

Shareholder Update: Coldry Solid Fuel Commercial Trials

Tuesday 6 Feb 2018: Environmental Clean Technologies Limited (ASX: ESI) (ECT or Company) is pleased to provide the following update on the progress of Coldry solid fuel commercial trial activities in the Victorian and Tasmanian markets.

Key points:

- **Performance Testing:** Coldry solid fuel commercial trial program continues to deliver on targeted fuel performance and comparative efficiencies across various types of boiler systems.
- Value Proposition: Trials confirm Coldry solid fuel provides better value when compared with existing in-situ boiler fuel options including briquetted coal, biomass, LPG, diesel, waste oil and natural gas, providing a sustainable and cost-effective option for energy-intensive businesses.
- **Coldry Adoption:** Program participants across Victoria and Tasmania have indicated their intent to progress to Coldry solid fuel trials and if those are successful, to supplement or replace their use of existing solid fuels.
- **Test Product Sales:** Initial trial success has led to preparation of the maiden shipment of test product to Tasmania (see photos below). Further orders will be reported as they occur, along with long term volumes as contracts are finalised.
- Market feasibility LV Project: Current commercial trial program supports the continued development of market feasibility for a proposed first-of-a-kind, zero emission ~170,000 tonnes p.a. Coldry plant in the Latrobe Valley.
- **High Volume Test Facility (HVTF) Upgrades**: Conversion of current leads into contracts will also trigger the next round of upgrades at the HVTF which would allow up to a further 15,000 tonnes per annum of Coldry test product to enter the market for commercial trials.

Further to the Company's previous updates on its local market business development activities (1 & 15 Nov 2017), several trial participants have indicated their intention to enter supply contracts for Coldry solid fuel volumes if further solid fuel trials also prove successful. Confirmation of these contracts are expected to justify the next stage of upgrades at the Bacchus Marsh High Volume Test Facility.

The Company's maiden shipment of test product for a Tasmanian solid fuel trial customer has just been loaded, ready to transport.



Pictures (above, left to right): 20-foot shipping container loaded with Coldry solid fuel, destined for testing in Tasmania. View through the top loading point & close up of Coldry pellets.

ECT Chief Operating Officer, Jim Blackburn commented "The prospects for generation of revenues from our HVTF is an important element to our broader commercialisation strategy that wouldn't have been possible a few years ago. The local market pricing would not have supported test product sales, due to the higher cost of production associated with an R&D scale facility, which are typically non-commercial.

"However, the local market dynamics, inclusive of high gas prices, combined with the Stage 1 and Stage 2 upgrades at our Bacchus Marsh facility which have reduced our average production costs, present a strong opportunity for test product sales.

"Our team have worked in conjunction with logistics support partner Jebsens to develop leads. Several leads have progressed through testing, boiler system assessment and cost-benefit analysis, resulting in orders for live trials. We're now in the process of preparing to gear up production to service these customers.

"We have also partnered with independent boiler system specialist Paul Hoffman to assess and configure customers' existing systems for use with Coldry, in addition to helping end users specify, source, install and commission new boiler systems.

"Rounding off the turnkey approach is the ability to offer equipment finance through our subsidiary, ECT Finance Ltd."

Potential customers include large abattoirs as well as hydroponic and aeroponic facilities.

ECT currently plans to limit upgrades to the HVTF to a maximum 30,000-35,000 tonnes per annum capacity. Given the level of interest received to date, the Company is confident a sustainable market exists for a solid fuel here in Victoria and interstate, to supply energy-intensive industries currently having to manage increasing gas prices and/or limited or irregular supply of alternative solid fuels. As such the Company continues to develop its feasibility study for the establishment of a large scale Coldry demonstration plant in Victoria's Latrobe Valley, the scoping study component of which is anticipated to conclude in February 2018.

Importantly, the proposed large scale Coldry demonstration plant will leverage existing resources and infrastructure, with site selection at Yallourn power station announced on 15 November 2017.

The Victorian demonstration plant will be designed to an output capacity of \sim 170,000 tonnes per annum and will feature a zero CO₂ footprint, having no direct emissions itself.

ECT Chairman Glenn Fozard commented, "Coldry solid fuel is an ideal solution to industries requiring large volumes of process heat.

"Further, it doesn't conflict with the Victorian government's renewable energy target, as neither wind nor solar are suitable for generating reliable, affordable process heat to such industries.

"In this respect, we are competing directly with the prices of natural gas and biomass alternatives, which given the current supply-demand profile, look like remaining high, and possibly escalating, well into the future.

"Beyond supplying these energy-intensive industries, we see potential to grow our Coldry capacity in Victoria over time to support any number of high value applications, including high-efficiency, low-emission (HELE) power generation to deliver reliable, affordable electricity, through to hydrogen production, and upgraded coal products such as activated carbon, PCI (pulverised coal injection) coal, and hydrocarbon liquids and gases.

"All these high value applications can generate jobs while bringing down the emissions intensity of Victoria's world-class brown coal resource."

The Company will continue to provide further updates on the above activities as they progress.

For further information, contact:

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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 CO₂ 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.

About the India R&D Project

The India project is aimed at advancing the Company's Coldry and Matmor technologies to demonstration and pilot scale, respectively, on the path to commercial deployment.

ECT has partnered with NLC India Limited and NMDC Limited to jointly fund and execute the project.

NLC India Limited is India's national lignite authority, largest lignite miner and largest lignite-based electricity generator.

NMDC Limited is India's national iron ore authority.

Areas covered in this announcement: