



Alpha **HPA**

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ASX: **A4N**
ASX Announcement
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(5 pages)

HPA FIRST PROJECT UPDATE

SUPPLYING DE-CARBONISATION

STAGE 1 – PPF

- All major mechanical process equipment on site and installed
- Main building electrical works complete
- Piping connections underway
- Landscaping and civil works near completion
- Administration and laboratory building fabrication near completion
- Operational readiness activities ramping up
- PPF on track for commissioning in the September quarter

PRODUCT MARKETING

- 12 further product test orders received, mostly from Japan
- Follow on test orders from Li-ion and LED lighting sectors
- Li-ion electrode coating testwork underway for multiple parties
- Test orders under manufacture across catalyst, LED, Li-ion battery and sapphire glass sectors

STAGE 2 – FULL SCALE

- Lender due diligence advanced
- Product optimisation study progressed

The Board of Alpha HPA Limited ('Alpha' or 'the Company') is pleased to provide an update on project activities for its HPA First Project, representing the commercialisation and production of critical high purity aluminium products driving de-carbonisation.

Alpha is fully funded to commercial production at its Stage 1, Precursor Production Facility (PPF) which is under construction in Gladstone, QLD and scheduled to commence commissioning ahead of production of the Company's high purity Aluminium Precursors from the September quarter 2022.

The Company is concurrently satisfying the remaining conditions precedent to the full-scale Project Final Investment Decision, with a focus on product sales and offtakes and project financing.

STAGE 1 – PPF

The Company continues to make good progress on the construction of the Stage 1 PPF component of the HPA First Project as detailed below:



Stage 1 PPF building – July 2022



Completed mechanical installation of solvent extraction (SX) circuits

The Stage 1 PPF remains on track for commissioning in the September quarter.

All major mechanical process equipment on site and installed

Filter presses, raw material feed equipment, aluminium nitrate product bagging station and all production modules are installed. Control room on site to be installed this month.

Main building electrical works complete, equipment cabling well underway

Overhead lighting, roller doors operational. Power distribution cables being pulled on cable ladder and equipment cabling progressing. Main supply transformer works complete.

Piping connections underway and solution pumps in place

All process modules pipework progressing well. SX piping 80% complete, pumps in place. Reagent pumping and pipework are on track.

Landscaping and civil works near completion

All bitumen and concrete roads in place, stormwater swales operational and working as intended. Basic landscaping works are underway.

Administrative and Laboratory building fabrication near completion

The main administration and laboratory building is in the final stages of completion at the offsite workshop and is expected to be installed in August.

Operational Readiness activities ramping up

The PPF operations leadership team, initially based in Brisbane for training, commence relocation at the end of July. Hiring for operations staff in Gladstone received an overwhelming response from local applicants with an assessment centre conducted this week to finalise successful applicants. Operating procedures and training documentation is well underway.

PRODUCT MARKETING

Alpha continues to expand its product marketing outreach and is currently completing a marketing trip in Japan. In addition, the Company continues to receive inbound product orders in particular for:

- **Aluminium nitrate precursors for coating of lithium-ion anode and cathode powders;**
- **Alpha's various HPA powders for Li-ion electrode coatings; and**
- **Increasingly, test orders for Alpha's recently developed nano-alumina product for a range of applications including LED phosphors and Li-ion battery applications.**

The Company also continues to be active in collecting test work feedback and submitting supply quotations.

Additional product orders received

A further 12 test orders were received in the last 3 weeks, mostly generated from the Japan marketing, including:

- 6 further orders for Alpha's nano-alumina powders;
- Follow-on test orders from key Li-ion battery sector manufacturers;
- Follow on test orders from LED phosphor manufacturers; and
- Follow-on coating testwork of Li-ion anode active materials.

Orders and ongoing test work which remain under manufacture within the Company's Brisbane facility include:

- Li-ion cathode and anode particle coating tests using the aluminium nitrate precursors for multiple manufacturers;
- Multiple high purity gamma alumina test orders for both li-ion battery and catalyst sector end-users;
- High volume (+300kg) orders of sintered HPA pellets for sapphire glass growth; and
- High purity gamma aluminas and high purity boehmite samples for the catalysts sector.

STAGE 2 – FULL SCALE PROJECT

In parallel with the PPF, the Company maintains a number of workstreams directed at completing the remaining conditions precedent to the full-scale HPA First Project FID.

Lender due diligence advanced

Alpha continues to support the lender due diligence process. Following the completion of technical ITE (Independent Technical Engineer) reports, and the third party, independent Environment & Social (E&S) reports, Alpha has now provided lenders with third party CO₂ modelling data and updated Project marketing status.

Product Optimisation

Alpha has substantially progressed a study on the full-scale facility to accommodate marketing feedback and indicative product demand. The optimised Project will include higher volumes of aluminium precursors and capacity to deliver specific products to the sapphire glass, Li-ion battery, LED and catalyst sectors. The re-configured HPA First Project product scenarios will form the final basis for Project Financing.

Alpha's Managing Director Rimas Kairaitis commented "*We are delighted with the progress on the Stage 1 PPF as Alpha's product marketing continues to build momentum across multiple products and industry sectors. Alpha and its marketing agents are pleased to be progressively advancing pricing discussions as product qualified test work completes.*"

About the HPA First Project

The Company's HPA First Project represents the commercialisation of the production of ~10,000tpa equivalent of high purity alumina (HPA) and related high purity precursor products using the Company's proprietary licenced solvent extraction and HPA refining technology. The disruptive, low-carbon process technology provides for the extraction and purification of aluminium from an industrial feedstock to produce 4N (>99.99% purity) alumina and 5N (>99.999% purity) for sale into the lithium-ion battery and LED lighting industry.

Alpha completed a Definitive Feasibility Study in March 2020 following a successful pilot plant campaign in 2019. Alpha has since upscaled its Brisbane facility to demonstration scale and has now recorded over 7,000 operating hours and delivered an expanded range of over 90 high purity product orders to end-users globally.

Alpha is fully funded to the commercial production at its Stage 1, Precursor Production Facility which is scheduled to commence commercial production for the Company's high purity Aluminium Precursors from September quarter 2022.

The Company is now in the mature phases of market outreach and project financing with respect to the full scale HPA First Project, with the expectation of positioning the HPA First Project to Final investment Decision.

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