



High Volume Test Facility Upgrades Complete

Friday, 16 December 2016: Environmental Clean Technologies Limited (ASX: ESI) (ECT or Company) is pleased to announce that the upgrades to its Bacchus Marsh High Volume Test Facility (HVTF) have been successfully commissioned and completed. The Company will now start a detailed R&D test program at this facility.

Key points:

- Coldry pilot plant upgrades deliver high volume test capability up to 15,000 tpa
- Improved operational range, capability and flexibility for conducting broader R&D
- Output of suitable specification available for sale into the Victorian market

Bacchus Marsh High Volume Test Facility (HVTF)

Further to previous updates, the Company is pleased to advise it has completed the commissioning of upgrades to its HVTF and will commence a detailed R&D test program.

The upgrade project delivers expanded capabilities, including:

- Process scalability / testing at higher product throughput
- Greater measurement & control of plant inputs, outputs and sequencing
- Ability to simulate a wider range of plant integration options, including Matmor and HydroMOR
- Broader range of product application testing (Coldry as a potential front end to other value added technologies, e.g. Char, Urea, synthetic natural gas & hydrogen)

The Company's Bacchus Marsh Site Manager and Coldry Chief Engineer, Mr Warrick Boyle, commented "This works program has been a revitalisation of our facility here in Bacchus Marsh. We have improved our capability and capacity enormously, and I'm very pleased with how the plant commissioning has progressed and look forward to getting on with our valuable R&D, as well as servicing any customer interest from the incidental product output."

The Coldry HVTF has not only increased its capacity up to 15,000 tonnes per annum, which doubles its previous capacity, it has reduced the cost of running these tests to the extent that sales of any suitable product would be sold at a significant earnings margin, given current Victorian market pricing for solid fuel and natural gas.

The Company has achieved the primary objectives of this project:

1. Improved test and R&D capability at a size and scale able to support the commercialisation and continuous improvement of our technologies
2. Economic efficiency of these test facilities to provide both an intellectual asset and an economic asset

The ensuing test program will focus on the assessment and validation of various new parameters enabled by the upgrade, including process temperature and residence times at various stages within the process. In addition, other highly technical parameters and their influence on resulting product specification changes will be thoroughly assessed.

ECT Managing Director, Ashley Moore commented, "This activity is linked to preparations for the Coldry-Matmor Demonstration plant in India, which will include a sub-project focusing on the development of a control system algorithm that will manage process parameters in a complex, coupled, multivariate system."

"The test program will also extend to the development of data to better understand how the process and its control algorithm need to react in response to changes in raw coal specification."

“The implications for the Bacchus Marsh HVTF extend beyond the activity aimed at helping prepare for our India project, to the generation of new knowledge to support our design efforts for subsequent applications, such as integrated front-end rapid drying solutions for coal upgrading processes and improved final product specifications.”

A more detailed background to the upgrade project including a series of photos and diagrams will be released over the coming days.

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 licencing 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.