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# Renascor Resources
# Annual General Meeting

*Managing Director's Presentation*

30 November 2021
*David Christensen*
*Managing Director*

RENASCOR
RESOURCES
*Powering Clean Energy*

Section 1:

# Executive Summary

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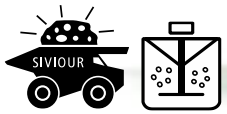
# Renascor's Strategy

**We aim to become a global leader in the supply of sustainable, 100% Australian-made battery anode material**




## Stage 1

### Commence PSG Operation

- Initial production of Graphite Concentrates and Purified Spherical Graphite
- Continue to build valuable offtake relationships with leading anode suppliers
- Develop markets for other specialty graphite products
- Increase Resource / Reserve
- Plan future growth

## Stage 2

### Expand Manufacturing of PSG

- Expand Purified Spherical Graphite production
- Staged approach to minimise upfront shareholder dilution
- Anode product development with current and next-generation anode suppliers
- Increased sales of specialty graphite products in traditional industrial, battery and emerging graphite end-user sectors

## Stage 3

### Full Renascor Potential

- Further expansion of mine and Purified Spherical Graphite manufacturing capacity
- Establish further downstream processing expertise (and partnerships, as appropriate) to support development of fully integrated anode production
- Utilise expertise in graphite materials, engineering and applications to become industry leading manufacturer of high value graphite products and solutions

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# Ethically-sourced and globally competitive battery anode material

## Highlights

- Electric Vehicle growth is driving ***annual increases of 29%*** in demand for Purified Spherical Graphite (PSG) for lithium-ion battery anodes.
- Renascor's Siviour Graphite Deposit in South Australia is the ***world's second largest Proven Reserve*** of Graphite and the ***largest Graphite Reserve outside of Africa***[1].
- The favourable geology and location of Siviour will allow Renascor to produce at costs that are competitive with current Chinese production and ***advantaged over developments outside of China.***
- Renascor is committed to industry leading ESG principles and has developed a proven ***eco-friendly, HF-free purification*** process endorsed by leading global anode companies.
- ***South Australia*** is ***Tier 1 jurisdiction*** with low sovereign risk and access to established infrastructure.
- Renascor has secured ***non-binding offtake agreements with leading global anode companies***, including POSCO (South Korea), Zeto and Minguang New Material (China), and leading Japanese-based global trading company Hanwa Corporation.

*1. See Slide 25 for Reserve category breakdown*

# Renascor Resources: Corporate Overview

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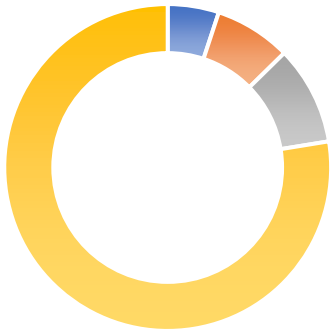
## Share Chart – ASX code: RNU



**Shareholder Breakdown (24 Nov 2021)**

- Clarke Family 5 %
- Directors 8%
- Top 20 (excl Clarke / Directors 10%)
- Other 77%

## Capital Structure

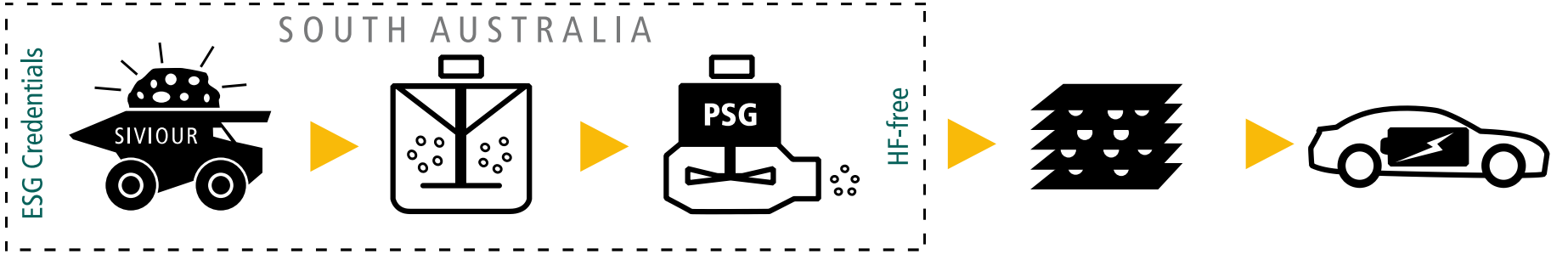
| | |
|---|---|
| Shares on issue (24 Nov 2021) | 1,889M |
| Listed Options (24 Nov 2021) | 153M |
| Performance rights (24 Nov 2021) | 6M |
| Share price (24 Nov 2021) | A$0.11/sh |
| **Market Cap (at A$0.11/sh)** | **A$207.7M** |
| Cash (30 Sep 2021) | A$16.1M |
| Debt (24 Nov 2021) | Nil |
| **Enterprise Value** (24 Nov 2021) | **A$191.6M** |

**European Capital Markets Exposure** with Renascor shares also traded on the Börse Frankfurt (Ticker **RU8**)

# Renascor's Battery Anode Material Project in the Graphite Supply Chain

**Renascor is developing a vertically integrated operation consisting of a Mine and Concentrator plus a downstream manufacturing operation to produce PSG via eco-friendly chemical purification route for sale to anode makers.**

Renascor's Integrated Battery Anode Material Manufacturing Operation




| Graphite mining | Graphite Concentrates | Purified Spherical Graphite (PSG) | Anodes | Li-ion Battery |
|---|---|---|---|---|
| Graphite-containing ore is mined, crushed and processed through flotation to 94-96% total carbon (TC) | | Graphite Concentrates are micronised, spheronised and purified to >99.95% TC | China, Japan, South Korea<br>Emerging production in Europe and USA<br>PSG coated and treated to create anode material | China, South Korea, Japan, Europe, USA<br>Anode and other components are assembled into Li-ion cells |

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Section 2:

# Impact of Lithium-Ion Battery Growth on the Graphite Market

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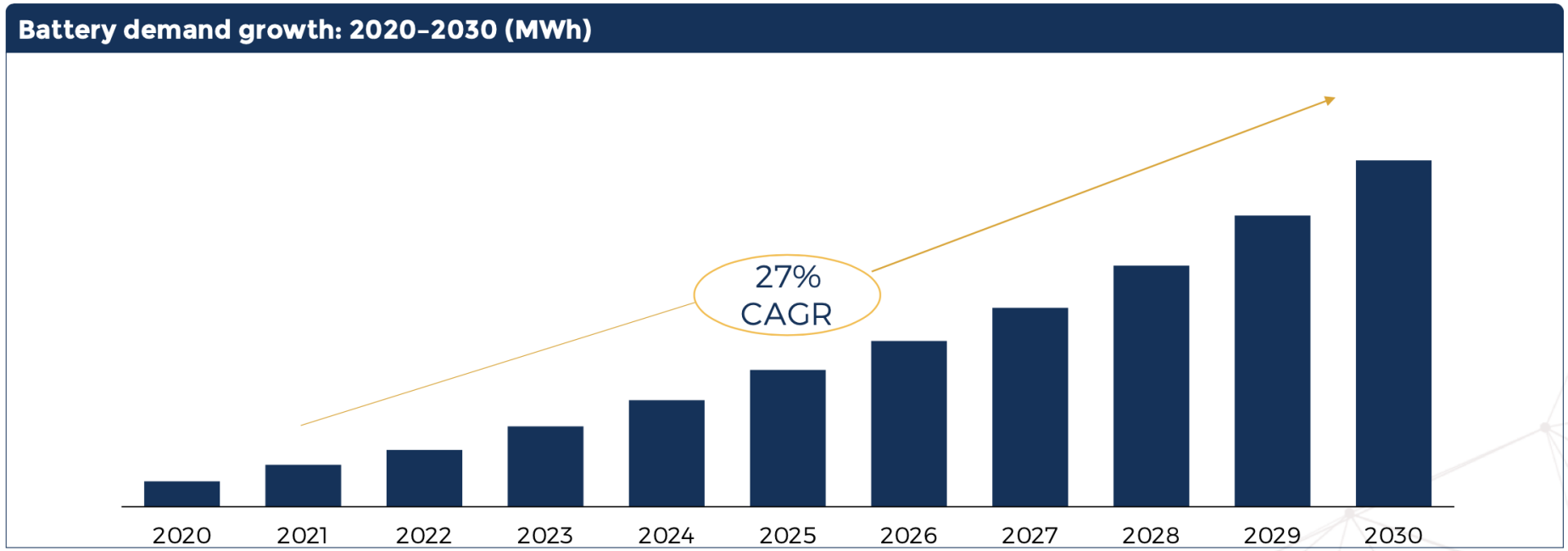
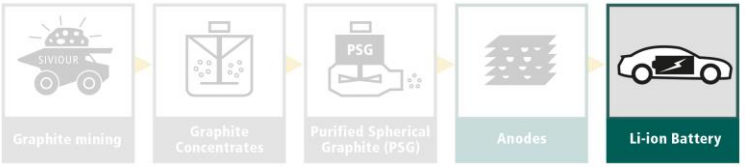
# Lithium-Ion Battery Growth is Creating a Paradigm-Shifting Event

**Electric vehicle adoption is creating unprecedented global demand for batteries.**




*Source: Benchmark Mineral Intelligence*

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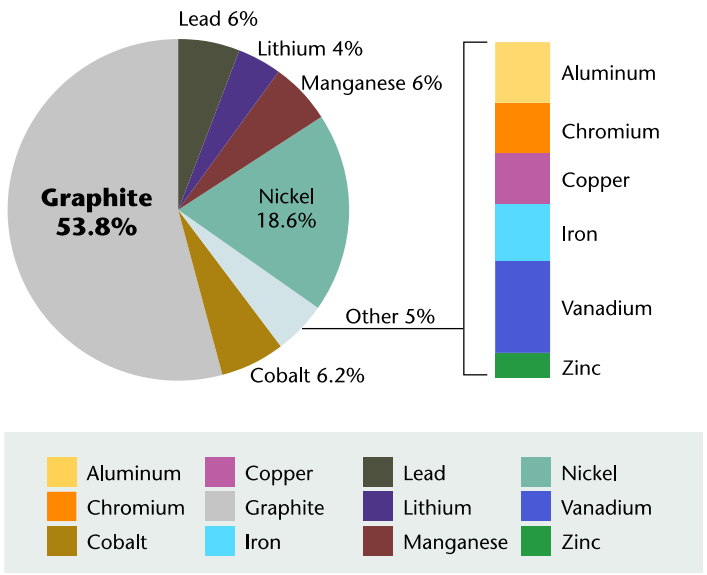
# Anode and Graphite Demand are Directly Linked to Battery Growth

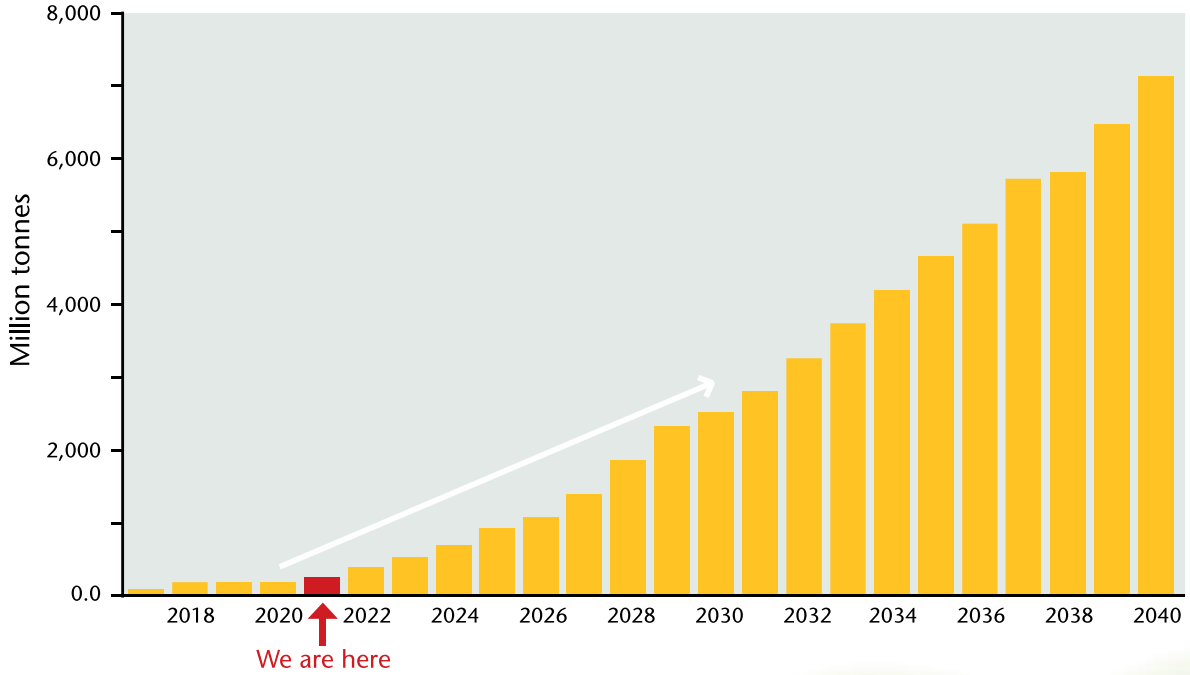
**Graphite is the fundamental raw material in lithium-ion battery anodes.**

Share of Mineral Demand from Energy Storage

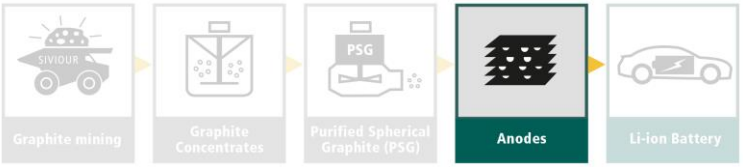



Source: IEA

Anode Demand Forecast 2018 to 2040




*Source: Benchmark Mineral Intelligence*

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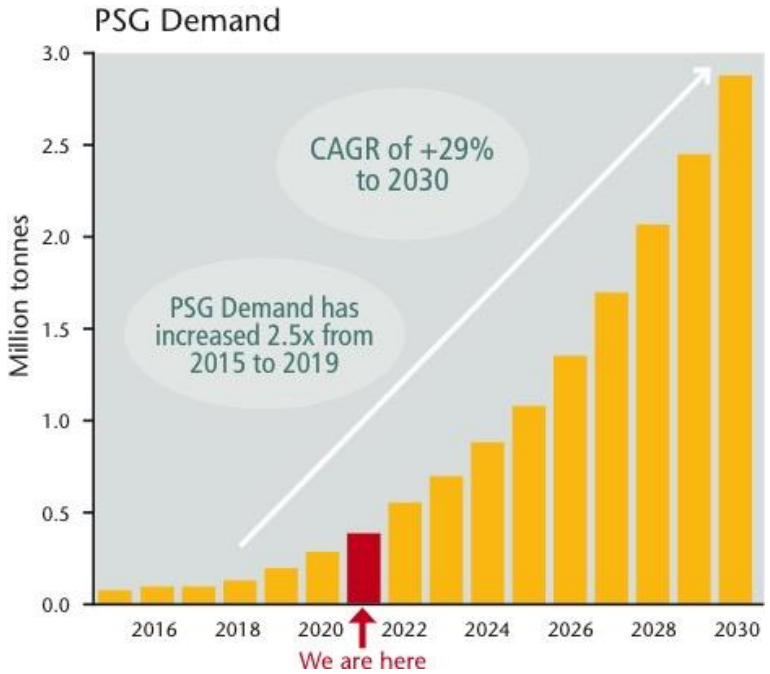
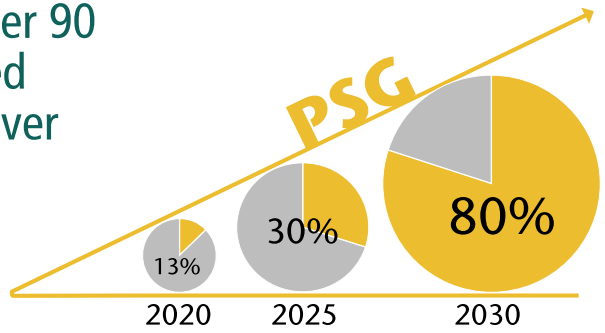
# Purified Spherical Graphite Demand Growth

**The projected growth rate in the demand for Purified Spherical Graphite will put graphite mining and graphite refining under increasing pressure to expand supply to meet demand.**

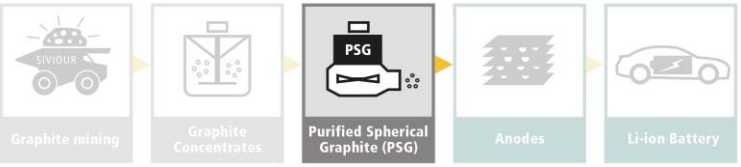



*Source: Benchmark Mineral Intelligence*




*Proportion of graphite concentrates used in production of PSG*

*Source: Benchmark Mineral Intelligence*




*Source: Benchmark Mineral Intelligence*

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# Graphite Prices Are Increasing

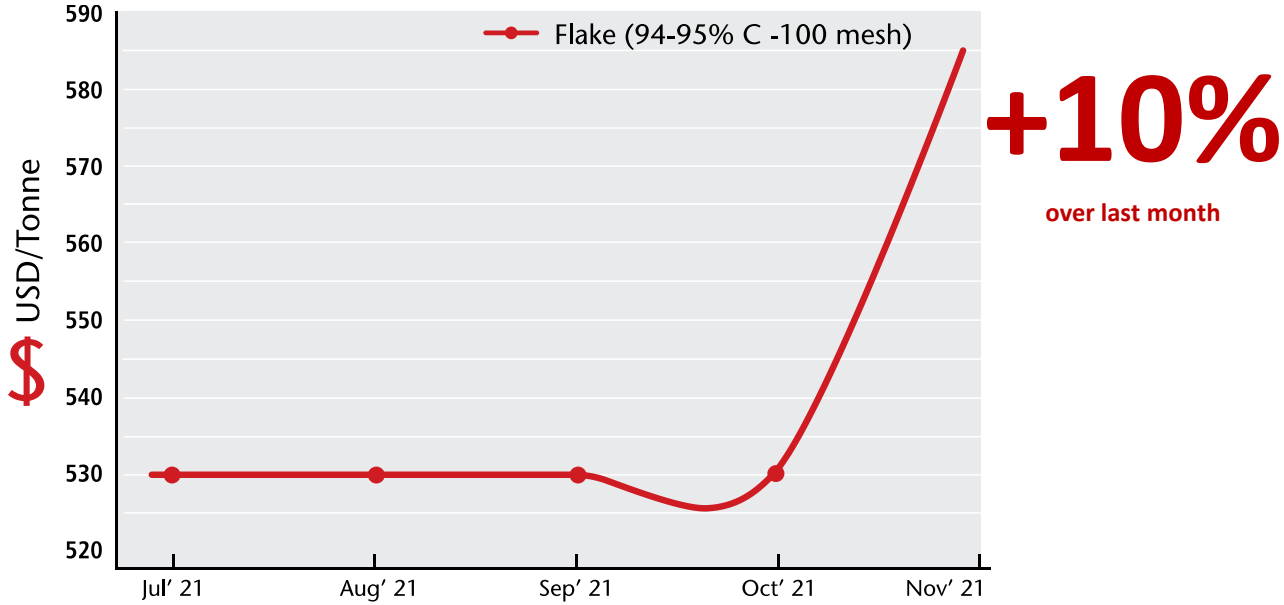
**The prices of Purified Spherical Graphite (PSG) and Graphite Concentrates are rising**

Purified Spherical Graphite Price Index

PSG prices are up +10% in the last month and 40% over the past year

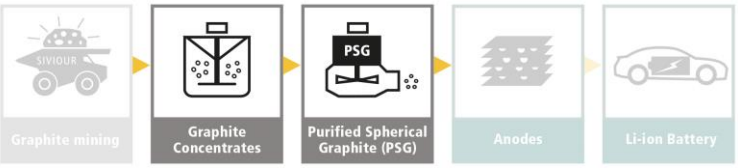
*Source: Fastmarkets*

Graphite Concentrates Prices (-194 and -195)




Graphite Concentrate prices are up over 10% in the last month

*Source: Benchmark Mineral Intelligence*

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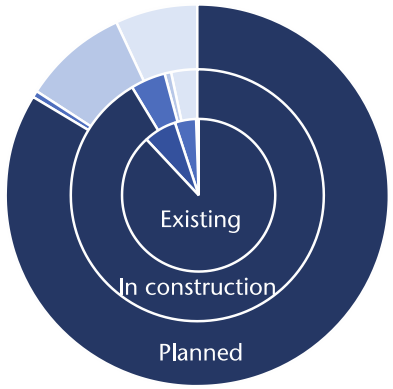
# Global Anode Supply is Centered in Northeast Asia

**China, Japan and South Korea will remain the center of anode production in the near-term before expanding over time into European, US and other markets.**

## Anode capacity




**Existing**

1,002,220 tpa

**In construction**

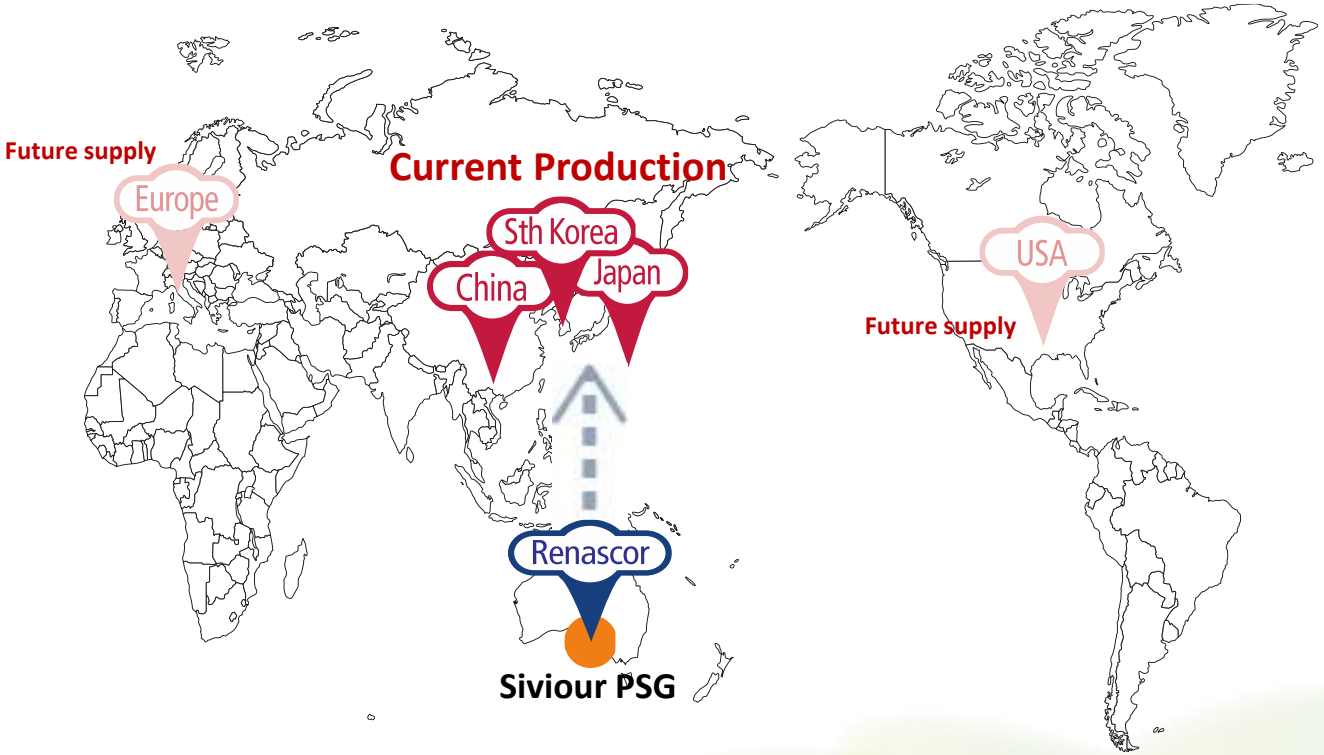
824,530 tpa

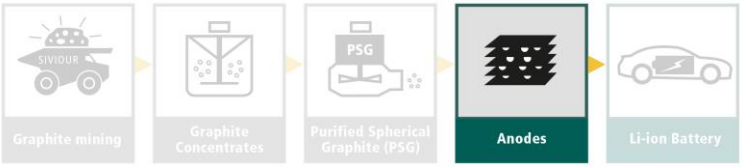
**Planned**

2,550,900 tpa

China | South Korea | North America | Other
Japan | Asia (other) | Europe

*Source: Benchmark Mineral Intelligence*

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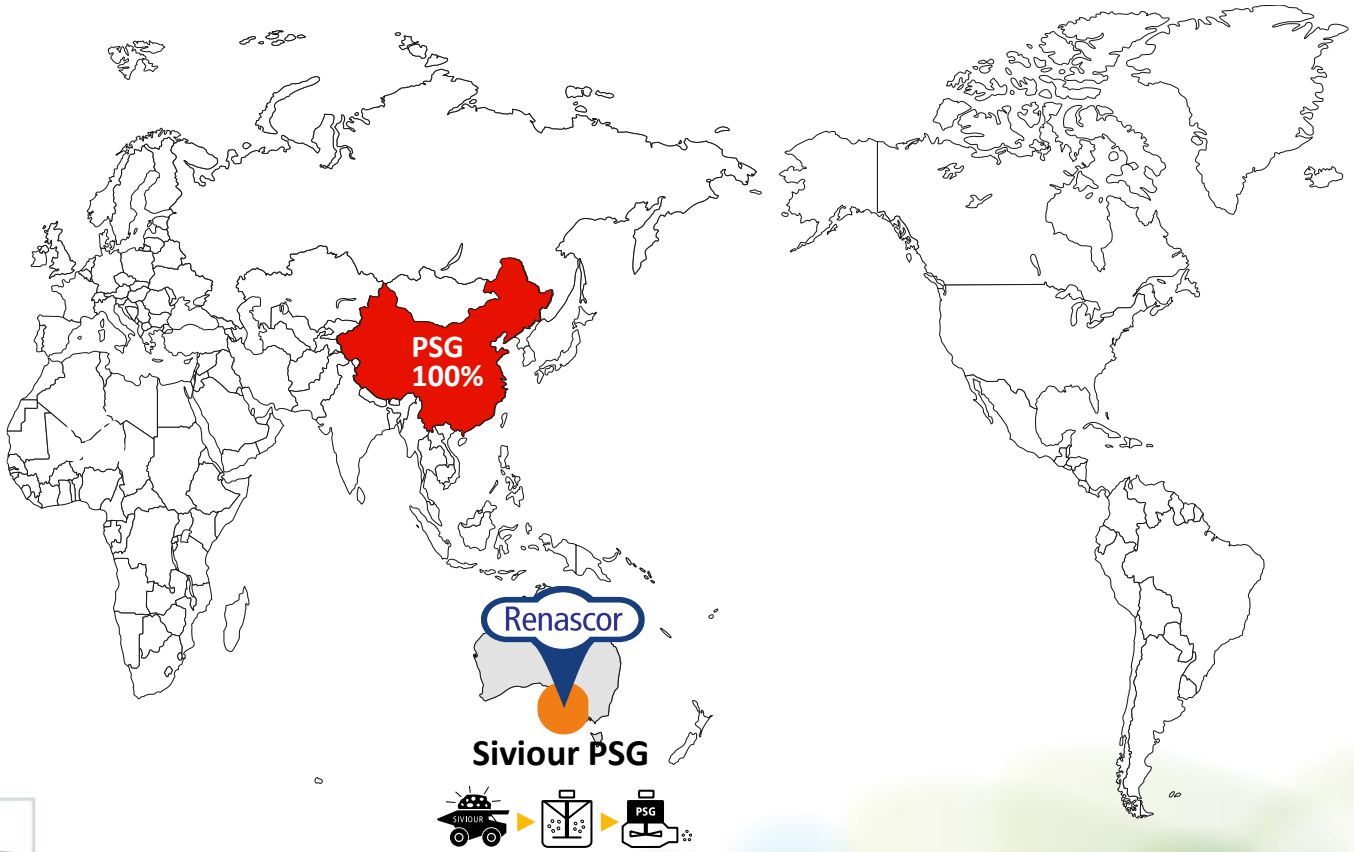
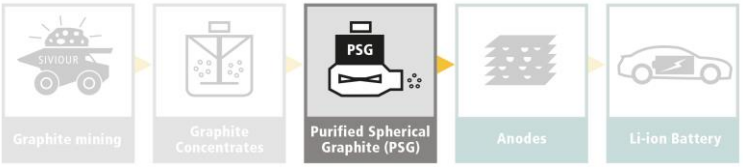
# China Currently Controls 100% of the Market for Purified Spherical Graphite

**All anode producers (including manufacturers in South Korea and Japan) are currently dependent on China for Purified Spherical Graphite.**

Renascor will provide a viable alternative supply source of PSG

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Section 3:

# The Siviour Battery Anode Material Project

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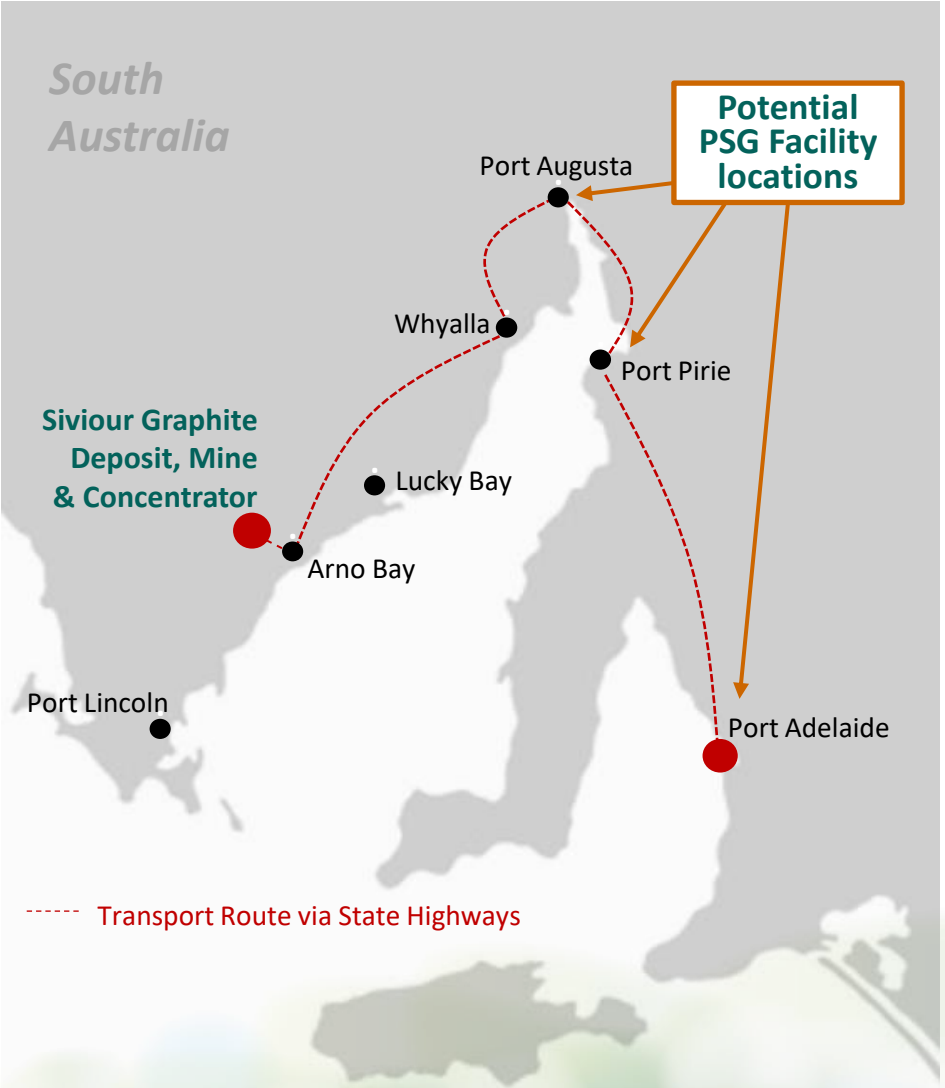
# Mine to Market Supply Chain Security

**Mine to Market supply chain located from South Australia lowers lowers logistics costs and ensures security of supply.**

- Renascor's vertically integrated operation offers **global supply chain security** from South Australia.
- The Siviour Graphite Deposit, Mine and Concentrator is located on the Eyre Peninsula in South Australia.
- Graphite concentrate produced at Siviour will be transported to a PSG manufacturing facility and then shipped to anode manufacturers around the world.
- The operation benefits from established infrastructure with the logistics supply chain to gain a competitive cost advantage in the production of PSG.




*1. Renascor is currently evaluating commercial sites in Port August and Port Pirie.*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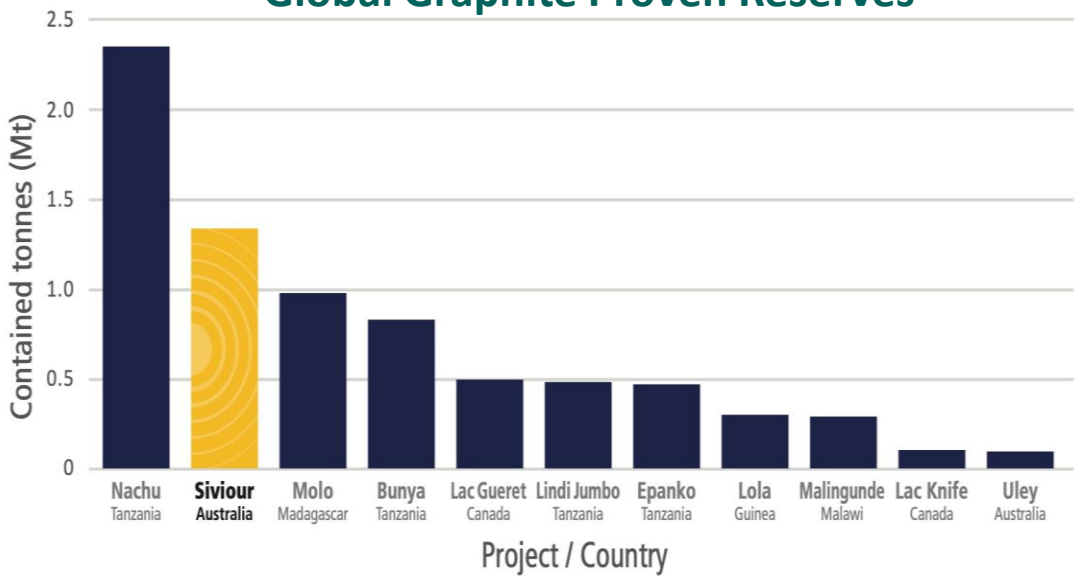
# The Siviour Graphite Deposit is World-Class

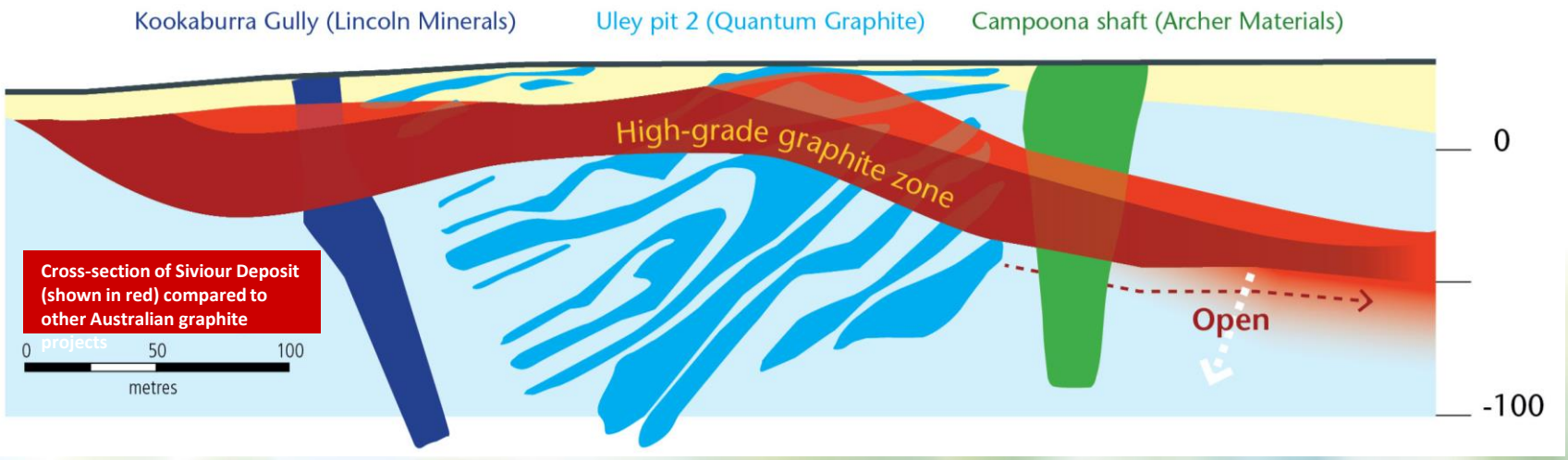
**Siviour is unique - in both its near-surface, flat-lying orientation and its scale as one of the world's largest graphite Reserves.**

- The deposit is flat, shallow and large, resulting in low-cost mining and consequently low-cost production of Graphite Concentrate.
- Integration of the downstream PSG production facility with the Siviour low-cost graphite concentrate feedstock allows for globally competitive PSG production costs.

## Global Graphite Proven Reserves[1]




*[1] See Slide 25 for Reserve category breakdown.*

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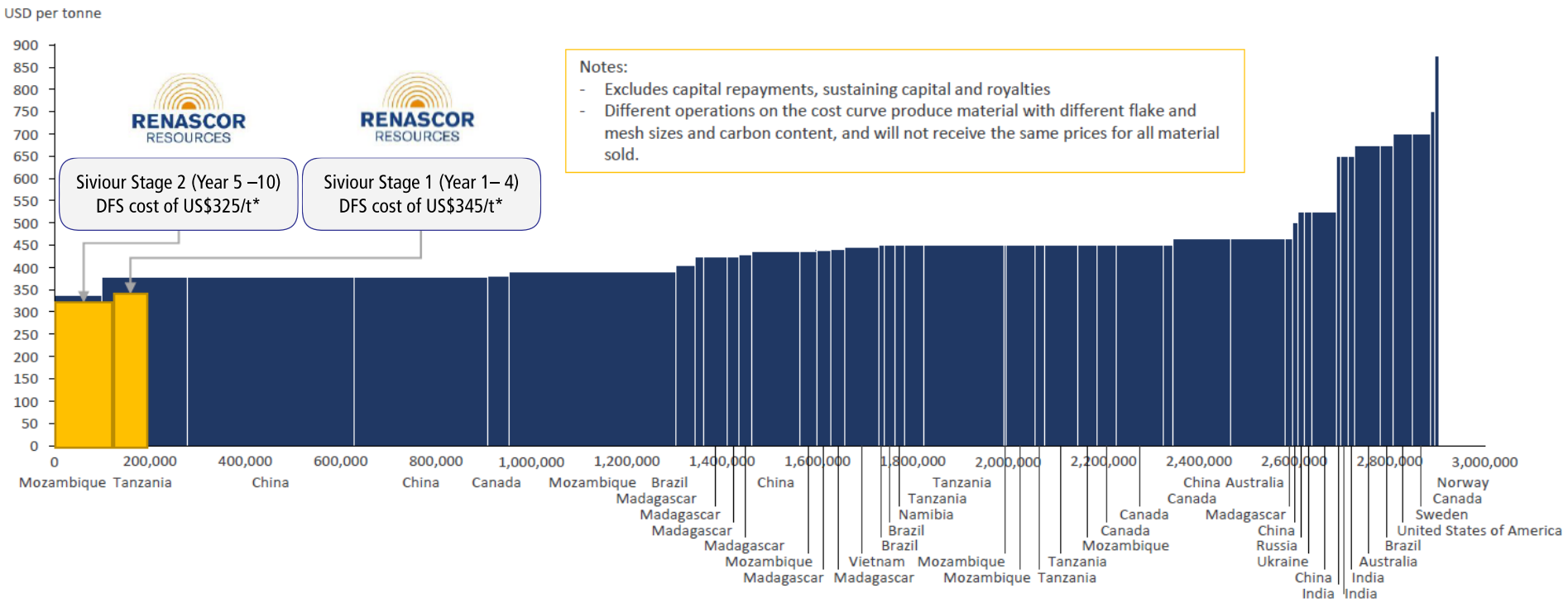
# **Siviour Graphite Concentrate:** Among the World's Lowest Cost Production

**Graphite Concentrate DFS confirms lowest quartile OPEX, underpinning globally competitive PSG production.**




* Costs provided by Renascor from the Siviour DFS document. The cost assessment from the Siviour DFS may not use the same methodology as the Benchmark Minerals cost model.

*Source: Benchmark Mineral Intelligence.*

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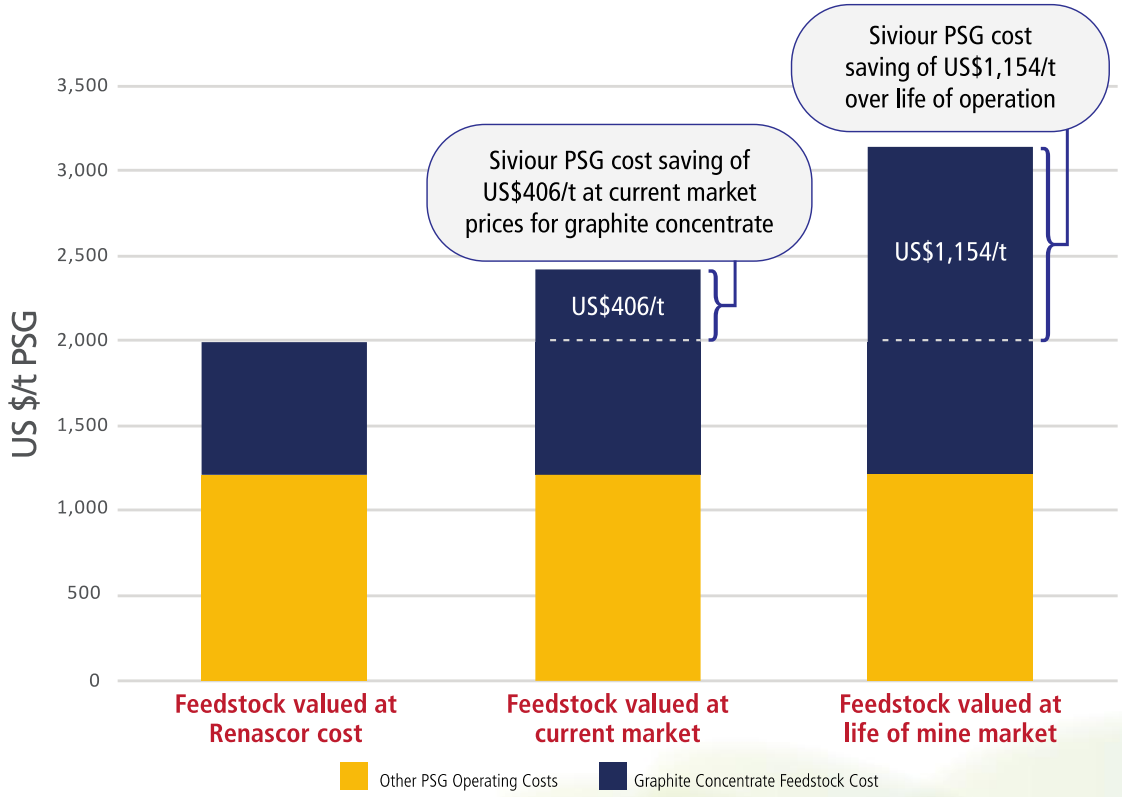
# Strong Comparative Advantage in PSG Production

**Vertical Integration underpins low-cost PSG production.**

- Graphite Concentrate feedstock a significant cost input to the PSG manufacturing process.
- Renascor's PSG operation benefits from obtaining Siviour Graphite Concentrate feedstock at the cost of production rather than buying the feedstock at market price.
- The difference in feedstock price has an exaggerated impact on PSG operating costs because only half of the Graphite Concentrates used as feedstock are spheronised to PSG during the milling process (i.e., PSG production can be at a 50% yield).
- Renascor's market data suggests an average operating costs of ~US$2,000/t PSG for existing PSG market (100% China).
- Renascor's gross operating cost of US$1,989/t PSG is favourable by comparison.




*Source: Benchmark Mineral Intelligence*

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# Battery Anode Material Study Results – Stage 1 PSG Production[1]

**Low graphite concentrate feedstock costs drives Renascor's low PSG production costs, high margins and strong cash generation.**

| Item | Value |
|---|---|
| Average annual LOM production of Graphite Concentrate | 105,000t |
| **Average annual LOM production of PSG (Stage 1)** | **28,000t** |
| Life of mine/project | 40 years |
| Start-up capital cost of mine and concentrator | US$79m |
| Start-up capital cost of battery anode material operation | US$63m |
| **Total start-up capital** | **US$142m** |
| **$NPV_{10}$ (after tax) of integrated operation with Stage 1 PSG production** | **US$499m** |
| Cost of Feedstock per tonne PSG production | US$775/t |
| Cost of Feedstock Conversion to PSG per tonne PSG production | US$1,214/t |
| **Total Cost Project Operating cost per tonne PSG production** | **US$1,989/t** |
| Operating cost (with by-product credit) | US$1,398/t |
| Projected PSG sales price (first ten years) | US$3,815/t |
| Net revenue of integrated operation | US$6,686m |
| EBITDA of integrated operation with Stage 1 PSG production | US$4,387m |
| **Project cashflow of integrated operation with Stage 1 PSG production** | **US$2,878m** |

*1. ASX release 1 July 2020 "Renascor Announces Battery Anode Manufacturing Operation"*

- Renascor has commenced work to investigate a substantial increase in Stage 1 production capacity beyond the currently planned 28,000tpa of PSG.
- Renascor has also brought forward feasibility work for the Stage 2 expansion.

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Socially responsible investing (ESG) aims to better mitigate risks and help shape a more sustainable world.

# Strong Environment, Social and Governance (ESG) credentials

- South Australia is a Tier-1 jurisdiction with **low sovereign risk** and a **robust and transparent regulatory framework**.
  - South Australia's Minister for Energy and Mining granted a Mineral Lease for Siviour April 2019,[1] the first step in the South Australian government's two-stage assessment and approval process. Second-stage approval submitted in September 2021.
- Renascor's **purification process is eco-friendly.**
  - Over the last five years, Renascor had developed a purification process that avoids the use of Hydrofluoric ("**HF**") acid, offering a cleaner **HF-free** alternative to prevailing process used in China.
  - Renascor's eco-friendly graphite purification technology achieved outstanding results of 99.99% C purity in recent testing at leading German independent battery mineral consultancy group Dorfner Anzaplan.
- By vertically integrating the mine and downstream processing operation in South Australia, Renascor **optimises the use of local resources** to lessen costly and inefficient transport of raw materials for intermediate processing and ensures strong ESG oversight of entire supply chain.

100% Australian-made

HF-free

*1. ASX 8 April 2019, "Mineral Lease Granted"1 July 2020 "Renascor Announces Battery Anode Manufacturing Operation"*

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# **Offtake Strategy:** Aligned with Global Leading Battery Anode Manufacturers

**Total commitments for up to 200% of current Stage 1 PSG capacity of 28ktpa**

posco

- **POSCO**: Non-binding MOU with POSCO for the purchase of 20,000tpa to 30,000tpa of PSG.
  - This potentially represents up to 100% of Renascor's proposed initial production capacity of PSG.
- The MOU provides scope for strategic cooperation between POSCO and Renascor including the potential for equity investment by POSCO International. Discussions with POSCO regarding the nature of the strategic cooperation are ongoing.
- POSCO is one of South Korea's largest conglomerates, and is the largest anode manufacturer outside of China, with existing production capacity of 44,500tpa, and a further 48,000tpa planned or under construction.

Sample qualification and negotiation on binding offtake terms currently underway

# **Offtake Strategy:** Aligned with Global Leading Battery Anode Manufacturers *(cont.)*

**Total commitments for up to 200% of current Stage 1 PSG capacity of 28ktpa**

- **Minguang:** First stage product qualification achieved with Chinese anode company Minguang as part of non-binding PSG Offtake MOU covering up to 10ktpa for 10 years.
  - Minguang is a subsidiary of Fujian Metallurgical Holding Co. Ltd. - one of China's largest battery material suppliers (total assets ~ US$13 billion).
- **Zeto**: First stage product qualification achieved with Chinese anode company Zeto as part of non-binding PSG Offtake MOU covering up to 10ktpa for 10 years.
  - Zeto is a top-ten anode producers globally and is a major supplier of anodes to the world's largest battery makers, including Hong Kong listed BYD Co. Ltd, the world's second largest manufacturer and retailer of EVs (market cap ~US$100 billion).
- **Hanwa:** Access to Japanese market through non-binding PSG Offtake MOU covering up to 10ktpa for 10 years.
  - Hanwa is a leading Japanese-based global trading company long history of trading with some of the world's largest metal and chemical producers and operates a dedicated Battery Team focussed on supplying graphite and other metals across the global battery value chain.

Increased offtake demand has led Renascor to bring forward feasibility work on potential first stage expansion and larger subsequent stage production.

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# Australian Government Support

- ”Major Project Status” awarded by Australian Government.
- Identified by Australian Government as a “Selected Australian critical minerals project”.
- Mineral Lease grant by South Australia’s Minister for Energy and Mining in Siviour April 2019.[1]
- Reduced royalty for first five years of production with grant of ‘New Mine’ status by South Australian Government Treasury.
- In principle financial support from the Clean Energy Finance Corporation and Export Finance Australia.
- Strong local support, including District Council of Cleve and Regional Development of Australia Eyre Peninsula.
- Austrade and Department of Trade and Investment support for offtake negotiations.

Federal Minister for Resources Keith Pitt with Renascor Managing Director David Christensen (June 2021)

*1. ASX 4 April 2019, “Mineral Lease Granted”*

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Australian Government | export finance australia | cefc | Government of South Australia | AUSTRADE Australian Trade Commission | District Council of Cleve | Regional Development Australia Eyre Peninsula Inc.

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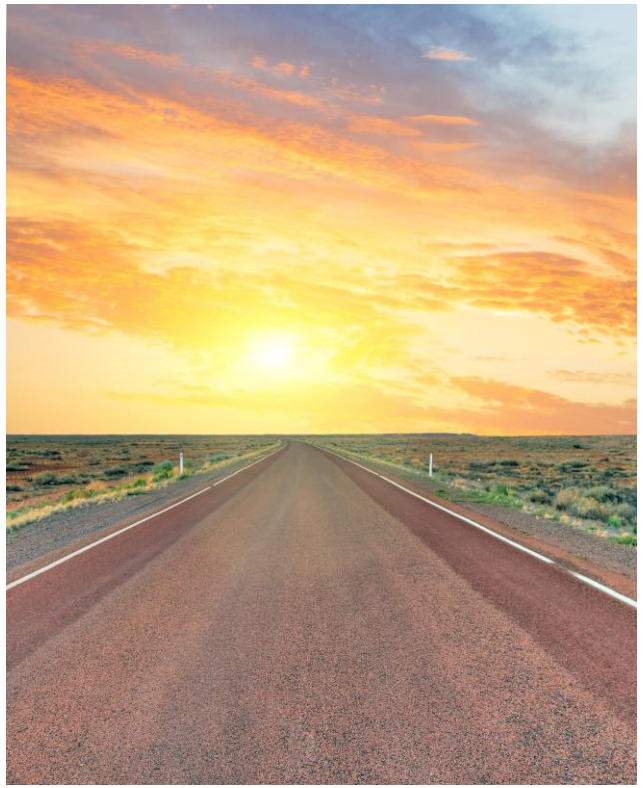
# **Renascor Resources:** Multiple Near-Term Value Drivers

- **Siviour Battery Anode Material Project:**
  - Advancing to binding offtakes with existing offtake and potential new offtake partners.
  - Increasing demand has led Renascor to bring forward feasibility work on potential Stage 1 expansion and larger Stage 2 production.
  - Completion of technical studies to capture synergies of the integrated Battery Anode Material Project.
  - Final environmental and regulatory approvals.
  - Lender due diligence and execution of binding credit approved terms sheets.



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Proud members of:

EUROPEAN BATTERY ALLIANCE | EBA250

EUROPEAN RAW MATERIALS ALLIANCE | ERMA

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# Appendix

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# Siviour Mineral Resources and Ore Reserves

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## Mineral Resource Estimate (April 2019)[1]

| Category | Tonnes (Mt) | Grade (% TGC) | Graphite (Mt) |
|---|---|---|---|
| Measured | 15.8 | 8.8% | 1.4 |
| Indicated | 39.5 | 7.2% | 2.8 |
| Inferred | 32.1 | 7.2% | 2.6 |
| **Total** | **87.4** | **7.5%** | **6.6** |

## Ore Reserve Estimate( July 2020)[2]

| Category | Tonnes (Mt) | Grade (% TGC) | Graphite (Mt) |
|---|---|---|---|
| Proven | 15.8 | 8.4% | 1.3 |
| Probable | 35.8 | 6.9% | 2.5 |
| **Total** | **51.5** | **7.4%** | **3.8** |

*1. ASX release 30 April 2019 "High-Grade Measured Resource in Upgraded JORC Resource", 2. ASX release 21 July 2020 "Updated Mineral Ore Reserve Estimate"*

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# Forward Looking Statements

This Presentation may include statements that could be deemed "forward-looking" statements. Although Renascor Resources Limited (the "Company") believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and actual results or developments may differ materially from those expected in the forward-looking statements or may not take place at all.

## No Offer to Sell or Invitation to Buy

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# Competent Persons Statement

The results reported herein, insofar as they relate to exploration activities and exploration results, are based on information provided to and reviewed by Mr G.W. McConachy (Fellow of the Australasian Institute of Mining and Metallurgy) who is a director of the Company. Mr McConachy has sufficient experience relevant to the style of mineralisation and type of deposits being considered to qualify as a Competent Person as defined by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2012 Edition). Mr McConachy consents to the inclusion in the report of the matters based on the reviewed information in the form and context in which it appears.

# Bibliography

Renascor confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements noted below and referenced in this presentation and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. Renascor confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.


1. Renascor ASX announcement dated 10 April 2019, "In Principle Project Finance Support from Dutch ECA"
2. Renascor ASX announcement dated 30 April 2019, "High-Grade Measured Resource in Upgraded JORC Resource"
3. Renascor ASX announcement dated 11 November 2019, "Siviour Definitive Feasibility Study"
4. Renascor ASX announcement dated 3 March 2020, "In Principle Finance Support from Australian ECA"
5. Renascor ASX announcement dated 24 June 2020, "Siviour Graphite Project Financing Update"
6. Renascor ASX announcement dated 1 July 2020, "Renascor Announces Battery Anode Manufacturing Operation"
7. Renascor ASX announcement dated 21 July 2020, "Updated Mineral Ore Reserve Estimate"
8. Renascor ASX announcement dated 29 September 2020, "MOU with one of China's largest battery material suppliers"
9. Renascor ASX announcement dated 12 January 2021, "First Stage Product Qualification with Offtake Partner"
10. Renascor ASX announcement dated 27 January 2021, "Further Offtake MOU with Leading Battery Anode Manufacturer"
11. *Renascor ASX announcement dated 11 February 2021, "First Stage Offtake Qualification of 2/3 of PSG Production"*
12. *Renascor ASX announcement dated 15 February 2021, "SA Govt. Grants Reduced Royalty Rate for Siviour"*
13. Renascor ASX announcement dated 22 February 2021, "Renascor's Eco-Friendly Graphite Purification Technology Achieves Outstanding Results"