April 2017

Energy from Waste in Australia

Delivering projects in an emerging sector

pwc

www.pwc.com.au

The Australian energy landscape is increasingly shifting towards the renewables sector. The current focus is on large scale solar and wind investment due to declining set-up costs and the potential to contribute to federal and state renewable targets.

The challenge for the Energy from Waste (Ef W) industry is how to successfully leverage this momentum.

Ef W technology has the potential to contribute to renewable energy targets, divert waste away from landfill, and reduce carbon emissions. By offering base load generation, it can also supplement solar and wind production and fulfill an important role in the energy mix.

Despite these benefits there has been a lack of deployment in Australia on a commercial scale to the extent seen in other countries – particularly in Asia and throughout Europe. Australia continues to send large quantities of waste to landfill (23 million tonnes of urban waste a year according to a recent CEFC report*) and population growth forecasts suggest increased waste generation that will further add to the waste management challenge. At a macro level the EfW sector needs to demonstrate its value within a robust waste management strategy while concurrently providing reassurance around perceived technology risk, environmental concerns, and demonstrating that EfW can exist alongside high rates of recycling and resource recovery. Other jurisdictions provide plentiful examples of how each of these can be successfully addressed.

This important step of building wider government and community support can provide the foundation for more consistent policy support (for example through landfill levies – with current variances across Australia offering inconsistent economic incentives for the sector).

It is encouraging that a number of states now have formal Energy from Waste policies and recognise energy recovery within their waste hierarchy.

As is the recent emergence of commercial scale projects – predominantly in Western Australia and New South Wales. The appetite from the market is evident, but these projects also suggest a willingness within the public sector to use pathfinder projects to help move the industry forward.

However, bringing projects to market is only the first hurdle. Procuring authorities subsequently need to deliver projects that achieve objectives, meet budget, and reach contract close in a timely manner while at the same time driving market confidence. A solid foundation of early projects combined with the potential for a pipeline will encourage waste operators and technology providers to invest in Australia and financiers to dedicate resources to the sector. This in turn generates competition, enhances bid quality and reduces pricing – further underlining the importance of successful structuring of early projects.

*Energy from waste in Australia: a state-by-state update, CEFC (November 2016)

Structuring principles to help drive a successful project

Be transparent with the market

The project vision should be conveyed to bidders in the business case or through the project brief. Does the authority have a predisposal to a given technology? Is the objective lowest cost, environmental considerations or local content requirements? Delivering direct (rather than implied) guidance facilitates more focused bid submissions. Conversely, a lack of clarity acts as a disincentive for bidders to expose themselves to the sector's bid costs.

Keep project scope focused and financially sustainable

Over-complicating – for example by integrating waste collection, addressing legacy landfill sites, or decommissioning obsolete assets – will limit the number of bidders able to deliver the project and thereby reduce competition. From an authority perspective, financial circumstances and priorities can change over the period of a long term contract. Payment arrangements should be unambiguous and incorporated into budget forecasts.

Use appropriate risk sharing based on sector precedent

Authorities should identify project risks before commencing procurement. EfW projects are complex with technical, market and regulatory risks not present in other sectors. Authorities should not react by seeking to transfer all risk to the private sector. Instead, risks should sit with the party best able to manage them as this will maximize market interest and reduce procurement delays.

Secure adequate feedstock to make the project viable

Offering a guaranteed minimum tonnage can help drive a project's economics. To manage the authority's risk, such guarantees need to be backed by a sufficient understanding of waste volumes and composition. It may also require joint cooperation between multiple authorities to supply adequate feedstock (with recent Australian examples including Phoenix Energy and the EMRC's planned facilities in Western Australia).

Structuring principles to help drive a successful project (cont')

Encourage the market to source additional feedstock

Designing a procurement that incentivizes bidders to secure third party waste helps drive value for the authority. While third party waste contracts are typically short term, there is strong precedent for operators and equity providers to share feedstock risk – particularly in a mature infrastructure market and if the ability to repay debt has been secured through a minimum tonnage guarantee.

Address planning and site risk early

EfW projects benefit from a clear regulatory/environmental framework. While this framework may be outside of the control of the procuring authority it should be conscious that planning risk is one of the primary reasons for projects failing in the sector. Good practice includes considering planning timeframes and risk allocation against the existing framework (ideally allowing for approvals prior to contract signature) alongside offering a viable site option (at the discretion of bidders) to prevent site selection becoming a central driver of the competition.

Secure a credit-worthy offtaker

The Australian energy market is characterized by excess generation supply and high competition for securing PPAs with energy retailers. Within Australia, it has been the traditional retailers that have purchased generation, but overseas precedent suggests a range of potential alternative offtake options including: supplying power and heat directly to industrial users (Runcorn and Kemsley facilities, UK), corporate PPAs (with the concept gaining increasing interest in Australia), supplying heat to district heating networks (Nottingham and Sheffield facilities, UK), and internal usage models (with the City of Surrey, Canada, set to deliver a closed loop organics facility that generates gas to fuel the City's collection trucks). There are also indications that certain local councils are now seeking to purchase renewable generation directly rather than via utilities companies. The approach to offtake should be considered alongside risk allocation decisions on energy volume and price risk with a robust power strategy able to help drive affordability.

Attracting private finance

While sector nuances mean that EfW lenders are a sub-set of the wider project finance debt market, the due diligence requirements of these lenders is well understood. The amount of debt that can be raised will depend not only on the extent of feedstock and power risk, but also on appropriate sub-contract and security arrangements. Bidders should also be cognizant that technology selection is central to the ability to raise finance. Initial projects coming to market have seen strong interest from commercial lenders and Australian banks have lent to the sector in other jurisdictions. Robust structuring will drive the bankability of a project and maximize market participation.

This is similarly true for the equity market with appropriately structured deals a pre-requisite for investment. Furthermore, with developed infrastructure markets such as Australia, the UK and Canada all seeing competition depress equity returns for lower risk sectors, Ef W deals have the potential for strong participation from the equity market.

Corporate financing is also common in the sector with large waste operators often prepared to leverage their balance sheets. This provides another potential source of financing provided authorities prepare tender processes and evaluation principles that are equally open to corporate and project finance bids.

Government backed funding is likely to support early deals in the sector. The Clean Energy Finance Corporation (CEFC) – which invests in clean energy that facilitates emissions reduction – is able to provide both debt and equity. CEFC's activity in the sector has included an initial investment in the Australian Bioenergy Fund.
The Australian Renewable Energy Agency (ARENA) – with a mandate on investing in R&D through to near commercial projects – may offer another source of funding provided projects have the potential to become commercial and investments offer value to taxpayers.

While EfW projects may be able to secure additional revenue through the sale of large scale generation certificates (LGCs) the price uncertainty of LGCs over the long term is likely to be heavily discounted by lenders. Absent any changes to the Renewable Energy Target (RET), the current LGC market price of c.$85 is expected to be maintained in the short term until new renewable generation is built, and then gradually fall from around 2020 onwards to nil when the target ends in 2030.

At a state level, the introduction of Contracts for Difference to support renewable generation projects – strongly suggested by New South Wales and Victorian governments – would help drive bankability through addressing energy price uncertainty. The watching point is whether such schemes will be structured to facilitate investment in EfW and how such schemes would interact with the aforementioned RET. To date, government support for renewable energy has often been issued on the basis of lowest cost to government which will require EfW projects competing with increasingly cost competitive solar and wind projects.

Our track record

PwC has advised clients in Australia and internationally on greenfield, brownfield, M&A and distressed Energy from Waste projects. As a global advisor we have helped our clients on many 'first of a kind' projects in the sector including in Europe, North America, and the Middle East. Having worked alongside both procuring authorities and bidders PwC is able to offer unique insights into successfully delivering projects.

Continue the conversation

Mario D'Elia
Lead Partner – Infrastructure
Financial Advisory
Direct: +61 3 8603 6799
Mobile: +61 407 946 648
Email: mario.delia@pwc.com

Matthew Denmark
Energy from Waste
Global
Direct: +44 (0) 207 2133885
Mobile: +44 (0) 7712 836285
Email: matthew.r.denmark@pwc.com

John Haggett
Energy from Waste
Australia
Direct: +61 3 8603 0476
Mobile: +61 437 483 021
Email: john.a.haggett@pwc.com

127047422