

Vulcan Energy Resources Limited

EV Materials

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| | |
|---|--|
| Rating SPECULATIVE BUY unchanged | Price Target A\$12.25 ↓ from A\$12.50 |
| VUL-ASX | Price A\$2.77 |

Market Data

| | |
|---------------------------|-------------|
| 52-Week Range (A\$) : | 1.95 - 6.60 |
| Avg Daily Vol (M) : | 0.2 |
| Market Cap (A\$M) : | 354.8 |
| Shares Out. (M) : | 167.3 |
| Enterprise Value (A\$M) : | 234.2 |
| NAV /Shr (A\$) : | 12.25 |
| Net Cash (A\$M) : | 147.6 |

| FYE Jun | 2023E | 2024E | 2025E | 2026E |
|-----------------------|---------|---------|---------|---------|
| EBITDA (A\$M) | (27.2)↑ | (29.9)↑ | (30.0) | (30.0) |
| Previous | (30.3) | (30.0) | - | - |
| Net Income (A\$M) | (30.3)↑ | (34.2)↑ | (40.8)↓ | (67.9)↓ |
| Previous | (31.6) | (34.4) | (32.8) | (54.2) |
| Free Cash Flow (A\$M) | (118.5) | (153.2) | (406.1) | (153.2) |

EU chips in for 1/3rd of the funding stack

Vulcan has announced that it has passed the European Investment Bank's (EIB) preliminary screening process for debt financing and has now advanced to the 'under appraisal' stage. The **EIB has proposed a financing commitment to VUL of €500m** to help fund its Zero Carbon Lithium Project (ZCLP) in Germany. The project hosts the largest lithium resource in Europe and holds strategic value for the EU's domestic battery supply chain ambitions. While the package is subject to due diligence, credit approvals and legal agreements, we see it as a great endorsement and huge step forward for the project.

Who is the EIB?

The EIB is the lending arm of the EU and one of the largest climate finance providers in the world. With its ambitions to reduce net greenhouse gas emissions by 55% by 2030 (and no net emissions by 2050), the EU is looking to provide support for projects that help it advance towards a sustainable and resilient domestic supply chain, with the EIB assisting in that process. The EIB has stipulated that the ZCLP is capable of providing a number of services/products that will help the EU achieve its emission goals, which ultimately qualifies it for debt finance. This includes the electricity and heat produced by its geothermal plant as well as the battery grade LiOH that will be produced from its Central Lithium Plant (CLP). We believe this is the largest funding package from an EU public company for an Australian company and sends a clear message to other potential financiers that the EU is fully behind the project.

Funding stack indicatively over the halfway mark

The €500m of debt funding announced today accompanies an existing A\$200m (~€120m) of debt funding indication from Export Finance Australia ([see note](#)) and provides ~50% of the €1,399m funding requirement for the ZCLP, on an indicative basis. If Nobian elects to form a JV with VUL for the Central Lithium Plant (50% capital contribution of €179m [see note](#)), and with the German Government signaling that it may contribute 40% of geothermal costs (CGe €272m), it leaves a **€328m funding gap before any sell-down of the project (excl. €78.6m in cash)**. The company continues to sound out strategic investors for equity funding, targeting indicative offers in the first half of 2024. If VUL is able to achieve a sell-down, with capital commitment, we believe a manageable funding gap could be delivered.

Project delivery continues: Drilling, first lithium and partnerships in 2024

VUL is set for an eventful 2024, in our view, with first lithium production from its optimisation plants, first drilling of production wells and financing progress. The Landau City Council recently executed an agreement which will allow Vulcan to begin construction of the Phase 1 Lithium Extraction Plant. Vulcan also recently completed its Environmental and Social Impact Assessment which is an important requirement for accessing finance and its social license to operate. With €78.6m in cash and declining spend, as optimisation plants are delivered, we believe VUL is well resourced to maintain its project delivery timeline. We have updated our model for cash spend, resulting in a slight reduction in PT to A\$12.25 (from A\$12.50/sh). We continue to risk our valuation given VUL's early project stage.



— VUL
 — S&P/ASX Emerging Companies (rebased)

Source: FactSet

Priced as of close of business 23 February 2024

Vulcan is a European lithium development company progressing the Zero Carbon Lithium project in Germany. The development envisages a 48ktpa lithium hydroxide operation using DLE from geothermal wells which will also generate carbon free power. The process is expected to be carbon negative based life cycle analysis and if achieved, Vulcan would fundamentally change the carbon emission structure of the lithium industry.

Research

[Securing cash to deliver on timeline](#)

[Vulcan derisks the funding stack with Nobian JV](#)

[Site visit](#)

[Not unconventional... Untapped - Initiation](#)

Figure 1: Financial summary for Vulcan Energy

| Vulcan Energy | | ASX:VUL | | Rating: SPEC BUY | |
|---|--------------------------------|----------------|-----------------|-------------------------|-----------------|
| Analyst : | Timothy Hoff | | Target Price: | | A\$12.25 |
| Date: | 23/02/2024 | | | | |
| Year End: | June | | | | |
| Market Information | | | | | |
| Share Price | A\$ | 2.12 | | | |
| Market Capitalisation | A\$m | 355 | | | |
| 12 Month Hi | A\$ | 6.60 | | | |
| 12 Month Lo | A\$ | 1.95 | | | |
| Issued Capital | m | 167 | | | |
| ITM Options | m | 16 | | | |
| Fully Diluted | m | 183 | | | |
| Trading Volume - 90 Day Average | m | 0.2 | | | |
| Valuation | | | | | |
| | | A\$m | Risking | A\$/share | |
| Phase 1 | | 1,019.1 | 50% | 5.56 | |
| SPV1 - Energy Business | NPV 10% | 134.4 | 50% | 0.73 | |
| SPV1 - LEP | NPV 10% | 703.4 | 50% | 3.84 | |
| SPV2 - CLP | NPV 10% | 181.3 | 50% | 0.99 | |
| SPV2 - Funding from Nobian | | 265.0 | 100% | 1.45 | |
| Phase 2 | | 975.0 | 50% | 5.32 | |
| Energy Business | NPV 10% | 115.5 | 50% | 0.63 | |
| LEP | NPV 10% | 565.0 | 50% | 3.08 | |
| CLP | NPV 10% | 294.6 | 50% | 1.61 | |
| Exploration/Partnerships | | 50.0 | 100% | 0.27 | |
| Corporate | | (81.8) | 100% | (0.45) | |
| Net cash /(Debt) | | 31.9 | 100% | 0.17 | |
| TOTAL | | 2,259.3 | | 12.33 | 12.25 |
| | | Target | | 12.33 | 12.25 |
| Assumptions | | | | | |
| | 2021a | 2022a | 2023e | 2024e | 2025e |
| Lithium Hydroxide (US\$/t) | 10,764 | 42,141 | 72,694 | 32,880 | 33,750 |
| Power (€/kwh) | 0.24 | 0.32 | 0.27 | 0.24 | 0.24 |
| EUR:AUD | 1.58 | 1.58 | 1.58 | 1.58 | 1.58 |
| EUR:USD | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Sensitivity | | | | | |
| | | | | | |
| | Lithium Hydroxide Price (\$/t) | | | | |
| Production Metrics | | | | | |
| | 2021a | 2022a | 2023e | 2024e | 2025e |
| LEP | | | | | |
| Lithium Hydroxide (LiOH) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C1 Cash cost (US\$/t) | 0.0 | 0.0 | 0.0 | 0.0 | #DIV/0! |
| Production Metrics | | | | | |
| | 2021a | 2022a | 2023e | 2024e | 2025e |
| CLP | | | | | |
| Lithium Hydroxide (LiOH) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C1 Cash cost (US\$/t) | 0.0 | 0.0 | 0.0 | 0.0 | #DIV/0! |
| Production Metrics | | | | | |
| | 2021a | 2022a | 2023e | 2024e | 2025e |
| Energy Business | | | | | |
| Power generation (MW) | 0.0 | 0.0 | 17.6 | 35.0 | 35.0 |
| Generation costs (€/kwh) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Reserves & Resources | | | | | |
| | Brine Volume (km2) | | Grade (mg/l Li) | | LCE (Mt) |
| Zero Carbon Lithium | 371 | | 181 | | 26.6 |
| Company Description | | | | | |
| Vulcan Energy Resources is developing the Zero Carbon Lithium project in the Upper Rhine Valley, Germany. The proposed project (Phase 1) will deliver 24ktpa of battery quality lithium hydroxide and 37MW of geothermal power generation capacity. | | | | | |
| Profit & Loss (€m) | | | | | |
| | 2021a | 2022a | 2023e | 2024e | 2025e |
| Revenue | 0.4 | 4.3 | 7.7 | 8.2 | 8.2 |
| Operating Costs | 0.0 | 2.5 | 6.3 | 2.3 | 2.3 |
| Royalty | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Corporate & O'heads | 2.9 | 17.1 | 23.3 | 12.0 | 12.0 |
| Exploration (Expensed) | 0.0 | 0.0 | 9.7 | 23.9 | 24.0 |
| EBITDA | -6.6 | -15.9 | -27.2 | -29.9 | -30.0 |
| Dep'n | 0.1 | 2.6 | 5.6 | 5.4 | 5.4 |
| Net Interest | 0.0 | 0.0 | 2.1 | 1.1 | -5.3 |
| Other | 0.0 | 0.0 | 1.0 | 2.0 | 3.0 |
| Tax | 0.0 | -0.4 | 0.4 | 0.0 | 0.0 |
| NPAT (reported) | -6.6 | -13.6 | -18.1 | -21.5 | -27.0 |
| Abnormals | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| NPAT | -6.7 | -18.9 | -30.3 | -34.2 | -40.8 |
| EPS | -\$0.05 | -\$0.15 | -\$0.19 | -\$0.18 | -\$0.18 |
| Cash Flow (€m) | | | | | |
| | 2021a | 2022a | 2023e | 2024e | 2025e |
| Cash Receipts | 0.0 | 3.8 | 8.0 | 8.2 | 8.2 |
| Cash paid to suppliers & employee | -2.2 | -15.4 | -37.6 | -14.3 | -14.3 |
| Exploration and Evaluation | -3.7 | -9.4 | -18.6 | -23.9 | -24.0 |
| Tax Paid | 0.0 | 0.0 | -0.5 | 0.0 | 0.0 |
| Net interest expense | 0.1 | -0.1 | 3.1 | 1.1 | -5.3 |
| +/- Other - working cap change | 0.3 | 0.3 | 2.2 | 2.7 | 2.7 |
| Operating Cash Flow | -1.8 | -11.3 | -24.8 | -2.3 | -8.7 |
| Capex | -0.8 | -22.8 | -75.4 | -127.0 | -548.4 |
| Other | 0.0 | -32.2 | 0.3 | 0.0 | 175.0 |
| Investing Cash Flow | -4.5 | -64.4 | -93.7 | -150.9 | -397.4 |
| Debt Drawdown (repayment) | 2.8 | 0.2 | -0.6 | 0.0 | 500.0 |
| Share capital | 75.1 | 176.2 | 67.4 | 303.2 | 0.0 |
| Financing Expenses | -3.8 | -4.4 | -3.4 | -9.1 | 0.0 |
| Financing Cash Flow | 74.0 | 172.1 | 63.4 | 294.1 | 500.0 |
| Opening Cash | 5.3 | 72.4 | 175.4 | 119.9 | 260.9 |
| Increase / (Decrease) in cash | 67.8 | 96.3 | -55.1 | 140.9 | 93.9 |
| FX Impact | 0.7 | 6.6 | -0.3 | 0.0 | 0.0 |
| Closing Cash | 72.5 | 175.4 | 119.9 | 260.9 | 354.8 |
| <i>Op. Cashflow/Share</i> | <i>-\$0.01</i> | <i>-\$0.08</i> | <i>-\$0.15</i> | <i>-\$0.01</i> | <i>-\$0.04</i> |
| <i>P/CF</i> | <i>-96.8x</i> | <i>-17.2x</i> | <i>-9.0x</i> | <i>-126.7x</i> | <i>-34.2x</i> |
| <i>EV/FCF</i> | <i>nm</i> | <i>nm</i> | <i>nm</i> | <i>nm</i> | <i>nm</i> |
| <i>FCF Yield</i> | <i>nm</i> | <i>nm</i> | <i>nm</i> | <i>nm</i> | <i>nm</i> |
| Balance Sheet (€m) | | | | | |
| | 2021a | 2022a | 2023e | 2024e | 2025e |
| Cash + S/Term Deposits | 72.5 | 175.4 | 119.9 | 260.9 | 354.8 |
| Other current assets | 0.8 | 4.2 | 2.8 | 2.8 | 2.8 |
| Current Assets | 73.3 | 179.7 | 122.7 | 263.6 | 357.5 |
| Property, Plant & Equip. | 0.9 | 51.5 | 118.8 | 237.8 | 603.1 |
| Exploration & Develop. | 8.7 | 20.4 | 11.5 | 11.5 | 11.5 |
| Liabilities | | | | | |
| Payables | 1.3 | 8.4 | 0.3 | 0.3 | 0.3 |
| Short Term Debt | 0.0 | 0.0 | -0.6 | -0.6 | 499.4 |
| Long Term Debt | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Net Assets | 81.5 | 247.3 | 257.4 | 517.3 | 476.5 |
| Shareholders Funds | 85.3 | 258.9 | 300.1 | 594.2 | 594.2 |
| Reserves | 5.8 | 16.8 | 16.8 | 16.8 | 16.8 |
| Retained Earnings | -9.6 | -28.4 | -59.1 | -93.3 | -134.1 |
| Total Equity | 81.5 | 247.3 | 257.9 | 517.7 | 477.0 |
| <i>Debt/Equity</i> | <i>0%</i> | <i>0%</i> | <i>0%</i> | <i>0%</i> | <i>0%</i> |
| <i>Net Debt/EBITDA</i> | <i>40.8x</i> | <i>15.5x</i> | <i>4.9x</i> | <i>112.9x</i> | <i>-16.6x</i> |
| <i>Net Interest Cover</i> | <i>nm</i> | <i>nm</i> | <i>nm</i> | <i>#DIV/0!</i> | <i>nm</i> |
| <i>ROE</i> | <i>-8%</i> | <i>-8%</i> | <i>-12%</i> | <i>-7%</i> | <i>-9%</i> |
| <i>Book Value/share</i> | <i>\$0.67</i> | <i>\$1.73</i> | <i>\$1.54</i> | <i>\$2.27</i> | <i>\$2.09</i> |
| <i>Net Debt</i> | <i>-72.5</i> | <i>-175.4</i> | <i>-120.5</i> | <i>-261.4</i> | <i>144.7</i> |

Source: Company data, Canaccord Genuity

Figure 2: SOTP valuation for Vulcan Energy Resources

| Valuation JunQ'24 | A\$m | EQUITY | RISK ADJ. | A\$m | DILUTED/SH |
|-----------------------------------|-------------|-------------|-------------|---------------|-----------------|
| Phase 1 | 2401 | 85% | 50% | 1019 | \$5.56 |
| <i>SPV1 - Energy Business</i> | 269 | 100% | 50% | 134 | \$0.73 |
| <i>SVP1 - LEP</i> | 1407 | 100% | 50% | 703 | \$3.84 |
| <i>SPV2 - CLP</i> | 725 | 50% | 50% | 181 | \$0.99 |
| SPV2 - Funding from Nobian | 265 | 100% | 100% | 265 | \$1.45 |
| Phase 2 | 1950 | 100% | 50% | 975 | \$5.32 |
| <i>Energy Business</i> | 231 | 100% | 50% | 115 | \$0.63 |
| <i>LEP</i> | 1130 | 100% | 50% | 565 | \$3.08 |
| <i>CLP</i> | 589 | 100% | 50% | 295 | \$1.61 |
| Exploration/Partnerships | 50 | 100% | 100% | 50 | \$0.27 |
| Corporate | -82 | 100% | 100% | -82 | -\$0.45 |
| Net cash /(Debt) | 32 | 100% | 100% | 32 | \$0.17 |
| TOTAL | | | | 2259 | \$12.33 |
| | | | | Target | A\$12.25 |

Source: Company Reports, Canaccord Genuity estimates

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Investment Recommendation

Date and time of first dissemination: February 23, 2024, 06:43 ET

Date and time of production: February 23, 2024, 06:43 ET

Target Price / Valuation Methodology:

Vulcan Energy Resources Limited - VUL

Our price target is set in line with our NAV with a 50% risk weighting. We use US\$22,500/t LiOH prices, 1.58 EUR:AUD exchange rates and discount rates of 10% for the lithium business and 10% for the energy business.

Risks to achieving Target Price / Valuation:

Vulcan Energy Resources Limited - VUL

Risks include pricing, delivery, resource size and grades, capex and opex estimates and production schedules.

Distribution of Ratings:

Global Stock Ratings (as of 02/23/24)

| Rating | Coverage Universe | | IB Clients |
|-----------------|-------------------|--------|------------|
| | # | % | % |
| Buy | 602 | 65.36% | 22.59% |
| Hold | 135 | 14.66% | 9.63% |
| Sell | 12 | 1.30% | 8.33% |
| Speculative Buy | 162 | 17.59% | 48.77% |
| | 921* | 100.0% | |

*Total includes stocks that are Under Review

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*As of January 1, 2024, the Ratings History Chart will reflect the new Canaccord Genuity Ratings System as defined above.

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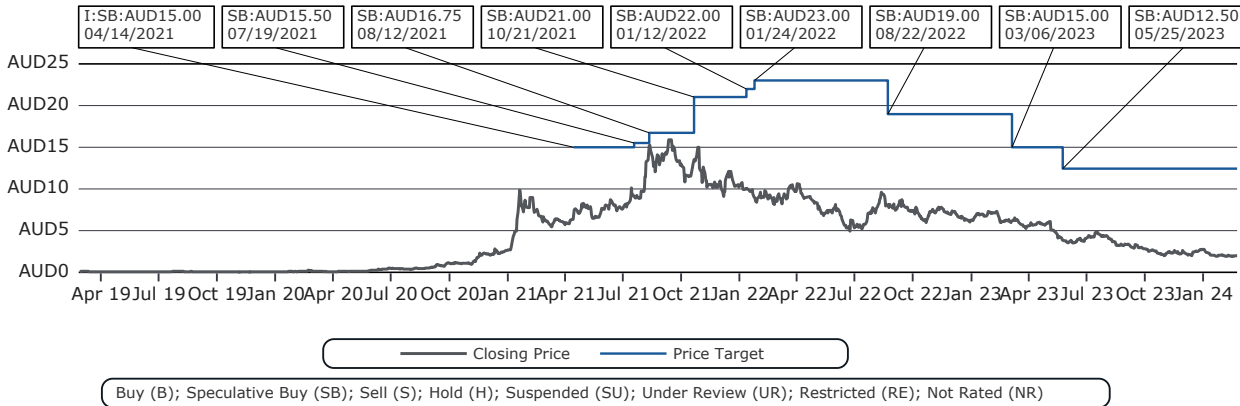
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Vulcan Energy Resources Limited Rating History as of 02/22/2024



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