26 October 2017

# OHD UPDATE & FUNDING GRANT

## Highlights

- Greenpower applies for Federal grant funding of circa $2 million lodged.
- Marketing plan in final stages and anticipated to be available this quarter, critical for the completion of the OHD Commercialisation Plan.
- Significant number of farmers signed up to undertake field trials for the 2018 cropping season.
- Greenpower to have a small Coal Conversion Unit built to produce bio-stimulant in Victoria for field growing trials.
- Greenpower continues to design the major commercial processing unit.

Greenpower Energy Ltd (ASX: GPP, "**Greenpower**", "**Company**") is pleased to provide the following update regarding its Oxidative Hydrothermal Dissolution ("**OHD**") fertiliser project.

## Australian Process Demonstration Unit & Field Trials

As previously flagged in ASX announcements Greenpower holds an exclusive license from Thermaquatica Inc ("**Thermaquatica**") of Carbondale Illinois USA, granting the Company the exclusive right for Australia and New Zealand (with the right to put a business case for, and obtain a license for any other area in the world), for the duration of Thermaquatica's patents, to utilise, and exploit the products of, the OHD process for converting solid biomass, such as coal, into liquid form.

To prove the efficacy of the OHD process beyond laboratory level, in 2013, Thermaquatica built a "Process Demonstration Unit" ("**PDU**") which has operated since then, in Carbondale, converting mainly coal to liquid. This small plant can operate at a conversion rate of circa a kilo an hour. Greenpower has been since 2015, contracted Thermaquatica to convert Victorian Brown Coal ("**VBC**") to liquid to enable Greenpower to have Monash University carry out glasshouse tests, using the VBC liquid as a plant growth bio-stimulant, the results of which have been reported. This OHD production process involves Greenpower obtaining VBC, packaging it and dispatching it to the US, then Thermaquatica packaging the resulting liquid and returning it to Australia.

Greenpower with the assistance of its OHD consultants has entered into agreements to conduct extensive field trials in the 2018 growing season for wheat and tomatoes, on the basis that these present the best crops to generate sales from the production of bio-stimulant fertilisers given the extensive glasshouse trials conducted to date and the fact that the market place in Australia for wheat is in excess of $7 billion[1].

In order to create sufficient bio-stimulant to carry out field trials on crop cereals and tomatoes, Greenpower will build its own PDU which will be based on the existing Thermaquatica PDU, but updated with a number of improvements.

[1]2016 Australian Bureau of Statistics

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Greenpower has engaged HRL Technology Pty Ltd ("**HRL**") to supervise the design and construction of Greenpower's PDU, and HRL is putting together a request for a proposal to EPIC Systems Inc of St. Louis USA, (which built Thermaquatica's PDU) to build Greenpower's PDU. Greenpower anticipates that its PDU will be completed and commissioned next year.

**Commercial OHD Production Plant**

Notwithstanding the construction of the PDU, HRL continues to complete the detailed design of the plant – referred to as the Demonstration Plant - intended to demonstrate the *commercial* efficacy of the OHD process using VBC, having a design feed rate of 20 tonnes of coal per day. This plant design is largely complete however some aspects require tests done using the PDU, and indeed some are currently being carried out for Greenpower by Thermaquatica on their PDU. This commercial 20 tpd plant will be the first of its kind in the world, so its design must be right. Once its design is complete, finance will be sought, and construction will commence. Greenpower aims for this to occur in late 2018/early 2019 with a 15 month construction and commissioning window.

**OHD Plant Trials**

As has been announced from time to time, in conjunction with, and supervised by Monash University in Victoria, a number of glass house and hydroponic trials of the OHD liquid as a plant growth bio-stimulant, on the growth of vegetables, including notably tomatoes and bok choy, have been carried out and results have been reported or where the trial has not yet been completed will be reported in due course.

Greenpower is now preparing to carry out field trials, in conjunction with Monash University and other institutions familiar with this type of activity. This will of necessity be carried out during the normal growing season for the crop concerned such as wheat, and will be done with the assistance of wheat growers in the case of wheat.

**Government Grant**

A number of possible government grants that could assist Greenpower to develop the OHD system and complete its Commercialisation Plan have been investigated. Greenpower has now made an application for Federal funding for the cost of the PDU and the conduct of field trials of the OHD liquid on wheat and tomatoes, those trials to take place during the 2018 wheat growing season. Greenpower awaits the result of that application which carries a face value of circa $2 million.

In 2015, Greenpower made an application for an 'advance finding' that the expenditure in 2014-2015 under its agreement with Thermaquatica could be partially recoverable under the R&D Innovation rules. AusIndustry disallowed the R & D recoupment in respect of that expenditure on the basis this was not expenditure on innovation by Greenpower, and therefore not a qualifying "core" activity. Greenpower sought advice as to an appeal to the Administrative Appeals Tribunal, however has now elected not to proceed with the appeal given the uncertain legal costs outweighing the value of any R&D claim. This decision will not impact the eligibility of R&D recoveries associated with the Australian built PDU or commercial plant.

**OHD Commercial Plan - Marketing Study & Business Case**

In March 2017 Greenpower engaged Metrix Consulting in Melbourne to carry out an assessment of the possible market in Australia for plant growth bio-stimulants, including all the possible plants grown for commercial purposes, all those growers now using bio-stimulants, the values and areas where use occurred and could occur, and the identity and market share of participants now in the field. That assessment is now nearing completion, and the final report is anticipated before the end of the current quarter. That marketing study will enable Greenpower to complete its Commercialisation Plan to confirm whether a viable business in production and sale of the OHD plant growth bio-stimulant can be commenced and succeed.

Simultaneous studies on the logistics of product transport, siting of the main plant, manning, all economic aspects of the intended business, etc are currently being undertaken and will also need to be completed before the Commercialisation Plan can be completed.

Updates on all the steps described in this update will be issued as they occur.

**Greenpower Executive Chairman, Gerard King:**

*"Greenpower's OHD project is a major value driver for all shareholders and the Company continues to be particularly busy behind the scenes piecing the necessary jigsaw puzzle together that is required to bring a proven and tested product to market that is capable of disrupting both the agricultural and fertiliser markets.*

*Whist the Company is occasionally quiet on the ASX announcement front that does not mean things are not occurring behind the scenes. 2018 is projected to be a watershed year for Greenpower's OHD project given the PDU start-up, field grower trials and if the Commercialisation Plan support, the construction of the 20 tonne per day OHD plant."*

**ENDS**

**For further information:**
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Chairman of the Board