

Dear Crowdcube investors,

We hope that you are well, and we would like to extend to you our very best wishes for 2023.

In the second part of 2022, our focus has been on getting the Caledon Green plant at Grangemouth completed, commissioned and in production. This update provides a summary of the developments at Caledon Green since our last update and our preparations for the future. The key points we would like to make you aware of are:

1. Progress on the commissioning of the Caledon Green, Grangemouth plant
2. Update on restructuring of debt financing of the Caledon Green, Grangemouth plant
3. Preparation for the future
 - a. Customer discussions
 - b. Changes at Board level
 - c. Development of proposition for second plant at Speyside
 - d. Development of strategic commercial proposition to demonstrate value to all stakeholders

GRANGEMOUTH PLANT – PROGRESS

At Caledon Green, Grangemouth the installation of the mechanical equipment within the plant and the complex automation systems was largely complete by June 2022. However, as we started commissioning the plant we experienced persistent issues with successful sterilisation of the input fermentable media, which is fundamental to the success of the Celtic Renewables process. These sterility issues required a fundamental change in our approach to commissioning, whereby we undertook step by step trials through the plant to identify and rectify areas of contamination as well as perfecting our sterilisation protocols. This was a time-consuming process to eliminate any sources of contamination and we are pleased to confirm that, as a result of this methodical approach, we are now seeing consistent and repeatable fermentation success within our inoculation stage.

It was a difficult but necessary decision to 'slow down' our commissioning given the compelling business and financial need to commence production at Caledon Green as soon as possible. We were strongly supported through this process by key investors who funded £5m working capital through this phase.

To maintain momentum and minimise delays, we decided to commission our distillation systems in parallel with the sterility trials discussed above. Our specialist contractors, Frilli, commissioned the distillation systems with simulated material from which we were able to successfully recover our solvents (acetone, butanol and ethanol) at target purity. As we had restarted fermentations within the inoculation system, we also accumulated and processed that fermented material through distillation in tandem with the simulated media leading to production of our first biologically derived solvents – a key milestone for Celtic Renewables!

Our small team have worked tirelessly through 2022 juggling multiple commissioning projects, troubleshooting inevitable challenges and devising and implementing production protocols in our first-of-a-kind facility. Their belief in and dedication to the Celtic Renewables purpose has got us to this exciting point – we are privileged to work with such a skilled and motivated team.

Our next steps at Caledon Green are: to finalise the commissioning of the large-scale fermentation tanks – faults were identified in these in the autumn and repairs were successfully completed in the week prior to Christmas; and to continue to train the newly recruited team of operators who will be responsible for the initial product manufacturing and the subsequent ramp up of production to consistent target production levels. Our ambition is to be producing solvents consistently by March 2023.

RESTRUCTURE OF DEBT FUNDING FOR CALEDON GREEN - UPDATE

As you will be aware from previous updates, we had previously secured two tranches of debt for the construction of Caledon Green, a term loan from Scottish Enterprise and debenture funding from Abundance investors and in June 2022, we agreed terms with both parties to restructure their terms. This restructuring is now complete with the group now in a significantly stronger financial position for the future.

PREPARATION FOR THE FUTURE

Customer discussions

Our first customer, Caldic, has been kept fully informed of our progress at Caledon Green and continues to be an engaged and enthusiastic supporter of the business. Caldic has a full order book ready to acquire their contracted levels of our product. In addition, we are in advanced discussions with a large second customer, Merck, who will be finalising their contract on receipt and successful testing of first samples. Merck have already shot a promotional video to market the Celtic Renewables' products to their customers – the video shoot involved their Global Head of Sustainability visiting our Caledon Green site in October 2022.

We continue to receive direct enquiries about available product, which is unsurprising given that there are currently no sources of biologically derived butanol and acetone in the world. Our main challenge in this area is maintaining customer interest while we build out the capacity to fulfil their requirements.

Changes at Board level

In anticipation of our next growth phase, we have made some key changes at Board level.



Brett Simpson is our new Executive Chair. Brett is an experienced leader of specialist technology and manufacturing businesses, who has successfully driven performance in challenging market conditions. A chemical engineer by background, he is committing significant time to Celtic Renewables with a specific focus on delivering growth and value generation for investors.



Eleanor Bentley has joined the Board as Chair of the Audit & Risk Committee. Eleanor is a senior business leader with extensive experience of risk and financial management in international public companies who will be enhancing our financial and risk management capabilities to provide a strong foundation for our future aspirations.

Development of proposition for second plant at Speyside

We have made good progress with our partner on the proposed second plant at Speyside. Together we are funding a development phase involving detailed design and planning. The first stage planning consultations is now complete with no significant challenges raised. Appointment of engineering consultants to support the Front-End Engineering Design (FEED) process is expected shortly after an extensive selection process.

Development of strategic commercial proposition to demonstrate value to all stakeholders

Following Brett Simpson's appointment and as the commissioning phase for Caledon Green reaches completion, we are focussing on developing the preferred strategic path for Celtic Renewables to derive maximum value from its unique, carbon reducing, proposition. There are so many potential opportunities available to us and with customer demand significantly outstripping supply, we recognise the importance of acting strategically and with purpose. We look forward to updating you on our plans as they are finalised.

Thank you again for supporting the restructure and for being an investor in Celtic Renewables. We look forward to updating you on further progress during 2023.

With best wishes,

The Celtic Renewables Executive Team

Recent Images from the Caledon Green plant, Grangemouth



Filming of commissioning activity during the Merck visit in October 2022



Plant automation systems are fully operational



Solvent Recovery System is now commissioned



Large-scale fermenters fully repaired and ready for operation

