



## Update on India Project, Waste-to-Energy Technology Acquisition and Request to Extend Suspension

**Friday 7 June 2019:** Environmental Clean Technologies Limited (ASX: ECT) (ECT or Company) provides the following update on its India project and waste-to-energy (WTE) acquisition and requests a continuation to the suspension of trading in its securities through to Thursday 13 June 2019 or in the event of reaching agreement for the acquisition, to the completion date being Tuesday 18 June 2019.

### Key points:

- Voluntary Suspension:
  - India Project
    - ECT to continue suspension whilst awaiting the outcome of the recent NMDC Limited (NMDC) board meeting
    - ECT continue to expand channels of communication between Chairman of ECT, CMD of ECT India and NMDC seeking feedback on NMDC board meeting outcomes
    - If NMDC provide the results from their board meeting in relation to the India project, the suspension could be lifted sooner
  - Waste-to-Energy Acquisition
    - Binding heads of agreement signed and due diligence period to be completed by 12 June
    - Upon agreement by 13 June 2019, completion date set for 18 June 2019

### Background to Voluntary Suspension

The Company requested a voluntary suspension in the trading of its securities from the ASX on 15 March 2019 until 1 April 2019 pending feedback from its India project partner, NMDC, on the status of its process to consider and approve the signing of the Research Collaboration Agreement (RCA).

On 29 March 2019 an extension to the voluntary suspension was granted until 22 April 2019 to address 7 key objectives in achieving certainty around the process and timeframes.

An update on the progress of the outlined objectives was provided on 18 April, with further extensions granted by the ASX until 6 May and then 31 May to allow the Company to pursue confirmation of timing.

NMDC held its board meeting on 28 May 2019 at which time, the proposal to proceed with the India project was tabled for approval.

In previous announcements the Company outlined 7 objectives it was looking to complete. In the last two weeks, objectives 6 and 7 were met, with NMDC advising its internal processes were met and that the India project proposal was on the agenda for consideration at their meeting.

As at the time of this release, and as advised in the announcement on 3 June, whilst the project was an agenda item at the board meeting, the Company is yet to be advised of the outcome of this agenda item and as such is not able to update its shareholders.

Also as noted in the announcement on 3 June, the most recent extension to the memorandum of understanding (MOU) expired on 31 May 2019 and as such a further extension, signed by ECT, has been provided to NMDC and NLC India Limited (NLC) for their approval. NLC have responded to this request and are amenable to the extension pending a response on this extension from NMDC.

ECT Chairman, Glenn Fozard, and ECT India CMD, Shri P Selvakumar are both in contact with NMDC to seek clarity on this matter and a formal response to the both the outcome of the board meeting and the MOU extension.

Further to the proposed extension, ECT has taken the view that direct contact with NMDC by the ECT Chairman and ECT India CMD represents a reasonable attempt to finalise the matter and clarify the outcome of the board meeting. ECT has not received any information, formal or informal, to indicate that NMDC do not wish to proceed with the project. As such it is prudent not to make any assumptions in regard to the outcome.

The priority in allocation of resources will be maintained towards the Company's domestic activities as advised in the announcement of 3 June until an outcome from NMDC is clearly determined. An update on these specific activities will be provided in the near future.

### **Waste-to-Energy (WTE) Acquisition**

As announced on 6 May 2019, the Company has been investigating the potential acquisition of a WTE technology. A Heads of Agreement has been signed and an exclusive due diligence period is currently underway.

The due diligence is expected to be completed by 12 June and, subject to satisfactory outcomes, completion of this acquisition is expected to occur by 18 June.

This acquisition would increase the Company's exposure to higher margins via the deployment of value-added downstream technology within the Latrobe Valley Coldry project currently under feasibility. It is proposed that the technology be developed for deployment globally as an integrated Coldry-enabled WTE plant or as a stand-alone WTE application using other waste feedstocks.

### **Background to the proposed transaction**

Having completed the initial scoping study, ECT is currently undertaking a full feasibility program, for a proposed Coldry commercial demonstration plant in the Latrobe Valley, a project which is targeting an initial plant build of 175,000 tonnes per annum (tpa), with current scaled up potential of ~300,000 tpa.

Continuing from the earlier completed market study conducted by engineering firm GHD, the further identification and evaluation of appropriate markets for either off-take (industrial clients) or direct sales (commercial clients) is imperative to establishing project feasibility.

Whilst ECT will continue to work towards capturing the significant opportunities in the local solid fuel market, an increased focus on developing higher volume, higher value end use markets holds potentially significant long term opportunities.

The clear opportunity here is to work with and leverage the economic and technical efficacy of Coldry as a 'gateway' enabler by optimising the superior traits of this product stream, delivering lower processing costs to integrated downstream applications to maximise margins.

Focusing Coldry production in Victoria on integrated, just-in-time applications shifts the primary focus from lower value 'commodity' markets that require a hard, robust pellet to withstand bulk transport over long distances, to downstream applications that require a softer, more porous pellet. In doing so the production cost of Coldry is minimised. This is because 'export' grade Coldry pellets require a slower processing time. While 'export' grade Coldry is cost-effective compared to other drying processes that may also produce a transportable solid fuel, just-in-time applications require a softer pellet, allowing a faster processing time, facilitating a lower Coldry production cost.

In short, integration of Coldry with suitable higher value downstream applications has the potential to provide access to greater margins compared to a standalone Coldry plant selling into the bulk thermal coal market.

In parallel to the Company's potential development of Coldry in the Latrobe Valley (conversion of a low value resource to a higher value product steam), the broader WTE industry has been emerging as a high growth area for technology solutions and, over the last few years, has been growing in capacity, output and importance, driven partly by supportive government policy, changes to the underlying dynamics of the recycling industry and investment appetite.

As part of the additional market development work, ECT has been reviewing the processing options for this industry segment and has identified an emerging technology which aligns with ECT's strategy for commercialisation of its existing technology suite and corporate values, including:

- Intellectual property (IP) ownership – ECT would own the patent
- Synergy with existing IP – the technology provides an application for Coldry and its efficiency and performance are expected to be enhanced by Coldry
- Novel process featuring low temperature and higher efficiency, consistent with the nature of our Coldry, Matmor, Hydromor and COHgen technologies
- Developing lower emissions solutions for energy and resource challenges.

ECT has been approached in the past by WTE technology providers seeking an integration opportunity with Coldry. In January 2019, ECT was approached by an adviser seeking interest from companies for a bid on the assets of a WTE technology development firm which had recently been placed into liquidation.

Given the comparative strengths of the WTE technology, the attractiveness of the target markets for its outputs, and its fit within the scope of the broader Latrobe Valley feasibility study, ECT undertook an initial technical investigation into whether this WTE process may potentially be suitable for integration with a Coldry plant in the Latrobe Valley to deliver a higher value solution as part of the Gateway Fuels Victoria project.

This review was followed by further commercial and technical reviews by ECT.

At a high level, the prospective adoption of an integrated Coldry-WTE technology would maximise both the native specification of the Coldry 'gateway' product (moisture content, calorific value, low particle size/high friability, etc) and facilitate the higher margin opportunity that may exist in higher value end products (diesel or crude diesel equivalent) produced by the WTE technology.

### **Heads of Agreement and formal Due Diligence**

On 16 May 2019, ECT entered into a binding Heads of Agreement with liquidators McGrath Nichol, for the acquisitions of assets of the CDP Group of companies. The Heads of Agreement sets out the proposed terms of transaction, subject to a 4-week exclusivity period through which detailed due diligence is being completed.

The assets currently being considered as part of the proposed acquisition include:

- Purchase of laboratory equipment used for the core research and development programs for the development and commercialisation of the CDP waste-to-energy technology
- Assignment of Federal Government's Cooperative Research Centre Projects. Funding Agreement and Participant Agreement for the further development and commercialisation program

- Domain names and the right to use the CDP Group's company names
- Associated plant and equipment of the CDP Group
- The entire collective CDP Intellectual Property inclusive of current patent application, R&D data and reference materials, digital file systems and other associated materials.

The transaction is to be formalised in the form of an asset sale agreement and contract novation (subject to the approval of the other contract parties) which encompass the above list of the assets.

Further, the acquisition is subject to completion of a formal due diligence program, due for completion by 12 June, with provisions for an extension of up to 14 days. The due diligence program has been extensive and includes:

- Site visitation to R&D facilities where the laboratory equipment is located and previously operated
- Equipment lists have been validated and verified
- Site visit to the liquidator's office to inspect the digital file repositories and IT equipment lists
- Independent external legal advice on the asset sale deed, IP structure, and other commercial aspects of the proposed transaction
- Advice in regard to the path towards registration of the patent in application

The acquisition is also subject to a number of conditions, including:

- Payment of a \$10,000 rebateable payment for exclusivity during the due diligence period (and any agreed extension). Amount is rebateable against the purchase price of the equipment.
- Agreement upon and signing of all associated transaction documents including the Asset Sales Deed, by all parties.
- Full payment of the final agreed transaction sum currently estimated at AUD \$220,000.

ECT has negotiated financing of the transaction through a partial redraw of the existing Challenge Bricks and Roofing Pty Ltd loan.

Commenting on the transaction, ECT Chairman Glenn Fozard said "We have taken a very thorough and considered path through this proposed transaction to date and subject to satisfactory finalisation of due diligence, look forward to its completion shortly. The possible introduction of this new technology to the ECT Group fits well within our current strategy and provides strong synergies with our advanced planning and feasibility on the Latrobe Valley Coldry project."

ECT will provide further announcements as required.

**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 CO<sub>2</sub> 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:**

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