



Shareholder Update – India Project

Master Project Agreement

Commercial Terms Disclosed Ahead of Canberra Signing Event

Thursday 17 May 2018: Environmental Clean Technologies Limited (ASX: ESI) (ECT or Company) is pleased to announce the commercial terms of the Master Project Agreement (MPA) ahead of the scheduled signing ceremony in Canberra on the 24th of May 2018.

Key points:

- Largest ever research and development (R&D) collaboration between Australian and Indian companies
- Innovative Australian-developed technologies aimed at lower cost, lower emission iron and steel production utilising lower grade or waste iron ore and low-rank coal resources
- MPA to be signed in Canberra in the presence of available Minister(s) and Indian dignitaries.
- Indian partners to contribute 100% of the project funds ~AUD35m
- Special Purpose Vehicle (SPV) will be created upon completion of the R&D phase of the project, with the following ownership:
 - ECT – 49%
 - NLC – 25.5%
 - NMDC – 25.5%
- Global licensing rights will be granted to the SPV, excluding Australia
- Future royalties will be disbursed to the partners according to the SPV ownership percentages

Largest ever R&D project collaboration between Australia and India

On the 24th of May 2018 senior executives of NMDC Limited (NMDC) and NLC India Limited (NLC), two prominent Indian Public-Sector Undertakings (PSUs), will visit Australia to sign India's largest-ever joint R&D agreement with an Australian company.

The agreement represents a milestone for both India and Australia in demonstrating positive support and bi-lateral benefit under the *Australia-India Comprehensive Economic Cooperative Agreement*.

NLC Chairman-Managing Director, Dr SK Acharya will lead the delegation to sign the MPA. The Company is in the process of confirming the availability of relevant Ministers to attend the signing ceremony.

The visit follows approval by NLC and NMDC to sign the MPA with ECT to establish the world's first Australian-designed Coldry and Matmor plant in Tamil Nadu state, India to diversify the use of lignite (brown coal) in the generation of electricity to include the production of steel at lower cost with significantly lower CO₂ emissions.

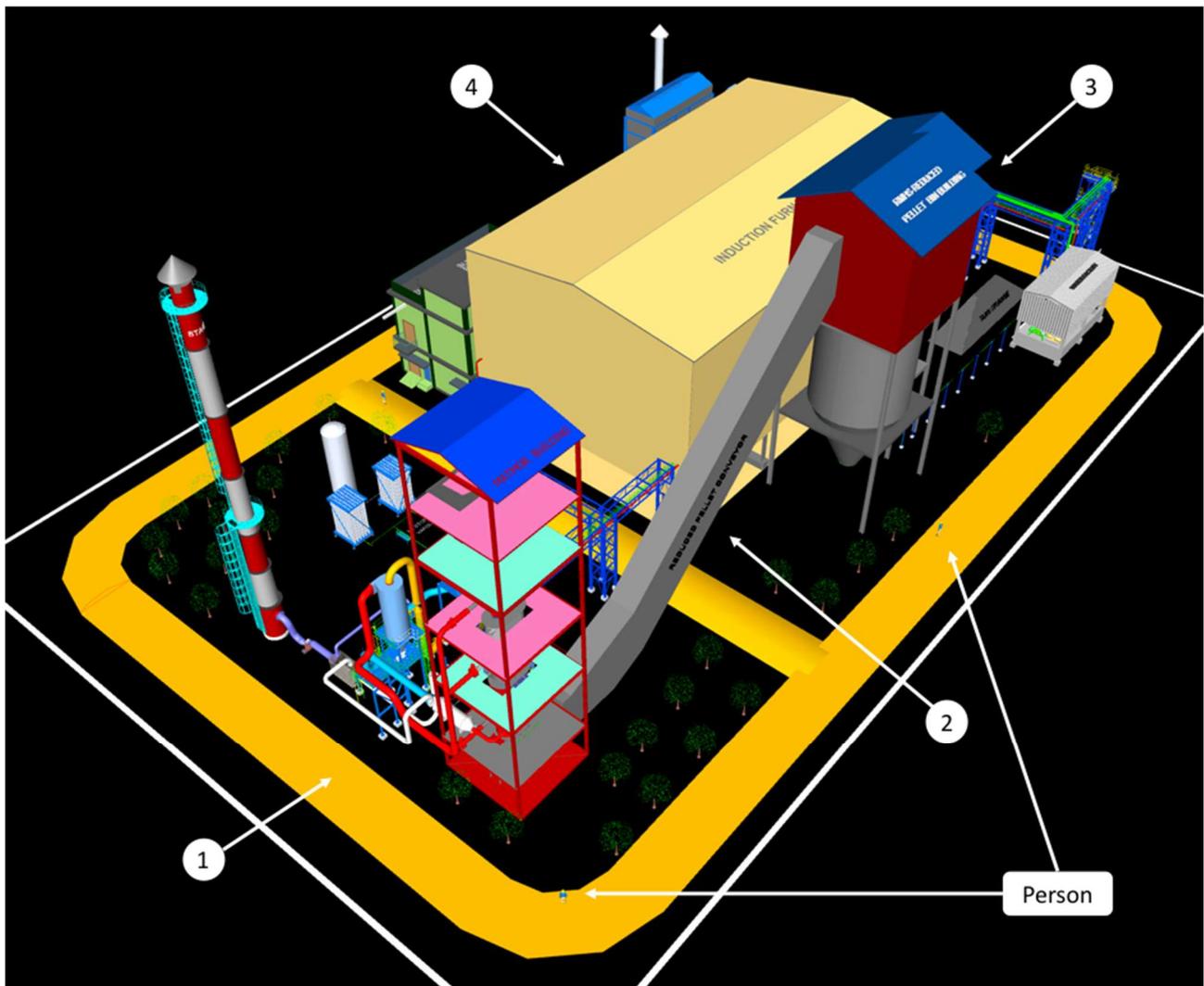
ECT Chairman, Glenn Fozard commented "Matmor represents the most significant departure from primary iron making since the advent of coke-based smelting in 1709. By utilising a predominantly hydrogen-based pathway, Matmor enables the use of abundant, lower cost alternative raw materials and lower CO₂ intensity.

“We believe Matmor is positioned to revolutionise primary iron making thanks to its unique chemistry and efficient furnace design.

“Matmor’s ability to utilise alternative, lower cost resources such as iron ore fines and lignite to produce iron and steel helps to address the real-world issues faced by India as it strives to mitigate emissions intensity in the face of ambitious growth targets.

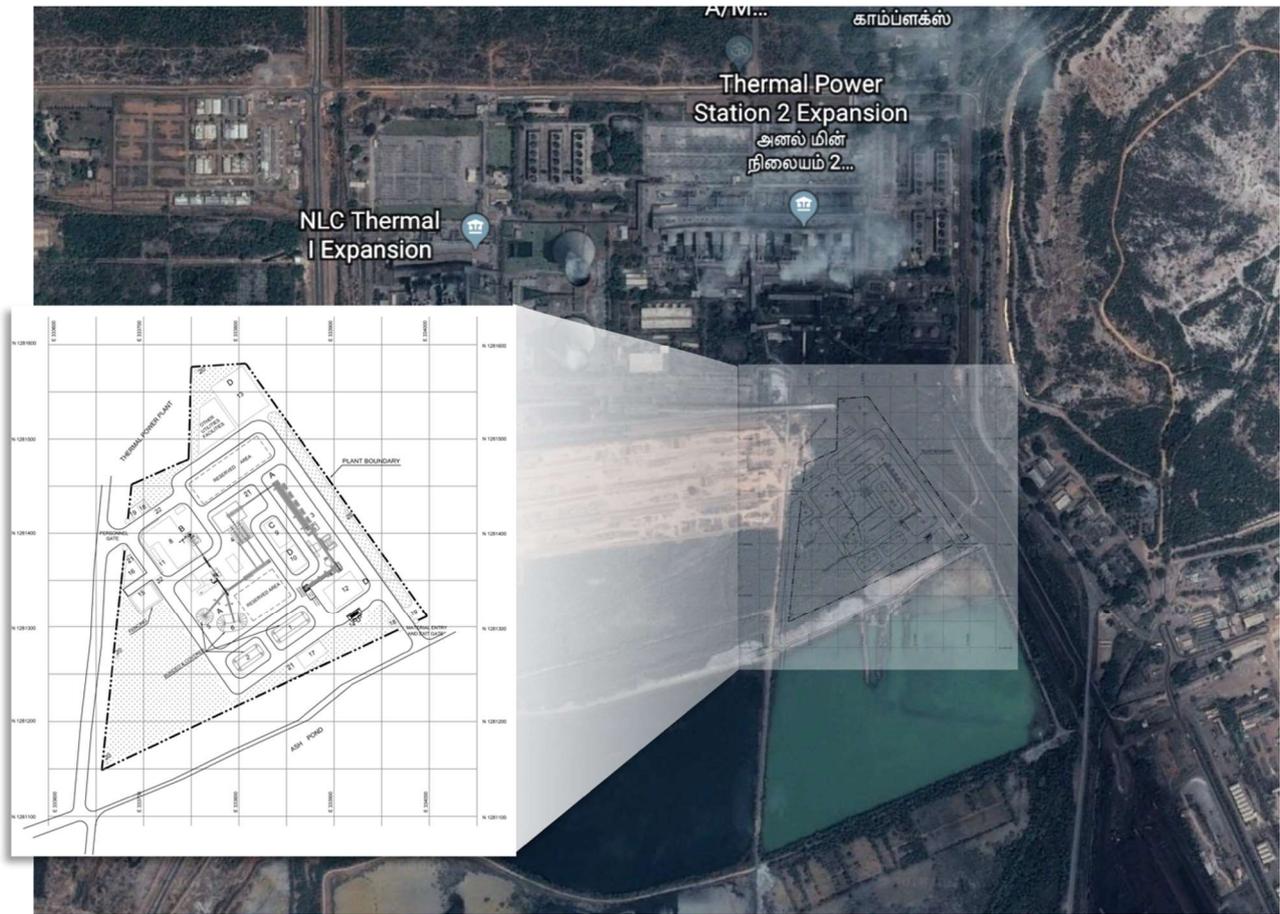
“India is the perfect place to develop our technologies and India’s national iron ore and lignite miners, NMDC and NLC, are ideal partners.”

Commencing with an ~AUD35 million R&D phase, the project aims to scale up ECT’s Matmor and Coldry technologies to deliver an integrated Coldry demonstration and Matmor pilot plant to validate their technical and economic feasibility at a capacity of ~2 tonnes of metal per hour.



(1) Matmor Retort & ancillary plant: two tonnes per hour metal output (Coldry plant not shown); (2) Reduced pellet transition conveyor; (3) Reduced pellet storage silo; (4) Melting & casting.

Following successful phase one R&D outcomes, the agreement provides the framework to proceed with a commercial-scale integrated steelmaking facility. The parties have previously contemplated the potential scope for the commercial phase via the techno-economic feasibility study completed in July 2016, which includes a notional capacity of 500,000 tonnes per annum steel output and an estimated AUD300 million capital investment. The site for the R&D plant has been chosen to allow room for expansion into a commercial-scale facility.



Australian Government support for innovation

The MPA provides the foundation for an ~AUD35 million investment by India to implement the first stage of the joint R&D project, which will also include R&D activity to be undertaken in Victoria.

The project, while located in India, brings international investment to an Australian technology which has been the direct recipient of the Australian Government's support for innovation via AusIndustry's R&D Tax Incentive program.

The Company has received an advance finding and overseas ruling for the Coldry component of its R&D activity in India, in addition to R&D Tax Incentive contributions of over AUD12 million since 2009.

An application for an advance finding and overseas ruling for the Matmor component has been submitted and remains in process.

The Technologies

Matmor is the world's first and only lignite-based primary iron making technology capable of replacing metallurgical coal and high-grade lump iron ore with lower-cost alternative raw materials thanks to its unique chemistry and furnace design.

The process is built on a unique chemical pathway that utilises hydrogen, enabling lower operating temperatures and shorter process times than the traditional blast furnace route.

The anticipated lower cost of the Matmor technology when commercialised provides a realistic basis for achieving zero-net CO₂ emissions from primary iron production, a goal which has eluded the commercial world of steel making despite many attempts.



Picture: Steel produced via the Matmor process

Coldry is a unique, zero-emission, lignite upgrading technology capable of producing a solid fuel for use in power generation, industrial thermal applications and as a feedstock to higher-value downstream applications such as coal to liquids, gas, fertiliser, chemicals, chars, activated carbon, hydrogen and steelmaking (via the Matmor technology). Coldry solid fuel is significantly less CO₂ intensive than lignite.

Deal structure - NLC and NMDC to fund 100% of the project

Over the past several months, the partners have worked to finalise the terms of the MPA underpinning this first-of-a-kind project.

Jim Blackburn, ECT's COO, commented, "the Directors and executives of the project partners have been working closely over the past six months and have considered a number of different structures and funding models. Each iteration has had inherent benefits and complexities, especially when you consider we have two Indian PSUs (NLC and NMDC) working in collaboration with an Australian listed company (ECT). Aside from direct and indirect tax, legal and jurisdictional issues, all parties have remained focused on a structure which best facilitates a successful project outcome."

These negotiations considered the mutual benefits to each partner for the long-term as well as the merits of the structure in the short term.

The most notable change to previous disclosures is the funding and ownership basis. The parties had initially contemplated a one-third contribution each to the project, with a 75% (ECT), 12.5% (NLC), 12.5% (NMDC) ownership split. The result of this change is that NLC and NMDC will each take a 25.5% position in the SPV.

Notwithstanding the preparations that ECT made to fund its anticipated one-third portion, the Indian partners will fund the entire capital and operating cost of the project. The driver for this outcome was recommendations stemming from the Independent Financial Review (see announcement 8th of March 2018) entailing three key factors:

- Firstly, it allows our project partners NLC and NMDC to maximise their R&D investment into projects which most strongly align with their technology development, innovation and commercial strategies
- Further, this funding structure reduces the overall complexity and financial risk associated with international taxation and R&D funding elements. With all R&D funding occurring in India, we have achieved a more streamlined financial model
- Lastly, by more closely aligning the division of equity in project intellectual property, there is naturally a greater commercial incentive for our partners to bring their substantial resources to bear on future commercialisation of the technology

Jim Blackburn stated, “ECT is very pleased with the final structure and funding arrangements as set out in the MPA. We believe this provides a strong and sustainable basis for delivery of the pilot plant project in India and a springboard into the future commercial pathway. At the same time, it preserves ECT’s ability to realise the full potential of its proposed Australian projects including both Latrobe Valley and Bacchus Marsh

The MPA sets out the agreed terms which will be transposed to a set of detailed sub-agreements. These include a Master Technology Licence Agreement, Tripartite Collaboration Agreement and NLC, NMDC and ECT Services Agreements.

“Over the next 48 hours we will have each of the draft sub-agreements in circulation and under review by the project partners. Whilst we have targeted project financial close by 30 June, the MPA provides up until 31 July 2018 to complete the sub-agreements. Importantly, the revised date will give the parties the necessary time to complete, consider and incorporate the budget estimates and detailed project plan stemming from the completion of the Basic Engineering Design, as required.

The ownership structure of any Intellectual Property (IP) developed under the project, in addition to the royalty splits and licence marketing rights, have been designed to mutually benefit all partners, creating a sustainable long-term driver for growth and commercial roll-out.

Jim Blackburn commented, “NLC and NMDC have shown great resolve and consideration in finalising the agreement terms and the final ownership structure ensures ECT has the backing of large partners with an aligned interest to continue to develop commercial projects globally as well as in India.”

The details of the revenue model will be the subject of further announcements in parallel with finalising the detailed sub-agreements.

Master Project Agreement – key commercial terms

The proposed structure for the project includes the following key commercial terms:

- The project will be undertaken by the parties on the basis of a R&D collaboration that is created and governed through a Tripartite Collaboration Agreement to be entered into between the parties.
- The MPA provides the key terms to be transposed to a number of detailed sub-agreements which will govern the execution of the project comprising:
 - Master Technology Licence Agreement
 - Tripartite Collaboration Agreement
 - NLC Services Agreement
 - NMDC Services Agreement

- ECT Services Agreement.
- The MPA states a 'sunset date' of 31st of July 2018 by which time the parties have committed to have finalised, approved and executed the project sub-agreements.
- The detailed design, construction, commissioning, operation, maintenance and assessment activities for the project will be carried out as part of the R&D Collaboration.
- Each party will make the following up-front contribution in consideration for its respective deferred equity share in SPV:
 - NLC – Payment of an amount equal to 50% of the required capital expenditure and operating expenditure for completion of the pilot plant project
 - NMDC – Payment of an amount equal to 50% of the required capital expenditure and operating expenditure for completion of the pilot plant project
 - ECT – Provision of an exclusive global (excluding Australia) licence in relation to the intellectual property rights relating to the Coldry and Matmor technologies existing prior to the date of the MPA (pre-existing IP), noting that:
 - The SPV will be established by NLC and NMDC on the earlier of:
 - final project completion;
 - any registrable IP coming into existence through the project; or
 - as mutually agreed between the parties.
 - The equity in the SPV will be issued in the proportions of:
 - 49% ECT
 - 25.5% NLC
 - 25.5% NMDC
 - Upon the establishment of the SPV, all project IP will be assigned to the SPV, and the SPV will become a party to a number of key party project agreements including the Master Technology Licence, NLC Services Agreement, NMDC Services Agreement and ECT Services Agreement.

ECT's immediate future and next steps

The signing of the MPA is an important milestone for ECT, ushering in a new phase of activity and growth for the Company.

In support of this transition a Steering Committee will be established, chaired by ECT director Barry Richards. The mandate of the Steering Committee will be to provide support, guidance and oversight of the project ahead of the official formation of the collaborative tripartite structures.

To support the project, ECT will bolster its skillset with a particular focus on project management and local Indian experience. Key appointments and changes to existing roles will be advised to the market as they occur.

Following project financial close, the partners intend to commence site works at NLC during July/August 2018.

Local project activity in Australia will increase; ECT has prioritised its focus in recent months on progressing the India project and in particular the finalisation of the agreements at hand. Moving forward the Company will allocate resources to the development of its Coldry high-volume test facility northwest of Melbourne, driving domestic solid-fuel sales and the finalisation of the previously announced feasibility study for the Latrobe Valley project.

The Company anticipates that continued commercialisation success of the Company's unique technologies in the Indian project will open many future opportunities.

This update provides a high-level overview of selected elements of the MPA and the Company looks forward to announcing additional details including the revenue model and project plan, 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 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:

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