ASX Release

9 July 2026

Cost Study Supports Low-Cost PSG Purification Process

Detailed engineering and testwork completed through PSG demonstration plant program supports cost advantages for Renascor's HF-free process over HF-based methods

Renascor Resources Limited (ASX: RNU) (**Renascor**) is pleased to announce the results of a cost study supporting the competitive operating cost profile for its hydrofluoric acid (**HF**) free method for purifying graphite to up to 99.99% carbon for use in lithium-ion battery anodes.

- Purification cost study estimates operating costs of approximately US$459/t (2026 dollars), supporting the potential competitiveness of Renascor's HF-free purification process relative to HF-based purification methods being developed in Western jurisdictions.
- Renascor's HF-free purification process is designed to provide a competitive ex-China alternative to conventional HF-based purification methods through lower reagent costs, reagent recycling enabled by an integrated water treatment circuit and by eliminating the need for higher health, safety and environmental management costs associated with the use of HF[1].
- Renascor's study incorporates engineering data and operating assumptions generated through large-scale purification testwork, process optimisation, water treatment studies, detailed engineering and our PSG demonstration plant development activities.
- Renascor is currently commissioning its Australian Government co-funded[2] Purified Spherical Graphite (**PSG**) demonstration plant to validate engineering, operating and process parameters ahead of commercial-scale downstream development.
- Renascor is concurrently working with prospective customers and strategic partners through its PSG demonstration plant program by generating and sharing operating data and product samples to support customer qualification, offtake and strategic investment discussions.

Renascor Resources Limited
ABN 90 135 531 341

Level 5, 149 Flinders Street
Adelaide SA 5000
Australia

Phone: + 61 8 8363 6989
Email: info@renascor.com.au
www.renascor.com.au

Commenting, Renascor's Managing Director, David Christensen, said:

> *"As global battery supply chains increasingly seek competitive ex-China sources of battery materials, Renascor's strategy is to combine the scale and quality of the Siviour Graphite Deposit with downstream PSG processing in South Australia to establish an integrated Australian mine-to-PSG operation.*
>
> *Renascor's strategy extends the low-cost advantage of the Siviour Graphite Deposit into downstream PSG production and is designed to provide anode manufacturers with a secure and commercially competitive source of spherical graphite produced using an HF-free purification process.*
>
> *The work currently being undertaken through Renascor's PSG demonstration plant program is intended to validate this value proposition by generating the operating data, cost information and qualification samples required to support engagement with anode and cell manufacturers, advance customer qualification programs and progress offtake and strategic partnership discussions."*

Figure 1. Renascor's PSG Demonstration Facility

PSG Demonstration Plant

A key component of advancing Renascor's strategy is the construction and operation of its PSG demonstration plant in South Australia to support final technical validation and ongoing customer qualification, offtake and strategic investment discussions.

As announced in July 2024, Renascor was awarded a $5 million grant under the Australian Government's International Partnerships in Critical Minerals Program to construct a PSG demonstration facility in South Australia[3].

The demonstration facility will convert spherical graphite into PSG through a continuous production process, enabling Renascor to test, demonstrate and optimise its purification

process. Renascor considers that its purification process offers potential advantages over conventional purification methods used for PSG by avoiding the use of hydrofluoric acid[4].

Learnings obtained from the demonstration facility will be utilised in the detailed design stage and carried through into the construction and operation of the full-scale commercial PSG facility designed to upgrade graphite for use in lithium-ion battery anodes.[5]

Purification Cost Study

Purification of graphite to battery-grade specifications of 99.95% carbon or greater is a critical requirement for lithium-ion battery anode applications. Purification is also one of the major operating cost components in downstream PSG production and is therefore critical to the development of competitive ex-China battery anode material supply chains.

As conventional purification methods generally rely on HF, downstream purification costs outside China can increase significantly due to reagent costs and the extensive health, safety, environmental handling and disposal requirements associated with hydrofluoric acid.

Renascor has developed an HF-free purification process that combines sulfuric acid leaching with a low temperature caustic bake. Renascor's purification process also includes a water treatment circuit permitting the recycling of reagents and limiting water usage[6]. Renascor's HF-free purification process has produced battery-grade graphite exceeding 99.99% carbon purity through large-scale locked-cycle trials, with no impurities detected above acceptable anode customer specifications.[7] A simplified flowsheet is shown below in Figure 2.

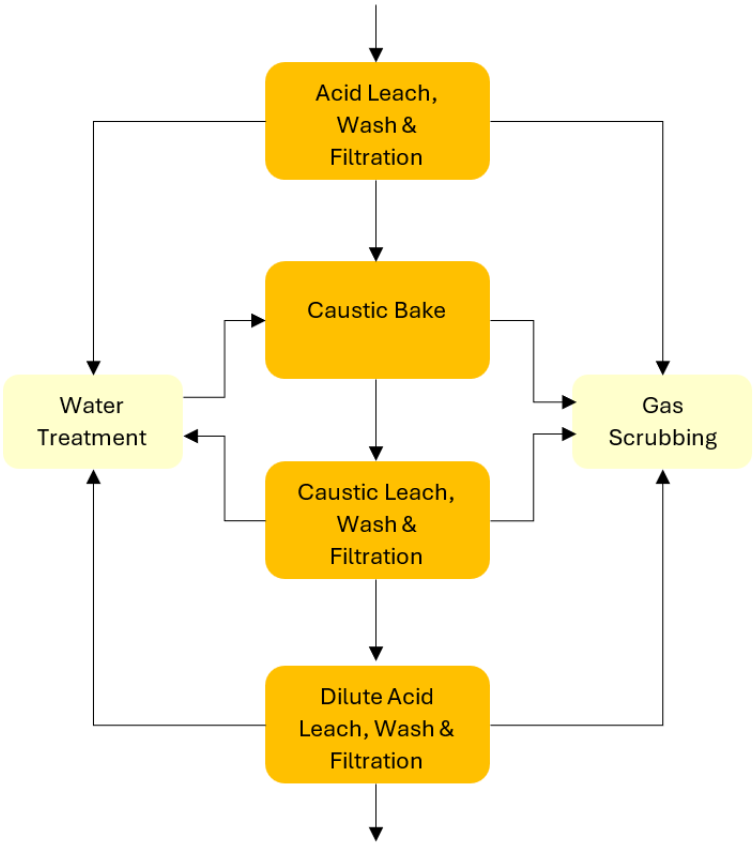

Figure 2. Renascor's HF-free purification simplified flowsheet

As part of the advancement of its downstream PSG development strategy and in preparation for commissioning and operation of the PSG demonstration plant, Renascor completed a

purification cost study to assess the operating cost profile of its HF-free purification flowsheet ahead of commercial-scale downstream development.

The purification cost study estimates operating costs of approximately US$459/t (2026 US dollars) for Renascor's HF-free purification flowsheet, supporting the potential for a commercially competitive ex-China source of battery-grade PSG.

Parameter	US$/tonne
Reagents	121
Energy	115
Labour	79
Maintenance	74
Other (water treatment, laboratory and G&A)	70
Total	**459**

Table 1. Estimated purification operating cost (2026 US$/t PSG)

The purification cost study is based on a commercial PSG facility with a design capacity to process approximately 50,000 tonnes per annum in Bolivar, South Australia, where Renascor has entered an option-to-lease with South Australian Government-owned utility SA Water[8]. The reference to design capacity reflects the assumed plant configuration adopted for the purposes of the study and does not constitute a production target. The study incorporates operating assumptions and engineering data generated through Renascor's downstream development activities and PSG demonstration plant programs, including extensive laboratory and large-scale purification testwork, process optimisation, reagent balance assessments, water treatment integration studies, detailed engineering design, equipment testing and scale-up activities completed in preparation for commissioning and operation of the PSG demonstration plant.

The estimated operating cost is expressed in 2026 US dollars using an assumed AUD/USD exchange rate of 0.70 and relates to the purification stage of PSG production, including leaching, baking, washing, filtration, gas scrubbing and water treatment. The estimate excludes costs associated with spheronisation, logistics, financing and other activities outside the purification process. The study is intended to assess the operating cost profile of Renascor's purification process independently of the source of graphite feedstock.

Comparison to Western HF-Based Purification

The purification cost study indicates that Renascor's HF-free purification process may provide a compelling alternative to conventional HF-based purification methods being developed outside China. As illustrated below, Renascor's estimated purification operating cost compares favourably with the range of operating costs associated with conventional HF-based purification methods in Western jurisdictions. This supports the potential for a commercially competitive ex-China purification process without the use of hydrofluoric acid.

Figure 3. Renascor estimated purification operating cost versus Western HF-based methods (Source: Independent Ex-China HF Purification Cost Benchmarking Report prepared by GraphiteHub[9])

Renascor considers that its HF-free purification process offers potential advantages over conventional HF-based purification methods by reducing reagent costs and avoiding costs associated with the handling, treatment and disposal of hydrofluoric acid. These factors may contribute to a more cost-competitive purification process in Western jurisdictions.

Renascor HF-Free Purification	Western HF-Based Purification
Avoids HF	Uses HF
Lower reagent costs through reagent recycling	Higher reagent costs associated with HF
Integrated water treatment and reagent recycling	Higher wastewater treatment requirements
Reduced handling complexity	Higher handling and disposal requirements

Table 2. Renascor's HF-free purification versus Western HF-based purification

Next Steps

Renascor is currently commissioning its Australian Government co-funded PSG demonstration plant in South Australia to validate engineering, operating and process parameters ahead of commercial-scale downstream development.

The demonstration plant is expected to provide important operating data relating to purification performance, reagent consumption, water treatment integration, process stability and product quality under continuous operating conditions. Learnings obtained through the demonstration plant program are expected to support the detailed design, optimisation and commercialisation of Renascor's planned downstream PSG operation.

Concurrent with commissioning activities, Renascor is working with prospective customers and strategic partners through the PSG demonstration plant program by generating and sharing operating data and qualification samples from continuous operating campaigns to support customer qualification, offtake and strategic investment discussions.

Important information and forward-looking statements

This report may contain forward-looking statements. Any forward-looking statements reflect management's current beliefs based on information currently available to management and are based on what management believes to be reasonable assumptions. It should be noted that a number of factors could cause actual results, or expectations to differ materially from the results expressed or implied in the forward-looking statements.

The estimated operating cost included herein is based on engineering studies and operating assumptions prepared for the purposes of evaluating Renascor's purification process. Actual operating costs may differ materially from those estimated depending on plant configuration, operating conditions, feedstock characteristics and market factors.

This ASX announcement has been approved by Renascor's Board of Directors and authorised for release by Managing Director David Christensen.

For further information, please contact:

Company Contact
David Christensen
Managing Director
+61 8 8363 6989
info@renascor.com.au

Media Enquiries Contact
James Moses
Mandate Corporate
+61 (0) 420 991 574
james@mandatecorporate.com.au

Keep in the Loop: Subscribe to our newsletter

[1] See Renascor ASX announcement dated 27 February 2025.
[2] See Renascor ASX announcement dated 11 July 2024.
[3] See Renascor ASX announcement dated 11 July 2024.
[4] See Renascor ASX announcement dated 27 February 2025.
[5] See Renascor ASX announcement dated 11 July 2024.
[6] See Renascor ASX announcement dated 27 February 2025.
[7] See Renascor ASX announcement dated 27 February 2025.
[8] See Renascor ASX announcement dated 20 September 2022.
[9] GraphiteHub is an independent graphite market intelligence and research platform covering the global graphite value chain. The benchmark is based on a review of publicly available feasibility studies, technical reports and academic literature relating to HF-based graphite purification. The benchmark is indicative only and has not been normalised for differences in project scale, jurisdiction, feedstock characteristics or study assumptions.