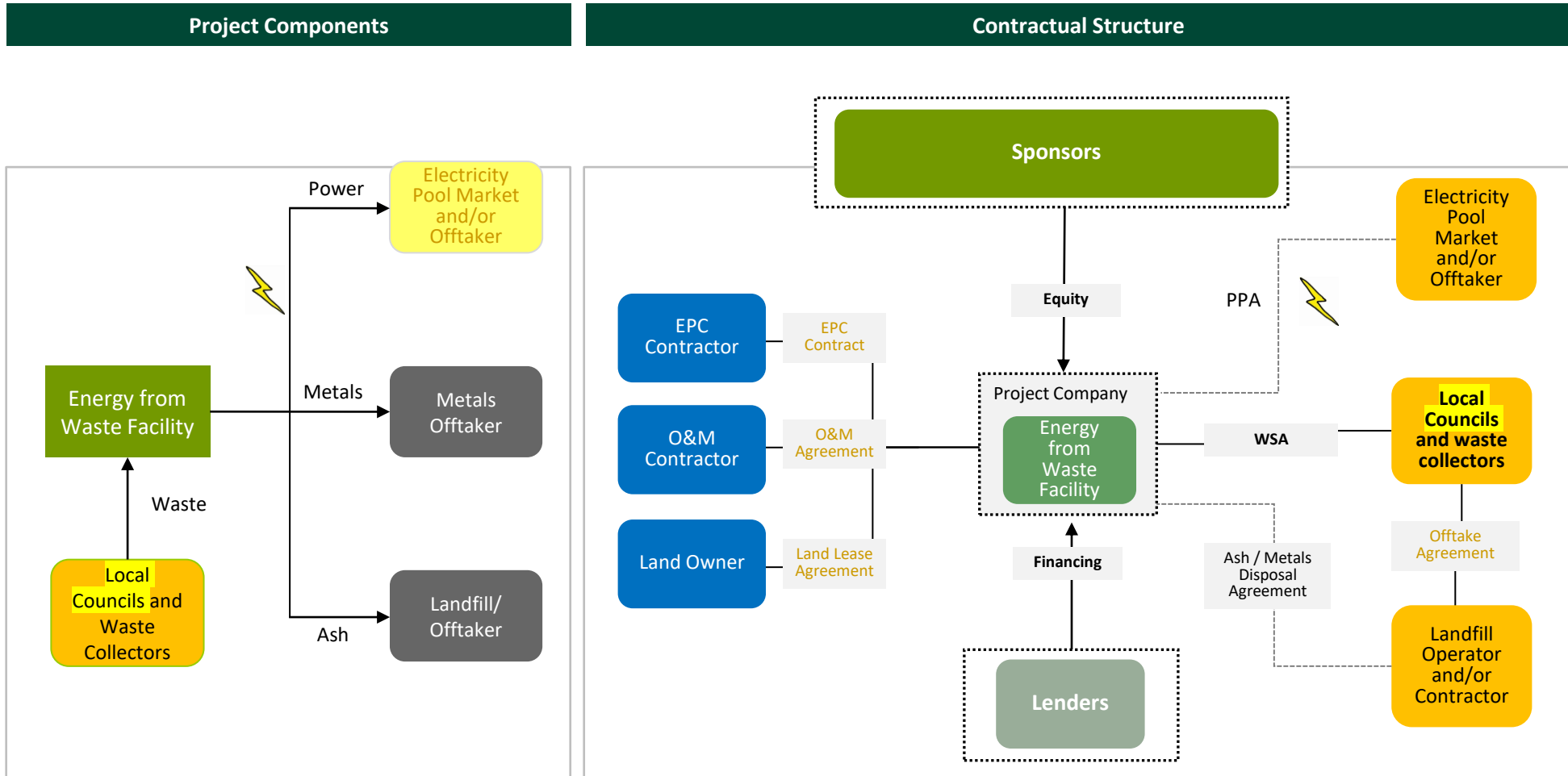


Financing Energy from Waste

April 2024

Why EfW projects and local councils have a symbiotic relationship ?

- 1) In the waste hierarchy, Energy from Waste is the first pillar of a more circular economy.
- 2) EfW will become an essential municipal service in Australia, taking the baton from landfilling and enabling purer forms of recycling down the road.
- 3) Local Councils are essential for EfW projects to exist.



Project Finance is the art of allocating risks to the counterparty best capable of handling them

The **ideal risk allocation** (for a lender), the one that will attract the cheapest cost of debt and the highest borrowing capacity is as follows:

- 1) Long Term Put or Pay Waste Supply Agreement for the full capacity,
- 2) Long Term Take or Pay Power Purchase Agreement for the full capacity,
- 3) Fixed price, Date certain, Turnkey EPC contract,
- 4) Long Term Fixed price O&M,
- 5) Revenue generating long term ash disposal agreement.

EPC Contract

- 1) Security package, LDs and bonding
- 2) EOT regime
- 3) Milestones
- 4) Equity and Debt cure rights
- 5) Counterparty risk
- 6) Subcontracting strategies

O&M Contract

- 1) Security package, abatement framework, and bonding
- 2) Lifecycle cost approach
- 3) Financier's cure rights
- 4) Counterparty risk

Waste Supply Agreement

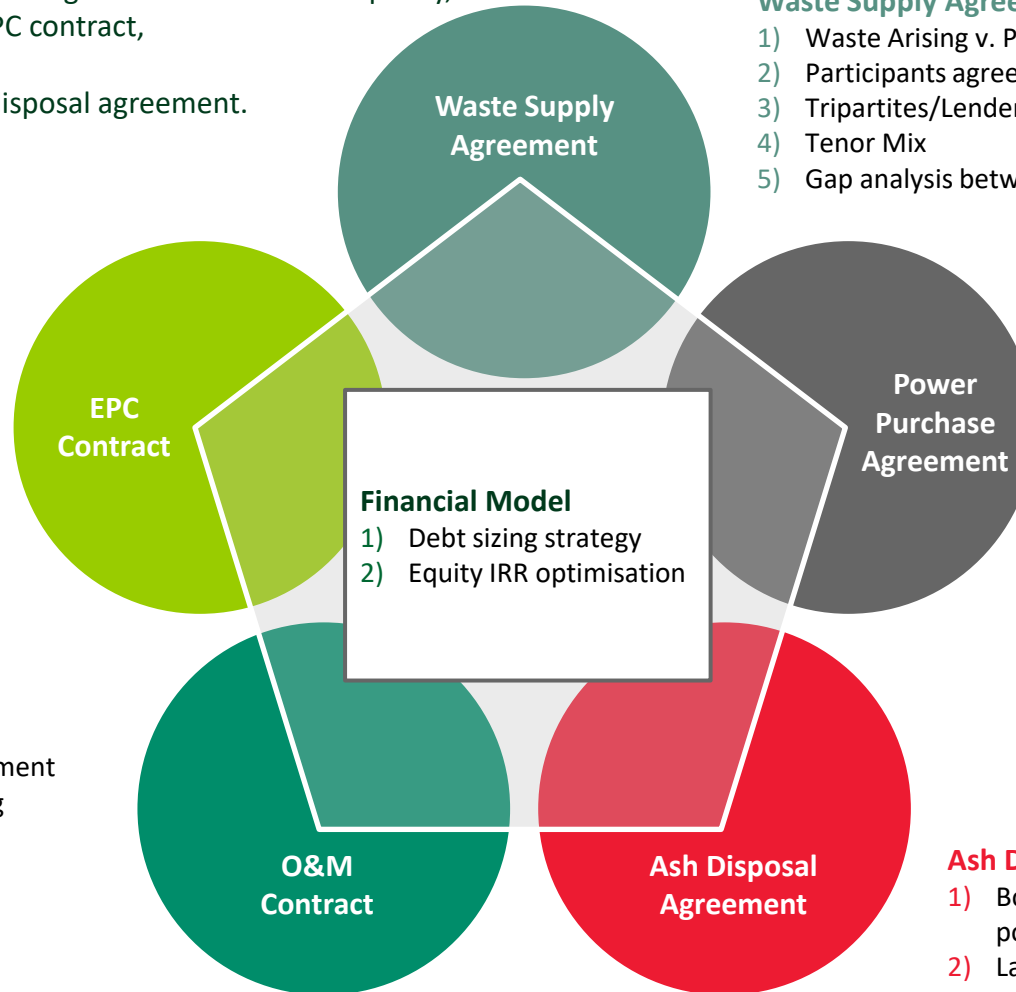
- 1) Waste Arising v. Put-or-Pay
- 2) Participants agreement
- 3) Tripartites/Lenders step in rights
- 4) Tenor Mix
- 5) Gap analysis between WSA and D&C

Power Purchase Agreement

- 1) Bundling v. Unbundling black and green products
- 2) Pass-through fuel costs
- 3) Gap analysis between PPA and D&C
- 4) Tripartites
- 5) Security, PCG and Others

Ash Disposal Agreement

- 1) Bottom ash v. boiler fly ash v. air pollution control residues
- 2) Landfill, Storage and Offtake contracts
- 3) Ash content and contaminant terms



Financial Model

- 1) Debt sizing strategy
- 2) Equity IRR optimisation

This is how Project Sponsors and their Lenders think about EfW

Issue	Description
Waste Supply Agreement	<ul style="list-style-type: none"> Waste supply agreements will need to be carefully negotiated to ensure the plant can maximise waste throughput and electricity and steam generation to achieve optimal value creation. Sponsors will work with local councils in developing the payment mechanism, termination provisions and documentation, including the terms of the WSA which are important to lenders (step in rights required by lenders to keep operating the project and keep treating local council waste, even in the unfortunate case where the equity has been written off).
Waste Revenues	<ul style="list-style-type: none"> Project Co would normally be paid a Gate Fee as a unitary charge per tonne of waste (\$/t). The important element in determining the size of the overall payment is the amount of contract waste processed, subject to a floor defining minimum waste delivered to ensure that a certain minimum level of revenue can be relied upon. This can potentially commit the waste supplier to deliver an annual minimum amount of waste or to compensate for any shortfall in revenue of the Project Co due to a delivery shortfall. Typically the payment amount is adjusted for performance and unavailability deductions.
Electricity, Steam & Green Revenues	<ul style="list-style-type: none"> The arrangements for a PPA vary for different projects. Typically, the electricity price is agreed and fixed for a certain time period under the PPA. After the expiry of this period, the Project Co is free to sell the electricity into the grid at market prices prevailing at that time. Consideration will also need to be given to how any LGCs or other green products are contracted.
Balance between Gate Fee and electricity price	<ul style="list-style-type: none"> A financeable project requires a certain amount of revenue. As a result, the higher the gate fee, the lower the electricity price can be (and vice versa). For example, if the gate fee is set too low then the electricity price required could be too high to be dispatched.
EPC & O&M Costs	<ul style="list-style-type: none"> Sponsors need to adequately manage the procurement process to ensure that the EPC and O&M arrangements are reasonable, and counterparties capable of delivering the job.
Technology	<ul style="list-style-type: none"> It is vital that the Sponsors can show prospective stakeholders that proven and reliable incineration technology is selected with the technology supplier having numerous successfully operating reference plants. Moving grate technology is the most widely used and reliable in the industry (this is NOT new technology at all). Key advantages of moving grates include being able to treat larger waste volumes, more flexibility on waste composition and the ability to operate at higher temperatures than other technologies, improving efficiency.

This is how Project Sponsors and Lenders think about EfW (continued)

Issue	Description
Combined Heat and Power	<ul style="list-style-type: none"> Incineration technology can be used to produce large amounts of heat (steam) for industrial purposes. Siting the plant near an industrial area could enable heat export to industrial offtakers.
Land availability	<ul style="list-style-type: none"> An appropriate site for the facility has to be identified and secured and the terms of the land lease agreement, including the length of the contract, needs to be fully considered. For example, it will need to be confirmed that the availability of the lease is not shorter than the concession term. The site/s need to be in reasonable proximity to: <ul style="list-style-type: none"> Connection to the Power Grid – consideration of expected transmission infrastructure including any requirements for easements and allocation of construction and cost between counterparties. Depending on cooling solution – potential proximity to sources of water or wastewater will be needed. The amount of water required by the plant per day needs to be considered.
Specialized Landfill	<ul style="list-style-type: none"> The Project Company will require an adequate long term landfill arrangement, or alternative offtake agreement (e.g. ash to an aggregate supplier) to be in place to cover disposal of unacceptable waste that cannot be processed as well as the disposal of EfW plant residues, such as bottom ash and fly ash. The Project Co would normally be subject to the landfill gate fee and any additional landfill levies payable.

Government Support: Governments provide a variety of mechanisms which help EfW projects to become financeable. These include, but are not limited to:

- Implementation of a **long-term waste management strategy** inform the market's view around policy risk.
- Established **planning pathways** allows a streamlined process for Projects to achieve necessary approvals.
- Local governments / councils may offer **waste supply agreements** which increase bankability and provide certainty over Project returns.
- Providing **economic incentives** such as landfill levies encourage investment in EfW by supporting the Gate Fee price.
- Grid connection** provides a stable revenue stream for Projects.
- Concessional finance** through funding mechanisms by MMI, CEFC & ARENA, allow Projects to achieve optimal capital structures.

Where is the value for project developers and their lenders ?

There are 3 main valuation drivers in an EfW project:

1) Getting the best value for the waste

- **Contracted Waste:** the private sector needs to evaluate all options and their pricing, ie:
 - The traditional take or pay WSA,
 - the waste arising WSA with or without a volume floor, and
 - the waste aggregator's contract model.
- **Merchant Waste:** this is waste that is not contracted at financial close but that is absolutely necessary to delivering private sector returns (in fact to operate the plant !). The more the waste is merchant, the lower the indebtedness will be (this could increase gate fees for local councils committing to EfW). The price of merchant waste is driven by public policy (starting with each State's landfill levy) as much as construction and O&M costs.

2) Getting the best value for the electricity

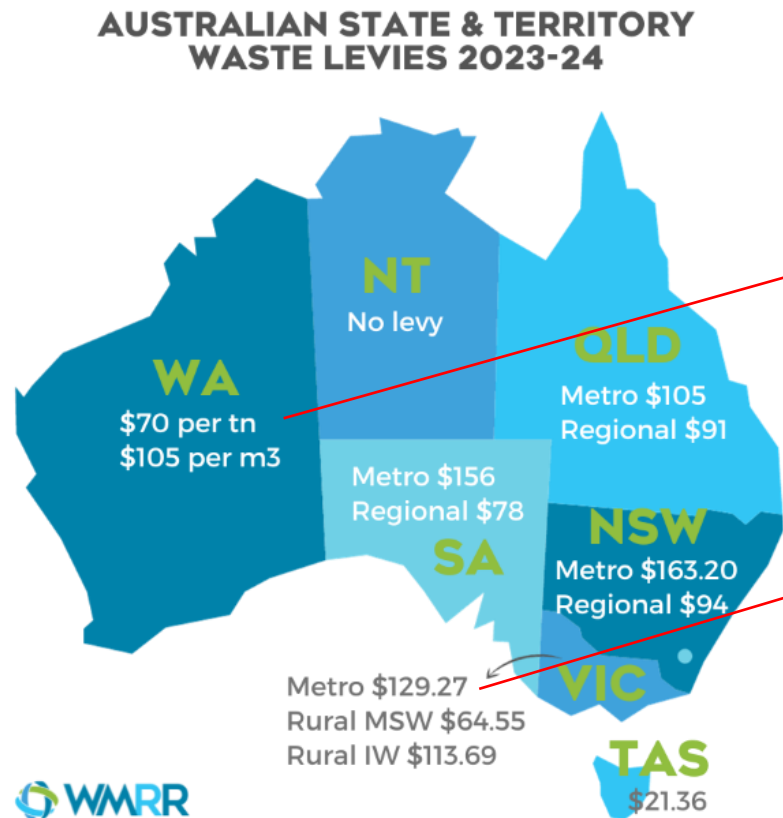
- Value can be extracted by applying various strategies, ie bundled versus unbundled products, where each part value may be optimized.
- Value can also be extracted by applying a portfolio approach to the offtake story (inside the fence offtakers, corporate offtakers, government offtakers or utility offtakers).

3) Getting the best value from EPC and O&M:

- Competitive tenders must be run to find the best possible value for money in the contracts to build and operate the EfW project.
- Price is not everything: you need the A team, with proven expertise and track record in delivering on time and within budget.

Where is the value for local councils ?

- 1) EfW provides global warming avoidance by diverting waste from landfill. There are trillions in sovereign funds, Australian superannuation funds, foreign retirement funds, infrastructure funds, and traditional banks looking for ESG opportunities, and Australia is an attractive OECD market for most of them.
- 2) Landfill sites are getting full and/or may not be permitted to extend their life at one point. Anticipation and future proofing waste treatment obligations are not bad ideas for local councils.
- 3) This is what is currently happening in Australia:



Financial Year	Levy rate to take effect	Levy rate per tonne	Levy rate per cubic metre
2023-24	1 July 2023	\$70	\$105
2024-25	1 July 2024	\$85	\$129
2025-26	1 July 2025	\$88	\$133
2026-27	1 July 2026	\$90	\$136
2027-28	1 July 2027	\$93	\$141

Landfill users

Victoria will increase its waste levy in line with New South Wales and South Australia. The state government will boost the metropolitan industrial and municipal waste levy to \$167.9 a tonne from mid-2025, up from the current \$129.27.

The levy will also be proportionally increased at rural landfills, which are lower than metropolitan areas.

The budget says the levy increases will help fund the Environment Protect Authority, Sustainability Victoria and Recycling Victoria to help disincentivise waste going to landfill. The government will also raise the fire services property levy from 1 July this year to help support the state's fire services.



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