

How to pump \$2.6 billion into waste

By Paul Howlett

THE DEMAND for capital investment in solid waste management and resource recovery infrastructure during the next eight years is estimated to exceed \$2.6 billion dollars by Wright Corporate Strategy (WCS) Market Intelligence.

In the soon to be released 2007 edition of *The Industry & Market Report – Australian Waste Industry – November 2007*, better known as the Blue Book, WCS has, in collaboration with WME Media, developed forward estimates on the demands that will be placed on the waste management industry if the jurisdictions are to deliver on their various targets for resource recovery from solid wastes (see Table 1).

But what has to happen to see this capital invested and the new facilities operational well before 2014-15? The new Blue Book sets out four key areas that need addressing if the industry is to be positioned appropriately to support the states and territories in their thrust for resource recovery:

1. Pricing signals must be bold.
2. Approval systems must be orchestrated.
3. Waste presentation options must be flexible.
4. An up-skilled workforce must be secured.

Pricing signals

Market pricing signals are essential to change the behaviour of waste generators and to encourage infrastructure investment from the waste management sector. With higher prices, waste generators become convinced that it costs less to source separate waste streams and have these beneficially processed in lieu of disposal to expensive landfill; and waste process operators can establish facilities and stand in the markets on a more level gate-price footing with landfill disposal.

In achieving appropriate levels of market pricing to deliver the desired shifts in behaviour, government intervention is essential. Natural market forces in the waste management industry rarely follow traditional arguments of supply and demand.

In this regard, landfill disposal is a good example. The traditional economic theory relating to supply and demand would lead one to assume that as landfill space becomes limited, so the price of landfill will increase. This is not evident in the waste markets,

which are regularly seen to act in ways traditional economists would consider to be 'non-rational'.

One argument for this might be competition in markets to secure waste. This is evident in the Sydney metropolitan market where the underlying landfill price (ie. excluding waste levies) has been relatively flat for a number of years, despite the

Table 2: Capital investment required from 2008 to 2015 (\$million)

	NSW	VIC	QLD	SA	WA	TAS	ACT	NT	AUST
Collection & Transport:									
- Municipal	32	12	30	3	11	0	3	1	91
- C&I	96	32	25	15	38	0	4	1	212
- C&D	6	3	3	2	3	0	0	0	17
Total Transport	134	47	58	20	52	0	8	1	321
Processing & Resource Recovery:									
- Mixed Waste	269	88	143	17	115	0	35	0	666
- Composting	385	274	273	40	109	27	7	7	1,123
- Shred & Mulch Organics	1	0	0	3	6	1	1	0	12
- C&D Sorting	41	58	26	21	0	3	5	1	156
- MRF Recyclables Sorting	115	44	60	22	38	8	8	1	296
Total Processing	811	464	502	103	268	39	57	10	2,253
Total Value	945	511	560	123	319	39	64	11	2,574

well-publicised imminent shortage of metropolitan landfill space. The other is the financial incentive to a private sector landfill owner to have the landfill filled and closed in the shortest time possible to maximise the site's net present value. This short-term incentive is very strong and rarely moderated by the prospect of future increases in landfill price.

Approval systems

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“ The infrastructure spend facing the industry during the next eight years is seriously behind time if the states and territories are to meet their resource recovery targets.

recovery targets. Policy, regulatory and approval systems have been holding the industry back. The 2007 Blue Book forecasts the need for significant infrastructure investment as shown in Table 2.

However, delays in getting the settings right means essential infrastructure for waste processing will be further delayed and significant spending will be required within three

Table 1: Summary of findings from the 2007 Blue Book

	2007-08	2014-15
Solid waste generated will increase	38.4 mtpa	48.9 mtpa
Waste processing will increase	17.6 mtpa	34.1 mtpa
People employed will increase	20,000	26,700
Value of industry services will increase	\$5.1 billion	\$6.3 billion
Infrastructure to be built will increase	129 new facilities	
Infrastructure & plant investment will increase	\$2.6 billion in new capital	

to six years as shown in Table 3.

From a planning and land availability perspective, the likely demand for sites for waste processing facilities over the next eight years is going to be highly significant and very politically contentious. Indicative of the challenge facing both the industry and planning agencies in the jurisdictions, the implications for land space demand for waste processing facilities in metropolitan Sydney are shown in Table 4.

This demand for sites and space cannot be met entirely through the construction of facilities on the

operations to approvals and support for the use and distribution of products from waste processing facilities, must be streamlined and harmonised.

Each of these areas of approval and support involve government involvement, and unless that is orchestrated and coherent, the incentive for infrastructure investment will wane rapidly.

Waste presentation

In the municipal waste sector, getting the settings right is perhaps more problematic than might be the case for the C&I and C&D sectors. While this may appear counter intuitive, and certainly counter to experience thus far of the jurisdictions introducing reforms, the following factors relating to collection arrangements need to be considered if future, further changes to resource recovery are to be implemented in time to meet targets:

- Collection contracts for municipal waste are generally set for 7-10 year terms with optional extensions;
- The collection contracts effectively lock in the configuration of waste presentation and collection for the term of the collection contract (not the disposal contract);
- This makes changes to configurations for different levels of

Table 3: Annualised capital investment from 2008 to 2015 (\$million)

FY	2008	2009	2010	2011	2012	2013	2014	2015	Total
New South Wales	33	51	91	155	232	213	133	38	945
Victoria	12	25	43	86	122	133	74	17	511
Queensland	13	28	46	89	135	149	81	18	560
South Australia	5	10	19	29	28	19	10	3	123
Western Australia	14	20	38	65	67	62	43	11	319
Tasmania	0	1	4	4	7	12	9	1	39
Australian Capital Territory	1	3	6	10	10	16	15	3	64
Northern Territory	0	0	1	2	1	3	3	1	11
Total	79	139	248	438	602	606	369	92	2,573

Table 5: Australian employment growth distributions from 2004 to 2015

	NSW	VIC	QLD	SA	WA	TAS	ACT	NT	AUST
Total Transport	650	186	154	42	245	17	29	2	1,325
Total Processing	2,099	1,138	844	360	1,195	138	108	29	5,910
Landfill Disposal	-130	-117	-19	-29	-74	-15	-7	-3	-394
Total Employment	2,618	1,207	979	372	1,366	140	131	28	6,842

source separation of municipal waste extremely difficult and potentially very costly if considered mid-term;

- Limiting the term of disposal contracts will not be effective if there is no flexibility in the associated collection contracts;

- Business waste generators, on the other hand, have contract terms measured in months, so can rapidly change the set-out format of their waste, once convinced of the

financial benefits of that change.

Up-skilled workforce

The 2007 Blue Book's forecast in employment demand clearly highlights the impending need for skilled process plant operators over the next 10 years if the jurisdictions do deliver on their targets – equal to approximately one-third of the 2004-05 total employment in the sector. This cannot be met by organic growth in employment

and the industry must embark on a serious training initiative to meet this demand.

WCS MarketIntelligence published the first edition of the Blue Book in 2001, the first comprehensive compilation of the substantive issues that shape the Australian waste management sector.

The updated 2007 compilation not only brings the reader forward some six years in industry development since the original Blue Book, but also

Table 4: Estimated land space demand for new waste processing facilities in Sydney by 2015.

Possible number of processing plant sites required in Sydney **25**

Approximate total area of land for covered buildings **50 hectares**

Approximate area of land for open stockpiles **150 hectares**

presents some new data and analysis on the industry that has not been released before.

Estimates on waste generation and resource recovery are presented for 17 regions across the country, covering all capital cities, major regional centres in the larger states and rural and regional areas in all other states.

Any company planning new business activity anywhere in Australia in the solid waste sector must secure a copy of the 2007 Blue Book to comprehend the breadth of the market and the trends in near-term resource recovery that will shape future business.

Order forms for the 2007 Blue Book can be downloaded from www.insidewaste.com.au

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