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2 June 2021

FYI HPA Presentation

Benchmark Minerals

EV BATTERY FEST

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

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DISCLAIMER

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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 PERSONS' STATEMENTS

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

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

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.

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.



HPA DIRECTED TO EV MARKET DEVELOPMENT

HPA's role in battery development

HPA demand is driven by EV adoption rates, higher energy density requirements in LIB cells, the value and cost effectiveness of the separator and importantly the improving of safety.

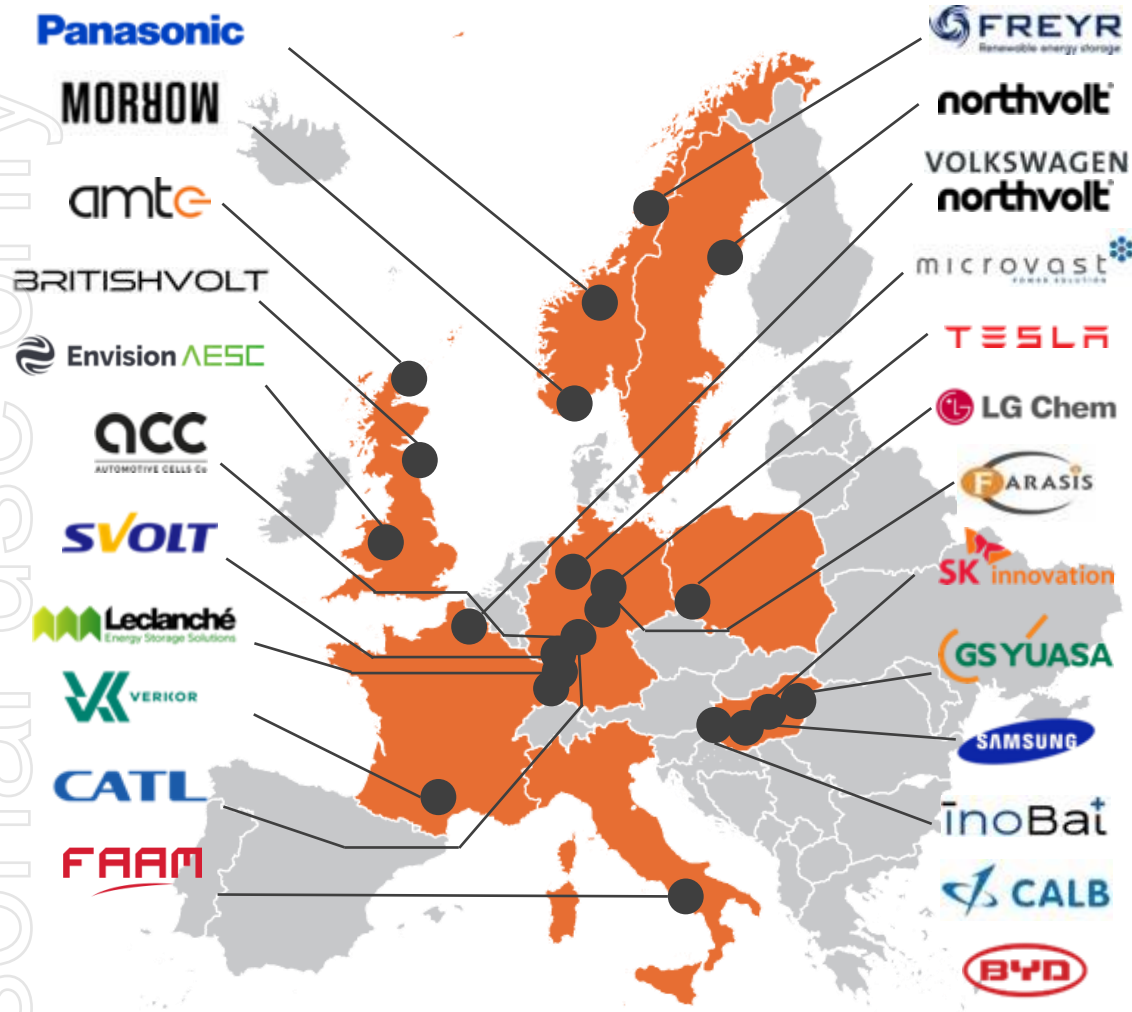
HPA DEMAND SUPPORTING EV GROWTH

The LIB **battery separator market** was valued at US\$6.2 billion in 2020, and it is expected to reach US\$11.3 billion by 2026.*

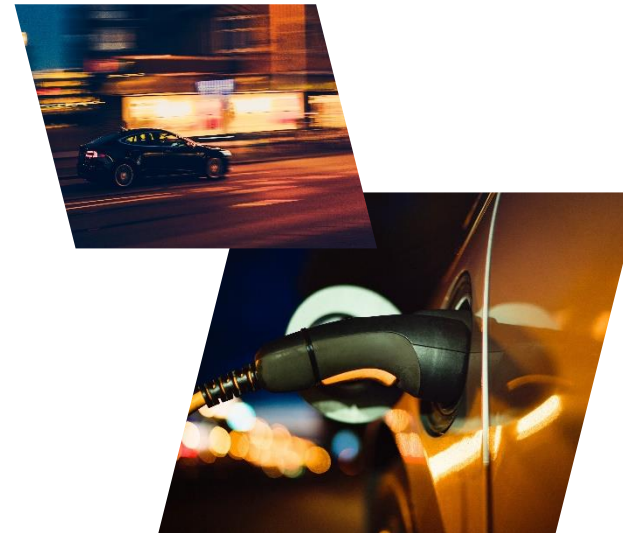
Demand from ceramic coated separators (CCS) for LIB / EV has growth rate between 2020 and 2028 of ~18.7%.*

HPA is the "hallelujah" battery material with applications in the separator and anode – and increasing potential candidate in cathode development (solid state)

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

✓ Increasing
requirement for
low carbon
supply chains
coupled with ESG

US BATTERY CAPACITY TO ACCELERATE UNDER PRESIDENT BIDEN

Jan 2021

Presidential Order
to electrify
Government fleet

Feb 2021

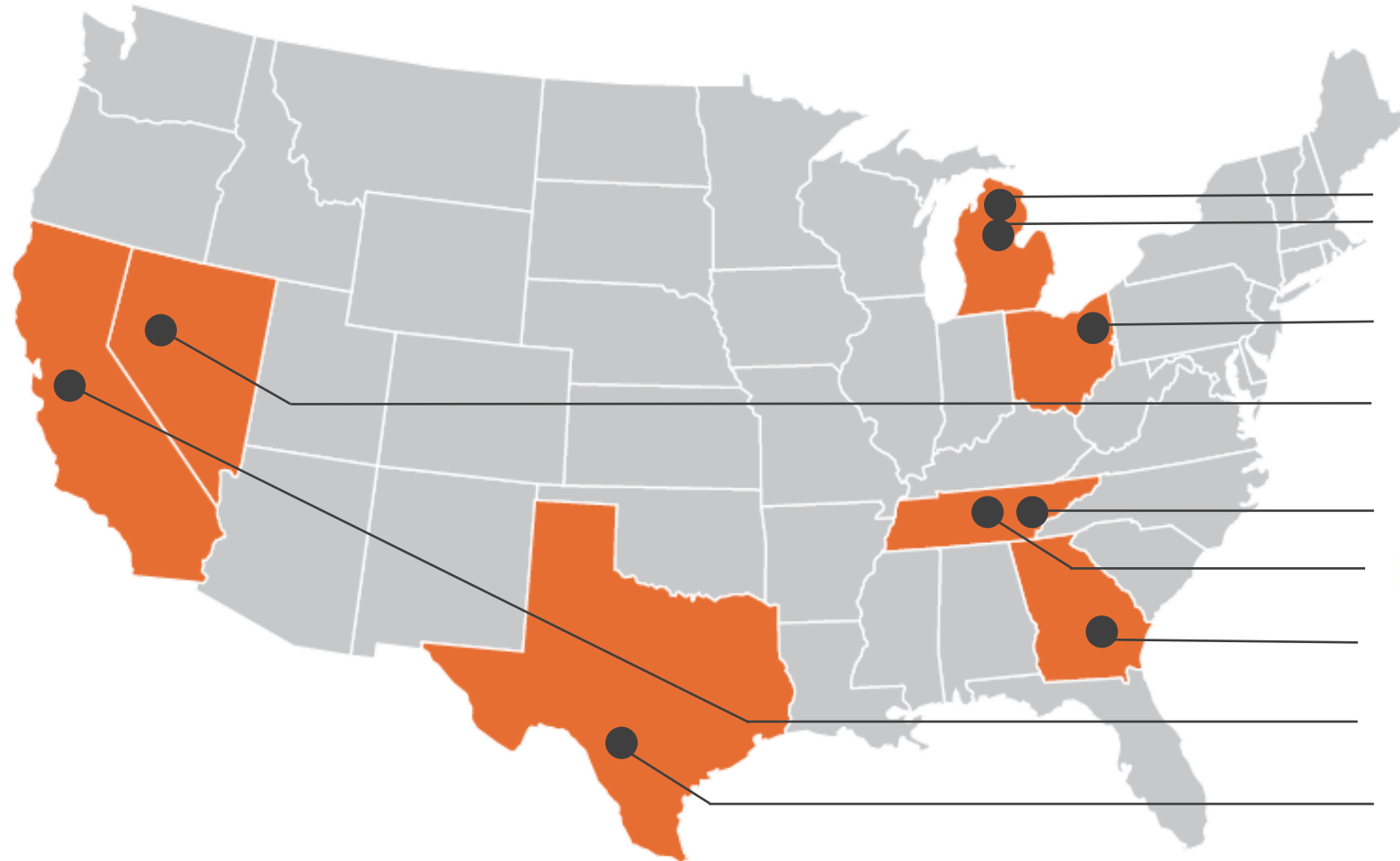
US re-joins Paris
Agreement on
Climate Change

Apr 2021

Infrastructure
plan to include
500,000 EV
charging stations

May 2021

Biden looks to
Canada,
Australia and
Brazil for EV inputs



LG Chem

SAMSUNG

gm LG Chem

Panasonic

gm LG Chem

Automotive
Energy Supply
Corporation

SK innovation

Tesla

Tesla

HPA IN EV BATTERY REVOLUTION

- Unprecedented development into the electric vehicle (EV) and static energy storage sector being undertaken
- EV / battery market is demanding improved and low-cost electrochemical energy storage / not compromising on safety
- Ground-breaking work being undertaken globally with excellent progress being achieved in improving battery performance,
- Resource efficient / cost effective chemistry and architecture
- HPA is a key element to the future development and is the benchmark separator material for most upcoming high duty battery concepts
- The use of HPA coating results in the improvement of anode characteristic of the LIB chemistries for peak load management and efficiencies
- Numerous benefits for battery manufacturers drive the use of HPA coatings, notably:
 - long life cycle
 - good chemical and thermal stability
 - Increased charge / reduced discharge rates
 - Cost effectiveness / quality & reliability / reputation
 - Safety
- Growing investments by governments to reduce the carbon footprint of transportation industry promote market prospect
- **propelling the growth of HPA** [in lithium-ion batteries market](#)

fyi



FYI – A BRIEF OUTLINE



FYI is an emerging innovative and fully integrated, high quality, ultra-pure alumina (HPA) producer



Our HPA process flowsheet and technologies coupled with extensive development result in a robust project strategy that has been de-risked ahead of production



FYI is characterised as a disruptive technology / industrial (pharmaceutical grade) company delivering critical high purity material to new age applications



The FYI developed HPA process results in best in class project economics – outstanding NPV & IRR / lowest quartile capex and opex.



FYI is actively implementing and operating under positive sustainable and societal guidelines and standards to better manage future financial performance



FYI offers ideal exposure and leverage to the EV markets through its ultra high quality and purity HPA

FYI CORPORATE SUMMARY

DIRECTORS

Mr Edmund Babington
Non-Executive Chairman

Mr Roland Hill
Managing Director

Mr David Sargeant
Non-Executive Director

Mr Adrian Jessup
Non-Executive Director

SHARE PRICE 2021



Shares on issue: 321m
Options: 37m

ASX:FYI FSE:SDL OTCQB:FYIRF

Share price	A\$0.61
Market capitalisation	A\$196m
Cash on hand	A\$9.1m

FYI



Capital Structure

Board & Management ~10%
Top 20 Holders ~42%

FYI SIX PILLARS OF HPA DEVELOPMENT

OUR STRATEGY IS BUILT UPON CORE PRINCIPLES

Strategy



Developing an integrated HPA project with the goal of becoming a leading producer of quality Al_2O_3

Quality



Innovative and efficient flowsheet demonstrated through rigorous R&D and Pilot Plant testwork and validated by positive response of major market participants

ESG (&E)



Setting and maintaining of responsible long-term operating criteria and standards to mitigate risk, manage community relationships and enhance project profits

Advantage



Tier 1 jurisdiction
Fully integrated
Validated HPA
Infrastructure
Ethical source
Low carbon print
Single source provenance

Growth



Multiple growth markets: LEDs and EVs are driving a significant rise in demand for HPA. FYI's development schedule is well timed for the forecast market growth

Economics



DFS confirms
Compelling NPV & IRR
long-life operation with industry-low opex and capex,

Validation



Robust HPA strategy culminates in excellent DFS with \$80m financing package from PE

FYI HAS THE OBJECTIVE TO BECOME A DOMINANT PARTICIPANT IN THE GLOBAL HPA MARKET

FYI HAS A COMMITMENT TO HPA EXCELLENCE

- FYI is committed to developing a leading HPA process flowsheet and product marketing strategy
- Championed by expert hydrometallurgical project management team (metallurgical and process engineering)
- HPA development testwork performed in Australia, Germany and US to optimise product quality and characteristics
- Successfully developed disruptive, cost competitive, ultra high purity, superior quality alternative HPA process
- DFS studies demonstrate top tier economic and investment case
- FYI HPA product quality and purity is verified through multiple HPA market participant validation and request for qualification engagement
- Quality strategy culminating in attracting tier 1 interest and support
 - Alcoa JV MOU
 - Leading HPA industry participant engagement (off-take / development)
 - Achieving 5N product bringing industry attention
- On going process and product development to maintain optimal production efficiencies and project economics



DETAILED HPA PRODUCT DEVELOPMENT

The Pilot Plant Has Validated FYI's HPA Flowsheet

- Three successful runs completed
- Purpose of facility is to trial FYI's innovative HPA flowsheet design
- Engineered to demonstrate and observe process flowsheet from "end to end"
- Testing of materials handling and materials of construction
- Further optimising system design and capacity
- Confirming equipment and process circuit requirements
- Assist in quantifying future production Capex and Opex parameters
- Lowering overall project risk by verifying process efficiency, yields and target grades
- HPA product sent to potential customer groups for product qualification and applications assessment
- Further runs planned



FYI's HPA pilot plant in operation in collaboration with Alcoa Kwinana-Rockingham, Western Australia

KWINANA REFINERY SITE

ENHANCEMENTS BENEFITING FYI HPA PROJECT DEVELOPMENT

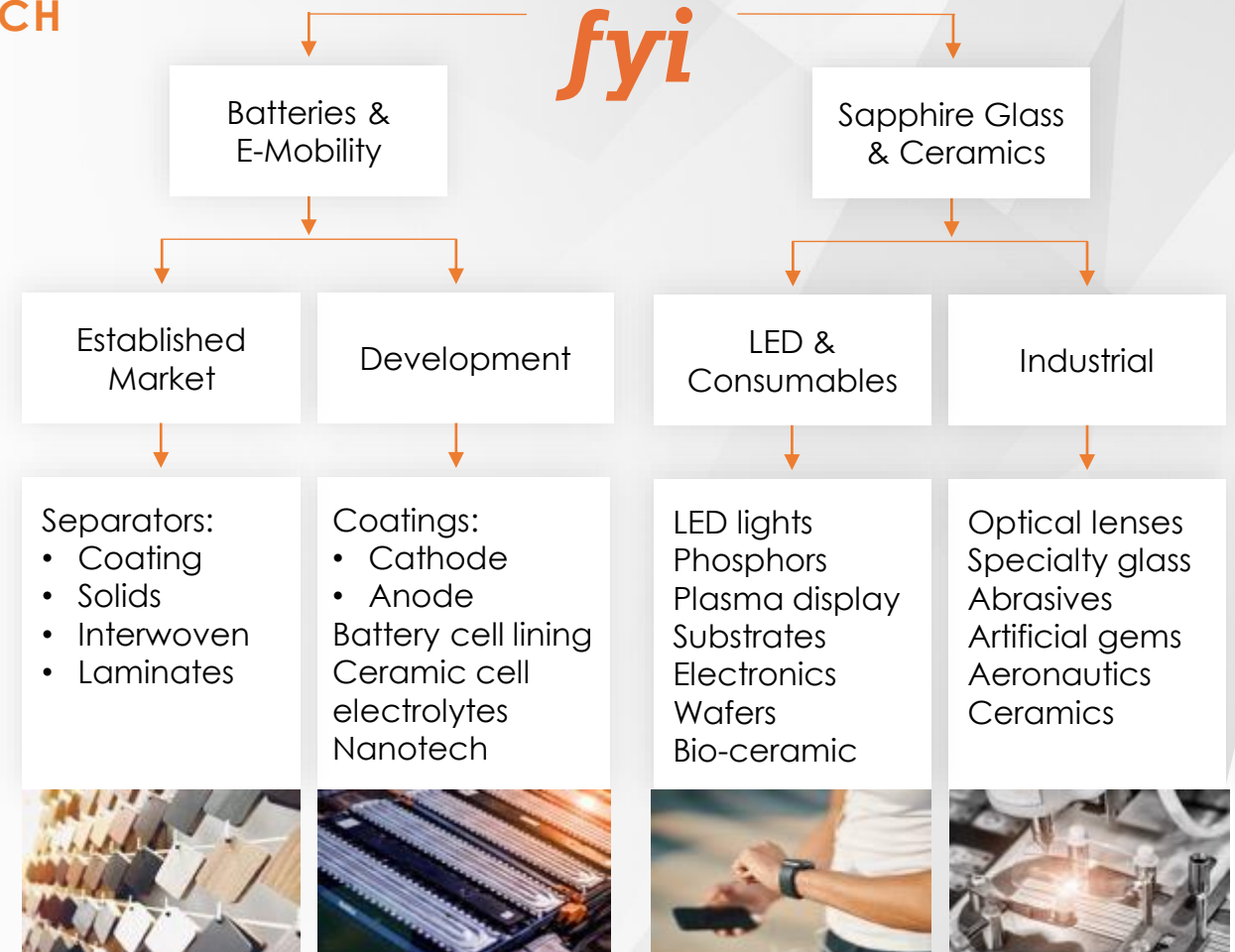
- Fully integrated production within Western Australia
- Support from Western Australian State Government through Lead Agency - Department of Jobs, Tourism, Science and Innovation
- Founding member and participant in the Future Battery Industry CRC (FBI-CRC)
 - Development of HPA specialty battery applications 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



FYI HPA TARGET MARKETS

FYI HAS A DEFINED HPA OFF-TAKE MARKET APPROACH

- FYI is an emerging producer of high quality, high purity HPA
- FYI standard product is 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
- FYI is also advancing different variations of final product to suit different market application specifications

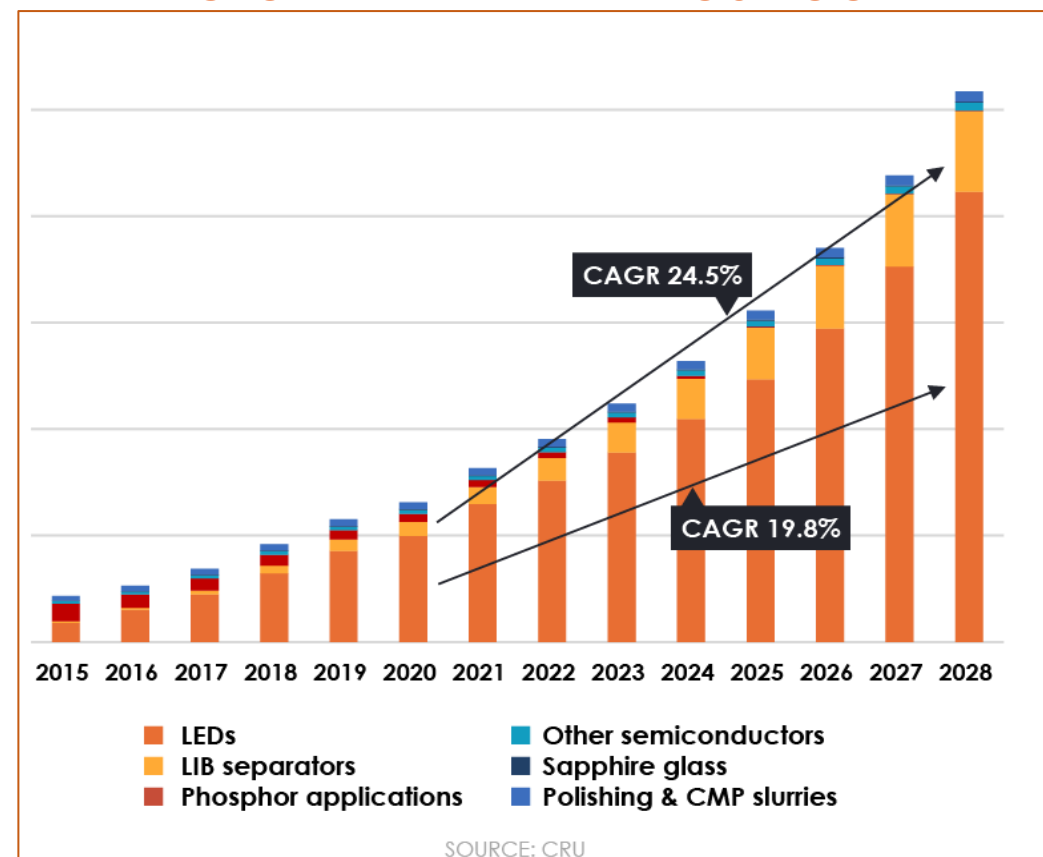


HPA MARKET OVERVIEW

GLOBAL HPA MARKETS ARE CONSOLIDATING

- ✓ 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 forecasted to be US\$4.49Bn by 2022****

GLOBAL HPA MARKET OUTLOOK



STRONG FOCUS ON MARKET ENGAGEMENT

FYI IS HEAVILY ENGAGED IN PRODUCT MARKETING AND SECURING OFF-TAKE

Strong focus on market engagement in key Market jurisdictions



Structured approach targeting off-take and potential financing



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



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



Detailed product development trials to meet customer specifications



DFS OUTSTANDING PROJECT ECONOMICS SUMMARY

POST TAX

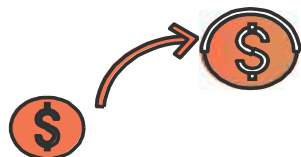
US\$6,661

HPA CASH COST



PER TONNE

55%



IRR

25 YEAR



MINE LIFE

US\$202m



CAPEX

US\$186m



AVGE ANNUAL EBITDA

3.2 YEARS



CAPITAL PAYBACK PERIOD

US\$1,015m



AFTER -TAX NPV AT 8%

US\$261m



AVGE REVENUE PER ANNUM

10,000 TPA HPA

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

15% PRODUCTION IS 5N

Refer ASX announcement 8th April 2021

MAJOR MILESTONE - ALCOA HPA PROJECT MOU



ALCOA SUMMARY

- HPA project JV MOU signed with Alcoa September 2020
- Alcoa attracted to FYI:
 - Innovative and efficient HPA process
 - Depth and degree of R&D
 - Outstanding development success
 - Industry leading project economics
 - Impressive level of market progress
- Alcoa is one of the worlds leading alumina producers:
 - Globally recognized and highly accomplished
 - >100 years of alumina experience
 - Fortune 500 company
 - Leading industry operator and innovator
 - Technically driven - attracted to FYI quality strategy
 - Global reach and relationships

FYI AND ALCOA HPA JV OBJECTIVE

- JV collaboration to build upon FYI's innovative HPA flowsheet and growth strategy
- JV to continue increasing project quality and value
- Collective JV alumina and HPA experience combine to create leading industry strategy
- Jointly develop new products and markets
- Leverage off separate and joint:
 - Technical knowledge and experience
 - Production capabilities
 - Marketing reach
 - Continuous improvement philosophy
- Improve on project capex and opex HPA strategy by joint development
- High ESG standards and targets

KEY ACHIEVEMENTS - PROJECT ENHANCEMENTS & DE-RISKING

- ✓ Alcoa JV MOU attracts world class investment attention
- ✓ DFS confirmed FYI's HPA project as a world-class*
- ✓ Process flowsheet optimised to increase efficiencies and further reduce Capex & Opex
- ✓ Metallurgical results exceeded 99.99% target HPA*
- ✓ Leases granted and permitting completed
- ✓ Advancing HPA offtake negotiations with potential customers
- ✓ Industry validation of FYI HPA quality
- ✓ Pilot plant success validates and de-risks the project
- ✓ Project Reserves** providing > 50 years mine-life
- ✓ Kwinana "Battery Alley" refinery site approved
- ✓ Focused on fast-tracking development and construction
- ✓ Major strategic financing arranged. Negotiations for balance of project funding is underway

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 (Alkoxide - bauxite / Aluminium)
 - Low environmental footprint
 - Reduction in raw material waste
 - Low waste residual / waste is recycled
 - 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 – working towards neutral emissions
 - Supplier to other sustainable and environmentally conscious industries (EV, LED)



PROJECT DEVELOPMENT SCHEDULE

PROJECT TIMELINE



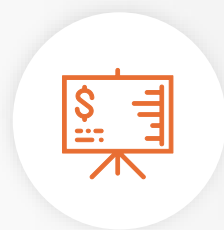
FYI – INVESTMENT INTO EMERGING GROWTH SECTOR



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



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



Partnering with tier 1 industry groups to become a dominant HPA produces



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



Strategically funded and leveraged for growth



Ground floor entry to an emerging growth sector with significant upside

FYI IS DEVELOPING A LONG-LIFE QUALITY HPA PROJECT



ASX: **FYI**
FSE: **SDL**
OTCQB: **FYIRF**

**FOR FURTHER DETAILS
PLEASE CONTACT:**

fyi *Resources Limited*

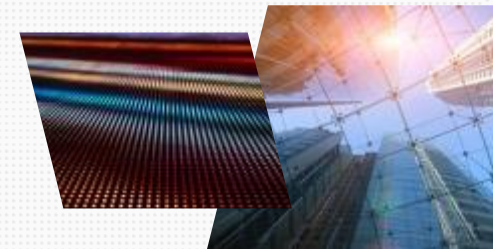
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FYI HPA – KEY DFS PROJECT ECONOMICS



ITEM	UNIT	AMOUNT
HPA production	Tpa	10,000
Production grade	Al ₂ O ₃	> 99.99%
Capital cost (capex)	US\$m	202
Operating cost (opex)	US\$/t	6,661
Project NPV (@8%)	US\$m	1,015
Project IRR	%	55
Assumed HPA selling price / t	US\$/t	26,400
Annual revenue	US\$m	261
Operating margin	US\$/t	19,739
Annual EBITDA (avg)	US\$m pa	186
Total project revenue - life of project (~25 years)	US\$bn	4.7
Capital intensity	US\$/t	20,200
Project payback	years	3.2
Exchange rate	A\$:US\$	0.75