



2 May 2023

ASX:FYI | OTCQB:FYIRF

FYI optimises HPA project development to accelerate market approach

Highlights

- FYI to progress small-scale production plant (SSP) via re-engineered development schedule for its high purity alumina (HPA) project
- Revised schedule targets >1,000 tpa production of HPA
- The SSP allows for key production and efficiency criteria advantages
- SSP / demonstration plant aims to validate revised operating parameters as well as deliver high quality HPA for targeted end-user qualification
- SSP will allow FYI to deliver samples to more than 25 potential tier-1 and tier-2 customers
- FYI proposes a phased and scalable development pathway towards commercialisation of HPA project
- A successful previous demonstration of process flowsheet and materials construction and handling will assist the development timeline
- Funding pathways established for the SSP development phase

Emerging critical mineral developer FYI Resources (ASX:FYI) (or the **Company**) is pleased to announce it has re-scoped and re-engineered its development schedule for a small-scale production / demonstration plant (SSP) to further de-risk and optimise the commercialisation phase of its flagship high purity alumina (HPA) project development.

HPA is a critical mineral that delivers a solution to assist in global electrification and decarbonisation with significant environmental, social and governance (ESG) benefits. FYI aims to be a major participant in the HPA industry.

Following conclusion of the HPA joint project collaboration with Alcoa in February 2023, FYI has revised and re-engineered the development schedule to achieve accelerated commercial production of its high quality HPA.

The revised development plan combines the small-scale production plant (SSP) with the benefits of a full-scale commercial plant by incorporating a staged and scalable development approach. This is achievable through the learnings and technical advances established over the past 12 months as well as addressing the HPA market insights gained, and end-user demands identified over that period.

Having reviewed and remodeled the project data and taking qualification material requirements into consideration, FYI's technical development team re-scoped the SSP with an optimised sizing of approximately 1,000tpa production HPA.

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FYI's development activities over the next 12 months will focus on the delivery of the SSP and the associated supporting studies and approvals and permitting activities.

The SSP is designed to demonstrate the value-add, de-risking development step whilst also potentially delivering significant project data and HPA product marketing benefits as the product samples will be used by prospective customers for their supply chain qualification.

Small-scale production plant outline

The predominant criteria differences with the re-scoped SSP include:

- Increased sizing of output (production volume)
- Modular design
- Capex and Opex improvements
- Integration and scaling of engineering
- Lower energy requirements / reduced carbon footprint due to efficiency and design improvements
- Accelerated development / tailored to market requirements
- Incorporate advanced materials construction learnings in the SSP development
- Targeting improved quality consistency and increased purity from pilot plant trial.

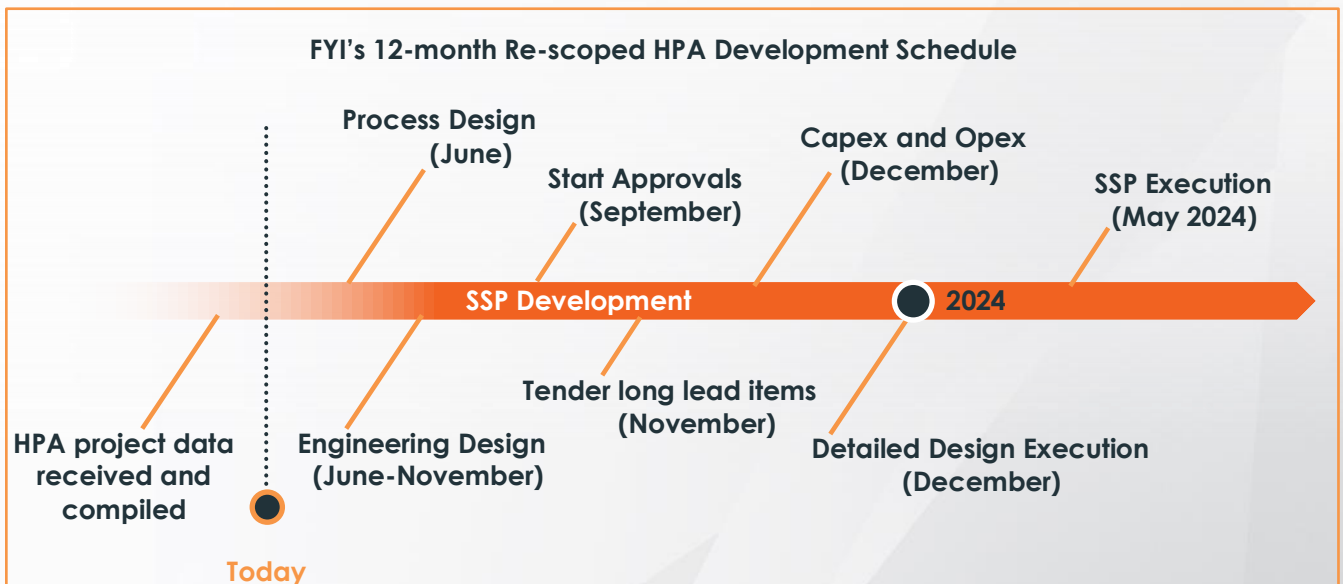
The SSP will enable FYI to produce bulk samples for prospective customers' testing and qualification. The plant's design capacity is targeted at >1,000 tpa high quality HPA. The SSP will enable process optimisation and testing for final product development and also serve as a testing and training facility.

FYI proposes the SSP will be located at Kwinana, Western Australia, and have key engineering design advantages to allow for possible phased modular production increases.

The Modular design should provide distinct advantages including:

- Faster project completion
- Reduced construction costs
- High quality fabrication
- Non-disruptive phased production increases
- Ability to relocate facility.

The HPA development work stream schedule has been determined as per below:





FYI has established a portfolio of potential customers which includes 12 Tier-1 customers, as well as servicing 16 Tier-2 end-users in the sapphire glass, e-mobility and niche product markets in diversified jurisdictions such as East Asia, Europe and North America.

The SSP is an important phase in the HPA customer qualification process as it provides substantive testing material made available to end users who have already tested and approved the quality, purity and physical qualities of the material produced from our pilot plant. The HPA material produced from the pilot plant, the SSP and our future commercial plant should be identical for the potential customers' quality assurance and quality control measures, demonstrating FYI's ability to provide consistent HPA supply.

FYI is currently in the process of assessing and selecting a preferred engineering service provider (ESP) to undertake the final engineering work as well as the SSP facility fabrication, installation and construction activities.

The SSP capital and operating costs (Capex and Opex) will be calculated once full equipment lists and final procurement quotes are received (expected by September 2023).

FYI has sufficient funds for the project engineering phase and has several Federal and Western Australian State grant funding applications pending for selected stages of project capital.

FYI Resources Managing Director Roland Hill stated: "We have proven that our 100%-owned HPA project can make high quality HPA and has significant value. Now through the development of the SSP, we can focus on demonstrating consistent and reliable HPA production.

"The re-scoped and re-engineered HPA project schedule for the SSP is a major step towards realising the projects value as outlined in the Definitive Feasibility Study. We intend to design and construct the SSP based on our innovative process as demonstrated throughout our previous pilot plant campaigns. However, the schedule and sizing will be engineered to accelerate development and better address the positive market engagement responses received for our HPA to date."

This announcement is authorised for release by Roland Hill, Managing Director

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About FYI Resources Limited

FYI has developed an innovative process design for the integrated production of high quality, high purity alumina (HPA) predominantly for electric vehicles (lithium-ion batteries), sapphire glass, LEDs / micro-LEDs and other broader tech applications.

FYI is positioning itself to be a significant producer of 4N and 5N HPA in the rapidly developing high-tech product markets.

FYI applies both an ESG and economic overlay of the Company and its operations to ensure long-term sustainability and shareholder value is created via the development of the Company's innovative, high quality, ultra-pure HPA project.

HPA is increasingly becoming the primary sought-after input material for certain high-tech products principally for its unique characteristics and physical and chemical properties that address those applications high specification requirements such as LED's and other sapphire glass products.

The longer-term driver for HPA, with forecasts of >17% year on year growth (GAGR)*, is the outlook for the burgeoning electric vehicle and static energy storage markets where the primary function is in the use as a separator material between the anode and cathode in batteries to increase power, functionality and safety of the battery cells.

The foundation of the HPA strategy is the Company's moderate temperature, atmospheric pressure innovative process flowsheet. The strategy's quality attributes combine resulting in world class HPA project potential.

* CRU HPA Industry Report 2021