

# Results of community research on Resource Recovery technologies



In May—July 2009, the EMRC undertook market research to understand community sentiment about the sites and technology options under consideration for an alternative waste treatment facility in Perth's Eastern Region.

## What we wanted to know—our objective

The overall objective of the market research was to **take a snapshot of community sentiment about the sites and technology options being considered for a Resource Recovery Facility in Perth's Eastern Region.** The information is then to be provided to Council to help make appropriate planning decisions.

The research involved telephone surveys and focus groups in May to July 2009, with the participants randomly drawn from across EMRC's six member Council areas.

Primarily, the research explored two main questions:

1. What do people think about the five technology options under consideration (anaerobic digestion, gasification, pyrolysis, combustion and plasma)?
2. What do people think about a facility utilising each technology being located at either of EMRC's sites at Red Hill or Hazelmere?

The research also aimed to follow up on previous community surveys conducted by EMRC in 2005 and 2006, which sought views on a broad range of issues to do with waste management. Issues, such as, people's willingness to pay for better environmental outcomes, and the importance of reducing greenhouse gas emissions.

## What we found—the research results

***'People are prepared to pay for better environmental outcomes'***

In comparison to the previous survey conducted in 2006, there has been an increase in the proportion of respondents that are prepared to pay something extra to reduce the environmental impact of the landfill.

In 2006, 77% were prepared to pay something, and in the current survey, this increased to 86%.

In the current survey 50% of people were prepared to pay at least an extra \$50 a year to reduce the environmental impacts of waste disposal.

***'There is low awareness about waste processing as a means to reduce the environmental impact of waste disposal'***

The research showed that when respondents were asked about what they believe Council should consider to reduce the environmental impact of waste landfill sites, the focus was almost exclusively on improvements in recycling and education of households, about waste minimisation and recycling.

This shows that, in order to secure community support for an alternative waste treatment technology, EMRC will need to undertake community education; to increase the awareness that waste processing and resource recovery, as well as waste reduction; are means by which the environmental impact of waste can be minimised.

## Acceptability of the preferred technologies

One of the main questions the research explored was: *What do people think about the five technology options under consideration (anaerobic digestion, gasification, pyrolysis, combustion, plasma)?*

The data gathered in the surveys shows a clear preference for anaerobic digestion as the preferred technology by which the EMRC should manage the household waste stream. It also showed that combustion technology had significantly lower levels of support compared to the other technologies.

In general, with the exception of combustion technology, the sentiment expressed is that, provided the costs were reasonable and the effectiveness of the technology was proven, there would not be significant resistance to any of the other four technologies.

The level of support for the five technologies is shown in the table below:

Technology	Level of support
Anaerobic Digestion	64%
Gasification	59%
Pyrolysis	55%
Plasma	48%
Combustion	35%

### **'Reduction in greenhouse gas emissions is a significant motivator'**

It is noted that during the focus groups, the participants were provided with additional information on each of the technology's impact on reducing greenhouse gas emissions.

This information changed the relative levels of support in strong favour of anaerobic digestion as this technology can reduce greenhouse gases by \*97% compared to landfill; while gasification, pyrolysis, combustion and plasma can reduce greenhouse gases by approximately \*38% compared to landfill.

*\*Figures supplied by Cardno (WA) Pty Ltd June 2009. These figures have since been revised, see Resource Recovery Update—Sept/Oct 2009.*

### **'Safety for the community is critical'**

Feedback from the focus groups indicates that the most important factors in justifying a particular technology are:

- safety for the community
- minimisation of greenhouse gas emissions
- construction and ongoing operation at minimal cost to ratepayers
- effectiveness in reducing volumes going to landfill
- examples of successful applications elsewhere in the world

### **Acceptability of the technologies at the different sites**

The second question the research aimed to explore was: *What do people think about a facility utilising each technology being located at either of EMRC's sites at Red Hill or Hazelmere?*

The community research showed that Red Hill is the preferred site, regardless of the technology involved.

The table below indicates the acceptability of the five technologies at the Red Hill and Hazelmere sites:

<b>Technology</b>	<b>Acceptability at Red Hill</b>	<b>Acceptability at Hazelmere</b>
Anaerobic Digestion	84%	37%
Gasification	79%	36%
Pyrolysis	78%	31%
Combustion	77%	27%
Plasma	76%	33%

Note: Results may total over 100% as respondents were able to answer 'either location OK' and this score was added to both acceptability scores.

### **Importance of ongoing communication and engagement**

The research highlighted that there is low community awareness about the Resource Recovery Project and the process EMRC is following, which emphasises the need for ongoing communication and engagement with the community on the project. Simple, clear communication about the process EMRC is following will be an absolutely vital aspect of the project.

### **Research Process**

- A recruitment survey encompassed 849 telephone interviews across the six member Councils, providing a theoretical sample error of  $\pm 3.5\%$  at the 95% confidence level;
- A follow-up survey of 450 respondents to gather views after reading an information pack on the five technologies and two locations under consideration, providing a theoretical sample error of  $\pm 4.6\%$  at the 95% confidence level;
- Three focus groups consisting of residents from suburbs nearby the potential Hazelmere and Red Hill sites and a third group drawn from residents across the region; and
- A meeting with members of the Red Hill Community Liaison Group to capture their views and concerns.

### **How the research results will be used**

The results will be considered by EMRC Council as it moves towards finalising the preferred technology and site in March 2010.

### **Thank you**

Thank you to everyone who participated in the recent community research.

Your efforts will provide valuable information towards EMRC's work on developing a Resource Recovery Facility for Perth's Eastern Region, to reduce the environmental and economic impact of household waste going to landfill.

### **For more information**

A summary and powerpoint presentation of the survey results are available for download on our website at [www.rgang.org.au](http://www.rgang.org.au).

If you have any questions or would like further information please call us on (08) 9424 2222.

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