ENVIRONMENTAL CLEAN TECHNOLOGIES LIMITED

Shareholder Update

Technology Acquisition & Voluntary Suspension Extension

Tuesday 2 July 2019: Environmental Clean Technologies Limited (ASX: ECT) (ECT or Company) is pleased to provide the following update on the proposed acquisition of a new waste-to-energy (WTE) technology and requests a continuation to the suspension of trading in its securities through to and including Monday 8 July.

Key points:

- Asset Sale Agreement signed for the acquisition of assets related to the CDP group of companies
- Completion of the transaction expected by close of business on 8 July 2019
- Presentation on the acquisition attached
- The Company will come out of suspension on 9 July 2019

Further to previous announcements on 7 and 13 June 2019 the Company is pleased to confirm it has today signed an Asset Sale Agreement (ASA) with liquidators McGrath Nichol for the acquisition of a WTE technology capable of producing automotive diesel from a range of inputs including various waste streams, such as construction wood-waste and end-of-life plastics.

The ASA was finalised and signed 3 days later than was anticipated and as such the completion period now concludes at the close of business on 8 July 2019. The purpose of the completion period is to allow for transfer of the assets and to satisfy all pre-conditions, including final inspection of the assets, and to make payment.

The Company is presently in Voluntary Suspension pending the completion of this acquisition and will seek an extension of this suspension until this transaction is completed or prior to the market opening on 9 July, whichever is sooner. At that time the Company will provide a further update, detailing the transaction, prior to recommencement of trading.

In the meantime, the Company provides the following presentation broadly outlining the technology and its strategic fit with the Company's Coldry process and potential plans for inclusion in its Latrobe Valley project.

Chairman Glenn Fozard commented, "This acquisition has been 7 months in the making and we are eagerly anticipating its application to the Latrobe Valley project amongst other immediate project opportunities."

"Waste to energy (WTE) solutions attract a lot of Government and community support and ECT has potentially identified how the latest WTE technology can be integrated with Victoria's lignite reserves with the aim of producing a diesel fuel refinery virtually unlimited by scale."

The Company looks forward to providing further details of the transaction completion and planned commercialisation program in due course.

For further information, contact:

Glenn Fozard – Chairman *info@ectltd.com.au*

About ECT

ECT is in the business of commercialising leading-edge energy and resource technologies, which are capable of delivering financial and environmental benefits.

We are focused on advancing a portfolio of technologies, which have significant market potential globally.

ECT's business plan is to pragmatically commercialise these technologies and secure sustainable, profitable income streams through licensing and other commercial mechanisms.

About Coldry

When applied to lignite and some sub-bituminous coals, the Coldry beneficiation process produces a black coal equivalent (BCE) in the form of pellets. Coldry pellets have equal or superior energy value to many black coals and produce lower CO_2 emissions than raw lignite.

About Matmor

The Matmor process has the potential to revolutionise primary iron making.

Matmor is a simple, low cost, low emission production technology, utilising the patented Matmor retort, which enables the use of cheaper feedstocks to produce primary iron.

Areas covered in this announcement:

ECT (ASX:ECT)	ECT Finance	ECT India	India Project	Aust. Projects	R&D	HVTF	Business Develop.	Sales

ECT Waste-to-Energy

Waste2Energy

ECT
CDP
Waste2Energy

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This presentation contains "forward looking statements" which involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of ECT, industry results or general economic conditions, to be materially different from any future results, performance or achievements expressed or implied by such forward looking statements. In particular, certain forward looking statements contained in this material reflect the current expectations of management of the Company regarding among other things: (i) our future growth, results of operations, performance and business prospects and opportunities; (ii) expectations regarding the size of the market and installed capacity of our technologies; (iii) expectations regarding market prices and costs; and (iv) expectations regarding market trends in relation to certain relevant commodities, including benchmark natural gas, thermal coal and metallurgical coal prices and foreign currency exchange rates.

Forward looking statements are only predictions and are not guarantees of performance. Wherever possible, words such as "may," "would," "could," "will," "anticipate," "believe," "plan," "expect," "intend," "estimate," "aim," "endeavour" and similar expressions have been used to identify these forward looking statements. These statements reflect the Company’s current expectations regarding future events and operating performance, and speak only as of the date of this material. Forward looking statements involve significant known and unknown risks, uncertainties, assumptions and other factors that could cause our actual results, performance or achievements to be materially different from any future trends, results, performance or achievements that may be expressed or implied by the forward looking statements, including, without limitation, changes in commodity prices and costs of materials, changes in interest and currency exchange rates, inaccurate geological and coal quality assumptions (including with respect to size, physical and chemical characteristics, and recoverability of reserves and resources), unanticipated operational difficulties (including failure of plant, equipment or processes to operate in accordance with specifications or expectations, cost escalation, unavailability of materials and equipment, delays in the receipt of government and other required approvals, and environmental matters), political risk and social unrest, and changes in general economic conditions or conditions in the financial markets or the world coal, iron and steel industries.

The materiality of these risks and uncertainties may increase correspondingly as a forward looking statement speaks to expectations further in time. Although the forward looking statements contained in this material are based upon what the Company believes to be reasonable assumptions, the Company cannot assure investors that actual results will be consistent with these forward looking statements. These forward looking statements are made as of the date of this material and are expressly qualified in their entirety by this cautionary statement. We do not intend, and do not assume any obligation, to update or revise these forward looking statements, unless otherwise required by law. Prospective purchasers are cautioned not to place undue reliance on forward looking statements. This presentation is for information purposes only and does not constitute an offer to sell or a solicitation to buy the securities referred to herein.

ECT Waste-to-Energy

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Executive Summary

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Overview

- Environmental Clean Technologies Ltd (ECT) is a listed company which has developed a number of technologies that aim to convert low grade and waste resources into higher value products with a low or zero emissions footprint.
- One such technology, Coldry, is a patented process that converts a high moisture, low calorific value lignite into a high energy, low moisture, transportable solid fuel or chemical feedstock. It also reduces the CO_2 emissions intensity associated with utilisation, enabling greater sustainability of outcomes.
- ECT has signed a Asset Sales Agreement for the acquisition the IP and assets of the CDP Group of companies which includes the entire global technology rights for the Catalytic Depolymerisation Process (CDP)
- CDP is a technology capable of converting a variety of organic waste feedstocks into high quality renewable diesel with continuous operation. Coupled with Coldry, there are significant potential synergies to provide a highly cost effective and environmentally friendly solution for automotive fuel requirements in Australia.
- Coldry's role in achieving this outcome is based on its abundance and consistency as a baseload chemical feedstock to the CDP process in combination with other waste streams.
- The CDP technology (worldwide patent application lodged No. PCT/AU2017/000137), has been established at pilot scale under continuous operations.
- The pilot program has provided the basis for design of a 1,500L/hr demonstration unit which will require further testing ahead of a full commercial demonstration project.
- ECT proposes to build a second, larger pilot plant in Bacchus Marsh to provide the facility for testing of the CDP process and feedstock with the aim of achieving process guarantees and underwritten funding for the feasibility of a commercial demonstration plant.

Investment Highlights

1	Leveraging of two complimentary technologies to deliver attractive financial and environmental outcomes
2	Significant R&D and further IP potential
3	Scalable technology
4	Effective conversion of a low value resources to high value products (diesel, bitumen, asphalt)

Executive Summary

CDP asset purchase has secured an intellectual property portfolio, including a patent application, to convert waste to diesel using the Catalytic Depolymerisation Process.

- Job and revenue creation – Waste to Energy is a growing industry
- Positive environmental impact
- Scalable - can deal with a large amount of waste
- Diverting landfill
- Fuel security
- Export opportunities
- Circular economy
- Relatively short delivery timeframe

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Catalytic Depolymerisation Technology

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CDP Process

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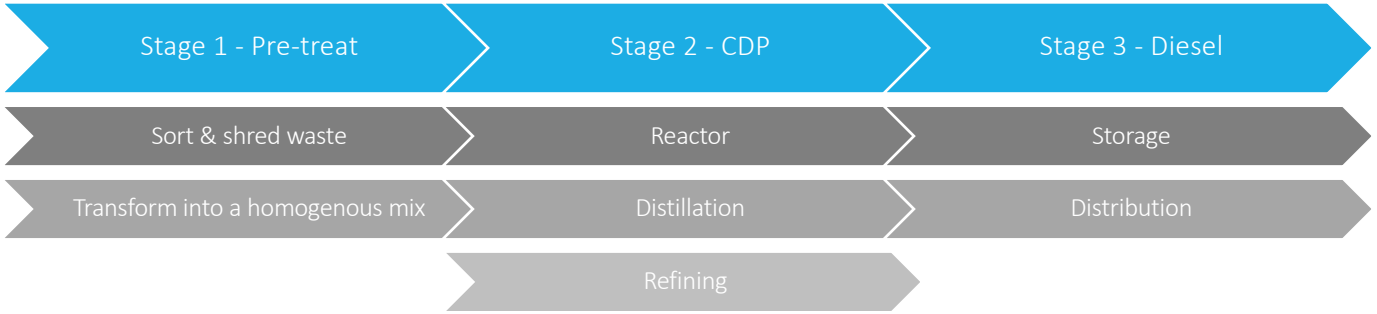
Catalytic depolymerisation process

Catalytic depolymerisation has the ability to efficiently convert a variety of feedstocks, such as construction and industrial waste, plastics or coal, into high-quality renewable diesel which can be used in both the transport sector or for energy generation.

Catalytic depolymerisation is particularly relevant to addressing Australia's growing waste and recycling burden, representing a net economically beneficial solution for local governments, public authorities, energy providers and remote communities. Catalytic depolymerisation will help a broad range of organisations realise improved economic value, environmental outcomes, energy security and social value.

This renewable diesel can be used in transportation and vehicle fleets as well as to generate power when coupled with diesel powered generating plants. Previously, CDP Waste2Energy had focused its research and development efforts on delivering production levels that provide commercially viable and competitive returns to investors, providing a point of differentiation in the W2E market.

Accordingly, the CDP technology is already progressed significantly towards being able to offer a Process Guarantee that ensures continuous and appropriate commercial production levels and diesel quality for the type of feedstock.



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CDP Process

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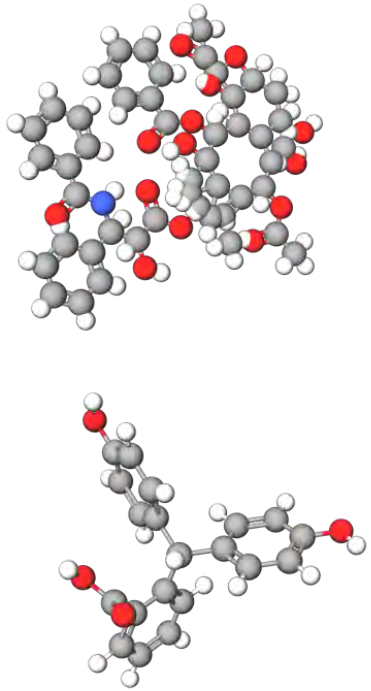
Catalytic Depolymerisation

Depolymerisation, a process for converting polymers into monomers, is used to reduce complex organic materials into high quality synthetic diesel.

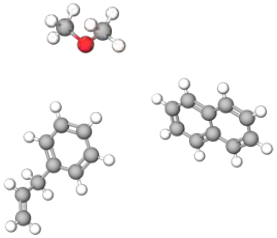
In the presence of a special catalyst, bespoke equipment, relatively low heat and approximately atmospheric pressure, the long chain and cyclic organic polymers decompose into short chain petroleum hydrocarbons.



Complex organic hydrocarbons

Depolymerisation

Polymerisation



Simple hydrocarbons

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Pilot Plant

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Pilot Plant

- The first pilot plant was located in Qingdao, China and was constructed and commissioned to gather data as a part of a CRC-P* grant, in partnership with University of Queensland.
- The pilot plant successfully converted waste timber to produce a heavy petroleum oil in the first week of November 2017.
- Subsequently the pilot plant had a number of further modifications to optimise performance and producing a heavy oil containing both diesel and light end components from waste timber, reaching steady-state and continuous processing for a period of time.
- Data and program evaluation from the first pilot scale program provides the further process step towards commercialisation (refer slide 17).
- The pilot plant in China was not acquired in the assets purchased and has been decommissioned.

* Cooperative Research Centre - Projects

Strategic Opportunities

- ✓ Improving Australia's strategic reserves of fuel
- ✓ Beneficial use of waste solving Australia's "waste crisis"
- ✓ Facilitating regional stability

- Logistics operations and remote and regional energy infrastructure is almost wholly dependent on oil.
- In the near and medium term, there are no alternatives to substitute fossil liquid fuels used for transport in the regions with other fuels.
- Consequently, liquid fuel supply poses an enduring risk to economic security, fuel security, food security and social stability.

"Since 2012, Australia has been in breach of its international obligations because we only hold 55 days worth of fuel as opposed to the 90 day minimum set by the IEA."

Financial Review
"Could Australia run out of fuel?"
June 14, 2019

Contribution to Circular Economy

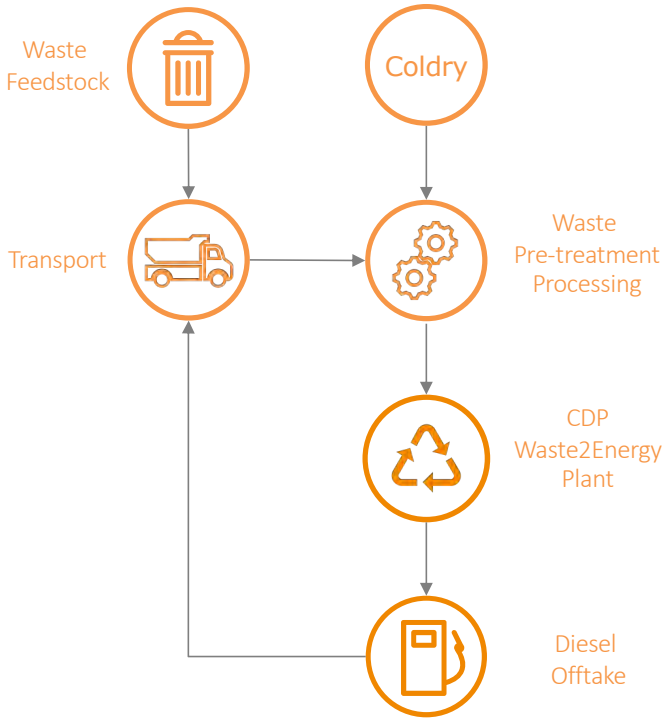
An example Waste to Energy project in the Latrobe Valley

With the strategic acquisition of the CDP assets, ECT has commenced the pathway to development of a Coldry-enabled CDP plant to be established in the Latrobe Valley for the purpose of converting waste and biomass to diesel for the transport market.

Coldry would supplement the waste and biomass, improving homogeneity, and enhancing performance and yield.

Key benefits include:

- Alternative to current recycling and waste-management models, providing a solution that delivers a net economic benefit, rather than cost;
- Transitional solution, bridging the gap between today's use of lignite and a zero emissions future;
- Higher-value application for Coldry process
- Substitution of diesel imports for the transport fuel market



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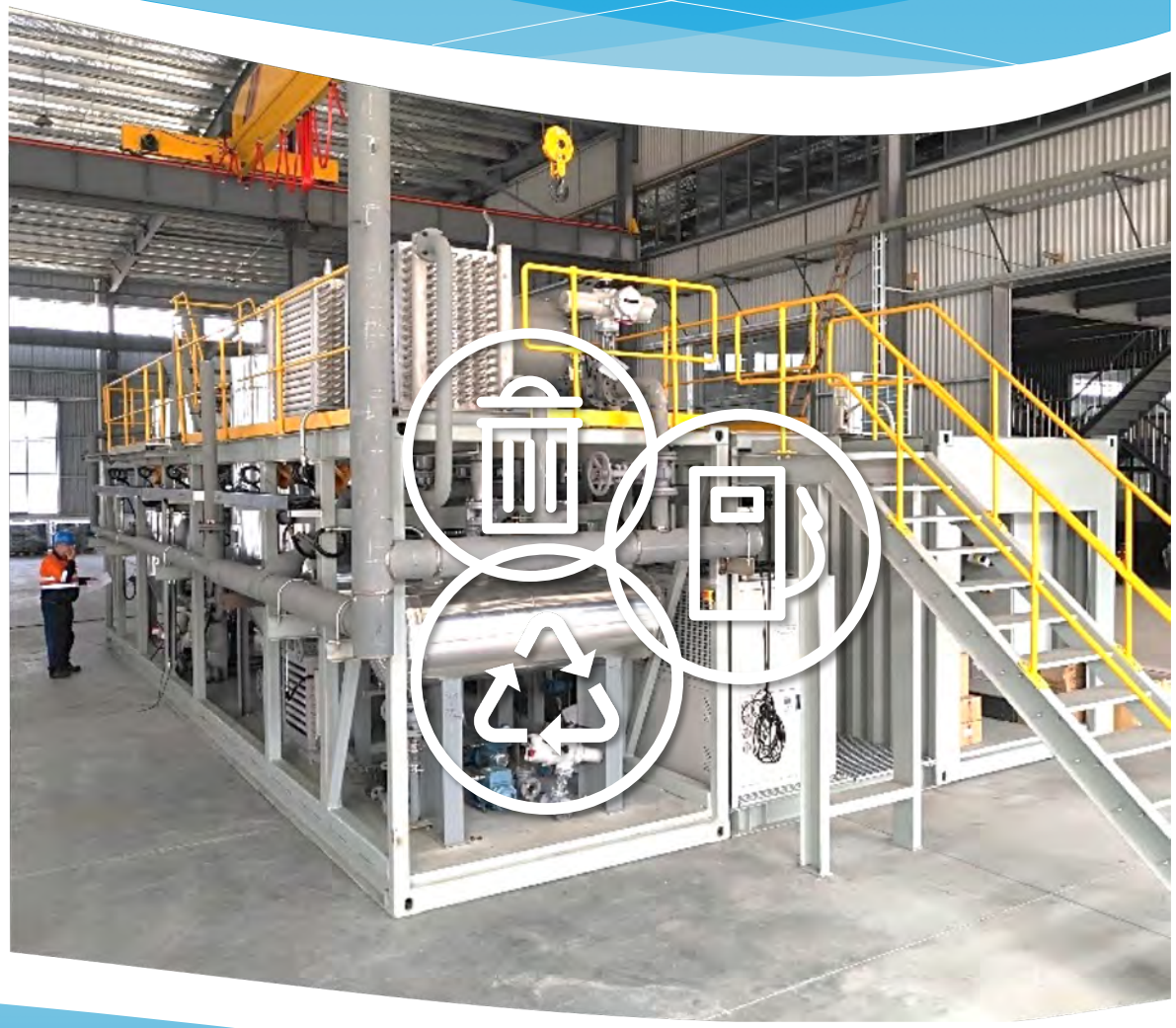
CDP in Comparison to other Waste to Energy Technologies



Four Main Benefits of CDP Technology

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01 Wide variety of waste

With further testing, it is expected that the technology will be able to process a mix of waste feedstock, including:

- Biomass such as paper, cellulose, fats, wood and organic squeezing residues; and
- Fossil fuel derived materials e.g. coal, plastics, oils, bitumen

Eventually, the waste streams could include:

- Municipal Solid Waste (MSW), Construction and Demolition (C&D) waste
- All kinds of plastics and synthetics (PP, PET etc.)
- Biomass (waste plant material), wood, bioderived residues like leaves, straw
- Animal waste
- Coal, crude oil, bitumen, old tyres and refinery residues
- Waste oil, fat and bio solids

02 Environmentally sound management of waste

In comparison to other waste to fuel processes the CDP process is a reaction process that occurs at relatively low temperature and low pressure, complementing the low temperature, low pressure approach of the Coldry process:

- Low temperature and low pressure conditions are a proxy for lower opex and capex and avoid the production of toxic substances such as dioxin;
- The process does not consume any water, reducing the impact on the environment and community, unlike other technologies such as gasification and supercritical processes, and;
- A lower carbon footprint due to a relatively low reaction temperatures (~ 280°C) unlike other upgrading technologies such as pyrolysis (>500°C) and gasification (>700°C).

Four Main Benefits of CDP Technology

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03

Diesel offtake

The high-quality diesel produced through the CDP process not only meets AS3570, but can provide the following benefits:

- not strongly acidic like pyrolysis oils;
- reduced costs per litre;
- diesel can be used to power generators for remote communities; and,
- reduced emissions.

Diesel offtake volumes could be met through a combination of fuel supply agreements to local independent fuel retailers and bulk supply agents and direct supply to the waste management company and logistics transport fleets.

Diesel Offtake

04

Scalable technology

Local governments and other regional waste management operations are required to manage waste environmentally, socially and economically for their customers.

The CDP process is scalable, and could be based on the CDP1500 module size, a 1,500L per hour renewable diesel unit. A project comprised of three CDP1500 plants could deliver an aggregate of 4500L of diesel per hour from 115,000 tonnes of waste per annum.

Scalable Technology

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Comparison to other Waste to Energy Technologies

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Process	Technology	Feed Source	Feed Cost	Complexity/ Capex Cost	Emissions Treatment Required	Level of Emissions	Yield	Product Output	Product Value
CDP	Catalytic depolymerisation	Waste	-	Low-medium	No	Low	Medium	Fuel – Diesel	High
Pyrolysis	High temp pyrolysis	Waste	-	Medium-high	Yes *Flue gas scrubbed and neutralized*	Med	Low-medium	Crude oil	Low-medium *Needs further refining*
Biomass to liquid	Gasification and Fischer Tropsch	Waste	-	High	Yes *Syngas is scrubbed for various contaminants*	Low-med	Low	Fuel – Jet, Diesel, Naphtha	High
Hydrolysis	Hydrolysis (enzymatic or catalytic)	Biomass	Low	High	No	Low	Low	Alcohols – gasoline	Medium *Discount to gasoline*
Transesterification	Esterification reaction	Vegetable oils and tallow	High	Low	No	Low	High	Fuel – biodiesel	Medium *Discount to diesel*
Incineration	Combustion – power plant	Waste	-	High	Yes *Flue gas is scrubbed and neutralized*	Med-high	Low	Electricity	Low

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Commercialisation Plan

ECT Commercialisation Strategy

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ECT's commercialisation strategy is a core part of its business model. Revenue is the goal.

- Commercialisation is the process that converts ideas, research, or prototypes into viable products and production systems.
- Commercialisation relies on the creation of effective manufacturing, supply chain and implementation strategies.
- Research, development and commercialisation require significant investment before revenue is realised.
- Our commercialisation strategy also includes marketing and sales systems, which will seek to drive the transition from research investment to revenue generation.

Commercialisation Pathway

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CDP → Bench Scale → Pilot Scale → Prepare Commercial Demonstration

Target Start Dec 2020

- Consolidate existing IP acquired
- Develop detailed gap analysis, with emphasis on feedstocks reviewed and pilot plant data.
- Develop priority list for further bench testing.
- Expanded bench testing program (Australian available raw materials – including Coldry pellets) to identify critical process parameters, process equipment requirements, mass & energy balance work to determine processing plant requirements

Pilot plant design, construction & operations program

- Data review and pilot plant development program
- Planned raw material mix
- Economic model projections (future commercial assessment rather than Pilot assessment)
- Business case
- Scope development
- Engineering firm selection
- Basic & detail engineering works
- Fabrication, site installation & construction
- Commissioning works
- R&D operations, data gathering & analysis

Demonstration plant development program

- Pilot plant data review
- Design parameters development
- Process guarantee review
- Economic model review
- Monetisation strategy development (e.g. sale, licensing, farm in)
- Investment case development
- Commercial & other partnerships development

Latrobe Valley Demonstration Project Coldry + CDP

Detailed design & construction of a commercial demonstration facility in a manner consistent with the monetisation strategy

Coldry → Feasibility Study → Investment Memorandum → Prepare Commercial Demonstration

Front End Engineering & Design

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Potential Synergies with Coldry

Overview of the Potential Synergies with Coldry

- Coldry product is likely to need less refining to be suitable for the CDP process when compared to other applications.
- The characteristics of the Coldry product are expected to reduce or remove the need for the first stage of the CDP process (being feedstock preparation) making a significant beneficial impact on both the capital and operational cost of the CDP plant.
- The Coldry product could be used to fuel a steam electrical generation system to supply the electricity for the CDP process and make it totally self sufficient.
- There are mutual benefits in co-locating such as reduced rent, transport costs and staffing.
- Consistency of feedstock is important for the CDP process, especially in the initial stages of the first commercial project. The Coldry feedstock can not only potentially satisfy that requirement, but can also be adjusted as required to facilitate testing other feedstocks in addition to Coldry.
- The Coldry process may be able to be adapted to create blends of various waste feedstocks in addition to lignite to facilitate. This potentially could include high moisture content waste such as green waste.
- Further R&D work is being conducted by ECT to investigate the cost effective production of hydrogen. This could save a significant amount of expense relating to the purchase of natural gas for use during the hydrotreating/refining of the CDP diesel.

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Team to deliver the commercial outcomes

Partners

Technology Ownership	ECT
General Engineering	ECT India – Engineering Team
Design Engineering	Dastur
Research & Specialist Engineering	Engineering firms from former CDP group
Business Development	Phil Major – Global BDM

Partners from former CDP group

Commercialisation Pathway							
Technology Push	Fundamental R&D	Applied R&D	Scale Demonstration	Market Development	Commercial Application	Market Pull	

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Research Partnerships

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THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

As a part of the CDP asset purchase, ECT has secured the rights to a Cooperative Research Centres (CRC) Projects grant for projects with the University of Queensland (UQ). This project is led by Associate Professor Steven Pratt and Associate Professor Bronwyn Laycock at UQ's St Lucia and Pinjarra Hills Campus.

Full novation of this grant is expected to occur shortly after the completion of the acquisition, although does require the formal approval of the government department, AusIndustry.

This CRC-P program involves research into diversifying feedstock applications and minimising energy consumption. The outcomes of this research will enable CDP to increase efficiencies, diversity of feedstock and maximise project objectives. The research also gives support to tailored commercial project solutions, focussing on delivering the best results for all stakeholders.

Engineering Partnerships

- The former owner of the assets (CDP Group of companies) had developed many relationships which ECT expects to consider in the future commercialisation of the technology.

- Former Managing Director and original co-inventor, Phil Major, is likely to continue with a Business Development role pursuing interests globally in other CDP projects.

- We are also talking to those engineering firms that were important to the development of the technology to date, with the view of adding continuity to our selection of the engineering team where it makes commercial sense to do so.

- In purchasing the assets, ECT did not accrue any obligation or liability associated to former staff, employees or service providers. The assets have been purchased on the basis that ECT has the internal engineering capability to proceed ourselves, although there is substantial benefit to lead-times by partnering with the prior engineering firms.

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Conclusion

Conclusion

The CDP W2E technology features:

- ✓ Strong synergies with the Company's Coldry process, providing a high value downstream application for Coldry deployment in lignite markets
- ✓ A highly prospective standalone technology in markets with suitable waste streams
- ✓ Suitably advanced in its development to fit well with current Coldry development timeframes
- ✓ Competitive advantage over other waste-to-energy technologies, being low temperature and low pressure, which are proxies for relatively lower opex and capex
- ✓ Production of products that have mature, well established markets and supply chains, facilitating financing and offtake