ASX Announcement

15 July 2024

ECT and ESG Agriculture sign Joint Venture Heads of Agreement

Highlights:

- **Commercial Milestone:** The HoA advances the commercialisation of ECT's agricultural net-zero COLDry technology following the MOU deliverables, validating product process and product efficacy.
- **Innovative Product:** The collaboration under the MOU created a lignite-based nitrogen soil health product, meeting the demand for cost-effective fertilisers and enhancing soil carbon levels while maintaining nitrogen efficacy.
- **Product Volume:** Initial product output of 30,000 tonnes per annum, with the opportunity to increase volume with no additional capital expenditure.
- **Strategic Partnership:** the HoA sets the pathway for a commercial scale validation of the process and concurrently delivers cash flow, boosts shareholder value, and demonstrates infield technology deployment, solidifying ECT's leadership in sustainability.

Environmental Clean Technologies Limited (ASX:**ECT**) ("**ECT**" or "**Company**") is pleased to announce the signing of a binding Heads of Agreement (**HoA**) with **ESG Agriculture Pty Ltd** ("**ESG**") for the development and offtake of soil health products. This HoA follows an existing Memorandum of Understanding (**MoU**) announced on 4 April 2024 and is a precursor to a detailed Joint Venture (**JV**) between ECT and ECG.

The MoU is now replaced by the HoA, and completed activities as outlined in the MoU validate the ECT and ESG processes, including COLDry, which serves as the front-end feedstock preparation process.

These activities included:

- Chemical composition tests
- Expert reviews
- Batch testing
- Granulation testing
- Volume and ramp-up design
- Financial modelling and sensitivity testing
- Plant upgrades

Initial results from small batch tests conducted by an ISO-accredited laboratory, HRL Technology, indicate a successful blending of lignite and nitrogen ingredients with almost no loss (<1%) of nitrogen content over the process. Initial field trials will be conducted in the coming weeks. Subsequent large field trials will be undertaken over the next 3-6 months and will target large cropping farms in South Australia, Victoria, NSW and Queensland. Concurrently, techno-economic analysis conducted by the team, mapping capex, opex, and market pricing, indicates this is a commercial proposition to be executed across two distinct stages:

- **Stage 1 – Baseline demonstration**
  This stage is intended to focus on building the COLDry process connected in-line with granulation at scale. The intent is to sell a commercial quantity of fertiliser whilst field trials are converted into bankable off-take. This stage will not prioritise financial performance, with the emphasis placed on de-risking the engineering and bankability of the project.
- **Stage 2 – Optimisation**
  This stage, which will follow Stage 1, will aim to optimise key operational and process parameters to expand the earnings footprint in line with a de-risked baseline of operations and performance. Key areas of optimisation will include blending, zero-cost waste heat, net zero impact, 24/7 operations, and drying acceleration.

Stage 2 will expand the earnings of the plant substantially.

These results give ECT and ESG confidence to advance to a collaborative, whole-of-value chain JV. The HoA establishes this commitment and outlines the JV's principles.

Addressing Market Demand for Sustainable and Cost-Effective Alternatives

The agricultural sector faces unprecedented challenges, contending with the rising costs of conventional fertilisers, declining sustainability, reduced soil carbon content, and the widespread effects of climate change. To address these issues, ECT and ESG Agriculture provide alternative, cost-effective fertilisers that enrich soil and crops while restoring carbon levels to our soils.

Benefits of Lignite-based Nitrogen Fertilisers

The innovative lignite-based nitrogen fertiliser offers several benefits, including:

- **Enhanced Nutrient Retention**: The lignite component improves soil structure, allowing for better water and nutrient retention.
- **Improved Soil Carbon Levels**: This blend helps restore soil carbon levels, promoting long-term soil health and sustainability.
- **Cost-Effective Solution**: This fertiliser combines lignite, a low-cost feedstock, with a nitrogen feedstock, offering a more affordable alternative to traditional fertilisers.
- **Reduced Emissions**: The blend supports ECT's net-zero targets by reducing greenhouse gas emissions associated with fertiliser production and use.

The Challenge and Solution of Creating Lignite-based Nitrogen Fertilisers

Lignite, a type of brown coal, has a high moisture content, making it challenging and costly to process using traditional high-temperature drying methods, which increase production costs and reduce economic viability. Achieving a uniform blend of lignite with traditional nitrogen feedstock is complex due to their

different properties. High temperatures cause nitrogen fertilisers to undergo thermal decomposition, leading to nitrogen loss, biuret formation, safety hazards, and reduced efficiency.

ECT's patented low-temperature COLDry process, validated by scaled product testing, mitigates these risks. This innovative approach uses low-temperature and low-pressure drying technology, significantly reducing energy consumption and costs. The process efficiently produces a granulated lignite-based nitrogen fertiliser, providing a cost-effective and sustainable option for improving soil health.

Pathway to a Full Joint Venture

The HoA is designed to achieve the following key objectives:

- Joint Venture Agreement (JVA)
- Project funding/financing Plan
- Project Execution Plan.

After analysing the options, ECT and ESG have agreed that the optimal strategy is to modify the existing Bacchus Marsh COLDry demonstration plant. This modification will transform the plant into a full-scale facility producing 30,000 tonnes per annum of finished product.

Success at the initial scale will serve as a working demonstration of a commercial COLDry plant and underpin the feasibility of a larger plant, with target sites currently under review.

ECT Managing Director Sam Rizzo commented:

> *"The testing results have exceeded expectations, confirming our ability to manufacture a lignite-nitrogen blend at a cost and product specification in accordance with consumer expectations. Additional testing will focus on blend and moisture ratios to define product and process optimisation.*
>
> *"The key to our success is the COLDry process, which combines raw materials and processes them efficiently and cost-effectively. We are looking forward to working with ESG to advance the project."*

ESG Agriculture Director Mark Scanlon commented:

> *"This agreement with ECT marks a significant step towards a joint venture that will enhance our ability to provide comprehensive value chain solutions and support the agricultural sector through soil health products, impactful reporting, and other ESG advisory services."*

Summary of the Terms of the Heads of Agreement

The Objectives of the Heads of Agreement for a Joint Venture (JV) includes:

A. Equal ownership of the JV;

B. Building, owning, and operating a COLDry based fertiliser plant at JBD Industrial Park in Maddingley to initially produce 30,000 tonnes per annum of finished fertiliser product ("Stage 1 Plant" or "Baseline Plant");

C. Expanding the Stage 1 Plant ("Optimised Plant") to produce increased volumes of finished product.

D. Defining areas of responsibility for the Parties to include, but not limited to:

a. ECT being responsible for design, engineering, project management and operating and maintenance of the plant.

b. ESG being responsible for sales, marketing and distribution of the finished product.

E. Identifying sites and locations for larger projects across Australia and overseas;

F. Continue to expand the manufactured product suite to include other ESG Agriculture fertiliser products;

G. Jointly developing intellectual property and rights (IPR or IP) with some exclusions to pre-existing IP;

H. Establishing an operation that would manufacture lignite-based soil health and fertiliser products, providing a facility for ongoing R&D, commercial demonstration, and integrating the parties' relative competitive strengths;

I. Share equally in the costs and profits of the joint venture.

Other key terms of the Heads of Agreement include:

- 30th September 2024, being the Target Date for the completion of:
  - Joint Venture Agreement
  - Business Plan for the Project
  - Project Execution Plan
- Costs to be shared by both parties leading up to the JVA
- Sunset Date of 30th November 2024
- The JV is an exclusive agreement between the parties for the manufacture of lignite-based fertiliser products.
- The agreement is binding upon the parties.

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This announcement is authorised for release to the ASX by the Board.

About ESG Agriculture

Founded by leading Agricultural Executives with proven results in developing marketing-leading solutions, **ESG AGRICULTURE** is positioned to be a solution provider of soil health products and advisory services, supporting growers on their practice change journey towards reducing their carbon footprint.

Competitive Advantage:

ESG Agriculture is a beacon of practice change supporting every single grower on the ESG journey. The 4 pillars to successful practice change offered by ESG Ag include:

1. Scope and Assessment
   - Work with the grower to establish scope of their practice change project
   - Assess their current Environmental (carbon), Social and Governance practices

2. Practice Change Solutions
    - Proprietary Fertiliser products
    - Composting Solutions for soil health on farm
    - Advisory support on Social and Governance
3. Measurement and Reporting
    - Measurement and reporting with the ESG Agriculture “ESG toolkit”
4. Industry Partner and Education
    - Partner with leading services to Agriculture across banking, finance and real estate

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Forward-looking Statement

This announcement may contain forward-looking statements regarding future events or performance, including but not limited to projections of financial results, anticipated growth, and business strategies. These forward-looking statements are based on current expectations, assumptions, and projections that involve inherent risks and uncertainties. Actual results may differ materially from those anticipated due to various factors, including market conditions, regulatory changes, technological advancements, and economic conditions.

Investors are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date of this announcement. The Company undertakes no obligation to update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise, except as required by applicable securities laws.

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