



Thursday, June 10, 2021

Regional landfill development & operation

Running a small landfill, are you charging enough?

Presented by Mike Ritchie – Managing Director

2:30 PM - 2:50 PM

Doltone House Jones Bay Wharf, Pyrmont NSW

15 Minute Presentation + 5 Minute Q&A

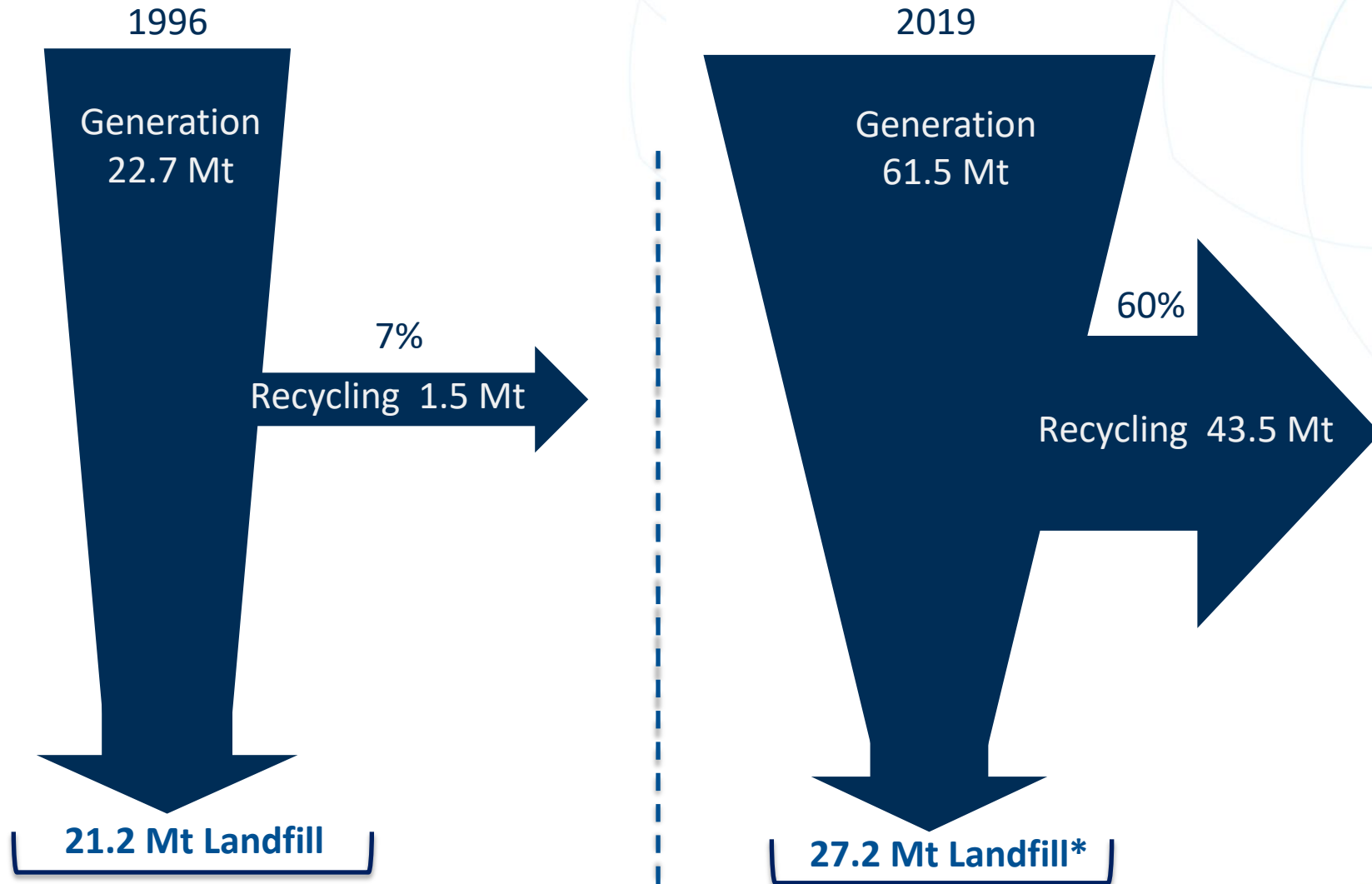


The specialists in recycling, waste and carbon



What is the average
market landfill price?

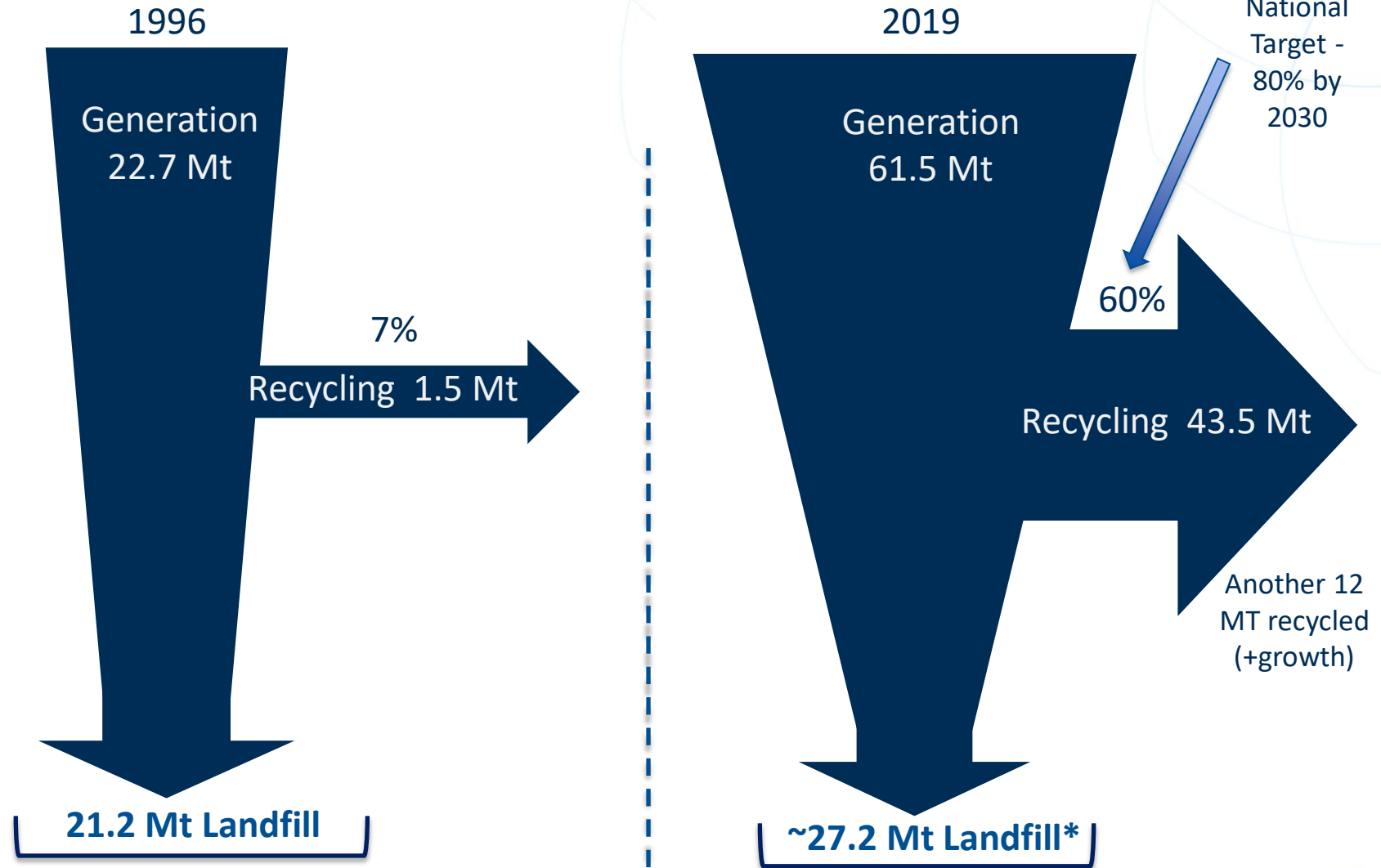
Waste is like a river



Source: ABS Year Book 2014; National Waste Report 2020

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

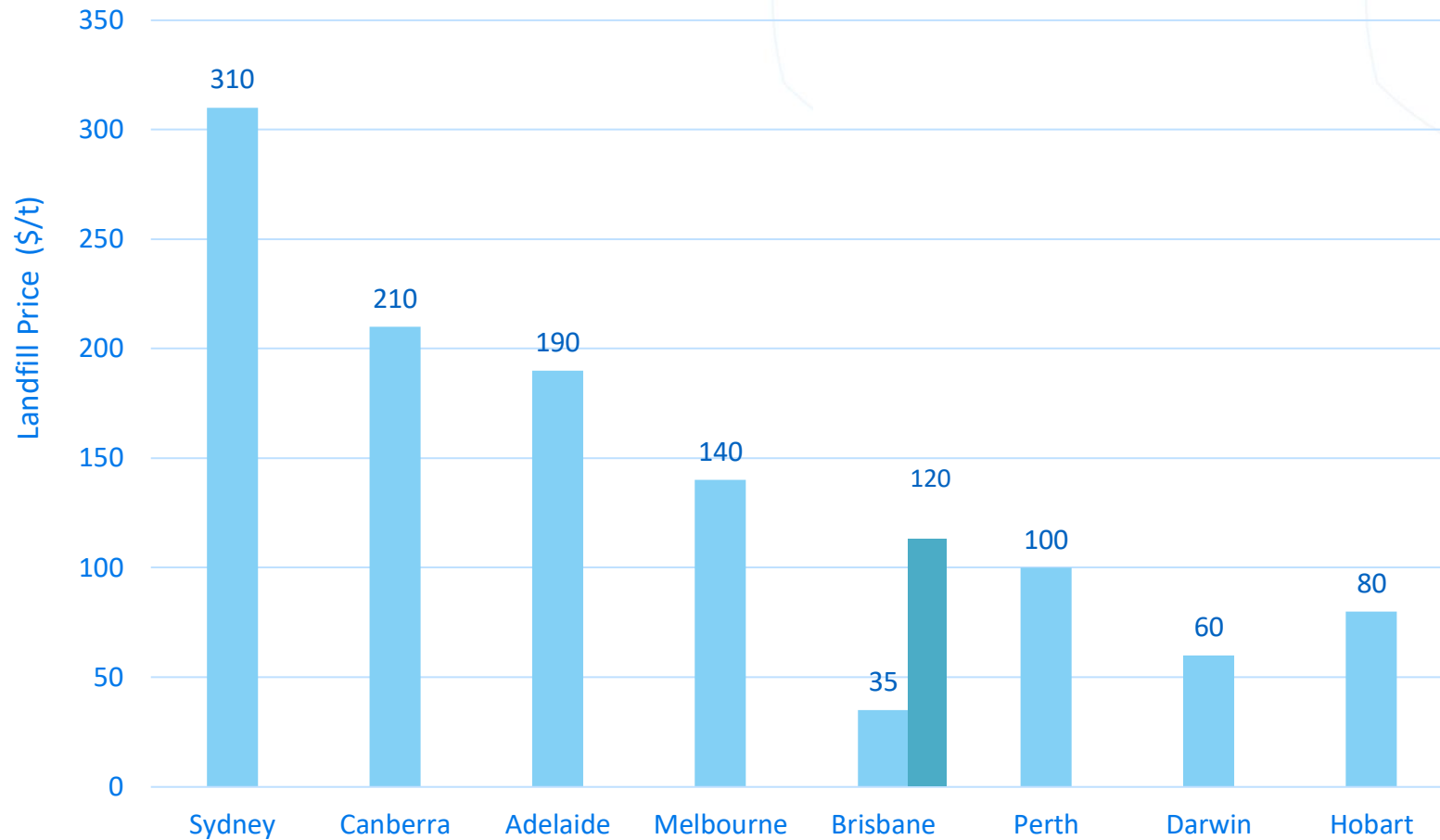
Waste Generation in Australia



Source: ABS Year Book 2014; National Waste Report 2018

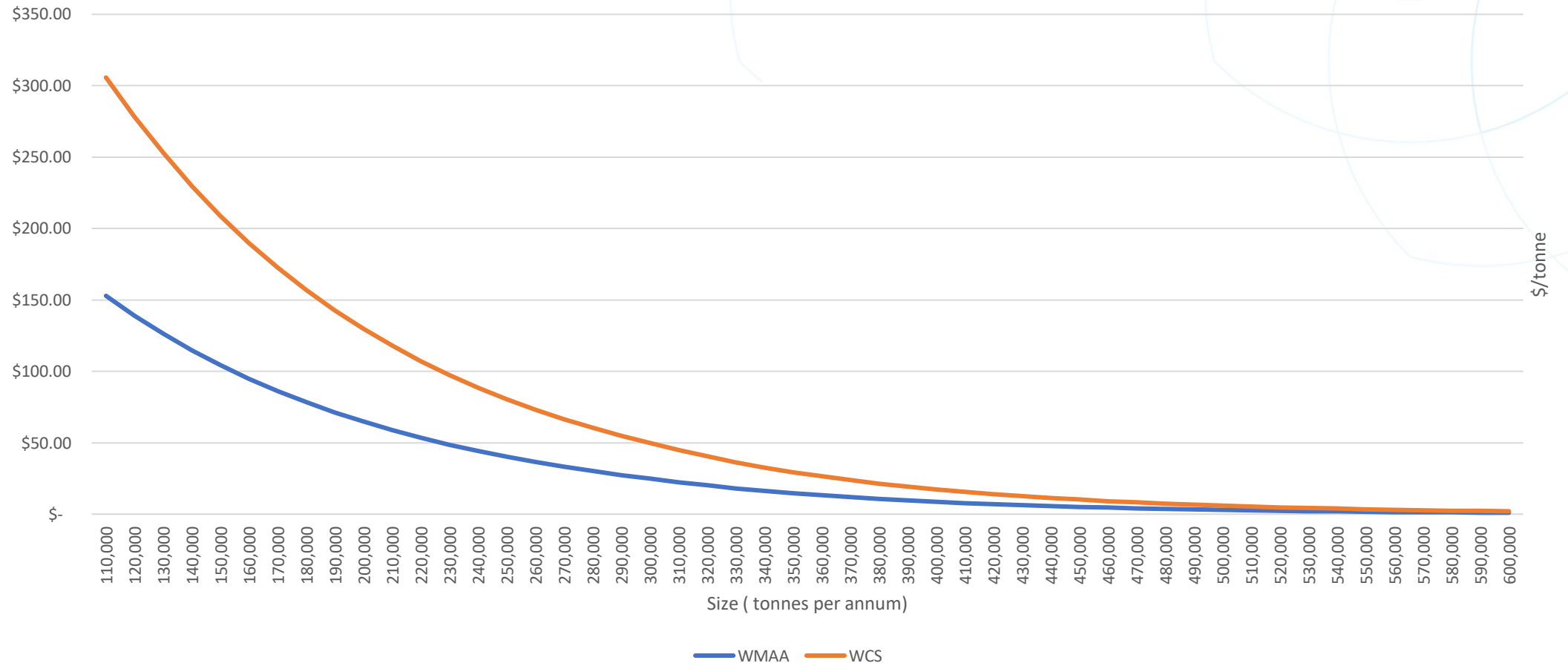
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Landfill Pricing



400,000 t/yr going to QLD

Typical landfill operating cost pricing by landfill size



Why review your price?

Common observations

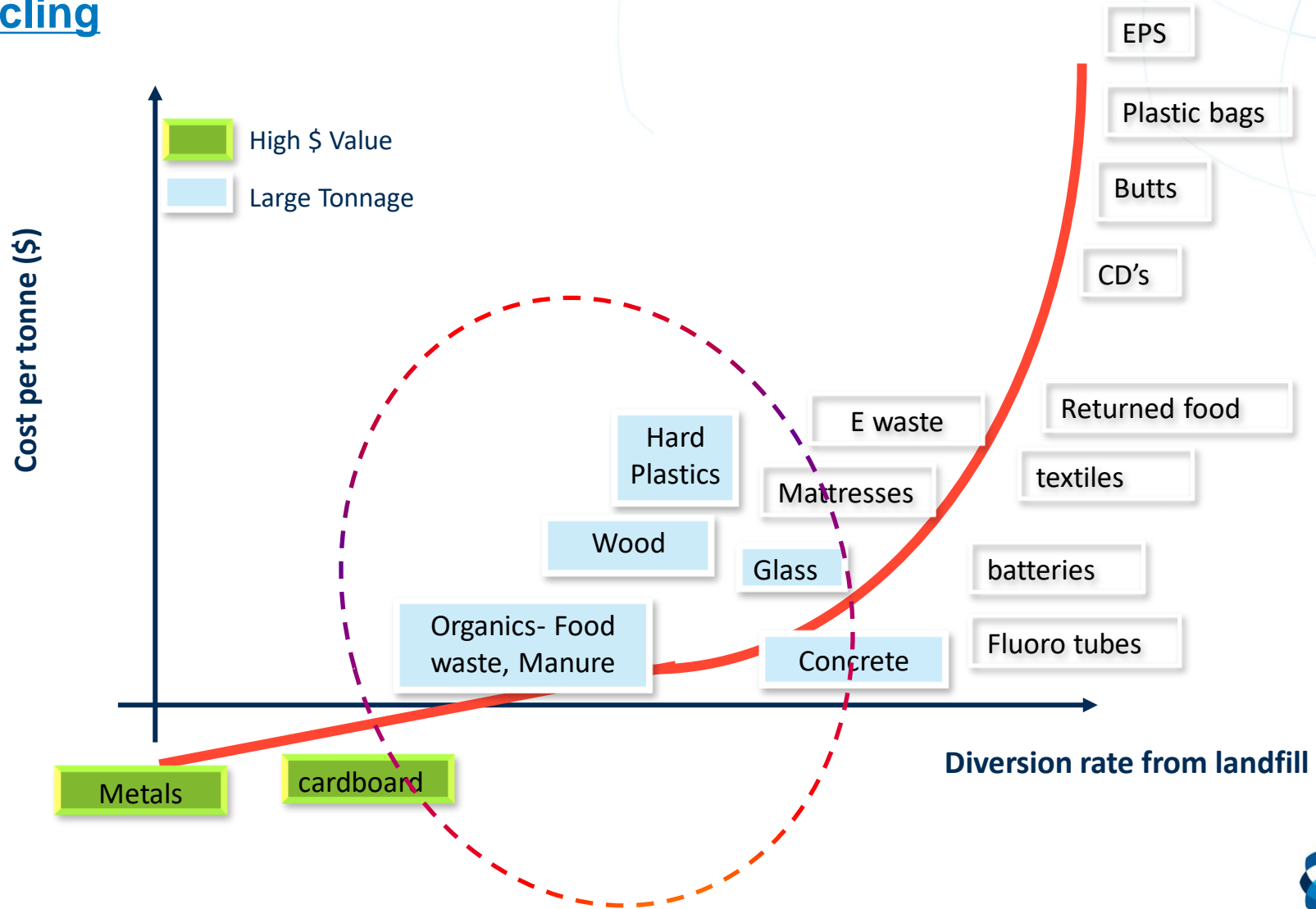
- Many Council owned landfills are underpriced
- Ratepayers will be subsidizing commercial operators disposing at Council landfill
 - Special rate increases biased towards households
- Unfunded liability often results from:
 - airspace undervalued
 - Infrastructure replacement not priced
 - Insufficient provision for aftercare

Implications

- Underpriced gate fee then creates an inaccurate basis for comparisons
 - all alternatives are expensive compared to an underpriced landfill
 - resource recovery (organics, wood, concrete, C&I sort...)
 - Landfill rationalisation, transfer stations

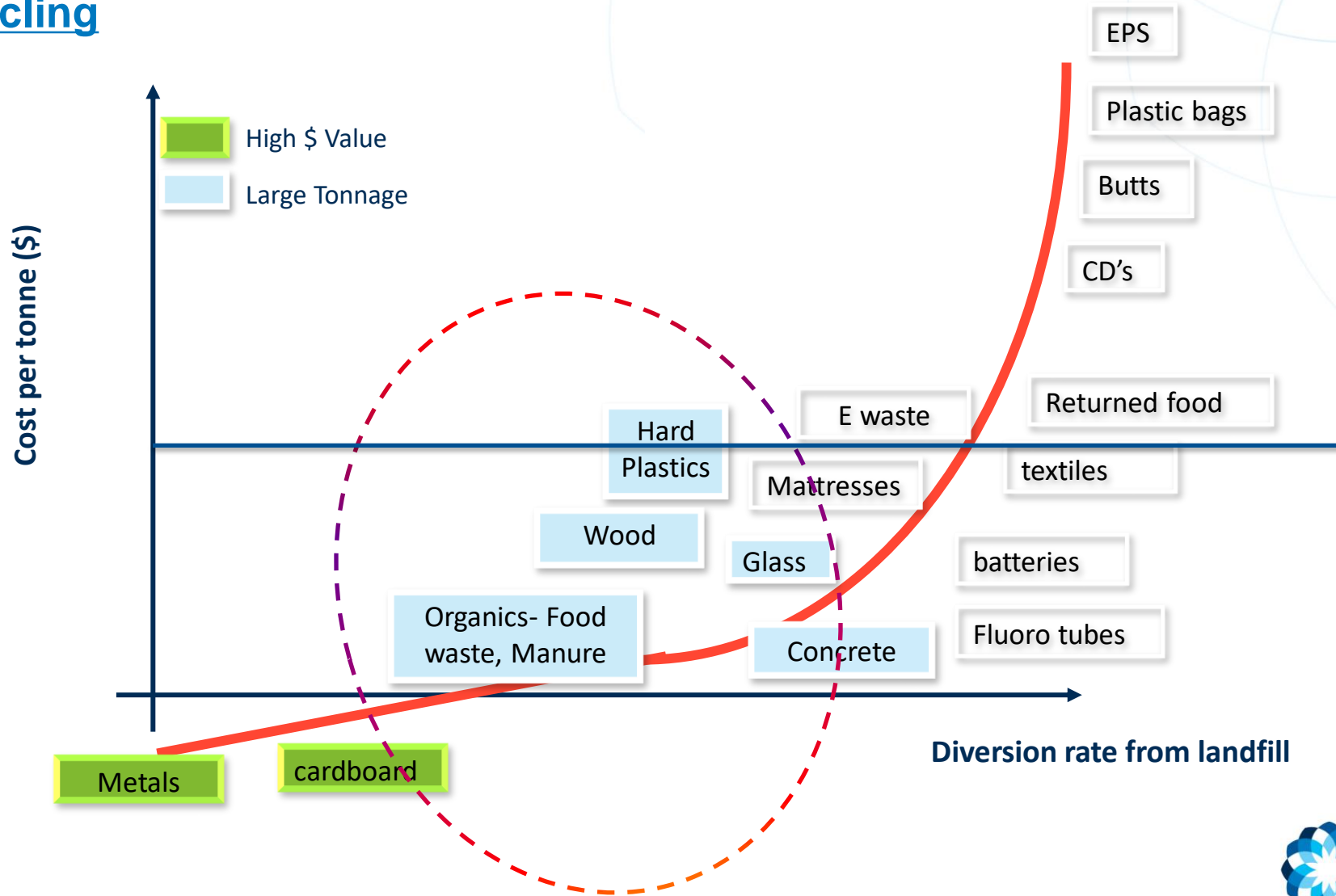
Economics

Cheap landfill disposal can determine the maximum paid for and viability of recycling



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How to determine a landfill cost?

Standard Approaches?

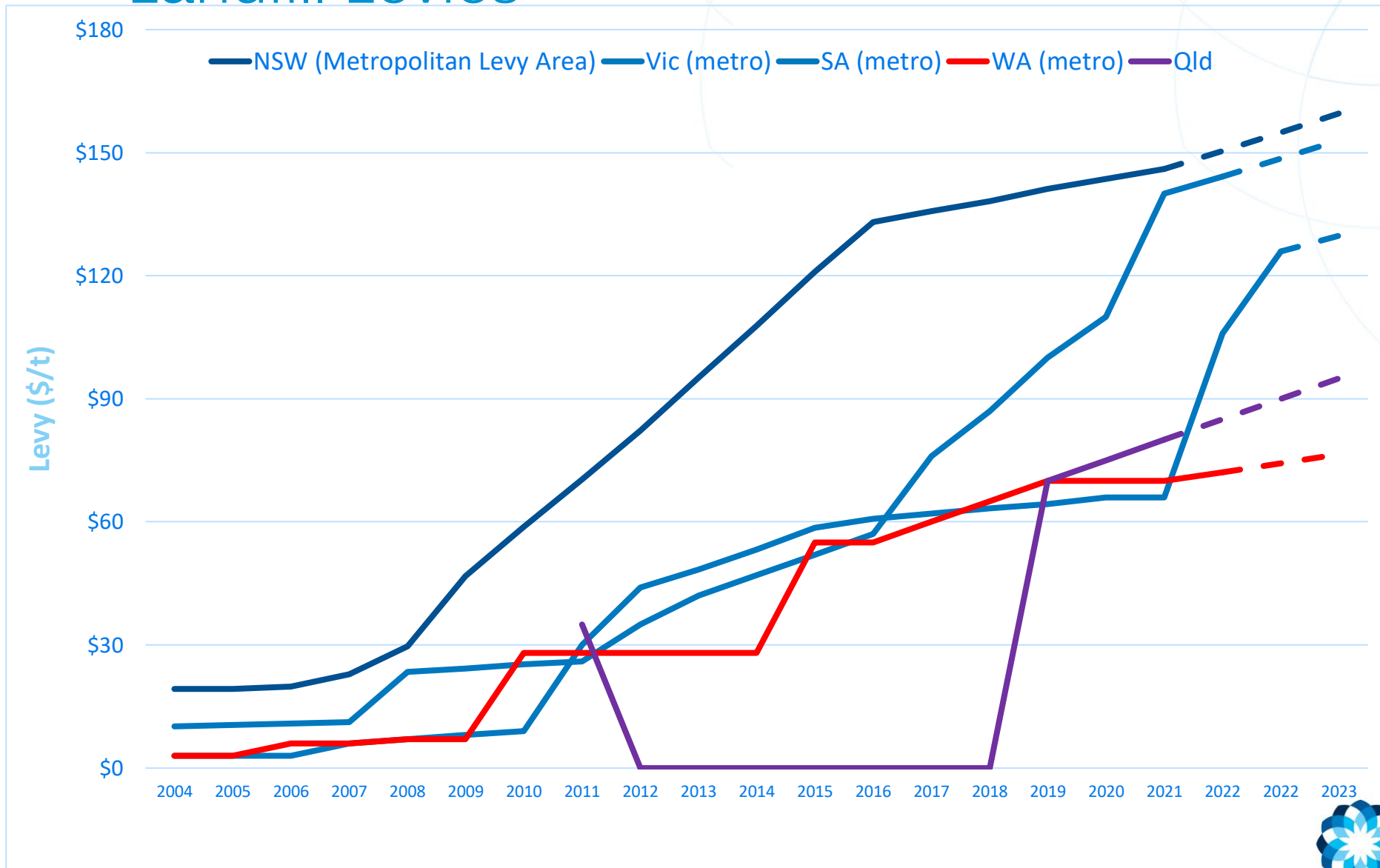
- Australia has no standard
- NSW Full Cost Landfill Calculator (but it ignores void space (air) value)
- US EPA - full cost accounting handbook 1997
- NZ -Full Cost Accounting guide 2002

Steps to work out full costs

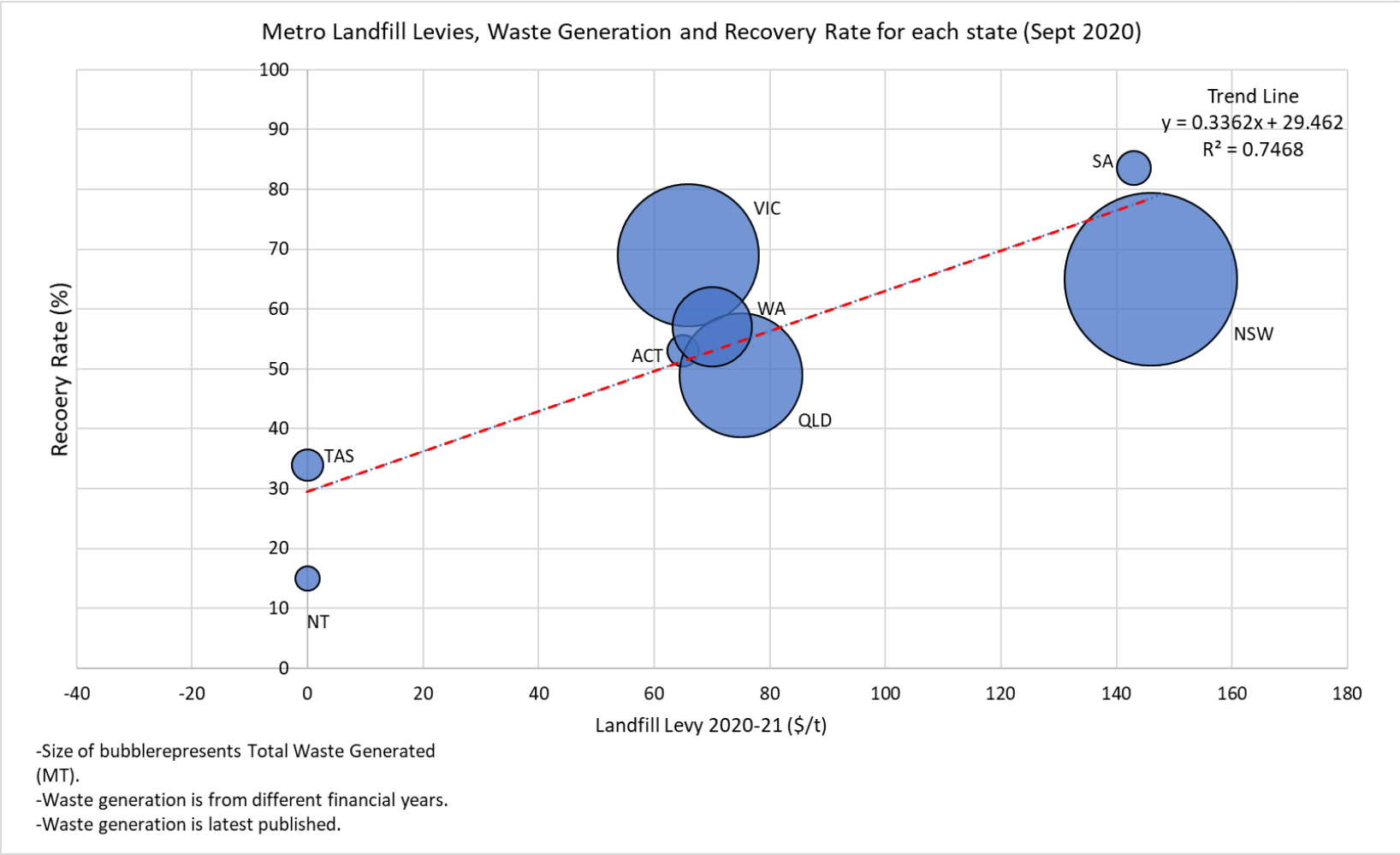
1. Waste projection model

- Waste generation rate
- Model growth projections
- Model changes in growth (increased levies, FOGO)
- Model Price Elasticity – changes in waste supply with higher or lower gate fees

Landfill Levies



Landfill levies drive resource recovery



Waste Projection Model

- Provides scenarios for landfill airspace utilisation.
- Allows you to identify the remaining life of the facility:
 - Utilisation of airspace
 - Timing cell construction
 - Timing of cell capping
 - Timing of rehab and aftercare activities

2. CAPEX - Plan capital costs and financing

- **Capital Costs**

- New cell design and construction
- Cell capping
- maintenance of leachate, gas systems etc
- Plant and equipment
- Weighbridges;
- roads
- Finance (borrowings and interest)
- Asset depreciation schedules

Understand capital costs



3. OPEX – operating costs

- Current operating costs :
 - Labour
 - Plant Operating
 - Utilities
 - Gas operation/maintenance
 - Leachate operation/maintenance
 - Environmental management
 - Lease and software costs
 - Corporate overheads.

4. Account for future liabilities

- Environmental management actions;
 - Risk
 - Rectification cost;
- Future operating costs
 - Long term monitoring and maintenance costs;
 - Future remediation costs.
- Contingencies
 - E.g. Financial Assurance.

5. Plan for additional activities and asset replacement

- If state or Councils policy requires - how will you fund additional resource recovery activities?
- When the landfill is closed how will you fund:
 - A new landfill site
 - Resource recovery
 - Transfer station
 - Landfill gas

6. So what should the gate fee be?

1. Determine the NPV of future costs and revenues and divide by the annual tonnage.
2. You are now getting close to a cost recovery the gate fee, but also:
 - Add contingencies for capital works
 - Plan for higher interest rates and CPI increases
 - Plan for increasing cost of legislative compliance
 - Allow for high and low landfill fill rate scenarios
 - Plan for differing closure dates
 - Differential gate fees for commercial and residential

Conclusions

1. Waste is like a river - it flows downhill to the cheapest price
2. Levies increase recycling – they create headroom for resource recovery
3. Most recycling is uneconomic –under pricing your landfill exacerbates this!
4. Underpriced landfills :
 - Require ratepayer subsidies
 - Allow commercial users a free ride
 - Undermine the viability of recycling
 - Put the costs unfairly on future generations

Any Questions?



thank you

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