

Energy from Waste

The Challenges for Local Government

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31 October, 2023



The specialists in recycling, waste and planning



National Waste Policy 2018



By 2030:

- 50% ↓ organics to landfill
- 80% total resource recovery

The 2018 National Waste Policy: Less waste, more resources was agreed by Australia's Environment Ministers and the President of the Australian Local Government Association in December 2018. It sets a new unified direction for waste and recycling in Australia.

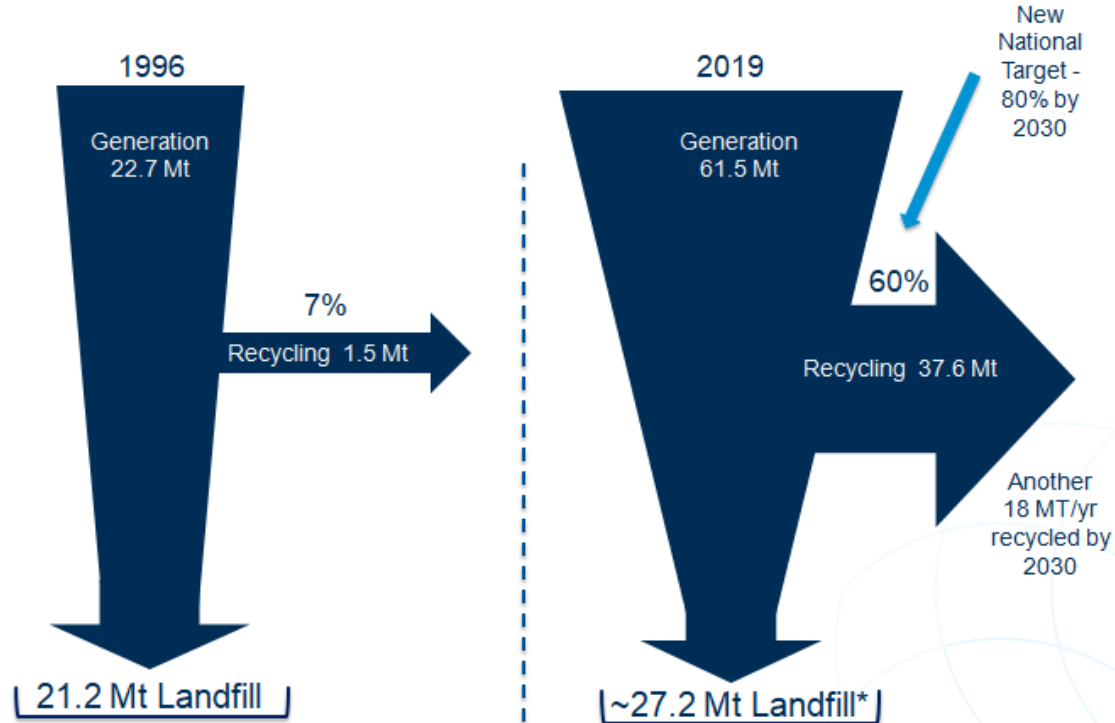
National targets

1. Ban the export of waste plastic, paper, glass and tyres, commencing in the second half of 2020
2. Reduce total waste generated in Australia by 10% per person by 2030
3. 80% average resource recovery rate from all waste streams following the waste hierarchy by 2030
4. Significantly increase the use of recycled content by governments and industry
5. Phase out problematic and unnecessary plastics by 2025
6. Halve the amount of organic waste sent to landfill by 2030
7. Make comprehensive, economy-wide and timely data publicly available to support better consumer, investment and policy decisions

Note: All targets will be measured against baselines in the 2018 National Waste Report

What does this mean in Practice?

National Achievement

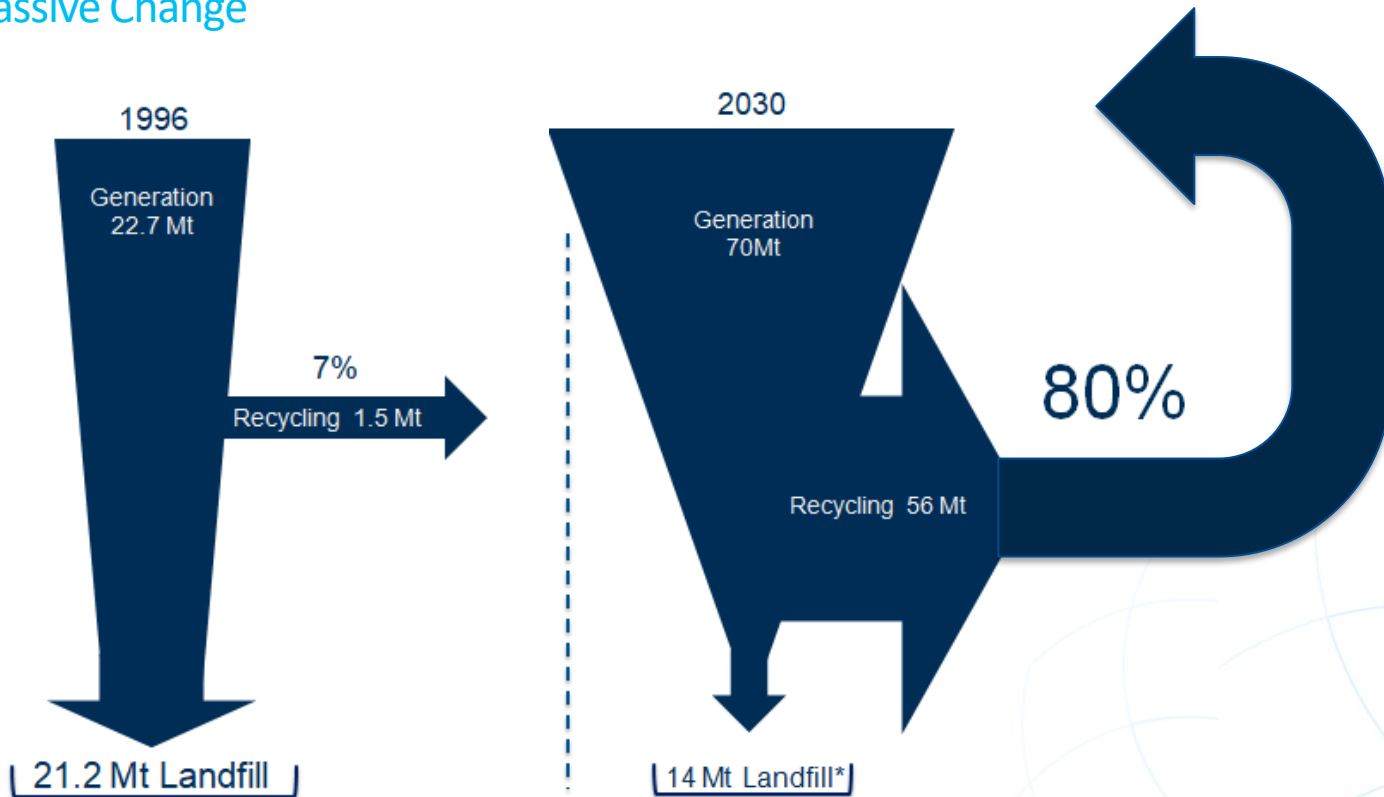


Source: ABS Year Book 2014; National Waste Report 2018

* The balance of landfilled/recycled is waste recovered as energy, including via LFG.

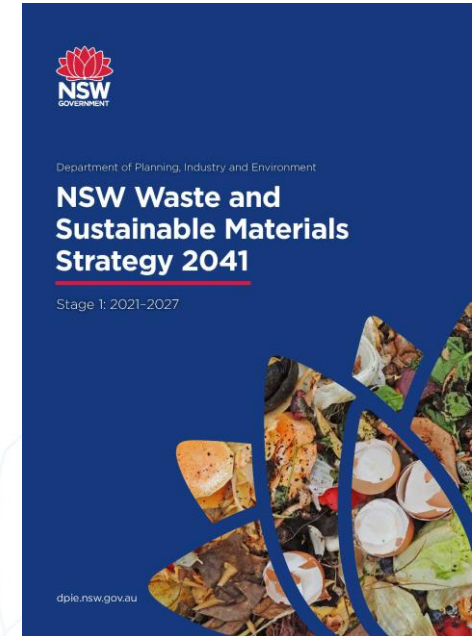
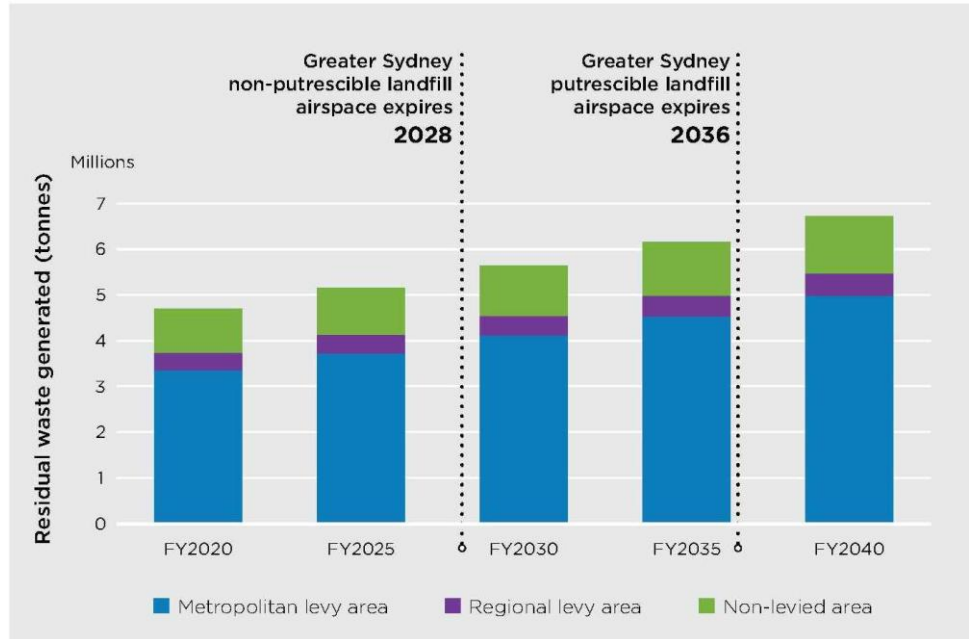
What the Targets Mean

Massive Change



NSW Waste Strategy 2041

Figure 2: Projected residual waste (household and commercial) by levy area, under 'business as usual'



Disaster waste

Local Government in the front line

- Seldom considered
- Unpredictable
- Increasing
- Dedicated recovery infrastructure not economically viable



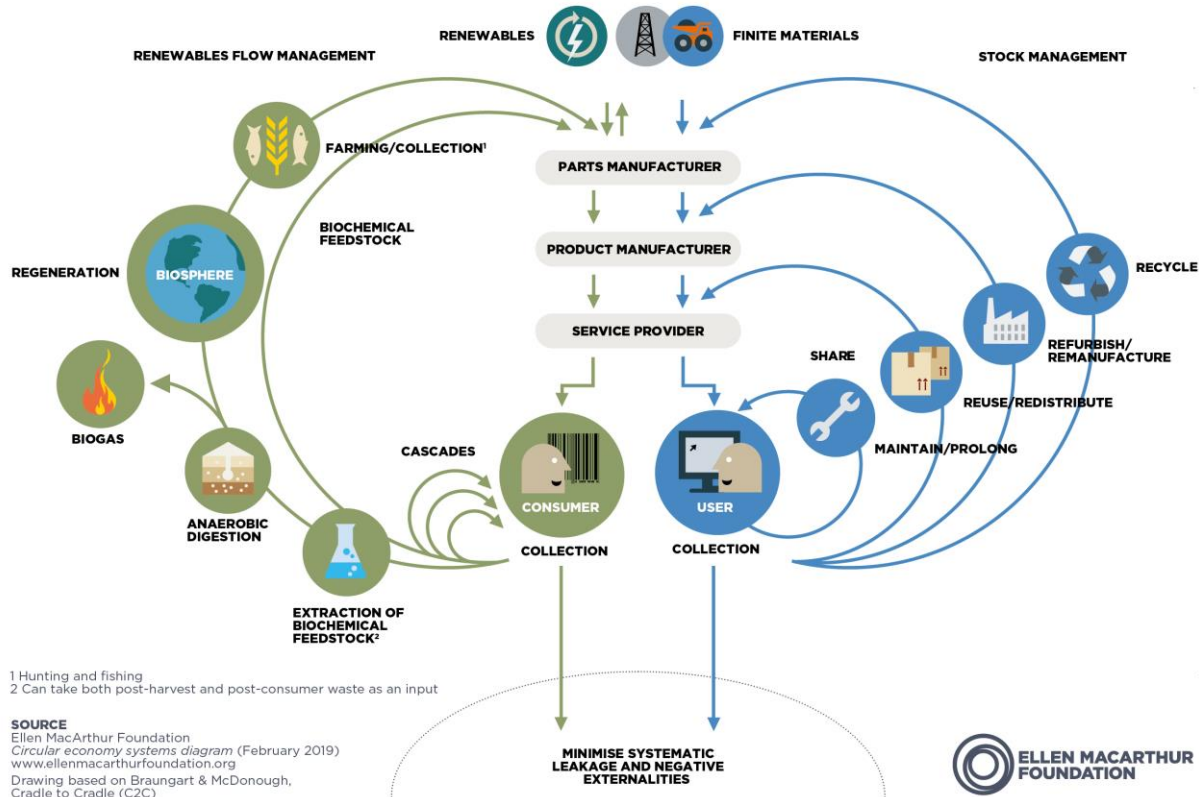
The Australian 3 March 2022

The “Traditional” Waste Hierarchy

- Adopted by NSW EPA
- Mixed achievement
 - Disposal very easy
 - Avoidance very hard
 - Reuse is limited
 - Recycling can be expensive
 - Energy recovery difficult

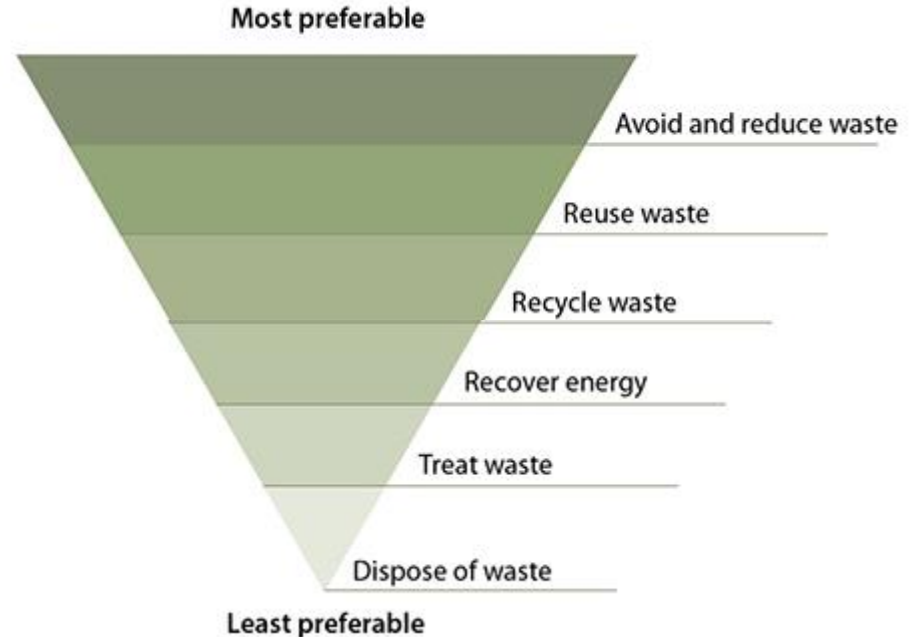


The Circular Economy



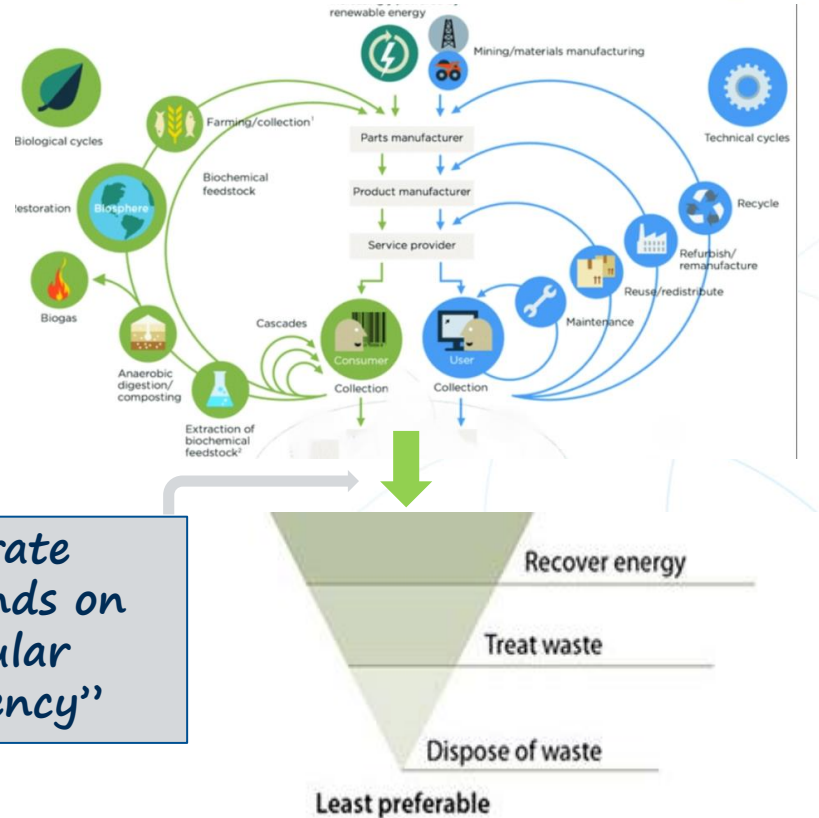
How do they fit together?

- The circular economy is more than just the top of the hierarchy
- The top is an integral part of the “butterfly”
- The bottom is reduced, but not necessarily gone



Transition to the Circular Economy

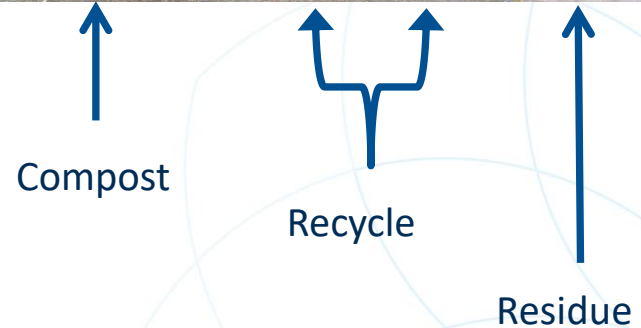
- Encouraged by Government Policy
- Needs realistic, practical approach:
 - CE is a way of thinking
 - How long to achieve?
 - Residue will not wait.



Household Waste

Source separation really helps

- Put wastes in the right bin
 - green, yellow, & red (blue? burgundy?)
 - Education “what goes where?”
 - Council role = Minimise residue, collections
 - Industry role = infrastructure, markets
 - **What happens to the Residue?**
 - Only 2 options:
 - Burn it
 - Bury it
- } Keep it out of the red bin if you don't like these choices



Options pending a Circular Economy

It's complicated



Landfill

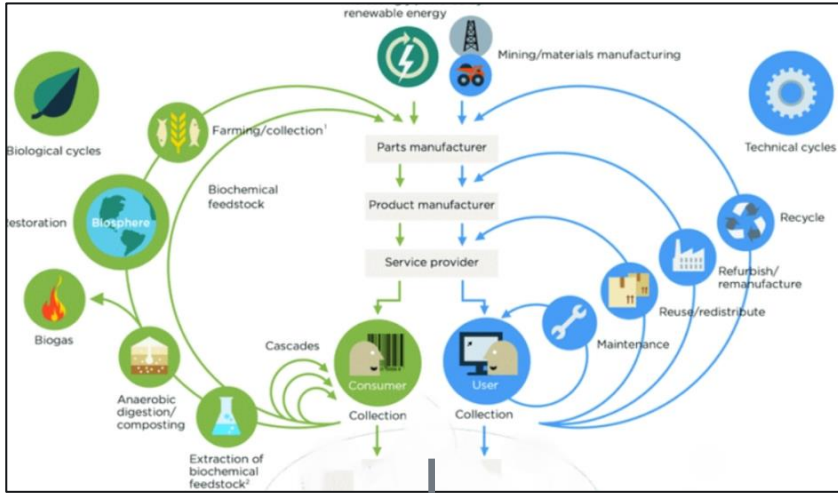
- Social licence
- Legacy greenhouse gas
- Legacy groundwater pollution
- “Waste” of resource
- Cheap

Energy Recovery

- Social licence
- Bad reputation
- Ash disposal
- Expensive

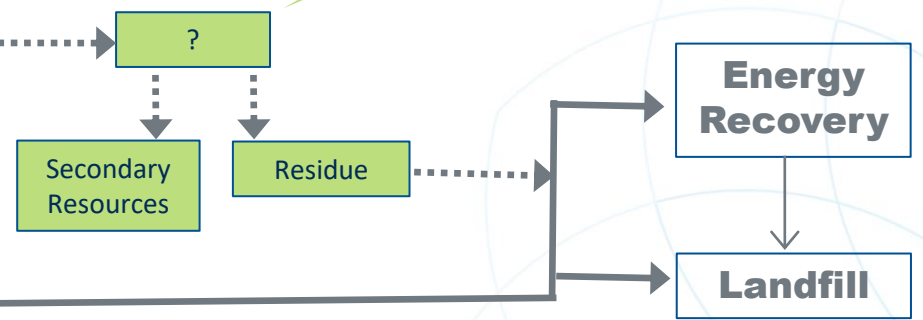
Bottom line:

- There are arguments against both
- One must be selected nevertheless
- The hierarchy favours energy recovery to landfill



Evolving technologies:

- Dirty MRF
- Niche
- Small scale

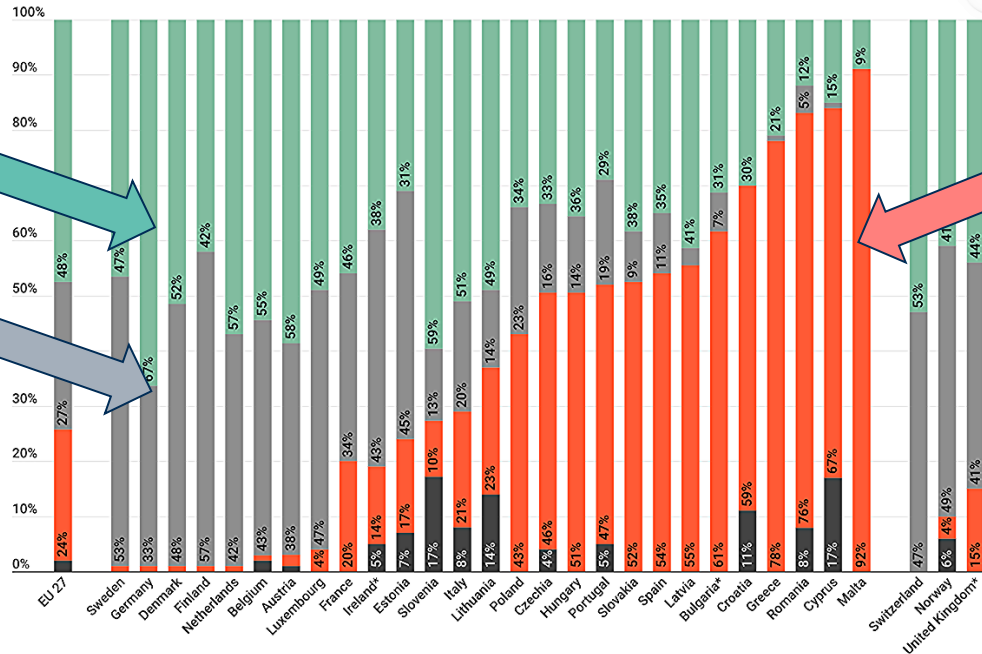


European Experience

What to do with the contents of the red-lid bin

High
Resource
and Energy
Recovery

Municipal waste treatment in 2019



High landfill

● Missing data ● Landfill ● Waste-to-Energy ● Recycling + Composting

EfW's role is not understood

Well intentioned but misguided opposition

LGNSW Conference March 2022:

L3

Waste to energy incinerators

That Local Government NSW:

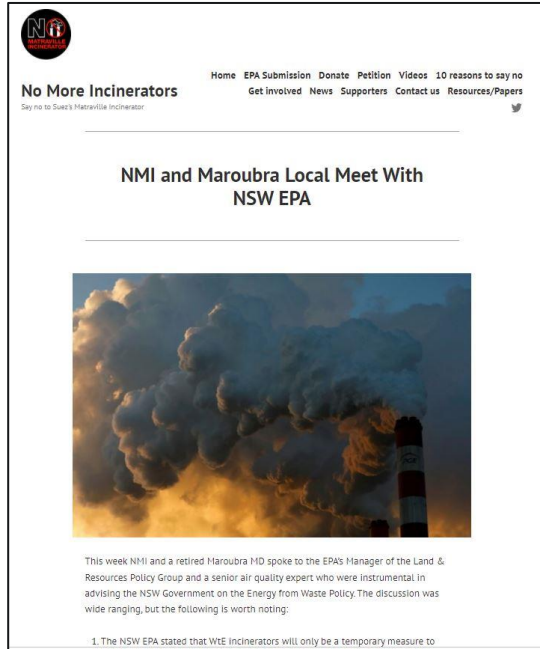
- a) Acknowledges concerns regarding the impact of waste to energy incinerators on communities and the environment;
- b) Notes that the Draft Regulations and the Environment Protection Authority's (EPA) Energy from Waste Infrastructure Plan would prohibit waste to energy incinerators in some places and not others;
- c) Considers burning energy an outdated technology and encourages diversion rather than incineration.

Decision: Carried

This position unfortunately sees EfW as competing with resource recovery whereas in fact it does not.

Misinformation Regarding EfW


Terrible picture of EfW



No More Incinerators
Say no to Suez's Matraville Incinerator

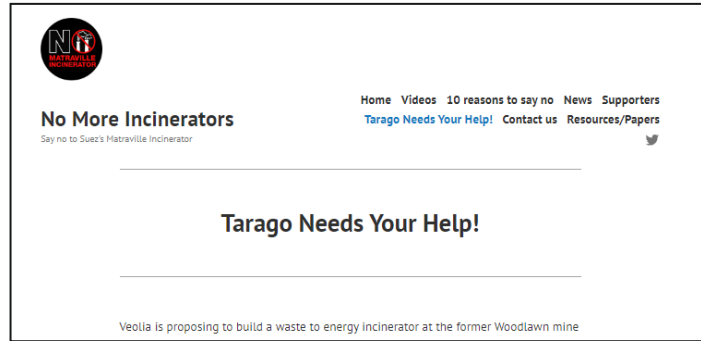
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NMI and Maroubra Local Meet With NSW EPA



This week NMI and a retired Maroubra MD spoke to the EPA's Manager of the Land & Resources Policy Group and a senior air quality expert who were instrumental in advising the NSW Government on the Energy from Waste Policy. The discussion was wide ranging, but the following is worth noting:

1. The NSW EPA stated that WtE Incinerators will only be a temporary measure to



No More Incinerators
Say no to Suez's Matraville Incinerator

Home Videos 10 reasons to say no News Supporters
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Tarago Needs Your Help!

Veolia is proposing to build a waste to energy incinerator at the former Woodlawn mine

- “Community” Group
- Successfully opposed Suez Matraville proposal
- Now opposing Veolia at Woodlawn
- Emotive and misleading information

Reality Check

Real origin of the picture

Energy

EU carbon price hits record 50 euros per tonne on route to climate target

By Reuters, Nora Buli, Kate Abnett and Susanna Twidale

May 4, 2021 6:23 PM GMT+10 · Updated 2 years ago



Smoke and steam billow from the Belchatow Power Station, Europe's largest coal-fired power plant, near Belchatow, Poland, November 28, 2018. REUTERS/Kacper Pempel [Archive Licensee: Reuters](#)

Project 

Belchatow Power Plant

POWER FOSSIL FUEL / COAL AND GAS COAL PLANT

Plant Type :	Location :	Capacity :
Coal-fired power plant	Belchatow, Poland	5,298MW

MORE 

The 5,298MW Belchatow power plant located in Poland is the biggest [coal-fired](#) power plant in Europe. Operational since 1988, the plant is owned and operated by PGE Elektrownia Belchatow (PGE), a subsidiary of state-owned Polska Grupa Energetyczna (PGE).

 Encompassing 13 lignite-fired power generating units, the power station generates 32.3TWh of electricity a year, accounting for approximately 20% of Poland's total power generation capacity.

 Belchatow also emits more than 30 million tonnes of CO₂ a year, which makes it the biggest polluting power plant in Europe.

The reality of EfW

Over 2,500 plants worldwide

- Emissions standards & reporting exist
- No legacy emissions
- Recover energy otherwise wasted
- Provide local heat and power
- Metal recovery from ash
- Co-exists with recycling & reuse
- Smaller footprint – does not sterilize the land

Vienna



Instagram: My Vienna Austria

Copenhagen



ThePlanningReport.com 14/8/19

What does this mean for Local Government?

- Engagement – Social Licence and Education
- Planning & Approvals
- Infrastructure

Engagement

Everyone needs to be on the same page



All levels of Government

- Education – consistent, long term
- Work together to improve outcomes

Councils

- Cooperation for greater project “bankability”
- Consistent message across LGAs

State Government

- Appropriate levy
- Realistic hypothecation
- Streamline planning
- Clear streamlined licensing

Commonwealth Government

- Ban unrecyclable materials
- Increase producer responsibility

Planning and Approvals

Waste facilities are often “too hard”



- Designate waste precincts in SEP & LEP
- Streamline approvals
- Waste infrastructure hubs – integrated developments
- Internal action plans
 - How to achieve 80% resource recovery target
 - How to achieve 50% organics diversion target

Conclusion

Local Government support is critical



- Achieving targets will require processing capacity:
 - 18 million tonnes p.a.
 - 7 million tonnes p.a. in NSW
- Support for development “financial bankability”
- Consider improved organics management now

NSW Waste Strategy:

Commercial food by 2025

Domestic FOGO by 2030

Thank you

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