

## RESOURCE RECOVERY COMMITTEE

### MINUTES

8 March 2012

(REF: COMMITTEES-13461)

A meeting of the Resource Recovery Committee was held at the EMRC Administration Office, 1<sup>st</sup> Floor, 226 Great Eastern Highway, BELMONT WA 6104 on **Thursday, 8 March 2012**. The meeting commenced at **5.00pm**.

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## 1 DECLARATION OF OPENING AND ANNOUNCEMENT OF VISITORS

The Chairman opened the meeting at 5.00pm.

## 2 ATTENDANCE, APOLOGIES AND LEAVE OF ABSENCE PREVIOUSLY APPROVED

### Committee Members

Cr Tony Cuccaro ( <b>Chairman</b> )	EMRC Member	Shire of Mundaring
Cr Jennie Carter	EMRC Member	Town of Bassendean
Cr Alan Radford ( <b>Deputy Chairman</b> )	EMRC Member	City of Bayswater
Cr Glenys Godfrey	EMRC Member	City of Belmont
Cr David Färdig	EMRC Member	City of Swan
Mr Simon Stewert-Dawkins	Director Operational Services	Town of Bassendean
Mr Doug Pearson	Director Technical Services	City of Bayswater
Mr Ric Lutey	Director Technical Services	City of Belmont
Mr Shane Purdy	Director Infrastructure Services	Shire of Mundaring
Mr Jim Coten	Executive Manager Operations	City of Swan
Mr Peter Schneider	Chief Executive Officer	EMRC

### Deputy Committee Members - Observers

Cr Gerry Pule	EMRC Member	Town of Bassendean
Cr Alan Pilgrim	EMRC Member	Shire of Mundaring

### EMRC Officers

Mr Stephen Fitzpatrick	Manager Project Development
Mr Brian Jones	Director Waste Services
Mr Hua Jer Liew	Director Corporate Services
Ms Mary-Ann Winnett	Personal Assistant to Director Corporate Services (Minutes)

## 3 DISCLOSURE OF INTERESTS

Nil

## 4 ANNOUNCEMENT BY THE CHAIRMAN OR PERSON PRESIDING WITHOUT DISCUSSION

Nil

## 5 CONFIRMATION OF MINUTES OF PREVIOUS MEETINGS

### 5.1 MINUTES OF THE RESOURCE RECOVERY COMMITTEE MEETING HELD ON 17 NOVEMBER 2011

That the Minutes of the Resource Recovery Committee meeting held on 17 November 2011, which have been distributed, be confirmed.

### RRC RESOLUTION(S)

MOVED CR GODFREY                      SECONDED CR FÄRDIG

THAT THE MINUTES OF THE RESOURCE RECOVERY COMMITTEE MEETING HELD ON 17 NOVEMBER 2011, WHICH HAVE BEEN DISTRIBUTED, BE CONFIRMED.

**CARRIED UNANIMOUSLY**



**6 PRESENTATIONS**

**6.1 INVESTIGATION INTO THE FEASIBILITY OF CONVERTING WOODWASTE AND OTHER RESIDUALS AT HAZELMERE INTO RENEWABLE POWER**

The Manager Project Development gave a presentation on the progress on the Feasibility Study into the pyrolysis of woodwaste at Hazelmere.

The Chairman thanked the Manager Project Development for his presentation.

**7 ANNOUNCEMENT OF CONFIDENTIAL MATTERS FOR WHICH THE MEETING MAY BE CLOSED TO THE PUBLIC**

**8 BUSINESS NOT DEALT WITH FROM A PREVIOUS MEETING**

Nil



## **9 REPORTS OF OFFICERS**

### **9.1 RESOURCE RECOVERY PROJECT UPDATE**

**REFERENCE: COMMITTEES-13575**

#### **PURPOSE OF REPORT**

To update Council on the progress of the Resource Recovery Facility (RRF) project.

#### **KEY ISSUES AND RECOMMENDATION(S)**

- The draft Public Environmental Review (PER) was submitted to the Office of the Environmental Protection Authority (OEPA) on 19 December 2011.
- Feedback on the draft PER was received from the OEPA on 3 February 2012 incorporating comments from various branches of the Department of Environment and Conservation, OEPA staff and the Department of Health.
- The project team and the three sub-consultants are in the process of finalising responses to the issues raised in the OEPA feedback following which final changes to the PER will be made and the report submitted to the OEPA for approval to commence the public comment period.
- The release of the PER for public comment is not expected until late March/early April 2012.
- Preparations for communicating the availability of the PER for the public review period are almost complete.

#### **Recommendation(s)**

That the report be received.

#### **SOURCE OF REPORT**

Manager Project Development

#### **BACKGROUND**

On 30 April 2009, Council resolved to proceed with the Expression of Interest process.  
(Ref: Committees-9127)

At the 27 August 2009 meeting of Council it was resolved that (Ref: Committees-9571):

- "1. *THE FOLLOWING RESPONDENTS TO THE EXPRESSION OF INTEREST ARE LISTED AS ACCEPTABLE TENDERERS:*
- A. *ENERGOS AS;*
  - B. *EVERGREEN ENERGY CORPORATION PTY LTD;*
  - C. *GRD MINPROC LIMITED;*
  - D. *MOLTONI ENERGY PTY LTD;*
  - E. *SITA ENVIRONMENTAL SOLUTIONS;*
  - F. *TRANSPACIFIC CLEANAWAY LIMITED; AND*
  - G. *WSN ENVIRONMENTAL SOLUTIONS.*



*Item 9.1 continued*

2. *THE FOLLOWING RESPONDENTS TO THE EXPRESSION OF INTEREST ARE NOT LISTED AS ACCEPTABLE TENDERERS:*
  - A. *ANAECO LIMITED; AND*
  - B. *THIESS SERVICES PTY LTD.*
3. *THE RESPONDENTS TO EXPRESSION OF INTEREST 2009-10 BE ADVISED OF THE OUTCOME OF THE ASSESSMENT.*
4. *THE ATTACHMENT REMAINS CONFIDENTIAL AND BE CERTIFIED BY THE ACTING CHIEF EXECUTIVE OFFICER AND THE EMRC CHAIRMAN.*
5. *THE TENDER EVALUATION COMMITTEE BE ACKNOWLEDGED FOR THE SIGNIFICANT EFFORT PUT INTO EVALUATING THE EOI SUBMISSIONS."*

On 24 September 2009, Council resolved that (Ref: Committees-9922):

- "1. *THE FOLLOWING PRELIMINARY RECOMMENDATIONS OF THE RESOURCE RECOVERY COMMITTEE FORM THE BASIS OF CONSULTATION BETWEEN THE EMRC AND THE MEMBER COUNCILS AND THE COMMUNITY WITH THE INTENTION OF REPORTING BACK TO COUNCIL IN APPROXIMATELY MARCH 2010 WITH A FINAL RECOMMENDATION;*
  - A) *RED HILL WASTE MANAGEMENT FACILITY IS THE PREFERRED SITE FOR THE RRF BASED ON ENVIRONMENTAL, ECONOMIC AND PLANNING CONSIDERATIONS, COMMUNITY RESEARCH AND THE POTENTIAL VALUE OF THE EMRC HAZELMERE SITE AS A RESOURCE RECOVERY PARK.*
  - B) *THE DESIGN & CONSTRUCT CONTRACT OWNERSHIP MODEL IS PREFERRED TO A BUILD OWN OPERATE CONTRACT MODEL.*
  - C) *THE RRF TECHNOLOGY OPTIONS INCLUDING ANAEROBIC DIGESTION, GASIFICATION AND PYROLYSIS ARE RANKED HIGHER THAN COMBUSTION AND PLASMA AT THIS STAGE BUT MORE INFORMATION IS REQUIRED BEFORE A FINAL PREFERENCE CAN BE DETERMINED.*
  - D) *A THIRD BIN FOR HOUSEHOLD ORGANIC WASTE COLLECTION IS CONSIDERED IN CONJUNCTION WITH ANAEROBIC DIGESTION TECHNOLOGY."*

Further, on 3 December 2009, Council resolved that (Ref: Committees-10346):

- "1. *COUNCIL APPROVE A VISIT TO EASTERN STATES AND OVERSEAS RESOURCE RECOVERY REFERENCE FACILITIES TO BE UNDERTAKEN BY THE CHAIRMAN, RESOURCE RECOVERY COMMITTEE, MR JOHN KING, PROJECT DIRECTOR FOR CARDNO LIMITED AND THE MANAGER PROJECT DEVELOPMENT.*
2. *INFORMATION GAINED FROM THE VISIT BE REPORTED TO THE RRC AND COUNCIL IN EARLY 2010 AS PART OF THE FINAL RECOMMENDATION ON THE PREFERRED RESOURCE RECOVERY FACILITY OPTIONS."*

On 22 April 2010, Council resolved in relation to the reference facility visits that (Ref: Committees-10780):

- "1. *THE REPORT BE RECEIVED.*
2. *INFORMATION GAINED FROM THE RESOURCE RECOVERY FACILITY VISITS BE APPLIED TO THE ANALYSIS OF THE PROJECT OPTIONS ON TECHNOLOGY, CONTRACT MODEL AND BIN COLLECTION SYSTEM.*
3. *THAT THE ATTACHMENT TO THIS REPORT REMAIN CONFIDENTIAL AND BE CERTIFIED BY THE CHIEF EXECUTIVE OFFICER AND CHAIRMAN."*



*Item 9.1 continued*

On 20 May 2010, Council resolved that (Ref: Committees-10810):

- "1. THE FOLLOWING OPTIONS ARE CONFIRMED AS THE PREFERRED OPTIONS FOR THE RESOURCE RECOVERY FACILITY:
  - A) RED HILL WASTE MANAGEMENT FACILITY IS THE PREFERRED SITE FOR THE RRF.
  - B) THE DESIGN & CONSTRUCT CONTRACT OWNERSHIP MODEL IS PREFERRED TO A BUILD OWN OPERATE CONTRACT MODEL AT THIS STAGE OF THE PROJECT.
  - C) THE RRF TECHNOLOGY OPTIONS INCLUDE ANAEROBIC DIGESTION, GASIFICATION, PYROLYSIS AND COMBUSTION. PLASMA TECHNOLOGY WILL ONLY BE CONSIDERED IF IT IS AN INTEGRAL PART OF ONE OF THESE TECHNOLOGIES.
  - D) A THIRD BIN FOR HOUSEHOLD ORGANIC WASTE COLLECTION BE CONSIDERED IN CONJUNCTION WITH ANAEROBIC DIGESTION TECHNOLOGY, OTHERWISE A TWO BIN SYSTEM IS RECOMMENDED FOR THE THERMAL TECHNOLOGY OPTIONS.
2. COUNCIL PROCEEDS WITH THE ENVIRONMENTAL AND PLANNING APPROVALS TASK FOR THE RESOURCE RECOVERY PROJECT BASED ON THE PREFERRED SITE AND TECHNOLOGY OPTIONS."

On 21 October 2010, Council resolved to amend the Resource Recovery budget to allow for the predicted cost of baseline environmental monitoring and additional consultant costs as follows (Ref: Committees-11544):

"THAT THE BUDGET FOR SEEK ENVIRONMENTAL APPROVALS (TASK 15) IN THE ANNUAL BUDGET UNDER RESOURCE RECOVERY BE INCREASED FROM \$220,000 TO \$525,000 AND THAT THIS INCREASE BE FUNDED FROM THE SECONDARY WASTE RESERVE."

On 23 June 2011, Council resolved that (Ref: Committees-12150):

- "1. COUNCIL NOTES THE ADVICE FROM SITA ENVIRONMENTAL SOLUTIONS AND WSN ENVIRONMENTAL SOLUTIONS OF THEIR INTENTION TO WITHDRAW FROM THE TENDER PROCESS FOR THE EMRC RESOURCE RECOVERY FACILITY.
2. THE LIST OF ACCEPTABLE TENDERERS BE AMENDED TO REMOVE SITA ENVIRONMENTAL SOLUTIONS AND WSN ENVIRONMENTAL SOLUTIONS.
3. SITA ENVIRONMENTAL SOLUTIONS BE ADVISED OF COUNCIL'S ACKNOWLEDGEMENT OF BOTH SITA ENVIRONMENTAL SOLUTIONS AND WSN ENVIRONMENTAL SOLUTION'S WITHDRAWAL FROM THE EMRC RESOURCE RECOVERY FACILITY TENDER PROCESS.
4. THE REPORT AND ATTACHMENTS REMAIN CONFIDENTIAL AND BE CERTIFIED BY THE CHAIRMAN AND THE CHIEF EXECUTIVE OFFICER."

On 18 August 2011, Council resolved (Ref: Committees-12849):

"THAT COUNCIL CONFIRMS THE TECHNOLOGY OPTIONS FOR THE RESOURCE RECOVERY FACILITY AT RED HILL WASTE MANAGEMENT FACILITY AS ANAEROBIC DIGESTION AND GASIFICATION."

At the 3 November 2011 meeting of Council, a clarification of gasification technology was provided and what this class of thermal waste treatment technology includes. (Ref: Committees-13114)

*By way of explanation, the three contract ownership models being considered for the RRF are as follows:*

#### **Build Own Operate**

Under a Build Own Operate (BOO) contract delivery model, the Contractor will be required to build, finance, own and operate the facility for a fixed period of time (the economical life of the facility and anticipated to be for 20 years). Under this contract model, some of the project risks, and in particular, the risks associated with the design, construction and performance of the RRF, are transferred to the Contractor.



*Item 9.1 continued*

### **Design and Construct**

Under a Design and Construct (D&C) contract delivery model, the Contractor will design and construct a facility that conforms to agreed standards and performance requirements. If the D&C model was adopted by the EMRC, the Contractor will also be required to operate the facility for a minimum of 12 months and up to two years after the completion of wet commissioning. Under this contract model, the operational and ownership risks would be assumed by the EMRC, particularly following transfer of operational responsibilities to the EMRC and expiry of warranties and defects liability periods. The EMRC may operate the facility using its own staff or enter into a separate contract for the operation of the facility under this D&C contract delivery model.

### **Design, Build Operate and Maintain**

Under a Design, Build Operate and Maintain (DBOM) contract delivery model, ownership of the RRF is with the EMRC but operation and maintenance is with the Operator. The EMRC will contract with the main contractor, who is most likely to be an Operator or technology provider who will be responsible for subcontracting and managing the risk of a builder for the construction phase. The EMRC will be required to obtain its own funding for the RRF and will have to fund construction payments during the construction phase and service payments during the operation phase, usually by way of regular monthly payments linked to the amount of waste processed by the RRF.

As with the BOO, the Operator's involvement in the RRF continues until the expiry of the operation term. However, unlike the BOO, the operating period under a DBOM can be less than under a BOO as it does not have to match the duration of the debt repayments. This is because the debt repayments are made by the EMRC direct to its financier, rather than by the Operator to its financier.

Under this contract model, the project risks associated with the design, construction and performance of the RRF, are transferred to the Contractor whereas the ownership risk resides with the EMRC.

### **Acceptable Tenderers and Technologies**

<b>Acceptable Tenderers as at 1 September 2011</b>	<b>Technology Offered at EOI Stage</b>
Energos AS	Gasification
Evergreen Energy Corporation Pty Ltd	Anaerobic Digestion
Amec (formerly Amec Minproc Limited)	Anaerobic Digestion and Combustion
Phoenix Energy	Combustion
Transpacific Cleanaway Limited	Anaerobic Digestion

## **REPORT**

### **Public Environmental Review (PER) Development**

The draft PER was submitted to the OEPA on 19 December 2011 including the electronic and hard copies of the report and modelling data requested. The OEPA administers the requirements for formal assessments on behalf of the EPA.

Feedback on the draft PER was received from the OEPA on 3 February 2012 incorporating comments from various branches of the Department of Environment and Conservation (DEC), OEPA staff and the Department of Health. Some sixty three (63) comments were noted in the feedback, not all of which require a response.



*Item 9.1 continued*

The project team and the three sub-consultants are in the process of finalising responses to the issues raised in the OEPA feedback following which a meeting(s) will be sought with the DEC branches and the OEPA to discuss and clarify their comments before final changes are made to the PER. The amended PER is then re-submitted to the OEPA for approval to commence the public comment period which is not expected until late March/early April 2012, depending how soon the feedback issues can be resolved.

An updated schedule for the PER is as follows:

Details	Commencement	Completion	Target Timeframe
Submit draft PER to EPA	14 November 2011	19 December 2011	Milestone
Review by EPA	19 December 2011	3 February 2012	7 weeks
Revise PER & EPA approval to Release	3 February 2012	23 March 2012	7 weeks
Printing of PER, advertising	23 March 2012	6 April 2012	2 weeks
Public Review	10 April 2012	5 June 2012	8 weeks
EPA provide summary of submissions	5 June 2012	26 June 2012	3 weeks
Proponent Response	26 June 2012	10 July 2012	2 weeks
EPA Bulletin Preparation/Assessment	10 July 2012	2 October 2012	12 weeks
Appeals Period	2 October 2012	16 October 2012	2 weeks
Minister Consideration	16 October 2012	16 January 2013	3 Months

### **Community Engagement**

Preparations for communicating the availability of the PER for the public review period and facilitating community discussion are almost complete, including:

- Press release;
- Mandatory newspaper adverts (West Australian newspaper);
- Community newspaper adverts;
- Local library displays;
- Website updates, including a frequently asked question section, a dedicated PER page and an e-book of the PER;
- Preliminary arrangements for a community briefing in Gidgegannup; and
- Community newsletter.

### **STRATEGIC/POLICY IMPLICATIONS**

Key Result Area 1 – Environmental Sustainability

- 1.3 To provide resource recovery and recycling solutions in partnership with member Councils

### **FINANCIAL IMPLICATIONS**

All costs covered within this report are accounted for in the annual budget approved by Council. Cardno have been advised they have expended their approved budget for the environmental approvals for the project (Task 15) and a response is pending.





*Item 9.1 continued*

### **SUSTAINABILITY IMPLICATIONS**

The Resource Recovery Facility and/or Resource Recovery Park will contribute toward minimising the environmental impact of waste by facilitating the sustainable use and development of resources.

### **MEMBER COUNCIL IMPLICATIONS**

<b>Member Council</b>	<b>Implication Details</b>
Town of Bassendean	} Nil
City of Bayswater	
City of Belmont	
Shire of Kalamunda	
Shire of Mundaring	
City of Swan	

### **ATTACHMENT(S)**

Nil

### **VOTING REQUIREMENT**

Simple Majority

### **RECOMMENDATION(S)**

That the report be received.

### **RRC RECOMMENDATION(S)**

MOVED CR FÄRDIG

SECONDED CR RADFORD

That the report be received.

**CARRIED UNANIMOUSLY**



## 9.2 PROGRESS REPORT ON RESOURCE RECOVERY INITIATIVES

**REFERENCE: COMMITTEES-13314**

### PURPOSE OF REPORT

The purpose of this report is to keep Council informed of continuing progress on non EMRC resource recovery processing initiatives.

### KEY ISSUES AND RECOMMENDATION(S)

- Visy have opened a new waste to energy plant in Victoria using residues from a Materials Recovery Facility (MRF).
- Pacific Pyrolysis has been awarded a \$4.5 million grant from the Victorian Government towards the construction of the state's first commercial biochar plant.
- AnaeCo and Transpacific Cleanaway are undertaking a feasibility study into deploying the DiCom technology at one of Transpacific Cleanaway's eastern states facilities.

#### **Recommendation(s)**

That the report be received.

### SOURCE OF REPORT

Manager Project Development

### BACKGROUND

At the Council meeting of 24 August 2000, Council adopted the following resolutions (Ref: Committees-1940):

- "1. THAT THE EMRC UNDERTAKE A STUDY TO DETERMINE THE RANGE OF COMMERCIAL AND FINANCING OPTIONS AVAILABLE TO THE EMRC FOR ITS INVOLVEMENT IN THE SECONDARY WASTE TREATMENT FACILITY.*
- 2. THAT THE EMRC REQUEST THE OPPORTUNITY FOR EACH MEMBER COUNCIL TO RECEIVE A PRESENTATION REGARDING THE TECHNOLOGIES, COSTS, NEED FOR STAGED COMMITMENTS ETC FOR THE INTRODUCTION OF A SECONDARY WASTE TREATMENT FACILITY.*
- 3. THAT AN OVERSEAS STUDY TOUR OF OPERATING SECONDARY WASTE TREATMENT FACILITIES BY OFFICERS AND COUNCILLORS OF THE EMRC, TO BE DETERMINED AT A LATER DATE, FOLLOWING A DESKTOP STUDY OF SUITABLE LOCATIONS AND PREFERABLY IN CONJUNCTION WITH AN INTERNATIONAL WASTE MANAGEMENT CONFERENCE.*
- 4. THAT SUBJECT TO THE PROVISION OF A COPY OF THE REPORT SECONDARY TREATMENT FEASIBILITY STUDY, AS COMMISSIONED BY MINDARIE REGIONAL COUNCIL, A REPORT ON ITS CONTENT AND APPLICATION TO THE EMRC'S PROPOSED ACTIVITIES BE PROVIDED.*
- 5. THAT A CONSULTANT BE ENGAGED TO PROCEED WITH THE RED HILL DEVELOPMENT 'MASTER PLAN' INCLUDING A REVIEW AND RECOMMENDATION FOR AN APPROPRIATE SITE FOR A SECONDARY WASTE PROCESSING FACILITY AND THE PROVISION OF A PROGRAM TO INTRODUCE SECONDARY WASTE TREATMENT.*
- 6. THAT A PROGRAMME BE DEVELOPED FOR THE COMMUNITY CONSULTATION NECESSARY FOR THE INTRODUCTION OF A SECONDARY WASTE TREATMENT FACILITY FOR THE EMRC*



*Item 9.2 continued*

7. *THAT A DETAILED REPORT BE PREPARED ON THE CONTENT AND SIGNIFICANCE TO THE EMRC OF THE "REPORT OF THE ALTERNATIVE WASTE MANAGEMENT TECHNOLOGIES AND PRACTICES INQUIRY" FROM NEW SOUTH WALES.*
8. *THAT A SECONDARY WASTE PROCESSING RESERVE BE ESTABLISHED AND STAFF PROVIDE A RECOMMENDATION OF THE INITIAL AMOUNT TO BE TRANSFERRED TO THAT RESERVE TAKING INTO ACCOUNT THE ADDITIONAL TIPPING FEES IMPOSED EFFECTIVE FROM 1 JULY 1999.*
9. *THAT THE EMRC START PUBLIC EDUCATION AND CONSULTATION FOR ALL MEMBER COUNCIL RESIDENTS ON PLANS FOR SECONDARY WASTE TREATMENT AS SOON AS PRACTICABLE."*

The nine resolutions from the 24 August 2000 Council meeting have been reported on in all subsequent meetings of the SSWTC/RRC and are complete. (Ref: Committees-1940)

At the Council meeting of 26 April 2001, Council resolved the following (Ref: Committees-1897):

*"THAT THE REPORT BE RECEIVED AND THE ATTACHMENT BE UPDATED FOR EACH MEETING OF THE STRATEGIC AND SECONDARY WASTE TREATMENT COMMITTEE."*

At the Council meeting of 20 May 2004, Council resolved the following (Ref: Committees-1323):

*"THAT A NUMBER OF INTERESTED EMRC COUNCILLORS WITH EMRC OFFICERS ATTEND GLOBAL RENEWABLES LIMITED, EASTERN CREEK, NSW FACILITY WITHIN SIX (6) MONTHS OF THE FACILITY OPENING."*

Report item 9.3 of the SSWTC agenda for 8 June 2006 (Ref: Committees-4675) reported on the EMRC visit to GRL Eastern Creek and other resource recovery facilities in the eastern states, satisfying this resolution.

Council resolved at its meeting of 31 July 2008 (Ref: Committees-8251) to attend the second international conference on Energy from Biomass and Waste in Italy and to visit waste treatment plants in preparation for the EOI process. This visit was reported to RRC at its 12 February 2009 meeting. (Ref: Committees-8917)

Other Resource Recovery Facilities operating in Australia including the EarthPower, Camelia facility, the Rethmann Integrated Waste Management Facility at Port Macquarie and the Cairns Bedminster facility now owned and operated by SITA CEC Environmental Solutions were reported in agenda item 10.1 of the 14 June 2007 RRC meeting. (Ref: Committees-6043)

A pilot scale pyrolysis technology plant has been developed by Best Energies in Gosford, NSW and was reported in the RRC July 2007 agenda (report item 9.3).

A proposed waste to ethanol project by a consortium of Holden, the Victorian Government, Caltex, Veolia, Coskata and Mitsui was reported in the RRC 8 July 2010 agenda (item 9.1). (Ref: Committees-11102)

## **REPORT**

### **Visy Waste to Energy Plant**

In November 2011, Visy opened a \$50 million waste to energy (WtE) plant at Coolaroo, north of Melbourne. Feedstock for the plant is degraded paper fibres and plastic fragments from the onsite Materials Recovery Facility (MRF). The WtE plant is designed to produce 30 MW thermal and 3 MW electrical power for use in the on-site paper mill (refer: Attachment 2).

Last November Visy also announced plans to seek \$100 million from the Australian Renewable Energy Agency to help pay for a proposed \$300 million project involving a \$200 million WtE plant and a number of waste pelletising plants (an additional \$100 million investment), (refer: Attachment 3).



*Item 9.2 continued*

### **Melbourne Bio-char Plant**

In September 2011, the Victorian Government awarded a \$4.5 m grant to Pacific Pyrolysis to build the state's first commercial biochar plant. The \$10 million pyrolysis plant will convert municipal organic waste and wood waste into biochar and electricity and will be built at a Transpacific Industries suburban waste facility which will be the source of the waste (refer: Attachment 4).

Progress reports on resource recovery initiatives being undertaken elsewhere in Australia are attached (refer: Attachment 1).

### **STRATEGIC/POLICY IMPLICATIONS**

Key Result Area 1 – Environmental Sustainability

- 1.3 To provide resource recovery and recycling solutions in partnership with member Councils

### **MEMBER COUNCIL IMPLICATIONS**

<b>Member Council</b>	<b>Implication Details</b>
Town of Bassendean	} Nil direct implication for member Councils
City of Bayswater	
City of Belmont	
Shire of Kalamunda	
Shire of Mundaring	
City of Swan	

### **FINANCIAL IMPLICATIONS**

All Resource Recovery Project activities are accounted for in the annual budget approved by Council.

### **SUSTAINABILITY IMPLICATIONS**

The Resource Recovery Project is aimed at reducing greenhouse gas emissions from the EMRC's waste disposal operations and State programmes for reduction of waste to landfill.

### **ATTACHMENTS**

1. Progress on Resource Recovery Initiatives in Australia as at 24 February 2012 (Ref: Committees-12153)
2. Visy opens new \$50 m Waste to Energy Plant, 29 November 2011 (Ref: Committees-13803)
3. Visy seeks Federal Government support for \$300m project, The Australian – 23 November 2011 (Ref: Committees-13805)
4. "Melbourne to get first Biochar Plant", The Age, 6 September 2011 (Ref: Committees-13806)
5. AnaeCo, Shenton Park Letter (Ref: Committees-13807)

### **VOTING REQUIREMENT**

Simple Majority



*Item 9.2 continued*

**RECOMMENDATION(S)**

That the report be received.

Discussion ensued

The Manager Project Development referred to attachment 5 - the Memorandum of Understanding (MOU) between Anaeco Limited and Transpacific Cleanaway Pty Ltd ("Transpacific") and advised that as Transpacific was one of our acceptable tenderers, he would liaise with them and report back on any implications for the EMRC project.

**RRC RECOMMENDATION(S)**

MOVED CR GODFREY

SECONDED CR FÄRDIG

That the report be received.

**CARRIED UNANIMOUSLY**



*Item 9.2 continued*

#### **Attachment 1 to RRC 8 March 2012 Item 9.2**

#### **PROGRESS REPORTS ON RESOURCE RECOVERY INITIATIVES IN AUSTRALIA AS AT 24 February 2012**

##### **Southern Metropolitan Regional Council (SMRC), Regional Resource Recovery Centre (RRRC) Project, Canning Vale**

Technology: Bedminster aerobic composting. Contract model: D&C. Bin system: 2 bin system.

The SMRC are due to provide an odour reduction and validation report to the DEC by 17 March 2012 as part of their licence renewal.

##### **Rivers Regional Council, Resource Recovery Project**

Technology: Undecided - aerobic composting or anaerobic digestion. Contract model: Most likely BOO. Bin system: 2 bin system.

RRC have recently completed a waste audit of their member Council rubbish bins and are planning to do a baseline odour survey at their preferred site and detailed community consultation before proceeding with tenders in about 9 months time.

##### **Atlas Waste Treatment Facility, Mirrabooka**

Technology: Dirty MRF and windrow aerobic composting. Contract model: BOO (for City of Stirling). Bin system: single bin system.

No further progress to report.

##### **Mindarie Regional Council (MRC), Resource Recovery Project**

Technology: Comporec aerobic composting. Contract model: BOO (SITA is the operator). Bin system: 2 bin system.

No further progress to report.

##### **Ti Tree Bioenergy Project, Queensland**

Technology: Landfill with methane extraction. Contract model: Privately owned. Bin system: N/A.

No further progress to report.

##### **Veolia Woodlawn Bioreactor Project, NSW**

Technology: Landfill with methane extraction. Contract model: Privately owned. Bin system: 2 bin system.

No further progress to report.

##### **Emergent Capital, Eastern Creek, NSW**

Technology: Anaerobic digestion (UR-3R process). Contract model: D&C. Bin system: 2 bin system.

The facility is believed to be operating only as an aerobic composting facility.

##### **AnaeCo, Shenton Park**

Technology: Anaerobic digestion (DiCom process). Contract model: BOO (for WMRC). Bin system: 2 bin system.

AnaeCo and Transpacific Cleanaway are undertaking a joint feasibility study with a view to deploying the DiCom technology at a Transpacific facility on the east coast of Australia (refer Attachment 5).

##### **Coffs Harbour City Council, Alternative Waste Treatment (AWT) Plant**

Technology: Aerobic composting. Contract model: BOO. Bin system: 3 bin system.

No further progress to report.

##### **WSN Environmental Solutions, South Sydney, AWT Facility**

Technology: Anaerobic digestion (ArrowBio process). Contract model: BOO. Bin system: 3 bin system.

SITA are now the owners of WSN's operations.

## Visy opens \$50m WtE plant

Posted Date: 29/11/2011

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Alex Serpo | [waste@ben-global.com](mailto:waste@ben-global.com)

### Visy has opened a waste to energy plant at its Coolaroo manufacturing and recycling facility north of Melbourne.

Opened by the Prime Minister Julia Gillard, Visy said that plant will produce 30mW of thermal and 3mW electrical power each year. The fuel source will be the degraded paper fibres and a small percentage of plastic fragments generated on site as part of the recycling process.

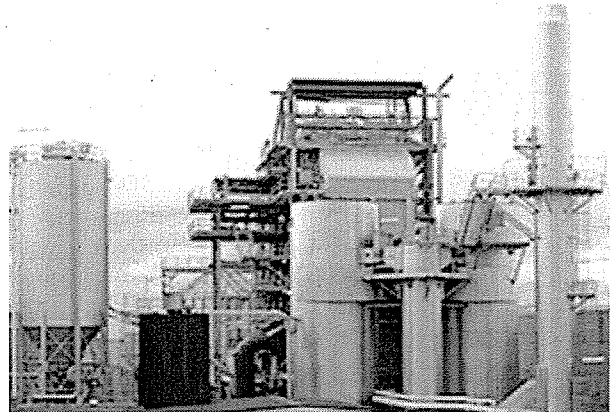
Visy estimate that the plant will divert 100,000 tonnes of waste from landfill each year, saving the company several million dollars in landfill costs. Energy from the plant will be used to fuel Visy's existing facilities on site, reducing the mill's reliance on natural gas for thermal energy by about 50% and the sites reliance on grid electricity by 10%.

The \$50 million dollar plant was built with the help of a \$2m grant from Sustainability Victoria. Building off the Coolaroo design, Visy hope to replicate the plant around Australia. Speaking at the launch of the plant, Visy CEO Anthony Pratt said that the Coolaroo plant was part of a larger plan.

"We now process the recyclables from more than 2.3 million houses every week," he said. "We think we can even turn municipal solid waste – garbage – into energy for the grid ... it's a vision that could see an end to many landfills in Australia."

Pratt also offered support for the Prime Minister's carbon price. "I want to thank [Julia Gillard] for providing a healthy business climate and a vision for a clean energy future for Australia. It gives companies like ours the confidence to invest and grow."

Speaking at the launch, Gillard said that the government's carbon price was designed to supply the establishment of facilities like Coolaroo. Today projects like Coolaroo are the exception, in a clean energy future, they will become the norm," she said. "Now that the work of legislation is complete, the work of our business sector begins."



*The Coolaroo recycling facility. Credit: Visy.*



Prime Minister Julia Gillard with Anthony Pratt, Visy CEO. Both attended the event in the pouring rain.

[Click here to read the rest of today's news stories.](#)

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# The Australian

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## Anthony Pratt seeks \$300m from government to flick switch on waste-to-power scheme

- by: Damon Kitney
- From: The Australian
- November 23, 2011 12:00AM

**THE Pratt family's \$3 billion Visy paper, packaging and recycling empire is seeking federal government support to help bankroll a revolutionary \$300 million project to turn household garbage into energy that would generate 3000 jobs across the economy.**

The project would involve construction of a \$200m waste-to-energy plant, the first of its type in Australia, designed to generate 75 megawatts of electricity that would be sold into the electricity grid or directly to third parties.

Fuel for the plant would come from waste transfer stations or landfill sites in capital cities, where Visy is planning to spend \$100m to build a number of so-called pellet plants to shrink garbage into fuel for the waste-to-energy facility.

The garbage will be dehydrated to the size of a cork, which has the burn value of low-grade coal, and then fed into the clean energy plant to turn into energy.

Visy is seeking \$100m for the project from the Australian Renewable Energy Agency, or ARENA, the new independent statutory body established to provide financing assistance for projects that strengthen renewable energy and energy efficiency technologies.

"This will be a very big leap from anything we have ever done," Visy executive chairman Anthony Pratt said in an interview with The Australian.

"It is not completely new in the sense it is being done in dribs and drabs around the world. But no one has put it together quite this way before. So it would be a big project of national importance. That is why we think it would qualify (for assistance)."

In recent weeks, Mr Pratt has been briefing ministers in Canberra on the project, including federal Industry Minister Kim Carr and Resources and Energy Minister Martin Ferguson. NSW Premier Barry O'Farrell, Queensland Premier Anna Bligh and Tony Abbott have also received briefings.

Julia Gillard is this weekend due to open Visy's first waste-to-energy plant at its Coolaroo manufacturing and recycling plant in Melbourne. The event is expected to be attended by more than 2000 people.

The Coolaroo energy-from-waste plant will reduce Visy's emissions by 70,000 tonnes a year and divert 100,000 tonnes of waste that was going to landfill. It will reduce 50 per cent of the gas used at the manufacturing and recycling plant and 10 per cent of the energy consumption.

Mr Pratt's plans follow his commitment four years ago to invest \$US1bn (\$1.01bn) in paper recycling and waste-to-energy infrastructure at a Clinton Global Initiative meeting in New York.

Last year, Visy's US associate, Pratt Industries, commissioned a \$US60m energy plant in Georgia that converts waste from its manufacturing into gas.

The new waste-to-energy plant in Australia, which is likely to be located adjacent to Visy's Tumut pulp and paper mill in southern NSW, would be three times the size of the US facility. It will provide baseload power, unlike other renewable energy technologies such as solar or wind power.

While there are expected to be questions about emissions from the plant and the potential for it to be viewed as a form of incinerator, Mr Pratt said they were much lower than from coal. The associated reductions on landfill would also contribute to lower greenhouse emissions.

The Obama administration provided \$US18.5m towards the \$US60m capital cost of the Conyers plant in the US.

Mr Pratt said an Australian government grant "would not make a difference as to whether we do it or not". However, it would bring forward Visy's ability to do it by "a number of years".

"A grant would help bring it to fruition a lot faster," he said.

Asked when the project could start with government funding, Mr Pratt replied: "Right here, right now. Automatically.

"It will create about 3000 jobs."

ARENA's board will manage \$1.5bn in committed funding and \$1.7bn in uncommitted funds to disburse for projects. ARENA will also receive future funding from discretionary dividends paid by the Clean Energy Finance Corporation and a share of revenue from the carbon tax. The first grants are due to be dispersed next year.

Visy is also setting up a contracting business, Build Run Repair, which will be a team of people charged with building and maintaining the plants.

Mr Pratt said Visy was considering establishing three or four pellet plants - three in NSW and one in Brisbane at Gibson Island - to supply the waste-to-energy plant. It would also consider selling the pellets to coal-fired power stations as an alternative fuel additive, to reduce emissions.

"What makes this different is that this is a step up in complexity in that no one in Australia and few around the world have been able to do: to turn municipal solid waste - real garbage - into energy," Mr Pratt said. "So this would be a first for Australia to be able to do that, at really big scale.

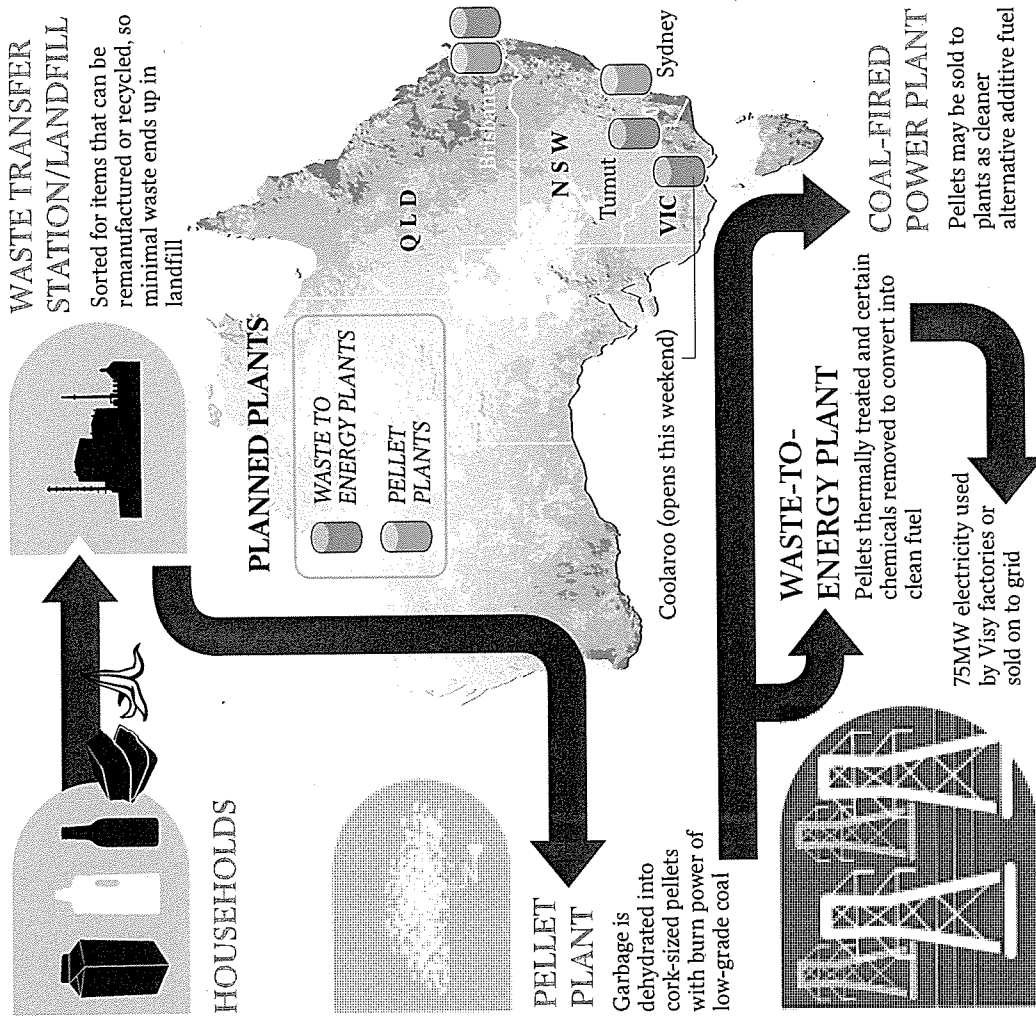
"The three things going for that are obviously, with the carbon tax, it would be a way to adapt to that. Secondly, landfill fees are going up a lot so it helps with that. And thirdly electricity rates are going up. So for all those reasons we think that would be interesting for coal-fired power plants to buy."

There are similar plants in Canada, Finland and the US, but they are at the pilot stage.

"My grandfather started Visy as a box manufacturer back in 1948," Mr Pratt said. "My father integrated the company back into paper mills. This is the next integration into what feeds the mills and that is energy. It's part of the same supply chain and part of the next evolution."

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# WASTE NOT, WANT NOT



- Visy's first waste-to-energy plant at Coolaroo, Victoria is projected to reduce the company's emissions by 70,000t and divert 100,000t of waste from landfill each year
- Other firms have similar plants at pilot stage in the US, Canada and Finland

## Melbourne to get first biochar plant

Paddy Manning  
September 6, 2011

[Read later](#)

THE country's first commercial biochar plant, to turn green waste into energy and store carbon dioxide, will be built in Melbourne after State Energy Minister Michael O'Brien awarded a \$4.5 million grant to Pacific Pyrolysis.

PacPyro's "carbon-negative electricity" pilot-scale project will turn two tonnes of municipal organic and wood waste an hour into electricity and biochar and store as much as 50,000 tonnes of carbon dioxide a year.

It will be built over the next 12-18 months at one of the existing suburban waste facilities operated by partner Transpacific Industries, which will provide the feedstock.

PacPyro's chief technology officer Adriana Downie said the \$10 million project would be the first in Australia to make marketable quantities of biochar, which would be sold as a soil enhancer for a few hundred dollars a tonne, a price comparable to premium potting mix.

Biochar, the product of slow pyrolysis or burning without oxygen, has attracted significant interest from both sides of politics because of its potential to draw down large quantities of carbon dioxide from the atmosphere, while generating energy.

Biochar is recognised under the federal Carbon Farming Initiative, meaning PacPyro will be able to sell carbon credits to polluters liable under the proposed federal carbon tax regime, as well as electricity into the grid and renewable energy certificates.

Ms Downie said at a carbon price of \$23 a tonne, the project would generate credits worth \$1 million a year. "If the [carbon tax] goes through, there's going to be billions of dollars in this space."

A government spokesman confirmed that conditional funding support had been offered to PacPyro but said the project was at a very preliminary stage.

The grant was from the Victorian government's Energy Technology Innovation Strategy, designed to support projects with high technology risk. The strategy received an extra \$41 million funding in the last budget.

The spokesman said the increase - almost double the program's funding under Labor - showed the Coalition was "putting serious money into renewable and low-emissions technology".



1 December 2011

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**Memorandum of Understanding (“MOU”) signed for a potential DiCOM™ facility**

AnaeCo Limited (“AnaeCo”) and Transpacific Industries Group Ltd subsidiary, Transpacific Cleanaway Pty Ltd (“Transpacific”), have signed a MOU to undertake a joint feasibility study with a view to deploying AnaeCo’s patented DiCOM™ System at a Transpacific facility on the East coast of Australia.

Under the terms of the MoU the parties will collaborate to conduct a joint commercial and technical feasibility study of installing a DiCOM™ plant at a selected site. The existing Shenton Park DiCOM™ facility currently being expanded by AnaeCo will provide an important data point in the study, although the proposed facility will be designed to handle significantly larger volumes of waste. The parties expect to make a decision on the results of the feasibility study, and whether to proceed further with this project, by approximately mid 2012.

AnaeCo’s CEO Patrick Kedemos said, “We are very pleased to have this opportunity to work with industry major Transpacific. We believe the unique attributes of DiCOM™ such as its ability to deal with a mixed waste stream, generation of renewable energy, odour management, advanced process control system and compact plant footprint, will prove to be very effective in this proposed metropolitan area project. Given the scope and scale of Transpacific’s business initiatives, we see this project as the beginning of a long and mutually rewarding relationship.”

ENDS

For further information, please contact:

Patrick Kedemos, CEO

(08) 9361 4777



### About Anaeco

Anaeco delivers Alternative Waste Technology (AWT) facilities based on the patented DiCOM™ bioconversion process. The system incorporates advanced sorting, recycling, anaerobic digestion and aerobic composting to recycle municipal solid waste (MSW) into renewable energy from biogas, agricultural grade compost and recyclables such as steel, aluminium, glass and plastics, thus ensuring maximum diversion from landfill and ensuring social, economic and environmentally sustainable management of MSW.

The DiCOM™ process enables resource recovery intervention closer to source, with enhancement of existing waste transfer stations now a viable waste management option. Anaeco's experienced team provides design, construction, commissioning, operation and maintenance services for DiCOM™ AWT facilities, as well as management of all outputs including renewable energy, compost, recyclable materials and non-recyclable residuals.

For further information go to [www.anaeco.com](http://www.anaeco.com)



## 10 CONFIDENTIAL MATTERS FOR WHICH THE MEETING MAY BE CLOSED TO THE PUBLIC

Nil

## 11 GENERAL BUSINESS

Cr Färdig asked if EMRC officers could provide a report on the current carbon credits process and EMRC's position in relation to carbon credits.

The Manager Project Development advised that the EMRC planned to have a public information session at Gidgegannup during the public comments period for the Public Environmental Review (PER). He had received a request from Mr Purdy to consider holding a similar session at the Shire of Mundaring office so local community groups could attend.

## 12 FUTURE MEETINGS OF THE RESOURCE RECOVERY COMMITTEE

The next meeting of the Resource Recovery Committee will be held on **Thursday, 5 April 2012** at the EMRC Administration Office, 1<sup>st</sup> Floor, Ascot Place, 226 Great Eastern Highway, Belmont WA 6104 commencing at 5.00pm.

### Future Meetings 2012

Thursday	5 April	at	EMRC Administration Office
Thursday	10 May (if required)	at	EMRC Administration Office
Thursday	7 June	at	EMRC Administration Office
Thursday	5 July (if required)	at	EMRC Administration Office
Thursday	9 August	at	EMRC Administration Office
Thursday	6 September (if required)	at	EMRC Administration Office
Thursday	4 October	at	EMRC Administration Office
Thursday	22 November (if required)	at	EMRC Administration Office

## 13 DECLARATION OF CLOSURE OF MEETING

There being no further business, the Chairman closed the meeting at 5.42pm.