ENDLESS SOLAR

CORPORATION LIMITED

ACN: 122 708 061

NATIONAL STOCK EXCHANGE CODE: ESCLV

PROJECT PROGRESS UPDATE

DATE OF ANNOUNCEMENT: 30 November 2023

Cool Solar project update

Dear Shareholders,

The Endless Solar Corporation Limited, is pleased to announce receipt of the Endless Energy Solutions (EES)- Project Update, from EES Chairman Mr. Andrew Hynson

This announcement has been approved for release by the Board of Endless Solar Corporation Limited.

Yours Sincerely

David Craig
Director

For more information visit www.endless-solar.com.au

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Engineering Prototype

The engineering development prototype is approaching completion.

- Water side system complete
- Refrigerant plumbing being manufactured
- Computer controlled variable geometry ejector being machined
- Power control board complete
- System control board complete
- Programmable logic controller interface software complete

Note that the engineering prototype is considerably more complicated than the future production design. The test rig has been designed to allow system operation well beyond expected normal operation to establish the outer limits of system operation.

Simulation Model

The key engineering tools that have to be constructed to enable the design and development of the pilot system are the static and dynamic simulation models. The simulation models are very sophisticated pieces of software with a very high level of embedded intellectual property.

Mike Dennis has successfully developed and tested the static model. He has successfully developed and tested the first iteration of the dynamic model. Further development of the dynamic model will be undertaken. The combined simulation models will allow optimisation of system configuration, component sizing etc.

One of the key purposes of the engineering prototype is to enable calibration and testing of the simulation models.

Mike Dennis is also in the process of writing detailed documentation explaining how the models function.

In the process of developing the simulation models, he has identified a number of system improvements that may be able to be patented.

Information Security

Currently all engineering data is held on a secure private server. The key intellectual property that Mike has been developing is currently stored on a standalone computer that has no internet connection. Investigations into how best to manage data security are underway.

Original ANU Lab prototype.

It should be noted that the Cool Solar technology has previously been demonstrated successfully in the laboratory at the Australian National University (see image below). Endless Solar's current patents were the result of that laboratory research program.

Since the completion of the original research there have been developments in the area of high-volume 3D metal printing that have enabled the commercialisation program to proceed. (The ejector has complex internal geometry that lends itself to 3D printing.)

In addition, new refrigerants have been developed and moved into mainstream use. The Cool Solar system has been redesigned relative to the original research design to use the latest technology refrigerant R1234yf.

Potential Impact[1]

The system cost will vary depending upon site location. It is expected to be commercially competitive. Once the system is in high volume production the hardware costs are expected to decrease.

The target is to achieve 80% reduction in heating/cooling energy and hot water energy from the electrical grid. For a medium sized house in Melbourne with 3 to 4 people the saving over a year would be around 24kWh per day (averaged over the year).

As an indirect comparison, 1.3M to 1.4M installations would be of the order of magnitude of Victoria's Loy Yang A power station. Loy Yang A is rated at 2200MW and is scheduled to close in 2035. Loy Yang A produces around one third of Victoria's electricity.

Each Cool Solar installation reduces the demand on the grid. Unlike other renewable energy solutions, Cool Solar does not drive any investment or upgrades to the electrical distribution system (poles and wires).

1. Individual household electricity consumption varies enormously depending such things as the house's energy star rating, use of natural gas, number of occupants, location and so on. The estimates noted are intended as a generalised guide.

Pathway to Commercialisation.

Commercialisation of any new technology follows a similar path. The broad stages of development are shown below. There is timing overlap between these phases. For example, the low volume manufacturing phase will continue until the high-volume manufacturing plant is fully operational.

In parallel with these technology commercialisation steps, ESC will need to commence development of the associated business activities such as sales and marketing, logistics and installation, service, purchasing, certification and so on. In addition, the long-term manufacturing strategy and footprint will need to be developed.

Engineering prototype (Current Phase)

The purpose of the engineering prototype is to develop detailed knowledge around the performance of individual components, sub-systems and the overall system and validate design assumptions.

The output of this phase is a design concept for the pilot version of the system, a list of key suppliers and a build plan.

Pilot

The purpose of the pilot phase is to field test the system in real world conditions. This phase also includes subsystem and component durability testing and validation. Information gathered during this phase will be used to improve the simulation model and product design.

The output of this phase is a design concept for the start of low volume production, contracted suppliers and a detailed low volume assembly line plan. There are numerous businesses in Australia who have low volume product assembly capability.

Production Ramp Up

The purpose of this phase is to rapidly get the product to market in relatively low volumes to allow the design to be further validated in the field and to provide the opportunity to improve the product design prior to high volume manufacturing. It provides the physical means for the other sections of the business to test and develop their processes. The expected volume of this plan is in the thousands of units per year range.

The output of this phase is the initial design for full scale production as well as contracted high volume production suppliers and detailed high volume manufacturing plant designs and staffing plans.

Full Scale Production

This phase has a ramp up stage at the beginning during which the low volume plant will continue operation. Expected annual volumes for each plant are in the hundreds of thousands of units per year.

Innovation, Continuous Improvement and Cost Reduction

Once the product is in high volume production, there is an ongoing requirement to support the current product through continuous improvement of quality, performance and cost.

The engineering team have identified a number of potential future innovations for the Cool Solar technology.

Andrew Hynson

Chairman

Endless Energy Solutions Pty Ltd

30 November 2023