ENVIRONMENTAL CLEAN TECHNOLOGIES LIMITED

Update: Victorian Coldry Project & Capital Raising

Wednesday, 20 July 2011: Environmental Clean Technologies Limited (ECT) (ASX:ESI) is pleased to provide the following update on the various options it is progressing in the commercialisation of its Coldry (Black Coal Equivalent (BCE)) technology and its plans to undertake preparatory work for the establishment of a large scale Coldry production plant to be located at the Loy Yang Power Station in Victoria's Latrobe Valley.

Key Points:

- Leading international engineering firm ARUP will be engaged to commence the Design for Tender (DFT) for the proposed, initial production plant located in the Latrobe Valley. This DFT will be timed to dovetail with the Datang 2,000 tonne Coldry test burn in China
- Rights Issue to fund advancement of Coldry process technology
- The ARUP DFT will support development of a Guaranteed Maximum Price for Construction proposal

As a follow up to the 5th July Coldry Technology Update, after termination of the Joint Venture Agreement with TinCom on 31st May, ECT is keen to keep shareholders informed on the various options it is progressing with respect to the commercial deployment of the Coldry Technology. These options include;

- Ongoing discussion and negotiation with numerous coal producers, coal trading companies and coal consumers, in several countries, regarding agreements with those companies to produce Coldry under a licencing arrangement.
- Introducing a new party to replace TinCom in the previously referred to Victorian Coldry Project.
- Another option is to negotiate large scale coal off take agreements with several black coal consumers, including China Datang, after successful test burns of Coldry in power stations owned or operated by these companies. If ECT is successful in negotiating substantial Coldry off-take agreements, it is expected that sufficient interest will be developed in the investment community for funding to be available to construct a Coldry production facility.

In parallel with the above referenced test burn by China Datang, and with our continuing efforts to secure off-take agreements and other sales commitments, ECT will seek to raise capital for completion of the first phase of a program to develop full engineering specifications for the proposed Coldry production facility. This is referred to as the Design for Tender (DFT).

The DFT, which will cost approximately $3.6 million, is to be delivered in three phases by ARUP. Phase 'A' will cost $1 million and will conclude towards the end of 2011 or early 2012, allowing results from the scheduled test burn for China Datang (announced 25th May, 2011) of 2,000 tonnes of Coldry BCE in one of its black coal-fired power stations, to be incorporated in the remaining design program. The Company is hopeful a successful test burn will enable ECT to secure a Coldry Off-take Scale Agreement with Datang to export Coldry BCE product to China.

While seeking to minimise shareholder dilution, in order to fund production of the 'Test Burn' tonnage and delivery of it to China, to complete Phase 'A' of the DFT and to provide other, necessary working capital, ECT will seek to raise approximately $3.5 million via a non-renounceable Rights Issue to shareholders. Further details will be provided in coming weeks.

Following the test burn, and subject to acceptance of the results by Datang, ECT will seek further funds to complete the DFT. When the DFT is completed, ECT will have the necessary engineering data for development of a Guaranteed Maximum Price (GMP) contract for construction of the project. The GMP together with a Coldry off-take Sales Agreement, will underpin project financing activities for the construction of the proposed 2 million tonne per annum Coldry production plant at Loy Yang.

ECT Chief Executive, Kos Galtos said “by funding our own Design for Tender, we are in control of the project and have the opportunity to generate better returns for shareholders from the first commercial deployment of Coldry technology, while also gaining the necessary data to move forward with opportunities in China, India, Indonesia, Poland and other key markets”

“Preparations for the Datang test burn are providing us with substantial production and shipping data that will be invaluable in optimising our plant design and establishing our Coldry product’s credentials in the world’s largest coal market” Mr. Galtos said.

“We are confident in the commerciality of the Coldry technology and look forward to completing the engineering design and construction pricing required to attract the necessary investment to construct the Victorian Coldry plant and, in so doing, generate financial returns for our shareholders,” he said.

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About ECT

ECT is in the business of commercialising and selling disruptive, leading-edge technologies that have game-changing potential within the energy and resources sector that are capable of delivering environmental and commercial benefits.

We are focused on advancing a portfolio of such technologies that have attractive market potential. This potential is largely informed by global markets that exhibit significant potential for growth and enable us to secure sustainable profits through licensing royalties or other commercial mechanisms.

About Coldry

When applied to lignite and some sub-bituminous coals, the mechanically simple Coldry process produces a black coal equivalent (BCE) in the form of pellets that are stable, easily stored, can be transported and which can be of equal or better energy value than many black coals, whilst significantly reducing CO2 emissions.

About Matmor

The Matmor process is positioned to revolutionise primary iron making thanks to the design of our simple, low cost, low emission, patented Matmor retort using cheaper, alternative raw materials.

ENVIRONMENTAL CLEAN TECHNOLOGIES LIMITED

Shareholder Update

Victorian Coldry Project

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Important Information

The purpose of this Shareholder Update is to provide general information about Environmental Clean Technologies Limited ACN 009 120 405 (ECT).

Not investment advice

This Shareholder Update should not be considered as the giving of investment advice by ECT.

Forwarding looking statements

This Shareholder Update contains certain statements, which may constitute "forward-looking statements". Such statements are only predictions and are subject to inherent risks and uncertainties, which could cause actual values, results, performance or achievements to differ materially from those expressed, implied or projected in them.

Executive Summary

ECT's Victorian Coldry Project is particularly exciting in the context of the commercial, environmental, and social benefits our patented technology delivers. By transforming the LaTrobe Valley's abundant lignite (brown coal) into energy-rich Coldry BCE pellets the Project will be able to access an affordable fuel source, respond to the rising global and domestic demand for energy, address (at least in part) the significant CO_2 emitted by existing lignite-fired power stations, and create options for the LaTrobe Valley communities that depend on the deployment of lignite.

The Victorian Coldry Project is of prime importance to ECT as it represents the first deployment of our leading-edge technology on a commercial scale.

Central to realisation of the Victorian Coldry Project is the Design for Tender (DFT) work that our engineering partner ARUP will undertake and the test burn by China Datang Corporation of the Coldry BCE pellets we are producing at our Bacchus Marsh demonstration plant. The output from our demonstration plant will support the in-situ testing Datang will be undertaking[1] and if it is successful we will be seeking a commitment from Datang (per the announced MoU) to enter into an off take agreement for some or all of the 2 million tonnes per annum of Coldry BCE pellets that the Victorian Coldry Project will be designed to produce.

[1] Announced on 25 May 2011.

The Victorian Coldry Project

Project Summary

The Victoria Coldry Project is the design and construction of a Coldry Plant (**Plant**) with a production capacity of 2 million tonnes of Coldry BCE pellets per annum.

It is proposed that brown coal as feedstock for the Plant, heat for the dewatering process at the Plant, the site for the Plant and certain associated utilities will be provided by GEAC, the owner of the Loy Yang Power Station. The Plant will have an initial production capacity of 2 MTPA of BCE per annum but ECT believes that if the initial 2MTPA Plant is commercially successful, it will be possible to add additional modules at reduced cost and in significantly less time.

Many aspects of the Project have been developed by ECT and its consultants to a greater or lesser degree. For example, design, construction and commercial considerations are well developed.

ECT is currently focused on directly procuring a design for tender (**DFT**) from Arup, at a cost of approximately $3.6m, which will underpin project financing for the construction of the Plant. The DFT will be central to our success given that it will provide the critical data to support commercialisation.

In addition to the partnerships we have built to underpin the commercialisation of our Coldry technology[2] we have entered into formal relationships with parties that will be central to the success of our Victorian Coldry Plant. These relationships relate to the construction and operation of the Coldry Plant and the delivery of the Black Coal Equivalent (BCE) product, and extend our position as a company that is committed to commercialising intellectual capital.

Arup, our engineering partner, has developed the design of the Coldry technology to integrate with the Loy Yang site. In this regard Arup will work closely with GHD and WorleyParsons, the engineering partners of GEAC, the owner and operator of the Loy Yang Mine and Power Station.

We expect that McConnell Dowell will assume responsibility for the construction of the plant on a guaranteed maximum price basis that includes obtaining approvals and sourcing specialist equipment from JC Steele and prefabrication companies.

We expect that Transfield Services Australia will commission the plant in collaboration with ECT and will operate and maintain the plant on an ongoing basis.

Our plans allow for lignite, electricity and heat to be sourced from the Loy Yang mine and power station, and the Coldry BCE pellets to be transported to the Port of Geelong for loading and shipping to Datang and other export markets.

In addition to the agreements that were outlined in our recent announcement '*Shareholder Update – Coldry Technology*' the agreements that relate to the Victorian Coldry Plant are explained in detail below.

Material Supplies

Great Energy Alliance Corporation (**GEAC**) is an Australian proprietary company that owns and operates Loy Yang Power, the largest electricity generator in Victoria and the Loy Yang mine, the largest open cut lignite mine in Australia with an annual output of approximately 30 million tonnes. The company employs approximately 565 staff and is headquartered in Traralgon, Victoria. The electricity generator at Loy Yang Power consumes approximately 60,000 tonnes of lignite per day and has generation capacity of 2,210 MW.

ECT and GEAC have entered into a Memorandum of Understanding[3] in which both parties have agreed to cooperate in the establishment and operation of the Victorian Coldry Plant at the Loy Yang site.

[2] Refer to *Shareholder Update – Coldry Technology* June 2011

[3] Announced 25th November, 2009

The terms of the MOU between GEAC and ECT include:

- The purchase by ECT from GEAC of up to 5,000,000 tpa of lignite over a 50 year period, to produce 2,000,000 tpa of Coldry Black Coal Equivalent (BCE) pellets,
- A site in the vicinity of the Loy Yang Power Station, as well as the services of electricity, heated water and others to be provided by GEAC, and
- The collaboration between ECT and GEAC with technical issues concerning the mine (via GHD) and power station (via Worley Parsons).

As per the MOU, upon completion by ARUP of the design for tender, ECT and GEAC will review the base assumptions noted in the MOU, such as lignite supply conditions, electricity supply and site arrangements. The ECT Coldry Plant will be located close to the Loy Yang mine in order to minimise the cost of lignite transport and handling, as well as to source the electricity and waste heat required for the Coldry process from the Loy Yang Power Station.

Design for Tender

Arup has submitted a proposal for the preliminary design and engineering services associated with delivering the Design for Tender package tailored for our Victorian Coldry Project. The tender design package should provide sufficient documentation and engineering design definition to allow reputable contractors to prepare a capital cost estimate with an accuracy level typically in the range of 10% to 15%. This level of accuracy should provide contractors with the confidence to prepare a Guaranteed Maximum Price with a minimum design contingency amount.

The detailed design will occur after the contract award. We expect that the tender design deliverable will cover the following preliminary items:

- Process Design and Operating Parameters,
- Structural and Civil Design,
- Ductwork Design,
- Mechanical Equipment Design, Selection and Preferred Manufacturers,
- Electrical Design,
- Controls and Instrumentation Design,
- Piping System Design and Distribution,
- General Civil and Infrastructure Works, and
- Service Distribution.

Key technology process equipment and systems that are critical to the success of our Coldry technology will be based on pre-approved suppliers.

The Design for Tender will take approximately 22 weeks from the start of the tender design phase with the price tendering and estimating phase requiring up to an estimated seven to nine weeks.

Commissioning and Operation & Maintenance

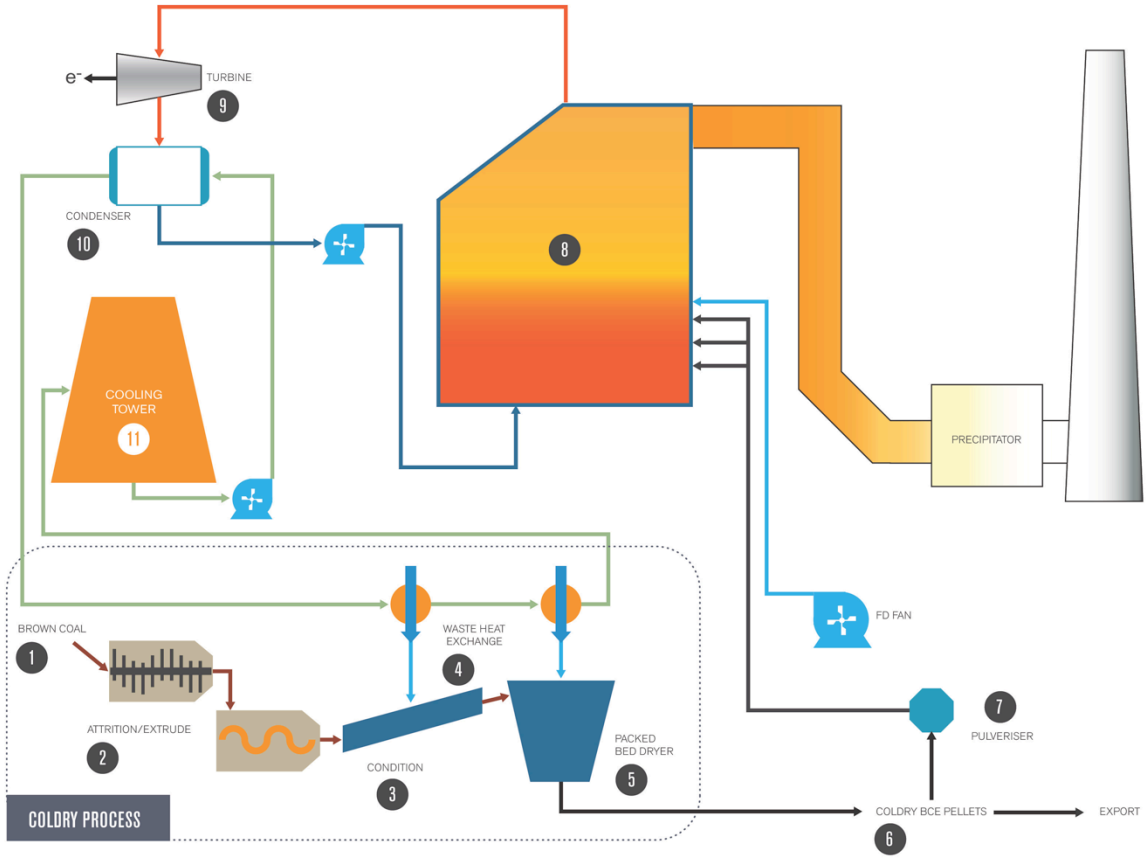
Transfield Services is a leading provider of operations, maintenance, and asset and project management services globally.

ECT and Transfield Services entered into a Memorandum of Understanding[4] that nominated Transfield as the provider of essential project and infrastructure services to ECT as the construction of Coldry plants are rolled out in Australia.

Transfield Services is a shareholder (14%) of GEAC and, hence, the Loy Yang Power Station. We expect that once the construction of the Coldry Plant is complete, McConnell Dowell will collaborate with ECT and Transfield Services in the handover and commissioning of the plant. Also, we expect that Transfield Services will carry out the operation and maintenance of the Victorian Coldry Project.

[4] Announced October 2008

SCHEMATIC LAYOUT OF INTEGRATED COLDRY FIRED POWER STATION



1. Raw Coal Feed
Raw coal is screened to remove oversize and contaminants, and sized to ensure a uniform feed into the next process step.

2. Attritioning & Extruding
A small amount of water is added to the mill attritioner, where the coal is sheared to form a coal paste. This intensive mixing initiates a natural chemical reaction within the coal which ejects both chemically trapped water, as well as physically absorbed water within the coal pore structure. The coal paste is then further masticated, finally being extruded into pellets.

3. Conditioning
The coal paste pellets are surface dried on the Conditioning belt to provide sufficient green strength to withstand the transition to the next step, the Packed Bed Dryer.

4. Heat Exchange
Waste heat form the co-located power station is recovered using heat exchange. This low grade energy stream is used to provide the warm air streams required to evaporate surface water from the coal pellets.

5. Packed Bed Dryer
Incoming moist coal pellets from the Conditioning belt are further dried to their ultimate moisture level within the packed bed dryer. Warm air from the heat exchangers removes the moisture rejected from within the coal pellets. The cross-linking reactions come to completion within the dryer, increasing the coal pellets' strength to levels sufficient to withstand bulk transport.

6. Coldry Pellets
The incoming brown coal has now been converted into a Black Coal Equivalent (BCE) through the permanent elimination of structural and physical trapped water. These high energy pellets are available for thermal applications, as well as other uses.

7. Pulveriser
The pulveriser reduces the pellets into finely ground coal dust, suitable for injection into a Pulverised Coal Combustion boiler.

8. Boiler
The coal is burned in excess air, producing a high temperature gas stream. This high temperature heats the water in the boiler, generating the steam needed for power generation.

9. Turbine
High temperature, high pressure stream is injected into the steam turbine, which is connected to the generator. High voltage electricity is the finished product from this operation.

10. Condenser
Steam exhausted from the turbine is passed into the condenser, where it is cooled to again form liquid water. This liquid water is pumped back into the boiler to start the steam cycle once again. The cooling water from the condenser is now at elevated temperatures, and needs to be cooled. It is pumped to the Coldry plant for heat exchange (step 4).

11. Cooling Tower
Return water from the Coldry heat exchange is now at a lower temperature, but still requires further cooling. This water is now pumped into the cooling tower, where a portion evaporates, cooling the remainder down to suitable temperatures for the condenser operation. Make up water is added to replace that which was lost to evaporation.

1A. COAL
1B. COAL
2. COOLING WATER
3. STEAM
4. AIR
5. BOILER FEED WATER

Figure 1

Transport and Logistics

The Coldry BCE pellets produced by the Coldry Plant could be transported in bulk via an existing railway line from Loy Yang to the Port of Geelong for loading into mid-size dry bulk vessels (around 50,000 tonnes capacity) and shipped to off-takers. This option would require the design and construction of a relatively short rail siding to facilitate access to the main railway line.

ECT is engaged with shipping companies regarding the transport and insurance of Coldry BCE pellets from the Melbourne area ports to China.

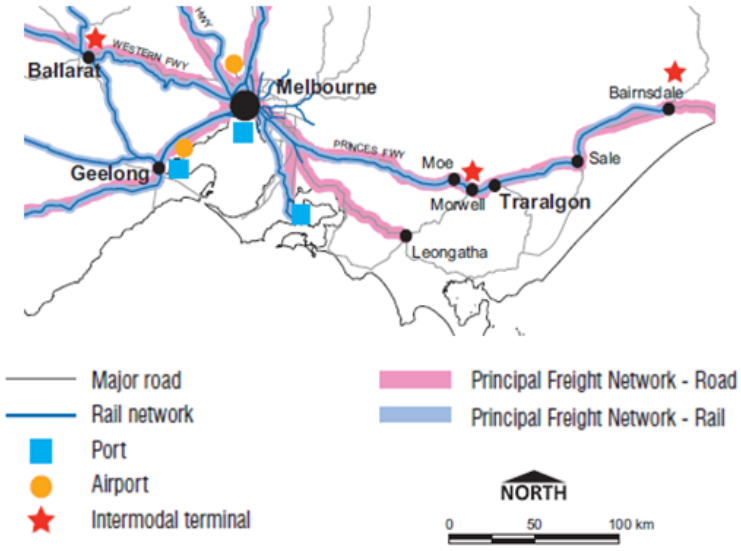


Figure 2

The transit from the Port of Geelong to ports in China, Korea or Japan in mid-size vessels is expected to take approximately 17 days, and 18 days to ports in India.

Figure 3

Most of the transport and storage infrastructure from Loy Yang to the Port of Geelong already exists and is under-utilised. Accordingly, sufficient rail and port capacity is available to accommodate the 2 mtpa Victorian Coldry Project.

New port and rail infrastructure would be required to support capacity expansions of the Victorian Coldry Project above 4 mtpa. Options identified include the Port of Hastings and Barry Point. The Victorian Government Department of Transport is considering infrastructure expansion options to support the development of multiple industries, and in its 'Ports and Freight Futures Strategies' is considering the expansion of the Port of Hastings for the export of lignite derivatives such as ECT's Coldry BCE.

Victoria

Over 40% of Victoria's energy consumption (85% of electricity generation) is sourced from lignite. Victoria's lignite resource amounts to a total 430bn tonnes in situ and accounts for 96% of identified lignite resources in Australia. An estimated potential economic resource of 33bn tonnes, without consideration of Coldry capabilities, is located in the Latrobe Valley (Gippsland Basin).

The mining of lignite in the La Trobe Valley is relatively low cost given coal seams of up to 330m (some of the thickest globally), low stripping ratios and long-standing existence of mining operations.

ECT's Coldry technology presents significant potential for revaluation of lignite reserves based on enhanced energy value, with a clear opportunity for undeveloped resources to be efficiently utilised. Importantly, adoption of Coldry will enable economically viable distribution of higher value product to regional coal markets. Indeed, the Victorian Government's Department of Primary Industries is of the view that 'the adoption of suitable drying technologies is expected to enable brown coal (lignite) to be exported in its own right and compete directly in black coal markets'. Furthermore, the Victorian Government is committed to investing in and facilitating low emissions coal technology research and development. In combination with low sovereign risk, economic stability, a skilled workforce, and an established mining services sector, this provides a highly favourable investment environment.

Environmental Considerations

Further adding impetus to the adoption of Coldry technology is the recent announcement of a AUD23/t carbon price by the Australian government.

Coldry could become a particularly valuable tool for lignite-fired electricity generators in Victoria to mitigate their environmental and commercial exposure, as well as a means to develop supplemental revenue streams from their lignite assets, either through additional sales of lignite, or as participants in the Victorian Coldry Project.

With Coldry available a more modern power plant could be installed, achieving greater efficiencies and significant CO_2 reductions.

With minimal plant modification and using an approximate 20% blend of Coldry BCE pellets, an existing generator could achieve an approximate 8% reduction in CO_2 emissions. In a purpose-built high-efficiency power station operating fully on Coldry BCE pellets, CO_2 reductions of more than 40% could be achieved. This could contribute meaningfully to the Federal Government's CO_2 reduction targets at significantly lower capital cost (versus large scale renewable energy generation and energy efficiency programs), significantly lower technical risk (versus large scale renewable energy generation and carbon capture and storage technology coupled to existing systems), and significantly lower base load power supply risk (versus large scale renewable energy generation and natural gas combined-cycle gas turbine systems).

As the Coldry plant taps into the waste energy streams of its host power plant, the evaporative water loss from the power plant will be replaced by the evaporative load of the Coldry plant. This will lead to a visible reduction of the steam plume from the cooling towers and a reduction in overall water consumption.

If the Coldry plant is operated without water recovery from the raw coal, then the plant will emit a steam plume. It is important to note that the plume will not emit an odour because the lignite volatile components are not liberated during the Coldry process. If the Coldry plant is operated with water recovery then the steam plume from the plant will be significantly reduced or eliminated. The condensed water produced will not contain any volatile fractions and following filtering the water would be suitable for industrial processes (including the replacement of river water for power generation purposes) or could be directed to river system experiencing water deficits[5].

[5] One tonne of Coldry BCE produced liberates approximately 1,000 litres of water.

Indicative Financial Information

A financial model has been built to assess the economic features of the Victorian Coldry Project. The results in terms of profitability and commercial viability are extremely positive under a range of scenarios.

As outlined in ECT's '*Shareholder Update – Coldry Technology'*, the technology can be implemented in either 'Fully Controlled' drying mode, or in 'Accelerated Mode' where the final portion of the drying occurs within stockpiles held for shipment providing for greater throughput and more efficient asset utilisation.

Indicative Operating Costs

Under these operational modes, the ex-works production cost is estimated at AUD 12.93 in 'Fully Controlled' drying mode, or AUD 30.99 per tonne including the lignite feedstock, decreasing to AUD 10.76 in 'Accelerated Mode', or AUD 28.82 including feedstock. The cost breakdowns are as shown below.

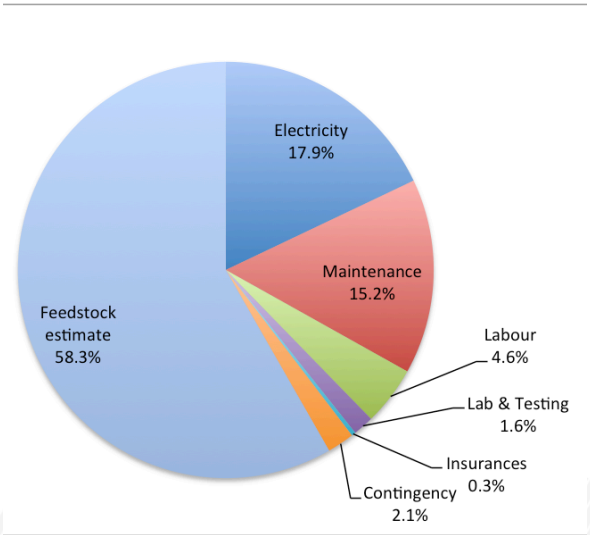


Figure 4

Cost per tonne (AUD/t)	Accelerated Mode	Fully Controlled
Electricity	$4.70	$5.56
Maintenance	$3.62	$4.70
Labour	$1.19	$1.42
Lab & Testing	$0.50	$0.50
Insurances	$0.10	$0.10
Contingency	$0.65	$0.65
Production cost	**$10.76**	**$12.93**
Feedstock estimate	$18.06	$18.06
Total, Ex-works	**$28.82**	**$30.99**

Table 1

Note: The above chart reflects the 'Fully Controlled' mode cost breakdown

The feedstock cost is based on an assumed lignite price of AUD 8.50 per tonne. This price is estimated to increase at an inflation rate of 2.50% per annum over the life of the plant. The ratio of feedstock over final product is 2.13:1, estimated from the extensive operations of the existing Bacchus Marsh Coldry pilot plant currently transforming the subject feedstock.

The cost of electricity is based on a demand for electricity of 94 kWh per tonne of final product in accelerated drying mode, and 111 kWh per tonne in fully controlled mode, and is estimated from the detailed technical model developed by ECT with Arup for a 2 mtpa Coldry Plant. The price of electricity is set at AUD 0.05/kWh with a growth rate of 5% per year. However, the recent introduction of a carbon price could result in up to 50% increased electricity costs for the Victorian Coldry Project.

Maintenance costs are estimated as 2% of the capital cost of the Victorian Coldry Project, which is a typical value for process plants of a similar nature, growing at an estimated rate of 2.50% per annum. The explanation for the difference between the two scenarios above is due to the installed equipment base needed under each operational mode – fully controlled mode requiring more assets.

Labour cost is calculated according to an estimate of staff required to run a 2 mtpa Coldry Plant based on staffing requirements of process plants of a similar nature. Wages are expected to grow at a rate of 4% per year over the life of the plant.

Contingency costs have been conservatively estimated as a percentage of overall costs. Insurance and laboratory costs have been estimated according to ECT's partner companies' experience in comparable process plants.

The costs associated with transporting Coldry BCE pellets from the Victorian Coldry Plant to off-takers, including train loading and transport to the Port of Geelong, port storage and handling, and shipping to a Chinese port has been estimated at AUD 40 per tonne in line with discussions and negotiations with freight companies.

The sale price agreed between ECT and Datang for the Coldry BCE is referenced to the Qinhuangdao index.

It is important to note that the modular design of our Coldry technology readily facilitates expansion and yields economies of scale benefits as well as rapid deployment opportunities.

Our estimates are based on the waste energy streams being taken from the host power station's condenser cooling water circuit. While the plant is not operated in water recovery mode, the capital and maintenance estimates assume the incorporation of the plant's chiller system. The incremental cost of operating the chiller system is approximately $7.5m per annum per million tonnes of Coldry BCE output capacity. If the recovered water has economic value at or above $10.50 per tonne then it makes economic sense to operate the chiller system. It is important to note that the high temperature aquifers beneath the Loy Yang mine could be well-suited to the energy needs of the Victorian Coldry Project.

Project modelling has been done on an annualised average basis and, accordingly, takes into account varying environmental conditions over a typical year.

The table below summarizes the expected costs, pricing and margins of the 2 mtpa Victorian Coldry Plant.

	Accelerated Mode	**Fully Controlled**
COSTS	**AUD/tonne**	
TOTAL Ex-Works	**$28.82**	**$30.99**
Plus Freight	$40.00	$40.00
TOTAL COST	**$68.82**	**$70.99**
REVENUES		
Qinhuangdao Index[6]	$138.00	$138.00
Less VAT	$117.95	$117.95
Margin opportunity	**$49.13**	**$46.96**

Table 2

Note: Qinhuangdao index is 'F.O.B. port' in China, and includes local VAT. For comparison, the equivalent F.O.B. Newcastle rate (approximately $US 120 per tonne) with ocean freight added (~$US 20 per tonne), represents approximately $US 140.00 per tonne, which should be compared to the $117.95 figure above.

Further, should ECT be able to sell product at pricing similar to the Newcastle benchmark index, margin opportunities could increase towards the level of $70 per tonne.

[6] There is a range of indexes for Coal based on the Qinhuangdao exchange. This is the approximate value today for the index of interest.

Indicative Capital Costs

Plant Mode	Accelerated	Fully controlled
Plant Capacity	2,000,000 tpa	
Expected Capital Cost	AUD 362m	AUD 470m
Expected Life of the Plant (without Value Engineering)	20 years	

Table 3

The capital cost of the plant is based on the technical assumptions listed above. Given the importance of atmospheric conditions in the Coldry process a detailed study of the weather conditions in Loy Yang has been developed. Conservative values for critical parameters have been considered. It can be expected that the capital cost will be significantly reduced thanks to improvements in efficiency identified by McConnell Dowell and the use of prefabricated equipment.

During the DFT process we expect to identify local savings with respect to the fabrication and installation of the Packed Bed Dryer, which will also favourably impact costs associated with the procurement and installation of fans and ductwork. It is also reasonable to assume that during the tendering and subsequent value-engineering phase we will consider cost savings opportunities presented by a suitably-qualified and capable offshore engineering companies to fabricate the key components of the Packed Bed Dryer and associated equipment.

Coal Quality and Markets

Typical Analysis of Coldry BCE pellets produced from Victorian Brown Coal (Lignite)

Feature	Lignite (Brown Coal)	Coldry BCE Pellets	Newcastle Benchmark	Qinhuangdao Index
Moisture	59.3% wb	12.0% arb		
Volatile Matter	20.0% wb	48.9% arb		
Ash	0.9% wb	2.4% arb	9% db max	
Sulphur	0.35% db	0.35% db	0.8% db max	1.0% db max
Net Wet Specific Energy	2,006 kcal/kg arb 8.4 MJ/kg arb	5,874 kcal/kg arb 24.6 MJ/kg arb	6,030 kcal/kg arb	5,500 kcal/kg arb

Abbreviations: wb = wet basis, db = dry basis, arb = as received basis, kcal = kilocalories, MJ = megajoules,

Table 4

The table above includes data from samples developed using ECT's test facilities and pilot plant while processing Latrobe Valley Lignite. The significant improvement over the raw Lignite is obvious.

It is useful to compare to other coal reference indexes and benchmarks to demonstrate the commercial attractiveness of Coldry BCE product.

For Newcastle benchmark coal, the heating value is 6,300 kcal/kg Gross, or 6,080 kcal/kg Net (comparable to the figure shown above). The index Sulphur specification is 0.8% max, with 9% Ash max. Price adjustment is made based on calorific value, with premiums available for lower sulphur and lower ash. This index has a current value of $US 120.50[7] per tonne, FOB Newcastle port.

[7] Platts International Coal Trader, 19 July 2011

For Qinhuangdao benchmarks, the index of interest is the 5,500 kcal/kg Net as received. This index refers to a 1% maximum for Sulphur. Similarly to Newcastle, price adjustment is made for heating value, with premiums potentially available for lower sulphur. This index has a value of approximately $US 138[8] per tonne, FOB Qinhuangdao, inclusive of 17% VAT.

Expected Next Steps

ECT expects the first stage of the DFT (Phase A) will be completed by the end of 2011, which follows the receipt of results of the Datang test burn (est. Oct-Nov 2011). Indicative timelines for the completion of the Project will then be;

- Completion of Phases B and C of the DFT est. Q2 2012
- Indicative construction and off take agreement(s) entered into est. Q3 2012
- Financial close of financing, construction and other project agreements est. Q4 2012
- Commencement of construction est. Q1 2013
- Completion of construction est. Q2 2014
- First sales est. Q3 2014

Given global energy demands and the economics of the Project, ECT believes that if the initial 2MTPA Plant is commercially successful, it will be possible to add additional modules at reduced cost and in significantly less time.

[8] Platts International Coal Trader, 19 July 2011

Initial Project Risk Assessment

Risk Area	Mitigation Strategy
Supply of lignite	An MOU has been signed with GEAC, owner of the Loy Yang lignite, for the long term supply of lignite.
Raw material quality	The lignite supply arrangement with GEAC includes specifications for coal quality, including ash and sulphur content.
Stockpile drying	The climatic conditions in Victoria have been studied in detail in order to establish the optimal drying times in the stockpiling stage.
Self- combustion	According to studies developed by the University of Queensland, the Coldry BCE pellets are more stable than many regularly traded black coals.
Integration	According to the agreement with GEAC, the integration of the Victorian Coldry Plant at the Loy Yang site will be assisted by GHD and WorleyParsons, the engineering companies working on site.
Capital Cost	The capital cost used as an input for the Victorian Coldry Plant financial model is a conservative maximum figure and has not taken into account the efficiencies identified by the joint work of Arup and McConnell Dowell. In addition, the use of prefabricated equipment will further reduce the construction cost.
Plant Construction	A Guaranteed Maximum Price (GMP) contract mitigates the risk involved in the plant construction. The fact that McConnell Dowell enters a GMP contract highlights the confidence this company has in the Coldry technology.
Plant Commissioning	McConnell Dowell, Transfield Services and ECT will work closely together to ensure a smooth handover of the plant from construction to operation.
Plant Operation	The operation of the plant will be undertaken by Transfield Services, an experienced company and a shareholder of GEAC, owner of the Loy Yang mine and power station.
Site, heat and electricity supply	The MOU signed with GEAC includes considerations for the site of the Victorian Coldry Plant and the supply of electricity and waste heat.
Transport	Most of the infrastructure required for the transport of the Coldry BCE pellets already exist and have available spare capacity. The volatility of freight costs is mitigated by long-term contracts.
Off-take	Several parties have expressed interest in the Victorian Coldry Plant product. Datang has signed a MOU with ECT for a long-term supply of Coldry BCE, comprising the entire plant output.

Table 5