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**OTCQX**

PRESENTATION

ASX: **FYI**

FSE: **SDL**

OTCQX: **FYIRF**

# INNOVATIVE HIGH MARGIN HPA

DEVELOPING A WORLD CLASS INTEGRATED  
HIGH PURITY ALUMINA (HPA) PROJECT

February 2022



# DISCLAIMER

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This presentation is for information purposes only. Neither this presentation nor the information contained in it constitutes an offer, invitation, solicitation or recommendation in relation to the purchase or sale of shares in any jurisdiction. This presentation may not be distributed in any jurisdiction except in accordance with the legal requirements applicable in that jurisdiction.

The DFS referred to in this presentation is a study of the potential viability of the Cadoux Project. It has been undertaken to understand the technical and economic viability of the Project. The DFS assumes as a 25-year Project life based only on Proved and Probable Ore Reserves (100%). The DFS is based on the material assumptions and modifying factors set out in the DFS announcement and the appended summary of the DFS released to ASX on 8 April 2021. 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 this DFS will be achieved. To achieve the range of outcomes indicated in the DFS funding in the order of US\$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. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the DFS. The contents of this presentation 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 presentation. Some statements in this presentation regarding estimates or future events are forward-looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance.

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## Competent Person's Statement

### Ore Reserves

The information in this report 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 within the DFS announcement 8 April 2021 and is available to view on the Company's website at [www.fyiresources.com.au](http://www.fyiresources.com.au)

### 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 and is available to view on the Company's website at [www.fyiresources.com.au](http://www.fyiresources.com.au)

### Metallurgy

The information in this report that relates to metallurgy and metallurgical test work is based on information reviewed and compiled by Mr Alex Borger, a Competent Person who is a Fellow of the Australian Institute of Mining and Metallurgy (AusIMM). Mr Borger is an employee of Independent Metallurgical Operations Pty Ltd, and is a contractor to FYI. Mr Borger 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](http://www.fyiresources.com.au).

### General

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the findings in the relevant market announcements continue to apply and have not materially changed and that all material assumptions and technical parameters underpinning the estimate in the relevant market announcement 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 announcement.

# FYI HPA PROJECT - VALUE HEADLINES

Disruptive industry technology	✓
Innovative process flowsheet	✓
Tier 1 HPA project partner - Alcoa	✓
US\$243m Alcoa project finance commitment under Terms Sheet	✓
Demonstrated quality (4N & 5N)	✓
High margin / lowest quartile costs (capex & opex)*	✓
Excellent ESG rating ranked 5th / 149 peers#	✓

Well defined pathway to realising potential project

NPV

US\$1.01b\*



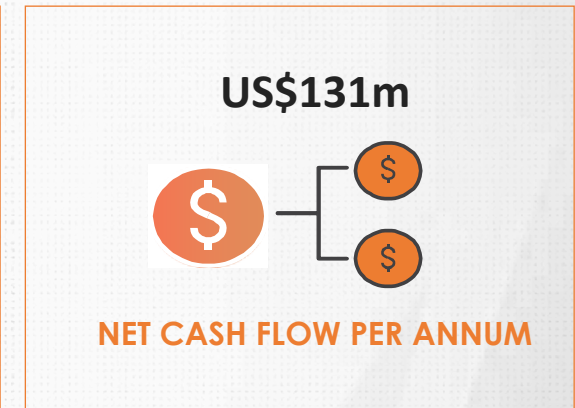
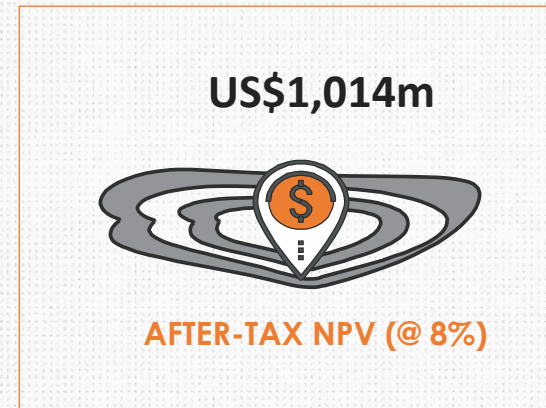
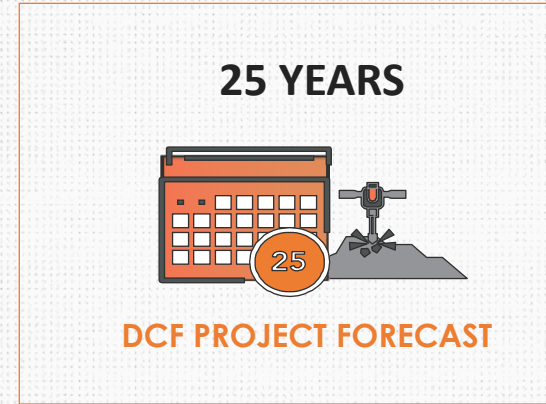
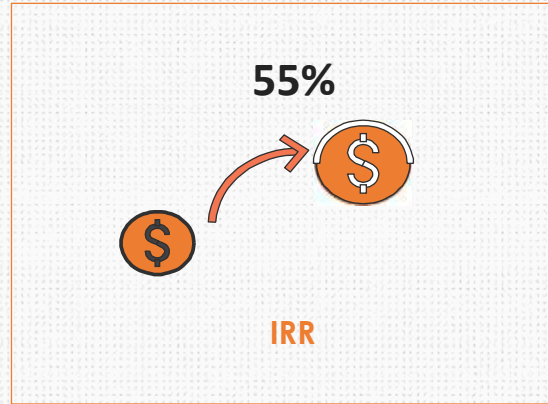
## Well Defined and Structured HPA Development Strategy



FYI AND ALCOA HAVE THE OBJECTIVE TO BECOME A DOMINANT PARTICIPANT IN THE GLOBAL HPA MARKET

# DFS OUTSTANDING PROJECT ECONOMICS SUMMARY

## NPV Summary (post tax)



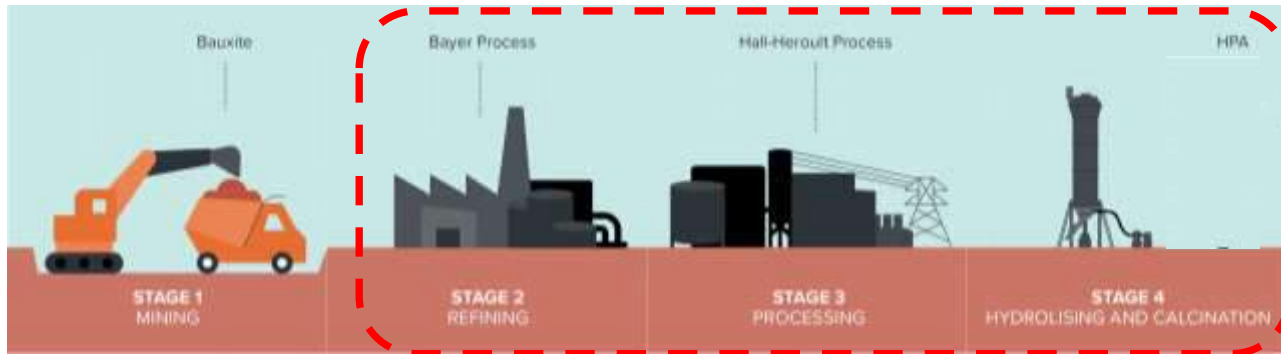
10,000 TPA HPA PRODUCTION

US\$26,400/-T HPA SALES PRICE

15% PRODUCT IS 5N

# INNOVATIVE AND FULLY INTEGRATED HPA PROCESS

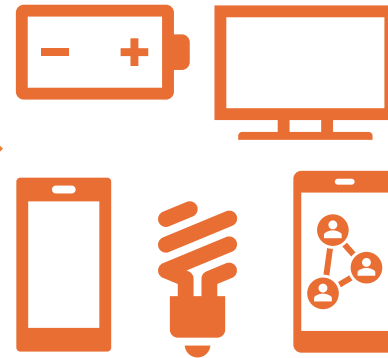
## Traditional processing route – 3 Stage



- Complex 3 stage Inefficient process design
- capex and opex intensive
- Inconsistent end-product quality
- High level of unwanted impurities
- High carbon footprint, Low ethical sourcing
- No product provenance / traceability



## FYI processing route – 1 Stage



HPA applications

- Simplified 1 stage flowsheet design
- Significantly reduced capex and opex
- Controlled process
- Consistent, ethically sourced and reliable quality end-product
- Dependable supply for long term contracts

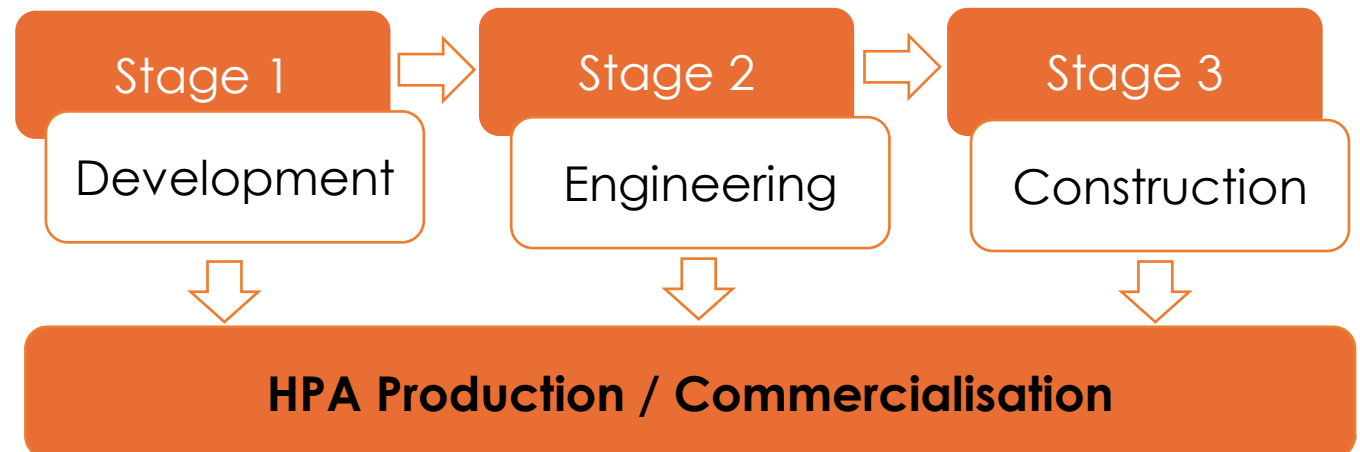
# ALCOA JOINT DEVELOPMENT OF FYI HPA PROJECT



**US\$243m funding  
commitment available**

- Tier 1 support for FYI's innovative long-life / high margin HPA project
- Project alignment via Joint development leading to Joint Venture
- Defined project development pathway under Terms Sheet Agreement
- Project funding commitment of up to US\$243m
- Equity 65% Alcoa / FYI 35%
- FYI essentially fully funded
- Project de-risking by globally recognised operator

**Defined 3 stage pathway to  
project development**



*fyi*

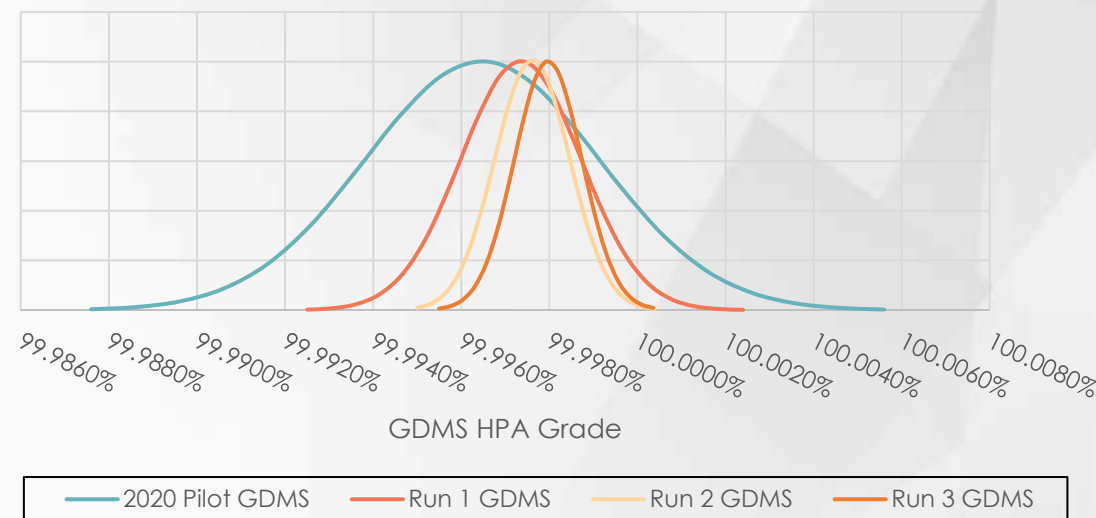
Stages 2 and 3 are subject to final investment decision under the Terms Sheet



# EXTENSIVE HPA PRODUCT DEVELOPMENT

## Pilot Plant Validation of FYI's HPA Flowsheet Design

- Purpose of facility is to trial FYI's innovative HPA flowsheet design
- Demonstrating process control and reliability of production
- Engineered to demonstrate process control of FYI flowsheet from "end to end"
- Testing of materials handling and materials of construction
- Further optimising system design and capacity
- Quantifying future production capex and opex parameters
- Lowering overall project risk by verifying process efficiency, yields and target grades
- Demonstrated improvement in HPA purity and quality over the series of pilot plant trials – including achieving 99.999% (5N)



FYI's HPA pilot plant in operation in collaboration with Alcoa

HPA (Al <sub>2</sub> O <sub>3</sub> )		Nov 2021	Week 1 (Run 1)	Week 2 (Run 2)	Week 3 (Run 3)
Peak Grade	%	99.999%	99.9988%	99.9987%	99.999%
Average Grade	%	99.9965%	99.9974%	99.9976%	99.9980%

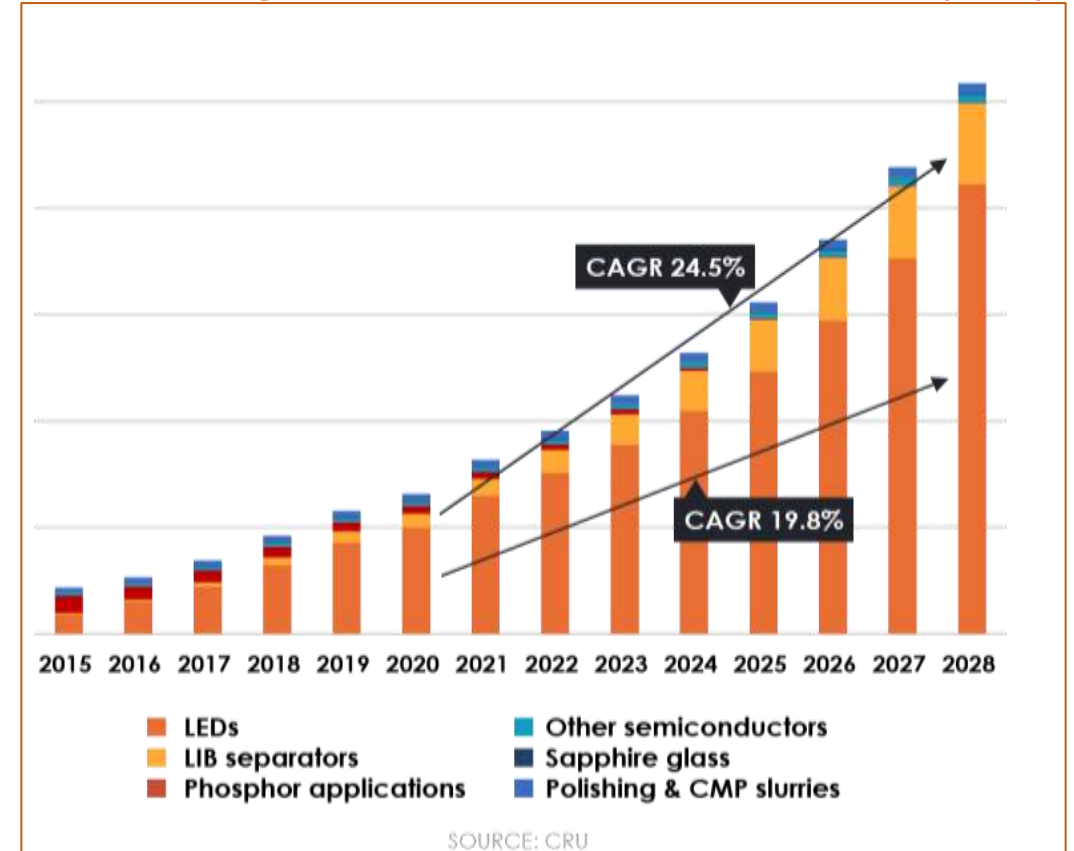
Results from the extended pilot plant trails from 16<sup>th</sup> November 2021 to 25<sup>th</sup> January 2022 in joint development with Alcoa – please refer FYI ASX announcements.

# HPA MARKET OVERVIEW

## Global HPA markets are growing

- ✓ HPA growth has been invigorated in response to global investment in EV's as post COVID19 stimulus incentives
- ✓ New applications and technologies have created increased demand and market opportunities
- ✓ The current global 4N HPA market demand is ~30ktpa 2021; this is expected to increase to **>104ktpa by 2028\***
- ✓ The market for HPA is witnessing dramatic consumer driven growth, with the **HPA market forecast to be US\$4.49Bn in 2022\*\***

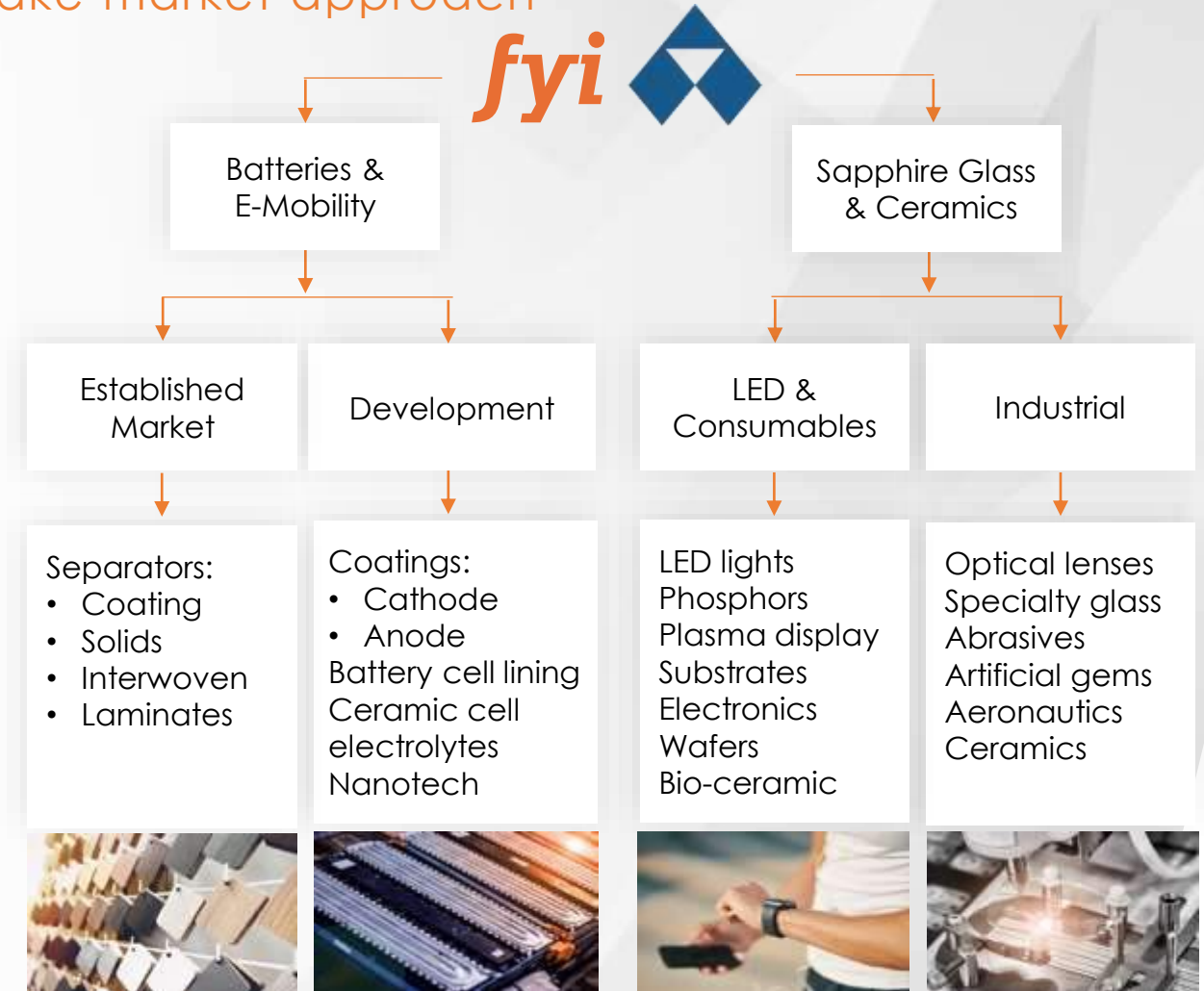
## Forecast global HPA demand forecast (tpa)



# HPA TARGET MARKETS

FYI and Alcoa have a defined joint HPA off-take market approach

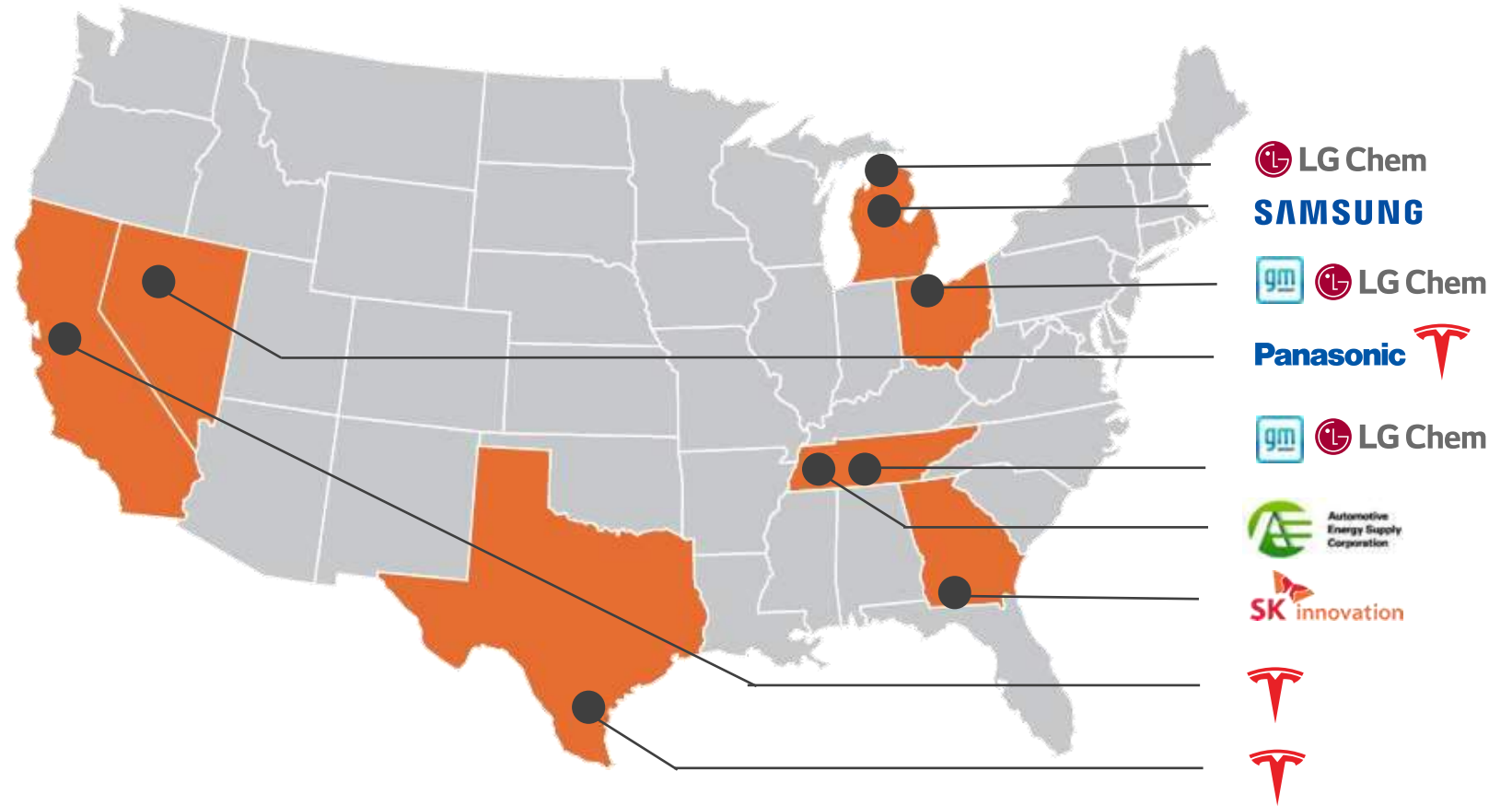
- FYI and Alcoa emerging producer of high quality, high purity HPA
- FYI and Alcoa joint development standard product is to be ultra pure 99.99% (4N) and 99.999% (5N) material with extremely low deleterious elements
- Key markets have been identified and targeted for compatibility with FYI's quality HPA
- Market determinants include:
  - Purity (4N or 5N)
  - Characteristics (ie crystal size, density, surface area)
  - Jurisdiction diversity
  - Application
  - Pricing
- FYI is developing alternative HPA product applications in collaboration with its research partners and Alcoa
- FYI is also trialling different variations of final product to suit different market application specifications



# US BATTERY CAPACITY TO ACCELERATE

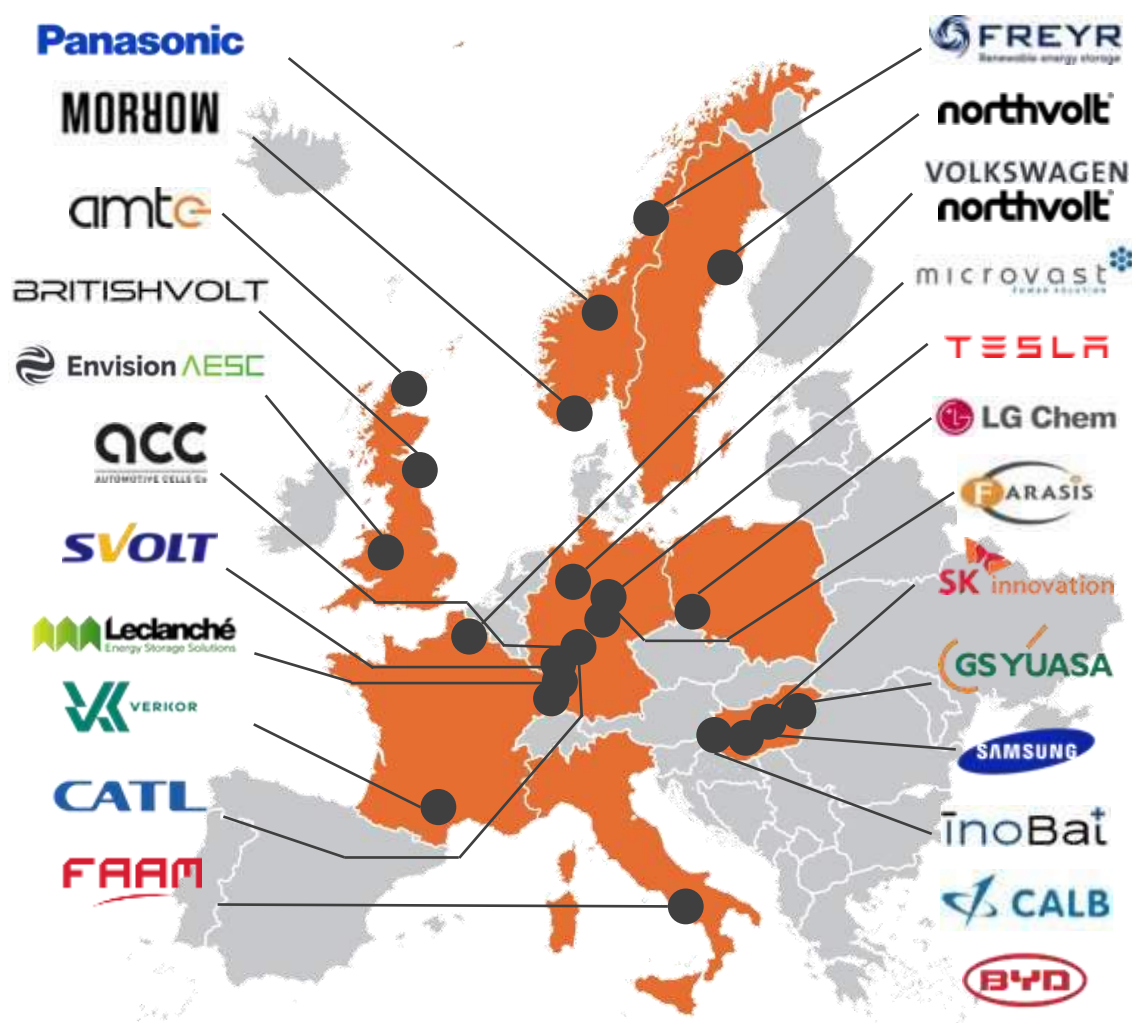
- ✓ **January 2021**  
Presidential Order to electrify Government fleet
- ✓ **February 2021**  
US re-joins Paris Agreement on Climate Change
- ✓ **April 2021**  
Infrastructure plan to include 500,000 EV charging stations
- ✓ **May 2021**  
Biden looks to Canada, Australia and Brazil for EV inputs
- ✓ **October 2021**  
The Battery Material Processing and Component Manufacturing Act
- ✓ **November 2021**  
Biden announces US\$7.5b EV charging infrastructure spend

> US\$1.8 Trillion infrastructure Bill expenditure planned including committed EV development funding in USA\*



US Battery Mega-factories and related facilities

# UNPRECEDENTED INVESTMENT IN NEW EUROPEAN BATTERY CAPACITY



24 GIGAFACTORIES  
ANNOUNCED WITH  
FORECAST 600 GWH  
TOTAL ANNUAL  
PRODUCTION CAPACITY  
DELIVERING 9-10M EV  
UNITS PER YEAR

✓ EU – one of fastest growing EV markets in the world

✓ EV growth requires new supply of critical, high purity battery material including HPA

✓ Increasing requirement for low carbon supply chains coupled with ESG



# STRONG FOCUS ON MARKET ENGAGEMENT

## FYI and Alcoa are heavily engaged in HPA marketing and securing off-take

Strong focus on market engagement in key market jurisdictions



Structured approach targeting off-take customers



Multiple rounds of meetings conducted (Taiwan/South Korea/Japan/ Europe/ USA/UK)



HPA trial product sent by request to market participants (HPA customers, traders)



Detailed product development trials to meet customer specifications



# KWINANA PRODUCTION SITE

## Key asset to HPA project development

- Fully integrated production within Western Australia
- Proximity to Alcoa operations
- Support from Western Australian State Government through Lead Agency - Department of Jobs, Tourism, Science and Innovation
- Founding member and participant in the Future Battery Industry CRC (FBI-CRC)
  - Development of HPA specialty battery applications suitable to FYI HPA
  - HPA key market development
- Prime positioning in Kwinana Industrial Area (KIA)
  - Ideal infrastructure and support
  - Reduction in raw material waste
  - Leverage with other KIA proponents (inputs and outputs)
  - Improve project economics



## Major Partners



Australian Government  
Department of Industry, Science,  
Energy and Resources

Business  
Cooperative Research  
Centres Program

FUTURE  
BATTERY  
INDUSTRIES CRC

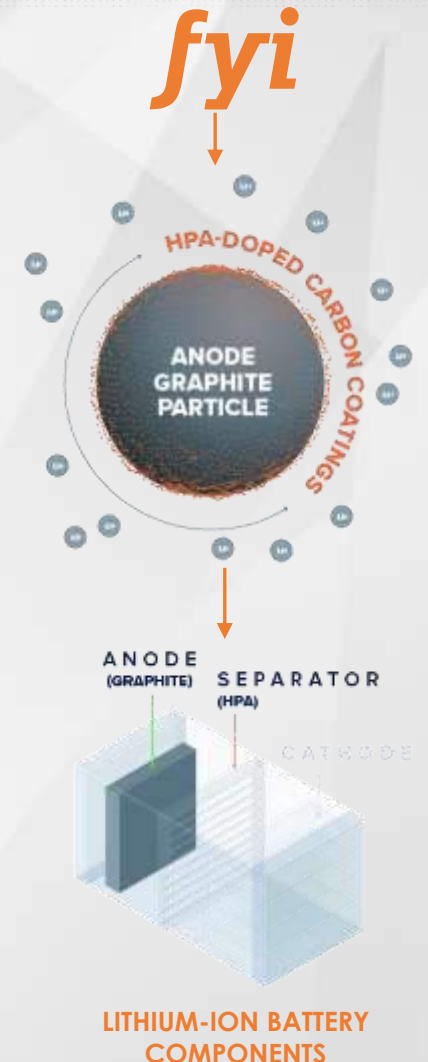
# DOWNSTREAM GROWTH OPPORTUNITIES

## HPA Enhanced Anode Coatings - EcoGraf (ASX:EGR)

- HPA is increasingly becoming a key sought after input material for various high-tech products principally for its unique properties, characteristics and chemistry that address certain applications and high specification requirements
- FYI and EGR are collaborating on developing FYI HPA as raw material input into the Active Anode Material (AAM) for various Li-ion Battery applications
- Development of an appropriate ALD coating (Atomic Layer Deposition) process using FYI HPA as coating precursor specific to EGR high purity carbon
- Production of purified pitch coated EcoGraf carbon applications doped with FYI HPA (ie anode, separator, cell lining)
- Initial testwork positive – results beat industry leader
  - Reducing first cycle discharge
  - First charge efficiency

## Anode Supply / Demand Forecast - 2025

- Target 15 million EV's produced pa by 2025
- Each EV car is loaded with 75kg of graphite anode material
- 75,000 tons of graphite will be consumed in 1 million EV cars
- by 2025, demand for graphite anode material will be 1,125,000 t
- HPA dope is about 4-5% in natural anode , consumption of HPA is 22,500t-28,000t (if 100% utilized HPA)





# HPA PROJECT SUSTAINABILITY

- High ESG standards are becoming pre-requisites for HPA off-take counterparties
- FYI embraces best practice approach to HPA project development
- FYI HPA has total provenance authentication and traceability of their 100% integrated process
- High environmental and social standards and governance
- HPA project developed to maximise green and sustainable practices
- Distinct environmental advantages over current traditional supply
- Low environmental footprint / De-carbonising
  - Reduction in raw material waste
  - Low toxic waste
  - Extensive recycling (inputs and outputs)
  - Approximately 50% reduction in greenhouse gas production / ton HPA
  - Approximately 40% reduction in processing energy consumption / ton HPA
- Contribute to clean and renewable industries (directly and indirectly)
  - Reduce fossil fuel dependency
  - Reduction of carbon gas emissions
  - Intending supplier to other sustainable and environmentally conscious industries (EV, LED)

# FYI's ESG RATING

## FYI Resources Ltd.

Aluminum Australia ASX:FYI

### ESG Risk Rating

**23.8**

Updated Jun 24, 2021

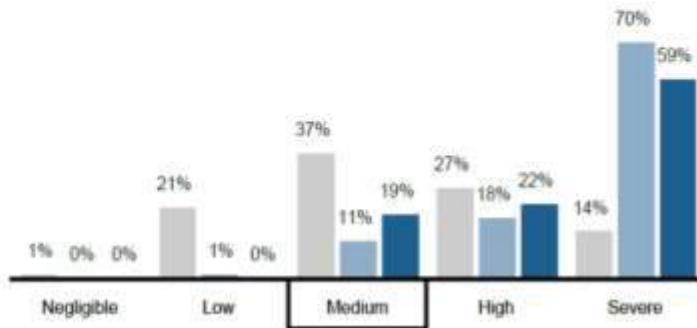
Not available

Momentum

### Medium Risk



### ESG Risk Rating Distribution



### ESG Risk Rating Ranking

UNIVERSE	RANK	PERCENTILE
	(1 <sup>st</sup> = lowest risk)	(1 <sup>st</sup> = lowest risk)
Global Universe	4819/13650	36th
Diversified Metals INDUSTRY	5/149	4th
Aluminum SUBINDUSTRY	3/32	7th



# FYI CORPORATE SUMMARY

## DIRECTORS

**Mr Edmund Babington**  
Non-Executive Chairman

**Mr Roland Hill**  
Managing Director

**Mr David Sargeant**  
Non-Executive Director

**Dr Sandy Chong**  
Non-Executive Director

Shares on issue: 365m  
Options: 10m

**ASX:FYI FSE:SDL OTCQX:FYIRF**

Share price	A\$0.30
Market capitalisation	A\$109m
Cash on hand	A\$12.9m
Average volume (3 mths)	1.7m

## Capital Structure

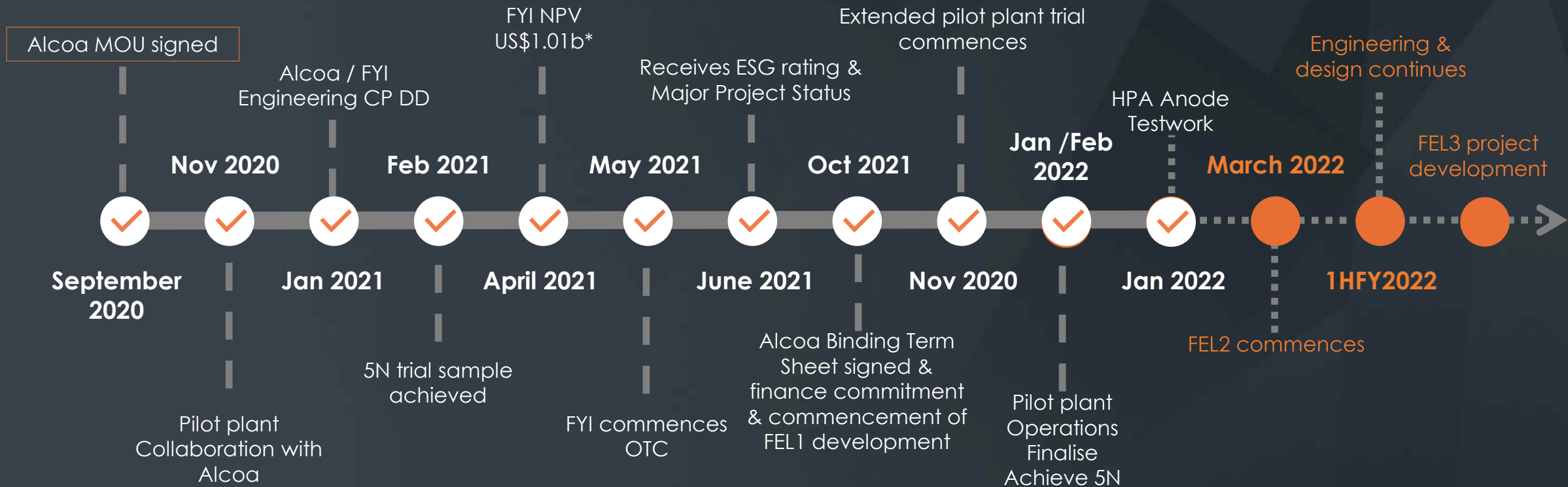
Board & Management ~10%  
Top 20 Holders ~43%  
Top 40 Holders ~ 54%

## FYI Share Price Graph



# PROJECT DEVELOPMENT SCHEDULE

## HPA PROJECT TIMELINE



# FYI – CORPORATE SUMMARY AND VALUE POINTS



Partnering with Alcoa and tier 1 industry groups to become a dominant HPA producer



Robust integrated strategy founded on sound technical principles and project de-risking



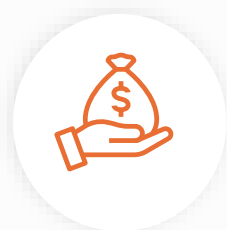
Ideal project delivery timing coinciding with forecast market growth



Compelling integrated technical and geographical business model advantages



Implementing long-term sustainable ESG(E) standards and practice



Best-in-class project economics with lowest quartile capex and opex



De-risked and funded development pathway



Ground floor entry to an emerging growth sector with significant upside

## DEVELOPING A LONG-LIFE QUALITY HPA PROJECT



# Thank You

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FSE:**SDL**  
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FOR FURTHER DETAILS PLEASE CONTACT:

***fyi*** *Resources Limited*

**Roland Hill** *Managing Director*  
[info@fyiresources.com.au](mailto:info@fyiresources.com.au)

Unit 8-9, 88 Forrest Street, Cottesloe WA 6011

[WWW.FYIRESOURCES.COM.AU](http://WWW.FYIRESOURCES.COM.AU)