ENVIRONMENTAL CLEAN TECHNOLOGIES LIMITED

Historic Australia-India R&D Collaboration Agreement Signed

Wednesday 30 May 2018: Environmental Clean Technologies Limited (ASX: ESI) (ECT or Company) is pleased to announce the signing of the Project Agreement with NLC India Limited (NLCIL) and NMDC Limited (NMDC) for the largest-ever joint R&D collaboration between Australia and India.

Key points:

- Project Agreement signed today in Canberra in the presence of India's High Commissioner, Dr Gondane
- Australia and India join forces to develop ECT's low emission iron and steel process via an integrated Coldry-Mamtor plant to be built in India
- The Project aims to jointly develop an integrated Coldry-Matmor pilot plant in India
- Delegation to visit Parliament House on Thursday 31 May 2018 to meet available Ministers

Photo (from left): Mr V. Manoharan (Chief of NLCIL's Centre for Applied Research and Development), Mr P. Selvakumar (Director Projects & Planning, NLCIL), Mr Ashley Moore (Chairman-Managing Director, ECT India), Mr Glenn Fozard (Chairman, ECT), Dr N.K. Nanda (Director – Technical, NMDC) and Mr Rajan Kumar (General Manager – R&D, NMDC).

Further to recent announcements in the lead up to today's Signing Ceremony, senior executives and Directors from NLCIL, NMDC and ECT executed the Project Agreement in the presence of His Excellency, Dr A.M. Gondane and representatives from the Australia India Business Council.

The ceremony, led by ECT Chairman Mr Glenn Fozard, featured speeches by the Mr P. Selvakumar, Director (Projects & Planning) at NLCIL, Dr Narendra K. Nanda, Director (Technical) at NMDC and Mr Ashley Moore, Chairman-Managing Director of ECT India.

Mr Fozard commented "We've spent the past four years building the relationship and crafting the process with NLCIL and NMDC in India with the aim of taking our two technologies – Coldry and Matmor – through the scale up process and, if successful on to commercial deployment.

“Today marks a significant milestone on the journey which, all going to plan, will see the commissioning of our Coldry-Matmor pilot plant in India by the end of 2019.”

During the ceremony NLCIL’s Director of Projects and Planning Mr Selvakumar noted, “We want to use our lignite for alternative purposes. We want to dry the lignite. Coldry is a good technology for transforming lignite. When discussing lignite use with NMDC, we saw the opportunity to work together to achieve iron ore reduction as well, adding higher value to our resource through new applications.”

“We look forward to a successful project for the betterment of India.”

Dr Nanda, Director (Technical) of NMDC added, “We are standing here on this auspicious day to sign this agreement to build the pilot plant. If the pilot plant is successful, it can be taken to commercial scale.”

“We wish the project great success for all companies and both countries.”

His Excellency, Dr. Gondane (below, second from right) was quick to add his support to the collaboration, noting the importance of the project to addressing the challenges faced by India.

Photo (from left): Mr Ashley Moore (Chairman-Managing Director, ECT India), Mr P. Selvakumar (Director Projects & Planning, NLCIL), Mr Glenn Fozard (Chairman, ECT), Dr Gondane (High Commissioner for India in Australia) and Dr Narendra K. Nanda (Director – Technical, NMDC).

Next Steps

The Project Agreement sets out the agreed terms for detailed sub-agreements. These include a Master Technology Licence Agreement, Tripartite Collaboration Agreement and NLCIL, NMDC and ECT Services Agreements.

Following execution of the detailed sub-agreements the commencement of project works will be funded and able to commence.

The parties are on track to deliver these agreements by the end of August and look forward to providing further updates as activities progress.

Background

The agreement sees the commencement of the next stage of development for ECT's two proprietary technologies:

- **Matmor** is the world's first and only lignite (brown coal)-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, hydrogen-based chemistry and furnace design.
- **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 products such as hydrocarbon liquids, gas, fertiliser, chemicals, chars, activated carbon, hydrogen and steelmaking via the Matmor technology. Coldry solid fuel is significantly less CO_2 intensive than lignite.

The project entails two phases, commencing with an AUD 35 million R&D phase funded by the Indian partners, which aims to scale-up ECT's Matmor and Coldry technologies to deliver an integrated pilot plant capable of producing ~2 tonnes of metal per hour.

Following successful R&D outcomes, phase two involves commercial expansion, targeting an integrated steel making facility with a proposed capacity of 500,000 tonnes per annum and an estimated cost of AUD 300 million.

The partners will then assess opportunities for global commercial expansion based on market assessment at that time.

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.

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