the Solid Waste Levy. As explained below the Environmental Protection Authority can grant a license for councils or other third parties⁸ to receive waste at a depot or landfill. The Solid Waste Levy is a payment the lessee owes on every tonne of waste received.⁹ The Solid Waste Levy will increase by 40% in 2019/2020. Find more information about the Waste Levy rates [here](#).

The LGA has expressed their concern about the increase in the context of China’s Sword Policy:

*The China National Sword policy has effectively closed the world’s biggest market for recyclables and triggered a global recycling crisis. A 40% increase in the Solid Waste Levy punishes the waste and resources sector at a critical time when greater investment is needed to support innovation and create new markets for recycled products. Research commissioned by the LGA shows that the impact of China Sword on SA councils is at least and \$8.8 million every year on top of the \$42.5 million bin tax.*¹⁰

The LGA does not believe that a Waste Levy alone will divert waste from landfill. The LGA expresses that the reduction in waste sent to landfill in recent years is much more likely to be the result of other measures such as all metropolitan councils introducing the three-bin system, increased waste education programs and a greater focus on recycling and recovery. In addition, the LGA states that the levy price signal does not reach individual householders for kerbside waste and does not incentivise better waste management practices on an individual level.¹¹

⁵ <https://www.greenindustries.sa.gov.au/chinas-new-policy-on-waste-and-recycling>

⁶ Environment Protection Act 1993 (SA)

⁷ <https://www.lga.sa.gov.au/page.aspx?u=6814>

⁸ For example, see <https://www.iwsgroup.com.au/>; <https://www.nawma.sa.gov.au/about-nawma/>

⁹ Environment Protection Act 1993 (SA) s 113

¹⁰ <https://www.lga.sa.gov.au/bintax>

¹¹ <https://www.lga.sa.gov.au/bintax>

From the EPA's perspective, it is an important source of revenue for waste minimisation. The EPA states:¹²

The waste levy is an important economic instrument for promoting waste minimisation and resource recovery in South Australia, by providing an incentive to reduce the amount of waste sent to landfill, and ensuring material resource recovery activities remain viable. The waste levy encourages markets to be created for recovered material resources by providing a financial incentive for industry to seek alternatives to the disposal of waste and to facilitate investment in future technologies, processes and resource recovery systems.

In addition, the SA Environment Minister has stated on ABC radio that money from the Solid Waste Levy will help drive strategy toward banning and phasing out single-use plastics.¹³

Rural and remote areas

In regional and remote areas, local government has a larger role, and covers costs through rates, service fees and gate fees at facilities.¹⁴ Any increase in cost for waste management due to China's restrictions may disproportionately affect regional and remote areas. In most regional areas, local governments own and operate or contract out the operation of landfills, transfer stations and recycling centres. Local governments in these areas often provide waste and recycling services to many businesses. Waste management costs per capita and per tonne are typically higher in regional and remote areas.¹⁵ Larger landfill levies in some metropolitan areas can reduce the cost differential.¹⁶

State government and agencies

Green Industries SA

Green Industries SA is the state government department responsible for the development and implementation of:¹⁷

- Waste management
- A waste strategy for the State and monitor and assess the adequacy of that strategy
- Collaboration with business to improve waste management; and
- Other relevant activities related to waste management

The EPA regulates the management of solid and liquid waste in South Australia, including the transport, handling, storage, treatment (including recycling and recovery) and disposal of waste, as well as activities that produce certain types of waste.¹⁸ Green Industries SA and the EPA are required to co-ordinate their activities

¹² https://www.epa.sa.gov.au/environmental_info/waste_management/reforming-waste-management-2015 page 6 see "Position Statement" under "Development of policy guidance for Energy from Waste facilities"

¹³ <https://www.abc.net.au/news/2019-06-20/transparent-recycling-bins-proposed-for-adelaide-council-area/11227906>

¹⁴ [National Waste Report](#) page 56

¹⁵ [National Waste Report](#) page 56

¹⁶ [National Waste Report](#) page 56

¹⁷ *Green Industries SA Act 2004* ss 5, 6 and 18

¹⁸ https://www.epa.sa.gov.au/environmental_info/waste_management

for the development and implementation of waste strategies.¹⁹ The EPA is responsible for granting licences for waste management activities such as:²⁰

- Disposal of domestic waste
- Regulated beverage container activity
- E-waste drop-off

The EPA must have regard to the waste management objective when assessing any licence application (or renewal) or commenting upon a referred development application.²¹ In 2010, the EPA introduced the *Environment Protection (Waste to Resources) Policy*. This Policy provides a regulatory basis to help achieve the State's waste management objectives through mechanisms such as mandatory resource recovery requirements and banning a wide range of materials from direct disposal to landfill.²²

Federal government

The Department of Environment and Energy developed the [2018 National Waste Policy: Less Waste, More Resources](#) ("**National Waste Policy**"). It recognises the need for a circular economy and collaboration between all Australian governments, business and industries. However, there are no commitments to any funding targets or Federal government intervention for the movement toward a circular economy.²³

The Federal government also provides a yearly [National Waste Report](#) which describes Australia's national performance on waste and recycling. This report provides useful insights to current data and trends in national waste management and has been relied upon as a source for this submission.

There are multiple policies, reports and consultations that have occurred at local and national level.²⁴ Each have similar objectives to reduce waste and create a circular economy. It has been suggested there is a lack of national investment and harmonisation that disincentives private business investment in innovative and productive resource recovery facilities in Australia.²⁵ It may be more useful to harmonise structural and legislative reforms necessary at each level of government with serious government investment. The Waste Management Association of Australia have called on the Federal and State governments to implement a \$150 million plan to 're-boot' the local recycling industry and create a circular economy.²⁶ Despite the fact this is an inquiry into South Australia's recycling industry, it may also be important to consider negotiation and incentivisation for cooperation between

¹⁹ *Green Industries SA Act 2004* s19

²⁰ *Green Industries SA Act 2004* Schedule 1

²¹ https://pir.sa.gov.au/food_and_wine/sa_food_credentials/waste_management

²² *Environment Protection (Waste to Resources) Policy 2010* (SA) ss 10, 12

²³ <https://www.abc.net.au/news/2019-01-11/australias-recycling-crisis-one-year-on-whats-changed/10701418>; <https://www.abc.net.au/news/2018-04-04/waste-industry-calls-for-circular-economy-and-action-plan/9618204>

²⁴ *Green Industries SA Act 2004*; [South Australia's Waste Strategy 2015–2020](#); [National Waste Report](#); [2018 National Waste Policy: Less Waste, More Resources](#); [Single-use Plastics Discussion Paper \(2019\)](#)

²⁵ <https://www.abc.net.au/news/2019-01-11/australias-recycling-crisis-one-year-on-whats-changed/10701418>

²⁶ <https://www.abc.net.au/news/2018-04-04/waste-industry-calls-for-circular-economy-and-action-plan/9618204>

each tier of government – particularly highlighting the economic benefits of investing in infrastructure for a national circular economy.

The National Waste Report states:²⁷

Waste has traditionally been managed locally, and most waste policy and regulation is developed by states and territories. Increasingly, however, waste is moving across borders and national industries are facing waste management issues in multiple jurisdictions. With support from the states and territories, the Australian Government is spearheading efforts to harmonise policy and regulation to ensure rational and efficient management. An updated National Waste Policy is to be released with this publication. Consistent national data and reporting is part of this effort. Harmonisation in the hazardous waste area is particularly important, since many of the markets for processing these materials are national.

Reform and strategies

1. Circular economy

Structural reform toward achieving long term solutions is needed in South Australia and Australia. An international and national well accepted solution is the movement toward a circular economy. This solution is often cited as an overarching goal that can reduce waste and increase resources.²⁸ The National Waste Policy 2018²⁹ adopts 14 key strategies to reduce waste and move toward a circular economy:

- Waste avoidance
- Design
- Knowledge sharing, education and behaviour
- Product stewardship
- A common approach
- Improving access
- Increasing industry capacity
- Sustainable procurement by governments
- Sustainable procurement by business and individuals
- Plastics and packaging
- Sound management of chemicals and hazardous waste
- Reduce organic waste
- Data and reporting
- Market research and development

*South Australia's Waste Strategy 2015–2020*³⁰ also identified key strategies to achieve waste reduction, including:

- a resource efficient economy where the best or full value is secured from products and materials produced, consumed and recovered across the State
- a stable and efficient market for investors through a clear policy framework providing a solid platform for investment decisions

²⁷ [National Waste Report](#) pages 71-72

²⁸ [Single-use Plastics Discussion Paper \(2019\)](#); http://ec.europa.eu/environment/circular-economy/index_en.htm; [2018 National Waste Policy: Less Waste, More Resources](#); [National Waste Report](#)

²⁹ [2018 National Waste Policy: Less Waste, More Resources](#)

³⁰ [South Australia's Waste Strategy 2015–2020](#)

- a culture enabling the South Australian community, businesses and institutions to continue and strengthen their role in implementing zero waste strategies and programs locally, nationally and internationally.

The Green Industries SA discussion paper on single-use plastics³¹ also identified the importance of transitioning into a circular economy and developing policy and legislation within this framework.

2. Individual incentives and penalties

There are various international jurisdictions which have implemented individual incentives and penalties for incorrectly disposing of household waste.

Mandatory targets for local council passed onto individuals

In Wales, local governments have been given mandatory recycling targets: 75% of waste to be recycled by local governments by 2025. This has led to local governments being creative in the ways in which they enforce individuals to recycle their waste.

In Swansea, local residents are being fined for not recycling correctly. Council officers have been appointed to check resident's waste to ensure they do not contain recyclables.³² There is a 100-pound penalty for incorrectly binning everything.

In Conwy, local council have decided to reduce waste by only collecting rubbish every four weeks. The four-week rubbish collection proved controversial and so the Cabinet also decided to put extra measures in place to help residents recycle, including free collection of large items, free nappy bins for grandparents who look after children and bespoke collections for people who miss having their bin emptied if they are on holiday.³³

Mandatory recycle targets, handed down from higher levels of government, could be a way to implement an Australia-wide target for local councils and harmonise Australia's waste targets. This would only be successful if appropriate funding was available for local government otherwise it may not be feasible for local council who are accountable to ratepayers.

See-through recycle bins

An Adelaide City councillor, Robert Simms, has proposed to introduce see-through recycle bins to encourage people to recycle correctly.³⁴ He said it is another tool to encourage people to think about their waste.

This suggestion comes after a 2018 trial of see-through bins in a local council in Perth.³⁵ The Mindarie council completed a trial replacing yellow recycling bins with

³¹ [Single-use Plastics Discussion Paper \(2019\)](#)

³² <https://www.bbc.com/news/uk-wales-47360778>

³³ <https://www.bbc.com/news/uk-wales-north-west-wales-42795993>

³⁴ <https://www.abc.net.au/news/2019-06-20/transparent-recycling-bins-proposed-for-adelaide-council-area/11227906>; <https://www.news.com.au/technology/environment/conservation/seethrough-wheelie-bins-proposed-in-new-plan-to-shame-rubbish-recyclers/news-story/7acd4e48cdbabee679a91077a89eb932>

³⁵ <https://www.communitynews.com.au/north-coast-times/news/face-your-waste-trials-clear-bins-waste-management-technique/>

see-through bins.³⁶ It was aimed to start a conversation within the community on how to reduce waste. The local landfill site in the Mindarie area is predicted to be completely full by 2028.

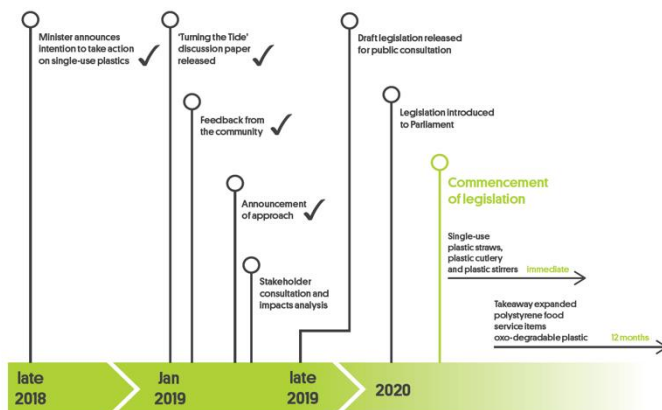
Individual penalties, and incentives that could be perceived as negative by individuals, may be controversial. As a stand-alone policy approach, they are perhaps unlikely to fix the issue that local governments already have as a result of the increase costs associated with China’s Sword Policy. They may be effective in reducing waste and educating the wider community about what can be recycled. If it is to be a part of any policy reform, it may have to be implemented alongside education programs and federal and state funding, and would arguably be most effective as a part of a national waste management framework with mandatory waste reduction targets. Individual incentives could be another tool that helps to achieve many of the strategies outlined in the National Waste Policy and South Australia’s Waste Strategy; ultimately a step toward a circular economy.

3. Regulating packaging from big business and the single-use plastics ban

Single-use plastics ban

Green Industries SA undertook an inquiry into banning single-use plastics. The Discussion Paper highlighted the need for a circular economy and queried how a ban on single-use plastics could help achieve this. The Environmental Defenders Office submitted a response to the Discussion Paper and inquiry that supported a ban on certain single-use plastics which can be found [here](#).

As a result, the South Australian government is planning to develop legislation to ban single-use plastics such as plastic straws, cutlery and stirrers while other plastic products are considered for intervention.³⁷ The timeline for implementation of the legislation is identified in Figure 1.



single-use plastics such as plastic straws, cutlery and stirrers while other plastic products are considered for intervention.³⁷ The timeline for implementation of the legislation is identified in Figure 1.

It is difficult to predict how such a ban will impact waste and recycling rates. More specifically, whether it will reduce the amount of waste

going into landfill and relieve pressure on councils as a result of China’s Sword Policy and any other countries restriction on waste imports. It is probable that a reduction in waste will occur at least to some extent, but the positive effects of such a ban may only be seen long term. Regardless, it is an important step toward a circular economy. It may help to build momentum toward national waste reform as

³⁶ <https://www.communitynews.com.au/north-coast-times/news/face-your-waste-trials-clear-bins-waste-management-technique/>

³⁷ <http://www.greenindustries.sa.gov.au/plastics>

other States and Territories, including the ACT³⁸ and Tasmania,³⁹ are also considering a single-use plastic ban.

Product Stewardship

Product stewardship places responsibility on those producing and selling products to reduce the wastes impact, throughout its lifecycle, on the environment, human health and safety.⁴⁰ This involves industry working to ensure their product wastes are properly managed, often through financial support and achieving collection targets. The *Product Stewardship Act 2011* (Cth) provides a basis for establishing product stewardship programs, which may be voluntary, co-regulatory (industry action underpinned by Australian Government regulation) or mandatory. No mandatory schemes have yet been established.

Product stewardship is one area where national leadership is required.⁴¹ Product stewardship agreements can reduce waste and improve its management through shared responsibility, including with manufacturers. A levy on initial purchases can be used to fund activities to reduce harm from the waste. The Australian Government is considering a number of other products for stewardship arrangements, namely:⁴²

- plastic microbeads and products containing them
- batteries
- photovoltaic systems
- electrical and electronic products; and
- plastic oil containers.

Other jurisdictions regulating packaging

In 2019, Germany is introducing packaging laws to address the role that big businesses play in the demand and consumption of waste for packaged products. On 1 January 2019, the new German Packaging Act (“**GPA**”) entered into force, replacing the German Packaging Regulation. The GPA obliges more producers and distributors, including online retailers, to register and participate in a disposal and recycling system.⁴³

Businesses which place goods on the German market can face a fine of up to €50,000 and prohibited to sell if they fail to comply with the country's updated packaging laws. Additionally, all businesses will have to register with the central packaging registry in order to maintain market access.⁴⁴ Companies that produce volumes of packaging higher than 80,000 kilograms of glass, 50,000 kilograms of

³⁸ <https://www.canberratimes.com.au/story/6206005/community-talks-start-on-act-single-use-plastic-ban/>; <https://www.abc.net.au/news/2019-02-23/canberra-businesses-already-banning-single-use-plastic/10833290>

³⁹ <https://www.abc.net.au/news/2019-03-05/hobart-to-ban-single-use-plastic/10869790>

⁴⁰ <http://www.environment.gov.au/protection/waste-resource-recovery/product-stewardship/consultation-review-ps-act-incl-ntcrs>

⁴¹ [National Waste Report](#) page 72

⁴² [National Waste Report](#) page 72

⁴³ <https://www.lexology.com/library/detail.aspx?g=f461e38d-0d2a-4fc7-8cad-b28492944385>

⁴⁴ <https://www.plasticsnewseurope.com/article/20180703/PNE/180709983/new-german-packaging-law-to-hit-market-in-2019>

paper and cardboard and 30,000 kilograms of aluminium, plastic and compounds which are sold in Germany should submit a Declaration of Compliance. Failing to do so could incur a €50,000 fine.⁴⁵

Without proper registration, producers or retailers must not offer the packaging in Germany, including via e-commerce.⁴⁶ If packaging is offered, fines of up to €200,000,00 on producers and retailers, including importers, could apply.⁴⁷ The German equivalent of the Australian Competition and Consumer Commission can claim from producers and retailers to cease and desist from any sales.⁴⁸ In addition, authorities may confiscate the proceeds.⁴⁹

Packaging items that require registration and licensing under the new GPA are sales packaging and secondary packaging or outer packaging that are filled with products, and typically end up, after use, as waste at:⁵⁰

- (i) a private final consumer or
- (ii) equivalent places of waste generation– such as restaurants, hotels, canteens, administrations, hospitals, educational, charitable or military institutions, service stations etc.

Banning and phasing out certain single-use products may be a way to reduce waste that ends up in landfill. The development of the single-use plastics ban legislation may affect the amount of waste that ends up in landfill and could, therefore, ease pressure from China's restrictions long term. Strict legislation on business such as the GPA in Germany may only be effective, and possible, if legislated on at a federal level. But it could have a larger impact on reduce packaging waste.

4. Re-manufacturing materials locally into desirable products (including energy production) and procurement policies and practices that support the use of remanufactured products

5.

Comparatively, Australia's waste management systems are very basic.⁵¹ A large majority of waste is sent to landfill in Australia.⁵²

Thermal energy from waste

Thermal energy can be produced from waste. This process can convert municipal and industrial solid waste into electricity and/or heat. It has been argued to be an ecologically sound, cost-effective means of energy recovery. This process works by burning waste at high temperatures and using the heat to make steam. The steam then drives a turbine that creates electricity.

The EPA has stated the process of creating thermal energy may trigger one or more of the prescribed activities of environmental significance in Schedule 1 of the

⁴⁵ <https://www.plasticsnewseurope.com/article/20180703/PNE/180709983/new-german-packaging-law-to-hit-market-in-2019>

⁴⁶ *German Packaging Act* s 9[5].

⁴⁷ *German Packaging Act* s 34[1][2]

⁴⁸ Case No. 4 U 92/06

⁴⁹ <https://www.lexology.com/library/detail.aspx?g=f461e38d-0d2a-4fc7-8cad-b28492944385>

⁵⁰ <https://www.lexology.com/library/detail.aspx?g=f461e38d-0d2a-4fc7-8cad-b28492944385>

⁵¹ [National Waste Report](#)

⁵² [National Waste Report](#)

Environmental Protection Act. ⁵³ If so, a development application would be necessary.⁵⁴ When assessing an application, the EPA has outlined that it will consider the location, noise, air quality and emissions management pursuant to the *Environmental Protection Act*. The EPA also highlights that any waste with a higher order beneficial use should not be compromised by using it for thermal energy. If waste can be avoided, reduced, reused or recycled, this is most preferable. But if the waste is to be disposed of, this waste may be appropriate for the thermal energy process.⁵⁵

Sweden uses this process which incinerates about 50 percent of Sweden's garbage to heat nearly 10 million residents.⁵⁶ It has been argued that the waste-to-energy process in Australia may not be as effective because Australia don't have district heating systems like Sweden.⁵⁷

Northern Adelaide Waste Management Authority – Renewable Energy Park

The NAWMA has developed a landfill gas power station that produces electricity from certain waste. The NAWMA website states:⁵⁸

The landfill gas power station uses gas drawn from 18 vertical wells and a network of horizontal wells in the active cell area to capture gas that is produced through the breakdown of organic matter in the landfill. Approximately 900m³ of gas is drawn from the landfill each hour with around 650m³ of this used to fuel an engine to make electricity. The system has a capacity of 1.1 MW and operates 24hr/day, 7 days/week generating a whopping 9,000 MWh/year of electricity

Sweden has been generating energy in a similar way since the 1960's.⁵⁹ And from 2002 to 2005, Sweden banned organic and combustible waste (such as paper) in landfills to reduce the substantial greenhouse gas emissions produced from such waste.⁶⁰ It uses the biogas from organic and combustible waste to power homes and fuel public transport.⁶¹

Regulatory and policy issues

⁵³ https://www.epa.sa.gov.au/environmental_info/waste_management/reforming-waste-management-2015 page 3, see "Position Statement" under "Development of policy guidance for Energy from Waste facilities"

⁵⁴ https://www.epa.sa.gov.au/environmental_info/waste_management/reforming-waste-management-2015 page 3, see "Position Statement" under "Development of policy guidance for Energy from Waste facilities"

⁵⁵ https://www.epa.sa.gov.au/environmental_info/waste_management/reforming-waste-management-2015 page 1-2, see "Position Statement" under "Development of policy guidance for Energy from Waste facilities"

⁵⁶ <https://www.nytimes.com/2018/09/21/climate/sweden-garbage-used-for-fuel.html>; <https://www.trtworld.com/europe/swedish-recycling-so-successful-it-is-importing-rubbish-24491>; <https://sweden.se/nature/the-swedish-recycling-revolution/>

⁵⁷ <https://www.abc.net.au/news/2018-08-14/how-would-burning-rubbish-like-sweden-work-in-australia/10115694>

⁵⁸ <https://www.nawma.sa.gov.au/resource-recovery/renewable-energy-facility/>

⁵⁹ <https://smartcitysweden.com/focus-areas/biogas/>

⁶⁰ <https://www.nytimes.com/2018/09/21/climate/sweden-garbage-used-for-fuel.html>

⁶¹ <https://smartcitysweden.com/focus-areas/biogas/>; <https://www.nytimes.com/2018/09/21/climate/sweden-garbage-used-for-fuel.html>

The EPA are preparing for thermal energy from waste (otherwise known as waste-to-energy) in its [Position Statement](#). Energy from organic waste is already happening at NAWMA. It will be important to ensure regulation and legislation on these new green energy sources is adequate and there are the right safety and development approval processes in place which the EPA have addressed in their Position Statement. In addition, it is also important to see these activities not as a primary way to reduce waste because avoidance, reuse and recycling is more in line with a circular economy. As with any new policy on waste management, it is critical to educate the community and perhaps consider individual incentives because these systems rely on households and business correctly disposing of their waste.

Please advise if you require clarification on any of the issues raised in this submission.

Yours sincerely



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