

RESOURCE RECOVERY UPDATE

December 2008



In partnership with its six member Councils the Eastern Metropolitan Regional Council has been working for the past eight years to develop a suitable resource recovery solution that will serve Perth's Eastern Region. This is known as the Resource Recovery project.

About the Resource Recovery Project

In partnership with its six member Councils, the EMRC has been working for the past eight years to develop a suitable resource recovery solution for Perth's Eastern Region that will introduce a more sustainable and environmentally friendly way in which waste will be managed.

The Resource Recovery Project's key objective is to have a fully operational resource recovery solution in place by 2013 or sooner, which would involve a resource recovery facility and/or resource recovery park.



It is anticipated that the EMRC will be advertising for Expressions of Interest (EOI) on technology options for the Resource Recovery Project in early 2009. Following that process, the current EMRC Council will decide on the preferred site and technology option and call for tenders.

Given the project's magnitude it is imperative that the EMRC Council is fully informed and prepared to make the decision in the EOI and tender phases. These will be the biggest financial decisions that the EMRC will have made since its creation 20 years ago.

To assist the EMRC in the decision making process, Council determined earlier this year that a working party would go to the *Second International Symposium on Energy from Biomass and Waste* in Venice, Italy in November 2008. More importantly, the trip incorporated technical visits to operating facilities in Italy, Germany and Manchester.

Key Points from the Delegation's Preliminary Report

Delegation's Objective

To gain improved knowledge relating to the key planning decisions for the EMRC Resource Recovery Project.

In particular:

- The understanding of and selection of acceptable waste treatment technologies
- The type of waste treatable by the technologies
- Project capital and operating costs and gate fees charged
- Project delivery model

Second International Symposium on Energy from Biomass and Waste

- The Symposium was attended by 510 delegates from 60 countries, over 170 papers were presented.
- Some of the sessions of interest to the EMRC delegation were:
 - Carbon cycle in waste management systems
 - Potential of biological waste treatment technologies in energy recovery
 - The Development of Sustainability Frameworks for Assessing Waste Utilisation
 - State of the art and public acceptance of thermal waste to energy technologies
 - Treatment of gaseous emissions
 - Ultrafine and nanoparticle emissions from stationary combustion sources
 - Combustion generated particulate and health
- Round table on health related issues and public acceptance of thermal treatment



Symposium Technical Tours

ASM incinerator plant at Brescia in north-west Italy.

Additional technical tour organised for the EMRC to two anaerobic digestion plants – one at Camposampiero, Padova (wet process) the other in Rosa near Bassano Del Grappa (dry process)

Additional Technical Tours

Passau, Germany

- Visited the Mayor of Passau for a discussion about waste management and the municipality's involvement.
- Visited SiUS operated Kompogas anaerobic digestion facility and recycling centre at Hellersberg.
- Visited the ZAW Donau-Wald landfill site at Ausserzell.
- Met with senior consultant from Fichtner GmbH (worldwide engineering and consultancy group in the areas of energy, environment, water and infrastructure including waste) and presentation on Waste to Energy technologies.

Refgas, Flintshire, UK

- Visited the Refgas pilot gasification plant for a presentation on the technology from the Chairman and to see the plant in operation.

Liverpool, UK

- Visited the Merseyside Waste Disposal Authority to meet Director, Carl Beer and to discuss how they manage waste and procure services/contracts.

Manchester, UK

- Visited Energos Ltd for a presentation on their gasification technology and discussion.

Key Learnings and Outcomes

- International conferences and facility visits provide perspective on how different countries are dealing with the same problem of managing municipal solid waste.
- In the Australian context, drivers for alternative waste treatment are different, we don't have a national or State landfill directive, only a soft policy target.
- No one technology is seen as the solution, waste to energy is seen as part of a sustainable strategy in Europe.
- The use of separate collection of household organics for conversion to compost and/or biogas. Also separate collection for recyclables
- Composting of green waste is important.
- Treat residual waste by incineration or convert to fuel.
- Need to examine the issue of carbon reduction and energy generation in the procurement of a solution for the Eastern Region.
- Need to consider power and heat for a waste to energy solution.
- Even if the technology is good, you need a good operator.

Delegation Summary

The Symposium and technical tours enabled the working party to learn about the latest international developments in energy from waste technologies, including biological and thermal technologies, areas of concern relating to operational and environmental impact, and optimising the performance of these technologies.

A large number of useful contacts were established.

All of the information gained and contacts made will be extremely valuable for the EMRC in finalising its strategic direction and developing and evaluating its EO documents.

More information

To learn more about the Resource Recovery project, visit www.emrc.org.au or call 9424 2222.

Eastern Metropolitan Regional Council

226 Great Eastern Highway, Belmont WA 6104 • PO Box 234, Belmont WA 6984 • Tel: 08 9424 2222 • Fax: 08 9277 7598 • Email mail@emrc.org.au

