

ASX: FYI I OTC: FYIRF 29 JULY 2021

# FYI Activity Report for the quarter ended 30 June 2021

# **Key points**

- FYI progresses HPA MoU with Alcoa Australia entering an Exclusivity Agreement
- Revised HPA project economics outlined in updated definitive feasibility study
- ESG rating and reporting platform established
- FYI granted Major Project Status by Federal Minister for Industry, Science and Technology
- Commenced quotation on the OTC market in US
- FYI admitted to MSCI Global Micro Cap Index

FYI Resources Ltd (ASX: FYI) ("FYI" or "the Company") is pleased to release its Quarterly Activities Report for the period ending 30 June 2021.

## FYI HPA outstanding project potential value

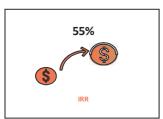
FYI announced an updated definitive feasibility study (Updated DFS) of the Company's high purity alumina (HPA) project (see ASX announcement 8 April 2021). The DFS results demonstrate a potential project value of US\$1.14b (A\$1.3b) and reflects changes to a number of underlying assumptions based on technical improvements, project de-risking and other key commercial developments accomplished by FYI since the initial DFS announcement on 11 March 2020.

FYI's process design for advanced refining of HPA utilises conventional leach and precipitation flowsheet and technologies which have been innovated and optimised by FYI to commercialise the production of high quality, high purity alumina. This results in excellent product characteristics for the targeted markets at lowest cost quartile for both opex and capex costs.

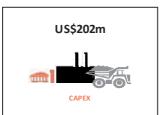
The updated Project NPV include detailed flowsheet advances, process design and production optimisation which were validated by extensive testwork (including multiple pilot plant trials) to optimise the integrated HPA process flowsheet and design.

## Summary of FYI's Updated DFS (after tax)

















10,000 TPA HPA

US \$26,400/-T (4N + 5N) HPA

15% PRODUCTION IS 5N

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## Major Highlights of Updated DFS and NPV

The key highlights to FYI's Updated DFS are summarised below:

- Updated DFS inputs are supported by additional pilot plant trials and data validation
- Updated DFS conducted by leading hydrometallurgical experts
- Sensitivity analysis demonstrates robust project economics
- The Updated DFS and financial analysis was completed to an accuracy of -10% to +15%
- Updated key project NPV metrics include:
  - o post-tax NPV<sub>8%</sub> of US\$1.014 billion
  - o project post-tax IRR 55%
  - o annual production:
    - 8,500 tpa 4N HPA (99.99% Al<sub>2</sub>O<sub>3</sub>)
    - 1,500 tpa 5N HPA (99.999% Al<sub>2</sub>O<sub>3</sub>)
  - average forecast selling price US\$26,400/t (basket 4N and 5N pricing)
  - o annual project revenue US\$261m
  - o annual project EBITDA US\$186m
  - o project capex US\$202m
  - o project opex US\$6,661/t
  - o project payback 3.2 years
  - AUD:USD exchange rate of 0.75 (from 0.70)

The Updated DFS outcome represents a persuasive economic case and demonstrates the merit of the Project in being developed as potentially one of the HPA sector's highest quality, lowest capital and operating cost projects.

Key DFS assumptions and outcomes include:

DFS version	Initial	Updated
Discount rate	@10%	8%
NPV (post tax)	US\$543m	US\$1.014b
IRR (post tax)	46%	55%
Payback period (years) (post tax) (inc ramp up)	3.6	3.2
Assumed exchange rate A\$/U\$\$	0.70	0.75
Modelled DCF Life of Project (years)	25	25
Total Sales (initial 25 years) no escalation	US\$4.7b	US\$6.1b
Total Project net operating cash flow (25 years)	US\$2.b	US\$3.3b
Annual EBITDA (average)	US\$133m	US\$186m
Cash flow after finance and tax	US\$88m	US\$131m
Shares on issue (as at publication of the DFS)	212.77m	321.09m
Capex (US\$) (8,000 tpa)	US\$189m	US\$202m
Capex/t (US\$/t)	US\$23,575	US\$20,200
Opex (US\$/t) - Life of Mine C1 costs, FOB Kwinana	US\$6,217	US\$6,661
Tonnes Processed (initial 25 years) (kt)	189	247
Production Target (tpa) (initial 25 years)	8,000	10,000
Proven + Probable Ore Reserves (@ 24.8% Al <sub>2</sub> O <sub>3</sub> kt)	3,205m	3,205m
Ore Reserve life (years)	25	25
JORC Resources (million tonnes)	11.3	11.3





## **HPA Market Update**

Key to the Updated DFS was the HPA market pricing assumptions as inputs to the valuation model.

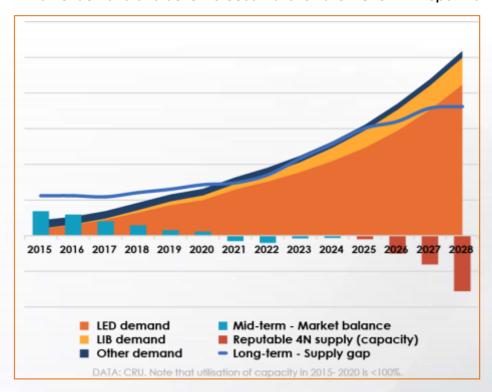
FYI maintains an active watch and review on the HPA market including the engagement of several independent commodity market research firms and sourcing data directly from market participants within the HPA industry. FYI conducts HPA market surveys with producers, consumers and other market participants in Japan, South Korea, North America, Europe and China.

According to one data source used by FYI, CRU Commodity Research, there is evidence that the HPA market is entering a phase of mild tightness as a result of accelerated COVID-19 related development and expenditure in the electric vehicle (EV) sector and the sourcing of high-quality battery element commodity chains including HPA. This demand lift is further supported by comments from consumers, particularly in the sapphire market for LEDs, who state that supplies of reputable 4N HPA is becoming limited and supply of "performance- driven" or 4N-5N HPA is tightening.

In terms of sales volumes, assuming unconstrained by supply of 4N+ HPA, demand is forecast to grow from ~30 kt in 2021 to over 104 kt in 2028, a CAGR of 18.7%. Pricing has been noted by CRU to be in the range of:

- US\$15/kg for mis-represented, off-specification product largely centering on the Chinese domestic market
- US\$56/kg for premium, high quality and reliable supply and specialist applications

HPA market demand and deficit forecast 2015 to 2028 – CRU HPA Report 2021







## HPA MOU with Alcoa Australia and Exclusive Agreement

FYI has been developing its strategy for the innovative production of high quality HPA. As a result of our advanced development, supported by extensive testwork and pilot plant validation, FYI was approached by Alcoa of Australia Ltd (Alcoa) regarding a possible commercial arrangement for the future advancement of FYI's HPA project. The two parties subsequently signed a memorandum of understanding (MOU) to commence due diligence on the project (see ASX announcement 8 September 2020).

Following the successful completion of the key technical conditions precedent, the parties entered into an exclusivity agreement (EA) (see ASX announcement 6 May 2021), to facilitate detailed negotiation of the terms of a possible joint venture. The EA provides Alcoa with a 90-day exclusivity period to undertake further due diligence to establish the technical and commercial viability of establishing a joint venture for the future development and commercialisation of FYI's HPA project.

## FYI Sustainability and ESG

#### **ESG Rating**

FYI acknowledges its responsibilities as an emerging HPA producer regarding the project's sustainability and Environmental, Social and Governance (ESG) obligations. FYI has adopted a globally recognised ESG rating framework under which the Company has established a baseline standard and will commit to improving on these ESG standards and reduce its legacy impact and potential environmental and other sustainability project risks.

FYI completed its initial ESG certification during the quarter through independent ESG assessment group, Sustainalytics (a Morningstar Group company). From a universe of approximately 14,000 companies worldwide, Sustainalytics calculated FYI's initial ESG rating based on their rigorous evaluation process. FYI achieved an excellent overall ESG rating of 28.0 (out of 100) and a ranking of 9th out of 153 peers (top 6th percentile). FYI was top ranked in 3 categories and top 5 ranking in a further 5 categories.

A summary table of FYI's category results are shown in the table below:

ESG Category	Exposure	Management	FYI ESG Rating
Corporate Governance	High	Average	Medium
Occupational Health & Safety	High	Average	Medium
Emissions, Effluents & Waste	Medium	Average	Low
Human Capital	Medium	Average	Low
Carbon – Own Operations	Low	Weak	Low
Resources Use	Medium	Average	Low
Community Relations	Medium	Strong	Low
Bribery & Corruption	Medium	Strong	Negligible
Business Ethics	Low	Strong	Negligible
Land Use & Diversity	Low	Strong	Negligible

Exposure – refers to the level in which FYI as a company is subjected to the category risk (ie Low is minimal risk)

Management – refers to the response FYI has to the category risk (ie Strong is a positive management response)

FYI ESG Rating – refers to Sustainalytic's calculated peer adjusted score (ie Negligible is positive)



# **ESG** Reporting platform

In conjunction with our ESG rating, FYI has committed to quarterly ESG reporting and disclosures as a major step in building its long-term ESG credentials. FYI undertakes to regularly demonstrate our progress in making disclosures via a recognised ESG reporting platform.

Following through on our ESG commitment and demonstrating our progress is essential to improving our transparency of decision making and general stewardship as well as attracting future-forward investors.

FYI's ESG matters will be disclosed against the World Economic Forum (WEF) universal ESG framework and reported on a quarterly basis. FYI's initial ESG dashboard report is included (below) with commentary addressing progress made during the quarter.

FYI's initial ESG reporting dashboard results Action Development Explanation Reported Verified Audited DISCLOSURE TIMEFRAME ESG Go Dashboard - Reporting Period 1 GOVERNANCE GO-01-A Setting purpose Y D D D Y 02 2021 Y 2021 D Governance body composition Q2 GO-03-A Material issues impacting stakeholders Y Y Q2 2021 R RRRRD I D D GO-04-A Anti-corruption practices Y Y Q2 2021 Y D R D GO-04-B Y Q3 2021 Mechanisms to protect ethical behaviour 0 R D Y N. GO-05-A Integrating risk and opportunity into business process Q3 2021 D D PL-01-A GHG emissions Y N Q4 2021 PL-01-B X N HI 2022 D TCFD implementation Y Y D. R PL-02-A Land use and ecological sensitivity Q2 2021 X Y PL-03-A Water consumption Q2 2021 Y D PE-01-A Diversity and inclusion 14 Q3 2021 D Pay equality Y N D D PE-01-B Y N D D D PE-01-C 2021 Wage level Q3 24 N PE-01-D Child, forced or compulsory labour DD Y N. 2021 D PE-02-A Health and safety Q3 Y N D PE-03-A Training provided Q4 2021 PROSPERITY y N. 0 PR-01-A Rate of employment Q4 2021 y D PR-01-B N. Q4 Economic contribution N D Y 2021 PR-01-C Financial investment contribution 04 Total R&D expenses Y Y Q2 2023 R Y Q2 2021 PR-03-A Total tax paid



#### FYI's Quarterly ESG Activity Summary

- Sustainability policies and procedures integrated in Company strategy and values
- Environment, Social and Governance framework has been implemented
- FYI has implemented and commenced ESG values and guidelines and structuring at Board level
- FYI has introduced ESG KPI's to executive management
- The Company will induct future employees under ESG guidelines and framework
- During the quarter, the Company had its ESG framework certified and rated by Sustainalytics
- FYI will continue quarterly reporting of ESG improvements using the SocialSuite platform
- The Company has held discussions with several parties regarding supplying renewable energy for the project
- FYI has conducted waste classification studies for the HPA project
- As a founding member of the Future Battery Industries Cooperative Research Centre, the Company participated in the Legacy Project. The Project investigates the waste profile of all associated companies with a view to recycle and reuse waste.

#### **OTC Trading Platform**

The OTC is a share trading platform which offers an electronic quotation and trading service in the US as a secondary platform to FYI's primary listing on the ASX.

FYI commenced OTC quotation of the Company's securities (see ASX announcement 20 April 2021) under the code OTC: FYIRF. FYI's OTC quotation was in direct response to a high level of inquiries from North American investors (funds, ESG funds, family offices and high net worths) aware of FYI's outstanding DFS results and who were actively looking for alternative investment opportunities into the electric vehicle (EV) industries. Various ESG funds were also attracted by the excellent ESG rating scored by FYI.

The interest the Company has received from North American investors is a result of:

- FYI's progress on the innovative and fully integrated HPA strategy
- the Company attracting high calibre corporate and counter party interest
- The demonstrated value outlined in the Company's DFS
- Leverage that HPA offers in the burgeoning EV and power storage markets

#### **Major Project Status**

On 29 June 2021, the Australian Federal Government approved Major Project Status (MPS) to FYI's innovative high purity alumina project. The awarding of Major Project Status is the Australian Government's recognition of a project's national significance and potential economic contribution to Australia.

The Federal Minister for Industry, Innovation and Science, the Hon. Christian Porter MP, officially recognised FYI's role in the growing battery and energy related minerals industry in Australia through the Company's planned participation and investment in downstream critical minerals processing sector.

"Not only will it improve global supplies of high-grade alumina, with forecast export revenue of \$6.8 billion, but the project will also provide a raft of economic and job benefits for regional communities in Western Australia," Minister Porter said.





The MPS supports the development of FYI's HPA project which is underpinned by the outstanding economic metrics set out in the Updated DFS.

FYI's HPA project strongly aligns with the growing policy changes globally that require higher standards of input materials and of environmental and social governance in battery minerals supply chains.

The benefits for the Company achieving Major Project Status include:

- a single entry point for Commonwealth Government approvals;
- project support and coordination;
- assistance with state approvals;
- potential financing support; and
- provide additional confidence to investors and financiers.

The awarding of the MPS follows on from the awarding of Lead Agency to FYI by the Premier of Western Australia, Mr. Mark McGowan, and the WA Department of Jobs, Tourism, Science and Innovation (JTSI) (see ASX announcement 23 September 2019).

## **Entry into MSCI Index**

FYI was selected for inclusion into the Morgan Stanley Capital International (MSCI) Global Micro Cap Index from the 27 May 2021.

As part of the inclusion, FYI was added to the MSCI Australia Micro Cap Index which is designed to measure the performance of the Micro Cap segment of companies traded on the Australian Securities Exchange.

The benefits to FYI being admitted into the MSCI Global Index include:

- increased exposure to global institutions
- gaining broader exposure to the investment markets
- possibility of increased liquidity
- increased access to potential capital sources
- possibility for broader exposure and research coverage
- transparency for institutional and retail investment

#### **Planned September Quarter Activities:**

The planned activities for the current quarter include:

- Progress Joint Venture discussions with Alcoa under the MoU and Exclusivity Agreement
- Continue extended pilot plant trial production development plans
- Commence HPA project detailed engineering, front end engineering
- Continual improvement and transition of ESG rating and reporting
- Continued product market qualification and assessment
- Investigation of additional internal revenue streams
- Investigation and development into broader battery HPA utilisation and market
- Elevate OTC trading platform for increased liquidity





## **Treasury**

The Company ended the June Quarter with a cash balance of ~\$9.0m.

#### **ASX Additional Information**

ASX listing rule 5.3.1 and 5.3.2 - Exploration and evaluation cash payments (net of GST) during the quarter were approximately \$1.31m. Details of exploration and evaluation and development activities during the June 2021 quarter are set out in this report.

There were no substantive mining production activities during the quarter.

ASX listing rule 5.3.5 - Appendix 5B, Section 6.1 – description of payments: During the quarter \$165k was paid to Directors for current and accrued director fees.

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

## For more information please contact:

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#### Interest in Mineral Tenements at 30 June 2021

Tenement	Location	Interest at the beginning of the quarter	Interest at the end of the quarter
E70/4673 M70/1388	Western Australia	100% 100%	100% 100%
WMM SPLs (6)	Thailand	100% (under application)	100% (under application)







## **About FYI Resources Limited**

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% CAGR\*, 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





## **Cautionary Statements**

#### **Substance of Updated DFS**

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

The Updated DFS assumes as a 25-year Project life based only on Proved and Probable Ore Reserves (100%). The Updated DFS is based on the material assumptions set out in this announcement 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 Updated 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 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 <a href="https://www.fyiresources.com.au">www.fyiresources.com.au</a>. 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 <a href="www.fyiresources.com.au">www.fyiresources.com.au</a>. 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 (AuslMM). 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 <a href="https://www.fyiresources.com.au">www.fyiresources.com.au</a>. 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.