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ASX:FYI | OTCQX:FYIRF

Key HPA Project Stage Completion

Significant project milestone achieved

Highlights

- **First significant HPA project development milestone completed**
- **Joint project team sign-off on Stage One for the development of a HPA demonstration plant**
- **Completion of Stage One demonstrates continued commitment to project development**
- **Project deliverables confirmed for Stage Two**
- **Stage Two development commenced**
- **HPA is a critical mineral in the production of batteries and LED applications**

FYI Resources Ltd (ASX: FYI, OTCQX: FYIRF) (“FYI” or “the Company”) is pleased to announce, in conjunction with project partner, Alcoa of Australia Limited (Alcoa), that the high purity alumina (HPA) project has passed an important milestone following the formal sign-off of Stage One of the joint development.

FYI has developed an innovative and fully integrated process flowsheet and engineering design to efficiently and cost effectively produce high quality HPA. To take the HPA project to commercialisation, FYI formally joined with Alcoa in October 2021 as joint partners to progress the project development under a defined three-stage schedule. Alcoa is earning into FYI's HPA project under the agreed Terms Sheet via the funding of up to 97% (US\$243 million of the estimated US\$250 million) of the capital expenditure for the project development as outlined in the FYI's 2021 definitive feasibility study (DFS) which demonstrated a NPV_{8%} of US\$1.01 billion (please see ASX release 8th April 2021).

The HPA joint development project's first significant milestone has been completed and signed off by FYI and Alcoa. The sign-off of the Stage One also includes budget allocation to the Stage Two scope of works for the continued project de-risking and demonstration plant development. Commencement of Stage Two engineering development for the demonstration plant has already commenced.

The official joint sign-off of Stage One and commencement of Stage Two works program demonstrates the joint commitment to the HPA project and sets the pathway for the further stages of development and advances the project one step closer to production.

The project development team have been systematically refining and detailing the development schedule incorporating technology and engineering improvements and validating the enhancements through extended pilot plant trials. The Stage One scope of works also included broader project development, planning and scheduling elements as well as ancillary technology development and product marketing.



The key Stage One project parameters were not limited to, but included:

HPA facility location

The joint development team have established Western Australia as the most suitable location for the demonstration facility. Basing the facility in WA is beneficial given the proximity to the development team, existing infrastructure, permitting and other ancillary advantages such as support from the Western Australian and Federal Governments, and industry group FBI-CRC,

HPA facility volume output

Demonstration: As part of the Stage One works, the joint development team optimised the capacity to between 100-240 tonnes per annum to meet requirements for project de-risking studies. Further optimisation will be conducted in the next stage.

Commercial: The development team has optimised the design production capacity up to 9,000 tonnes per annum for the commercial plant. Further optimisation will be conducted in future stages as process and de-risking efficiencies are incorporated into the design and to reflect any changes in the forecast HPA market growth.

HPA Terms Sheet facility budget

Demonstration plant: Up to \$US50 million

Commercial facility: Budgeted to US\$200 million (with further optimisation in future stages)

Statutory approvals

In the next stage, permitting and statutory approvals will be progressed in accordance with the Western Australian state guidelines and under the umbrella benefits of the pre-approved zoning of the Kwinana Industrial Area heavy industry development scheme.

Waste, water and energy recycling

The joint development team's objectives include improving the HPA project's ESG rating and low carbon production target. The development team is focusing on improvements in the minimisation and / or recycling of process waste, water and energy use and incorporating them into the operational design and business case.

Ancillary development

Required technical development for project de-risking, product marketing and customer outreach programs have been further developed with continued refinement planned in Stage Two.

Product Marketing

The HPA product marketing and customer outreach program continued over the Stage One development. The program was assisted by generation of larger volumes of HPA which was made available to potential customers. Both sapphire glass (LED) and battery (EV) markets are targeted while product marketing through the Stage Two will include product finishing studies.

FYI's pro-rata project development expenditure during Stage One has been approximately \$2.3M which was deducted from previous HPA project development expenses which were credited to FYI.



Stage Two is the platform for the next deliverables which includes the continuation of the facility design, engineering, fabrication and facility installation workstream activities for the demonstration plant. The workstreams include but are not limited to the following:

HPA Project Development Workstreams for Stage Two Demonstration Plant	
Leaching	Product finishing and refinement
Precipitation	Waste recycling and treatment
Calcination	Permitting
HCl regeneration development and refining	Works Approvals
Energy integration, recycling and optimisation	Product marketing

FYI will also be progressing its downstream opportunities in parallel to the Stage Two HPA asset development program.

FYI Managing Director, Mr. Roland Hill, commented “The completion of the first stage of the HPA demonstration facility development under the joint development with Alcoa is significant in the context of the project. This milestone achievement not only signifies the completion of the first workstreams but demonstrates the joint commitment to progressing the project by advancing the Stage Two workstreams. Pleasingly, we are one step closer to our joint production objective by strictly following the defined development schedule of project de-risking, optimisation and value improvement”.

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 (LED) 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 the FYI Resources and Alcoa of Australia HPA Joint Development Project

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

- Phase 1 – development;
- Phase 2 – construction and operation of a demonstration facility; and,
- Phase 3 – 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 99.995% (4N5+) Al₂O₃ 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 about 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 is set to fund approximately 97 per cent of the term sheet expected capital costs for a 65 per cent interest in the project, while FYI would retain 35 per cent under the terms of the Term Sheet Agreement. This structure utilises Alcoa's operational and execution strengths, while leveraging FYI's innovative HPA process flowsheet.



Cautionary Statements

Substance of DFS

The DFS referred to in this announcement is a study of the potential viability of the production of high purity alumina from feedstock from the Cadoux Kaolin Project. It has been undertaken to understand the technical and economic viability of the Project.

The DFS assumes a 25-year Project life based only on Proved and Probable Ore Reserves (100%). The DFS is based on the material assumptions set out in the announcement dated 8 April 2021 and its appended DFS summary. These include assumptions about the availability of funding. While the Company considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the feasibility studies will be achieved.

To achieve the range of outcomes indicated in DFS, funding in the order of A\$202 million will likely be required. Investors should note that there is no certainty that the Company will be able to raise the amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of the Company's existing shares.

It is also possible that the Company could pursue other "value realisation" strategies such as a sale, partial sale or joint venture of the Project. If it does, this could materially reduce the Company's proportionate ownership of the Project.

General and forward-looking statements

The contents of this announcement reflect various technical and economic conditions, assumptions and contingencies which are based on interpretations of current market conditions at the time of writing. Given the nature of the resources industry, these conditions can change significantly and without notice over relatively short periods of time. Consequently, actual results may vary from those detailed in this announcement.

Some statements in this announcement regarding estimates or future events are forward-looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance. Such forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. When used in this announcement, words such as, but are not limited to, "could", "planned", "estimated", "expect", "intend", "may", "potential", "should", "projected", "scheduled", "anticipates", "believes", "predict", "foresee", "proposed", "aim", "target", "opportunity", "nominal", "conceptual" and similar expressions are forward-looking statements.

Although the Company believes that the expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties, and no assurance can be given that actual results will be consistent with these forward-looking statements.

The contents of this release are also subject to significant risks and uncertainties that include but are not limited to those inherent in mine development and production, geological, mining, metallurgical and processing technical problems, the inability to obtain and maintain mine licences, permits and other regulatory approvals required in connection with mining and processing operations, competition for among other things, capital, acquisitions of reserves, undeveloped lands and skilled personnel, incorrect assessments of the value of projects and acquisitions, changes in commodity prices and exchange rates, currency and interest rate fluctuations and other adverse economic conditions, the potential inability to market and sell products, various events which could disrupt operations and/or the transportation of mineral products, including labour stoppages and severe weather conditions, the demand for and availability of transportation services, environmental, native title, heritage, taxation and other legal problems, the potential inability to secure adequate financing and management's potential inability to anticipate and manage the foregoing factors and risks.

All persons should consider seeking appropriate professional legal, financial and taxation advice in reviewing this announcement and all other information with respect to the Company and evaluating the business, financial performance and operations of the Company. Neither the provision of this announcement nor any information contained in this announcement or subsequently communicated to any person in connection with this announcement is, or should be taken as, constituting the giving of investment or financial advice to any person. This announcement does not take into account the individual investment objective, financial or tax situation or particular needs of any person.

Competent Persons Statements

Ore Reserves

The information in this announcement that relates to Ore Reserves is based on information compiled by Mr. Steve Craig, who is a Fellow of the Australasian Institute of Mining and Metallurgy. Steve Craig is a full-time employee of Orelogy Consulting Pty Ltd and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". The information is extracted from the Ore Reserve announcement released 29 October 2018 and the DFS announcement released 11 March 2020 and are available to view on the Company's website at www.fyiresources.com.au. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original announcements.

Mineral Resources

The information in this report that relates to Mineral Resources is based on information compiled by Mr Grant Louw, under the direction and supervision of Dr Andrew Scogings, who are both full-time employees of CSA Global. Dr Scogings is a Member of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. He is a Registered Professional Geologist in Industrial Minerals. Dr Scogings has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the "Australasian Code for the Reporting of Exploration Results, Mineral Resources, and Ore Reserves". The information is extracted from the PFS announcement dated 25 September 2018, Ore Reserve announcement released 29 October 2018 and the DFS announcement released 11 March 2020 and is available to view on the Company's website at www.fyiresources.com.au. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original announcements and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original announcements.

Metallurgy

The information in this report that relates to metallurgy and metallurgical test work is based on information reviewed and compiled by Mr Daryl Evans, a Competent Person who is a Fellow of the Australian Institute of Mining and Metallurgy (AusIMM). Mr Evans is an employee of Independent Metallurgical Operations Pty Ltd, and is a contractor to FYI. Mr Evans has sufficient experience that is relevant to this style of processing and type of deposit under consideration, and to the activity that he has undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves". Announcements in respect to metallurgical results are available to view on the Company's website at www.fyiresources.com.au. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original announcements.