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ASX:FYI | OTCQX:FYIRF

# FYI and Alcoa select WA site for HPA small scale production facility

## *JDP parties advance joint HPA project workstreams*

### Highlights

- HPA Stage Two workstreams progress under development schedule set by FYI and Alcoa
- Small-scale production and demonstration facility site selected near Kwinana, WA – environmental assessment works commenced
- Technology development and process optimisation continues
- HPA product marketing and customer outreach increased

Emerging critical mineral company FYI Resources (ASX:FYI) (or the **Company**) is pleased to report progress in its high purity alumina (HPA) project, advancing in collaboration with joint development partner, Alcoa of Australia (Alcoa).

### HPA Project Development

- Process optimisation and improvements (including flowsheet efficiencies and decarbonisation)
- Technology development and scale-up factors suitable for the joint development project's (JDP) commercial facility
- HPA market development.

Completing this work has set a solid technical and commercial foundation for the HPA project and provides the framework for the 2023 work schedule for the small-scale production and demonstration facility.

### Small-Scale Production / Demonstration Plant Workstreams

#### **Site Selection**

The joint development partners have endorsed a preferred site, near Kwinana in Western Australia, to locate the HPA demonstration plant. The permitting and environmental approvals process has commenced on the identified site.

#### **Design Engineering**

The project designs for the small-scale production and demonstration facility have been finalised and are being reviewed by the joint development partners. The final design provides the blueprint to the facilities' development.



### **Long Lead Equipment Procurement**

A review of equipment options ahead of placing orders on long lead capital items has been initiated.

### **Technology development**

The JDP partners continue to develop and optimise various aspects of the process design to assess and improve performance, efficiencies, economics and product quality. These studies include improvements in the process materials of construction, material handling, scaling up for commercial production and environmental and waste recycling and disposal.

## **Corporate**

Supporting the project development, various corporate aspects of the joint development partnership are progressing.

### **Final Investment Decision (FID) Stage Two Development**

The joint development partners have advanced the HPA JDP in relation to the project delivery schedule including product development, technical refinements and project risk mitigation, however revisions to the scheduling and specifications of the small scale demonstration plant have delayed a final investment decision. The JDP parties are focused on completion of the project development and are working towards FID delivery as soon as practical. This includes working towards completion of the large quantity of corporate, legal, and technical engineering sign-offs and a comprehensive marketing strategy which is currently being finalised.

### **Joint Venture Agreement Documentation**

The project's future operating model and structure is set to be governed via an unincorporated joint venture (UJV) that would be established upon FID. The UJV will be formalised via a series of agreements under an umbrella joint venture agreement. These documents are being refined in preparation for incorporation into the FID.

## **Product Marketing and Development**

Additional Stage Two project activities being progressed by the joint development partners include:

### **Customer Outreach**

The joint development partners are targeting specific market segments for HPA offtake. Increased customer outreach to established, emerging and niche market segments continues to provide market assurance as well as product development guidance. These opportunities include sapphire glass, LEDs / micro-LEDs and electric vehicle (battery components) as well as other niche market opportunities arising as HPA becomes an increasingly important and sought-after product in the critical minerals sector.

### **Comprehensive Market Analysis**

A comprehensive third-party marketing research review was commissioned by the JDP on the HPA industry to provide independent and targeted analysis on the various industry and geographic areas of interest. The report provides an unbiased and objective view on the market supply and demand provides additional guidance on the JDP marketing efforts.



### **Product Finishing**

The JDP is continuing to investigate broader product ranges and finishes for multiple client requirements. While not critical to the core HPA project development, the test work and product optimisation provides additional opportunities for increased sales channels and customer support.

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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's 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 sustainable 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 properties, characteristics 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 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

### **About Alcoa of Australia and FYI Resources Limited's HPA Joint Development Project**

Alcoa of Australia and FYI Resources Limited executed a binding term sheet for a staged joint development of a high purity alumina (HPA) project in October 2021. The three-phased approach includes:

- Phase One – development;
- Phase Two – construction and operation of a demonstration facility; and,
- Phase Three – construction and operation of a commercial facility.

This process defines a pathway for commercial HPA production through a future joint venture. Extensive technology piloting has achieved results in excess of 4N Al<sub>2</sub>O<sub>3</sub> in the opening phase, with works continuing on a detailed engineering design of a proposed demonstration facility. A demonstration facility is proposed to be constructed in phase two, in addition to undertaking detailed engineering for a full-scale HPA plant which would produce around 9,000 metric tons per annum. Phase three involves the construction and operation of the full-scale facility, with phases two and three subject to final investment decisions. Alcoa will fund its pro-rata share of project capital and make additional contributions to the demonstration and production facility construction costs, subject to final investment decisions, in consideration for its 65% interest in the project, while FYI will retain 35%. This structure utilises Alcoa's operational and execution strengths, while leveraging FYI's innovative HPA process flowsheet and corporate agility.