ASX Announcement

19 May 2021

Conference Presentation

Sunrise Energy Metals Limited's CEO and Managing Director Sam Riggall is presenting at the Australia-Europe Critical Resources Strategy & Supply Conference in Perth today where he will be discussing cobalt markets and the Sunrise Battery Materials Project. The presentation is attached.

For more information about Sunrise Energy Metals contact:

Ben Stockdale, CFO and Investor Relations +61 3 9797 6700

This announcement is authorised for release to the market by the Managing Director of Sunrise Energy Metals Limited.

About Sunrise Energy Metals Limited (ASX:SRL) – Based in Melbourne, Australia, Sunrise Energy Metals is a global leader in metals recovery and industrial water treatment through the application of its proprietary Clean-iX® continuous ion exchange technology. For more information about Sunrise Energy Metals please visit the Company's website **www.sunriseem.com**

About the Sunrise Project – Sunrise Energy Metals is the 100% owner of the Sunrise Project, located in New South Wales. The Sunrise Project is one of the largest cobalt deposits outside of Africa, and one of the largest and highest-grade accumulations of scandium ever discovered.

About Clean TeQ Water – Through its wholly owned subsidiary, Clean TeQ Water, Sunrise Energy Metals provides innovative water treatment solutions for removing hardness, desalination, nutrient removal and zero liquid discharge. The sectors of focus include municipal wastewater, surface water, industrial waste water and mining waste water. For more information about Clean TeQ Water please visit **www.cleanteqwater.com.**

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Sunrise Battery Materials Complex

Australia-Europe Critical Resources Strategy & Supply, Perth

19 May 2021

Sam Riggall, CEO

Cautionary statement

Certain statements in this news release constitute “forward-looking statements” or “forward-looking information” within the meaning of applicable securities laws. Such statements involve known and unknown risks, uncertainties and other factors, which may cause actual results, performance or achievements of the Company or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements or information. Such statements can be identified by the use of words such as “may”, “would”, “could”, “will”, “intend”, “expect”, “believe”, “plan”, “anticipate”, “estimate”, “scheduled”, “forecast”, “predict” and other similar terminology, or state that certain actions, events or results “may”, “could”, “would”, “might” or “will” be taken, occur or be achieved. These statements reflect the Company’s current expectations regarding future events, performance and results, and speak only as of the date of this new release.

Statements in this news release that constitute forward-looking statements or information include, but are not limited to, statements regarding: financing of the Sunrise Project; the outlook for electric vehicle markets and demand for nickel and cobalt; completing final design and detailed engineering; making a Final Investment Decision; the timing of commencement and/or completion of construction, commissioning, first production and ramp up of the Project; the potential for a scandium market to develop and increase; metal price assumptions; cash flow forecasts; projected capital and operating costs; metal recoveries; mine life and production rates; and the financial results of the Project Execution Plan (PEP) announced on 28 September 2020 including statements regarding the Sunrise Project IRR, the Project's NPV (as well as all other before and after taxation NPV calculations); life of mine revenue; capital cost; average operating costs before and after by-product credits; proposed mining plans and methods; the negotiation and execution of offtake agreements; a mine life estimate; the expected number of people to be employed at the Project during both construction and operations; the availability and development of water, electricity and other infrastructure for the Sunrise Project; the potential for new mineral discoveries at the Company’s exploration licenses; sales of BIOCLENS lenses; award of new Clean TeQ Water Projects; anticipated successful completion of the various Clean TeQ Water projects and outcomes related to research and development undertakings.

Readers are cautioned that actual results may vary from those presented.

All such forward-looking information and statements are based on certain assumptions and analyses made by the Company’s management in light of their experience and perception of historical trends, current conditions and expected future developments, as well as other factors management believe are appropriate in the circumstances. These statements, however, are subject to a variety of risks and uncertainties and other factors that could cause actual events or results to differ materially from those projected in the forward-looking information or statements including, but not limited to, unexpected changes in laws, rules or regulations, or their enforcement by applicable authorities; the failure of parties to contracts to perform as agreed; changes in commodity prices; unexpected failure or inadequacy of infrastructure, or delays in the development of infrastructure, and the failure of exploration programs or other studies to deliver anticipated results or results that would justify and support continued studies, development or operations. Other important factors that could cause actual results to differ from these forward-looking statements also include those described under the heading "Risk Factors" in the Company's most recently filed Annual Information Form available under its profile on SEDAR at **www.sedar.com**.

Readers are cautioned not to place undue reliance on forward-looking information or statements.

Although the forward-looking statements contained in this news release are based upon what management of the Company believes are reasonable assumptions, the Company cannot assure investors that actual results will be consistent with these forward-looking statements. These forward-looking statements are made as of the date of this news release and are expressly qualified in their entirety by this cautionary statement. Subject to applicable securities laws, the Company does not assume any obligation to update or revise the forward-looking statements contained herein to reflect events or circumstances occurring after the date of this news release.

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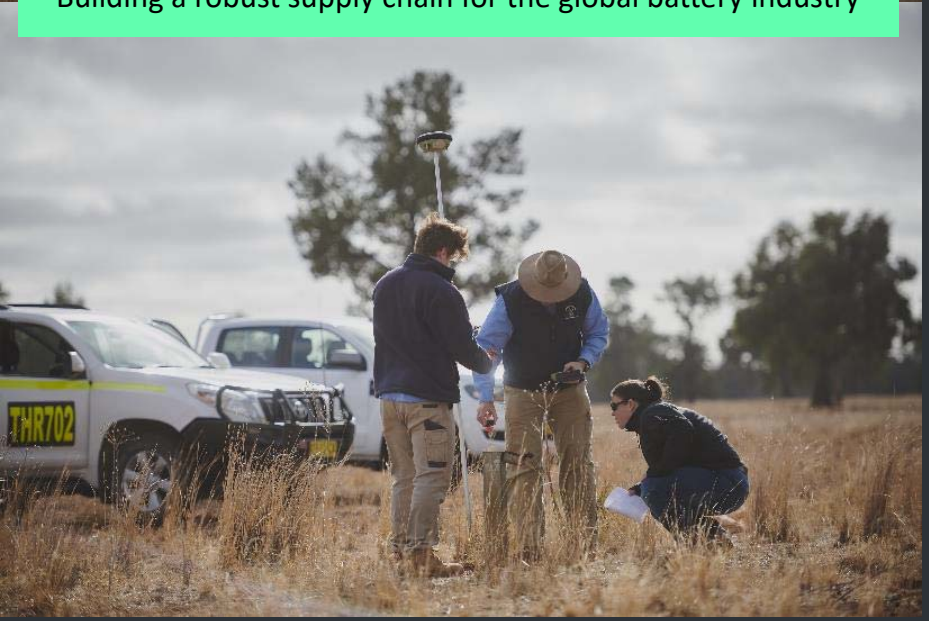
Building a robust supply chain for the global battery industry



Australia’s largest and most advanced battery materials project

Fully integrated from mine to battery chemicals and precursor

De-risked with an experienced project delivery team

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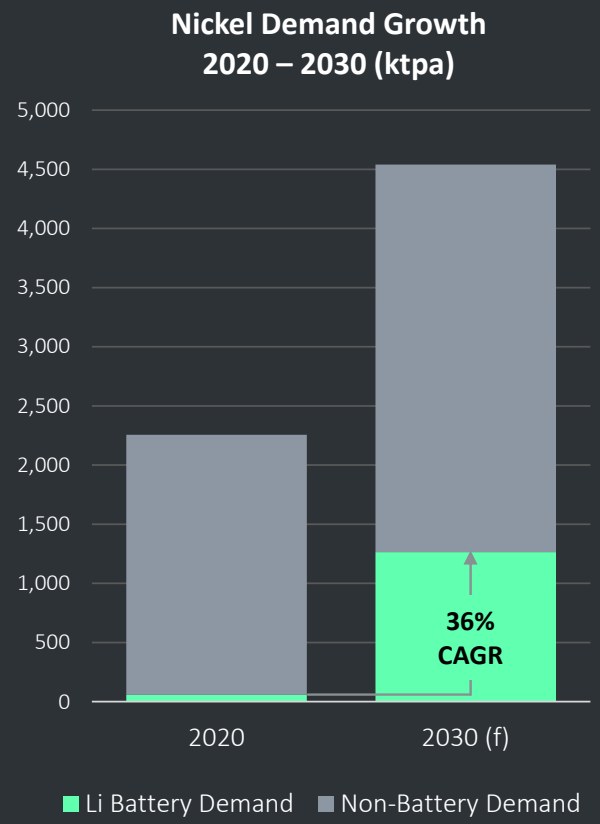
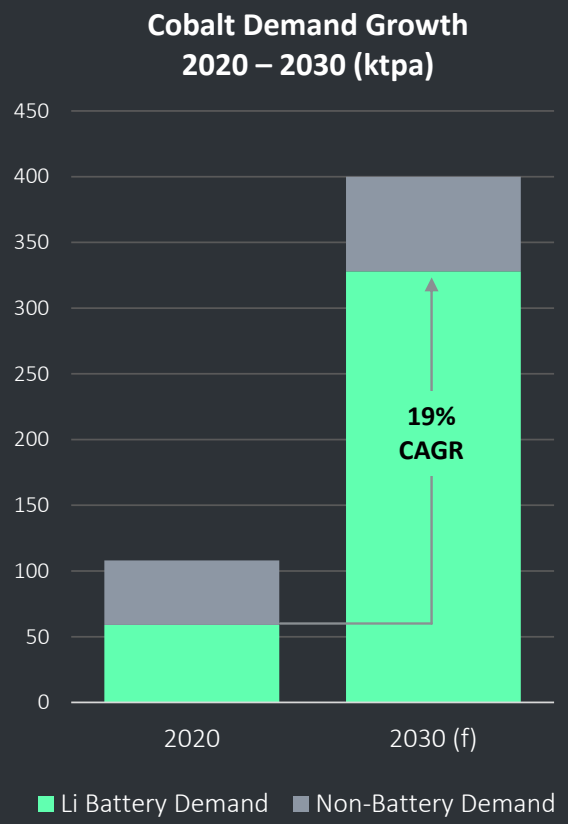
Electrification will have a profound impact on nickel and cobalt markets





Source: Benchmark Mineral Intelligence forecasts

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Cobalt supply is geographically concentrated

- 70% of all mined cobalt comes from the DRC; 65% of all processed and refined cobalt comes from China
- Artisanal supply makes up 20% of DRC production, but it comes with reputational risks
- Batteries are not the only high-growth end use: high-temperature superalloys use significant quantities of cobalt

60% of non-DRC cobalt supply comes from nickel laterite mines - if the world wants supply diversity, building capability in hydromet (PAL) processing is critical

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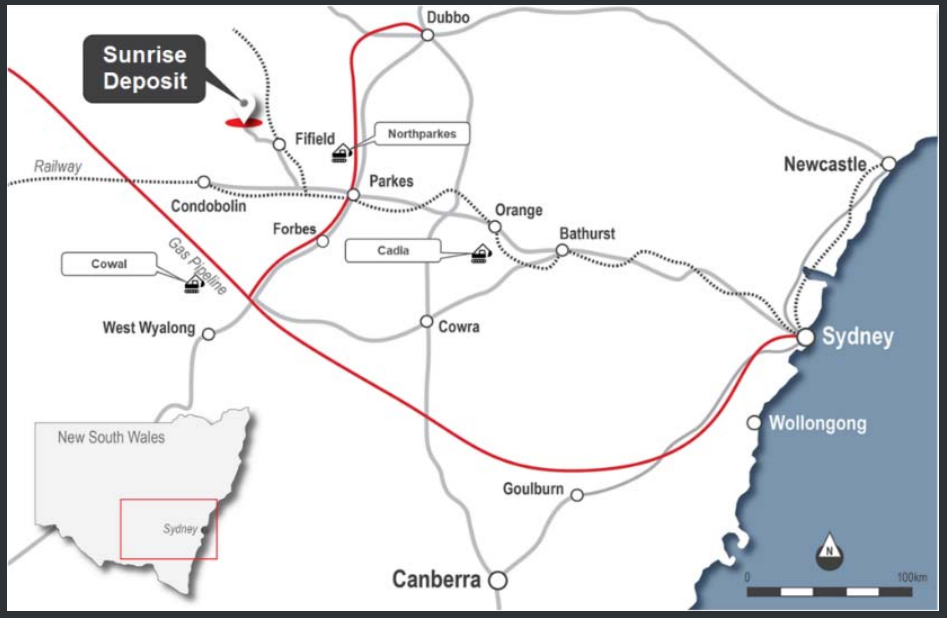
Will cobalt thrifting make a difference?

- The imminent death of cobalt in lithium-ion batteries has been greatly exaggerated
- Thrifting has been successful as battery cathode moves to more nickel intensive chemistries, but it creates other risks
- Most cell manufacturers still see a role for cobalt
- Of all the elements on the periodic table cobalt is still the most effective at stabilising nickel-rich, energy-dense ternary cathode and maximising safety and cycle efficiency

Thrifting pushes pricing risk to nickel

Thrifting impairs the economics of recycling

Thrifting needs to balance both safety and performance



Operating metrics (100%, first 25 years)

Average nickel production	~21 ktpa
Average cobalt production	~4.5ktpa
Throughput	2.5Mtpa
LOM strip ratio	1.26:1

Source: For more details see the Company's ASX release of 28 September 2020.

Project snapshot

- Located 350km west of Sydney with adjacent rail, power and port infrastructure
- One of the largest nickel-cobalt resources in the world, containing >900kt Ni and >160kt Co
- A$250M invested to date in pre-development capex: engineered, de-risked and construction-ready
- Ore reserves are sufficient for a 50-year operating life
- Average C1 cash costs of negative US$0.80/lb Ni (after credits) for years 2-25
- Good progress with debt finance, targeting c. US$750M of core project debt
- The world's largest scandium resource for stronger and lighter aluminum alloys

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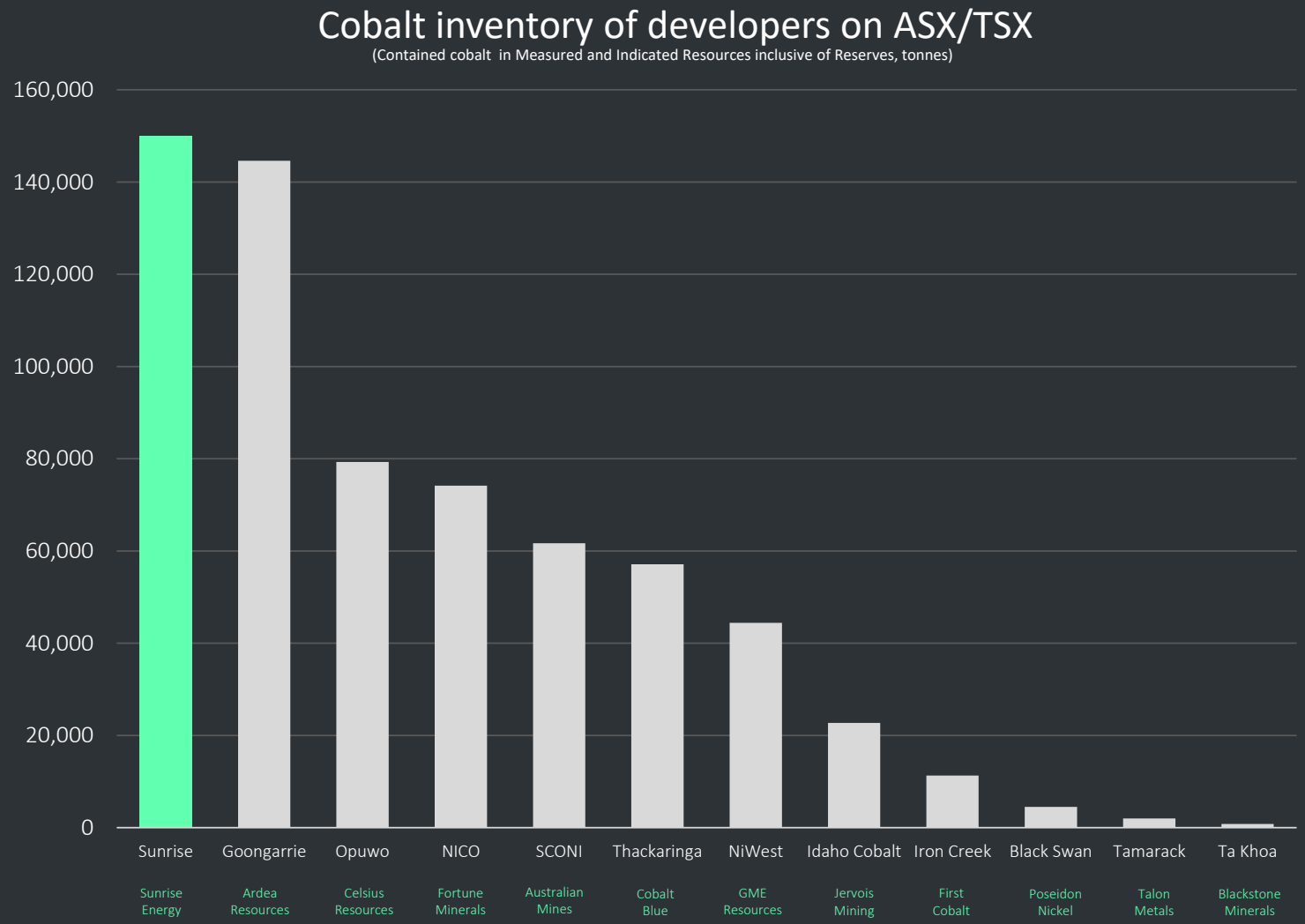
Sunrise – one of the world's largest cobalt resources



Source: SNL

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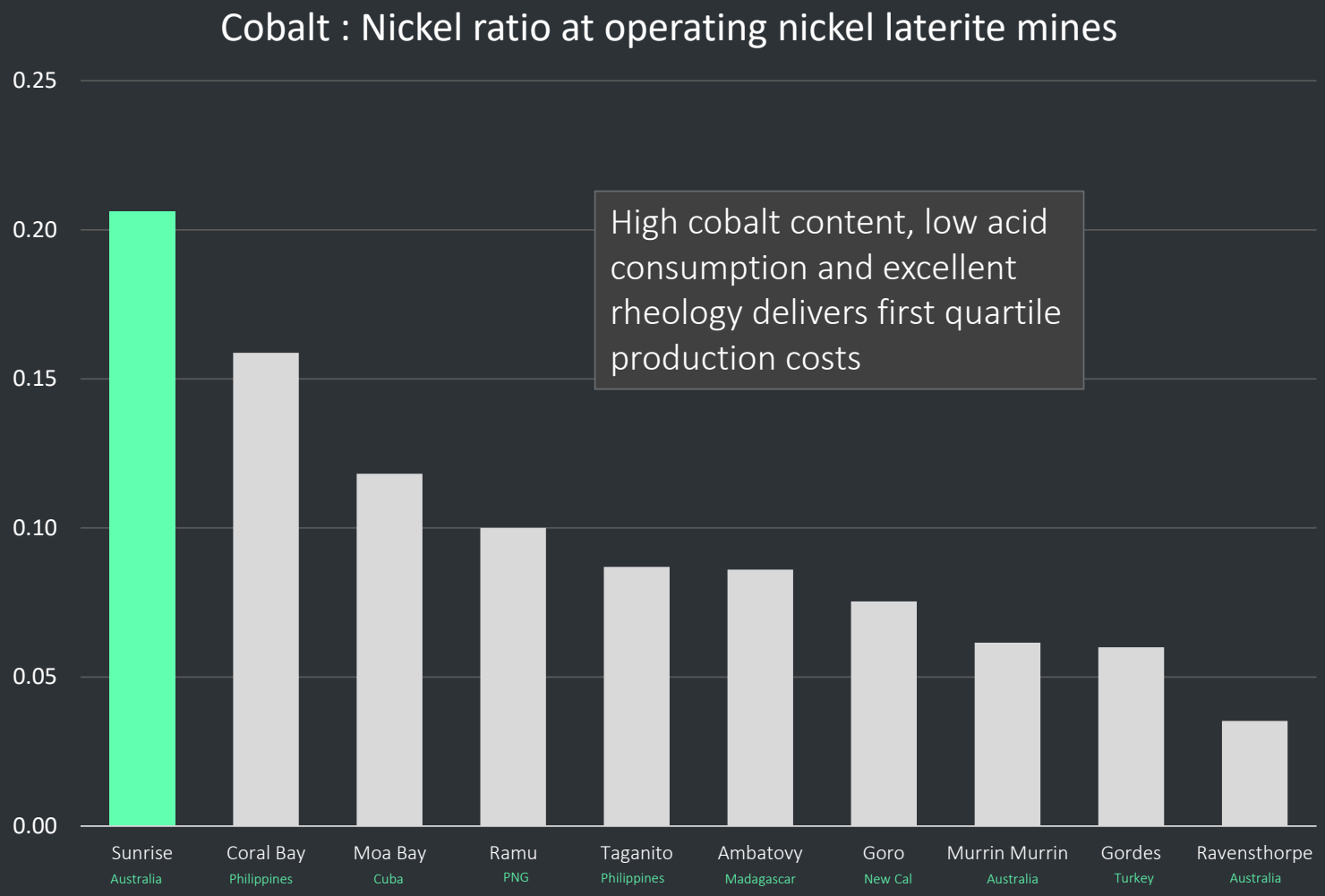
Sunrise's unique geology delivers strong economics



Source: Based on publicly available data and internal analysis. Sunrise data based on first decade of production from current mine plan.

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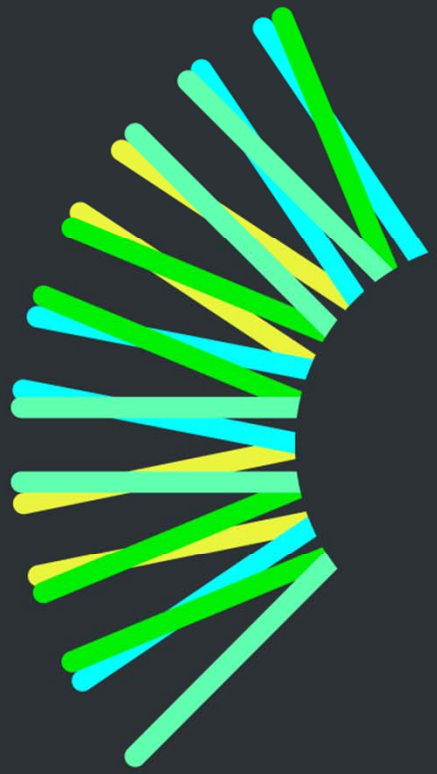

Sunrise Battery Materials Complex

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Sunrise Design Principles

Cost

Ion exchange is the simplest, lowest-cost and most direct route to battery-grade metal, by-passing intermediate products and third-party refining

Sustainability

Sourcing 100% renewable power, Sunrise will have one of the lowest carbon footprints in the industry and is in Australia's largest renewable energy corridor

Recycling

The Sunrise refinery will be designed to take recycle streams from spent cathode and recover nickel, cobalt and other metals

D2P

Ion exchange provides the opportunity to go Direct to Precursor (D2P) by keeping metal in solution and ultimately avoiding crystallisation

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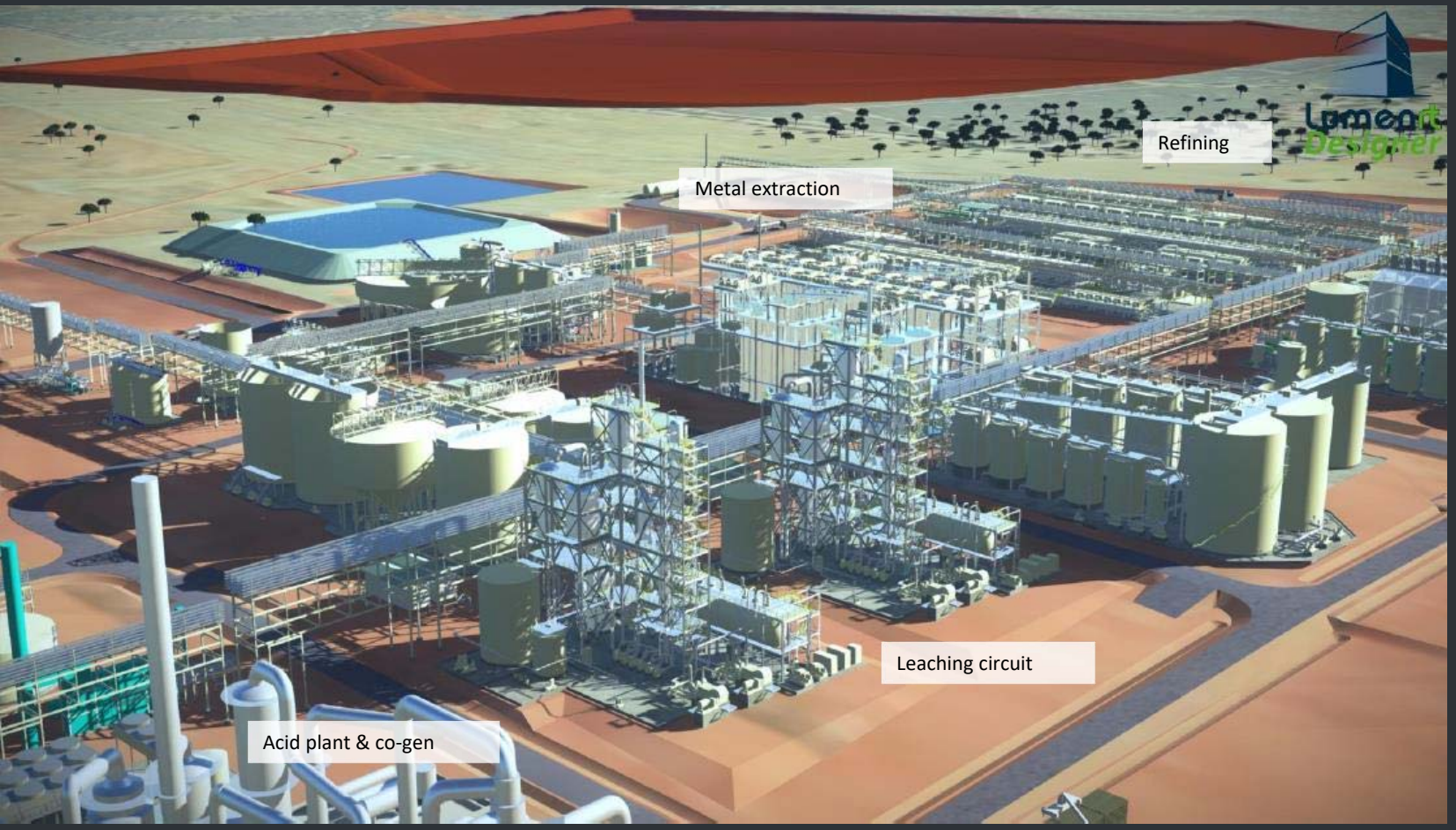

- All key permits in place and approved for construction
- Front end engineering and design complete
- Hydromet design is significantly de-risked
- Sourcing 100% renewable power
- Ion exchange circuit allows integration with precursor production
- Refinery to incorporate a recycling circuit for black mass

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Operating costs

- Sunrise will be a strong cash generator through the commodity price cycle
- At circa US$22/lb cobalt the cobalt revenues cover all cash operating costs (ie a zero cash cost nickel producer)
- Project cash breakeven prices are US$1.00/lb $NiSO_4$ and US$20.00/lb $CoSO_4$ (100% equity funded basis)

Operating Costs (US$/lb Ni)	Yr2-11	Yr2-25
Mining costs	0.84	0.76
Processing costs	3.14	3.47
Admin & Site Overheads	0.18	0.21
Haulage & Port	0.15	0.14
Total C1 Costs (before credits)	4.31	4.58
Cobalt Credits	(5.81)	(4.64)
Scandium Credits	(0.31)	(0.58)
Ammonium Sulphate Credits	(0.17)	(0.16)
Total by-product credits	(6.28)	(5.38)
Total C1 Cost (after credits)	(1.97)	(0.80)
Depreciation	2.22	2.33
Total C2 Cost	0.24	1.53
Royalties and other costs	0.88	0.75
Total C3 Cost	1.12	2.28
Total Cash Cost FOB	(1.09)	(0.05)

Source: For discussion on operating costs see the Company's ASX release of 28 September 2020. Cash breakeven analysis based on Project Execution Plan assumptions. Scandium by-product credits assume scandium oxide sales progressively ramp up from 2tpa to 20tpa over first 10 years.

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Ion exchange significantly de-risks the hydromet circuit

- Instead of counter-current decantation (CCD) we use an ion exchange (IX) circuit to produce a solution with very high nickel-cobalt tenor
- Higher concentration means less volumetric load in the refinery and thus lower capex and opex
- By preferentially loading nickel and cobalt the IX circuit significantly reduces impurity loads - Al, Ca, Cr, Fe, Mg and Mn (see table)
- Lower volumetric flow means lower acid neutralisation costs
- Ion exchange is the optimal route to low-cost, high quality precursor and cathode

	CCD	IX
Processing stages	7	10
Ni-Co recovery	96%	>99%
Feed flow rate (m^3/hr)	590	80
Ni concentration (mg/L)	5,600	42,800
Co concentration (mg/L)	1,350	10,300

Impurity ratios		
Co : Ni	0.24	0.24
Sc : Ni	0.01	0.01
Al : Ni	0.82	0.01
Ca : Ni	0.05	0.02
Cr : Ni	0.19	0.00
Cu : Ni	0.00	0.00
Fe : Ni	0.33	0.00
Mg : Ni	1.12	0.01
Mn : Ni	1.12	0.06
Zn : Ni	0.04	0.04
H_2SO_4 : Ni	6.96	0.25

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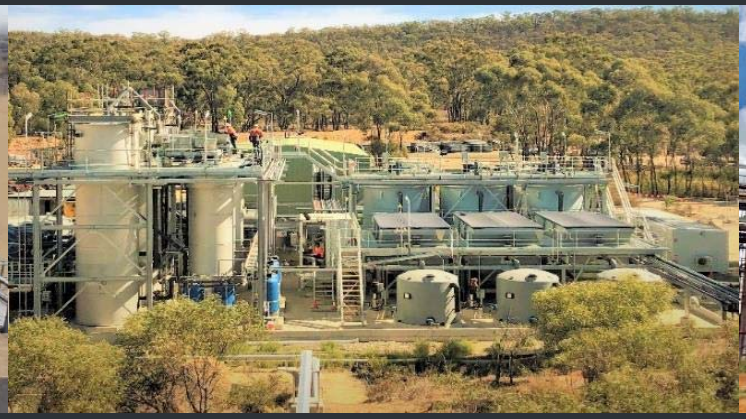
Sunrise Energy Metals is a world-leader in ion exchange metal processing

Antimony
(SPMP Sb Roasting Plant, Oman)



Sulphate, Ca, Mg, As
(Fosterville Gold Mine, Australia)

Uranium
(Metalkol RTR Cobalt Plant, DRC)

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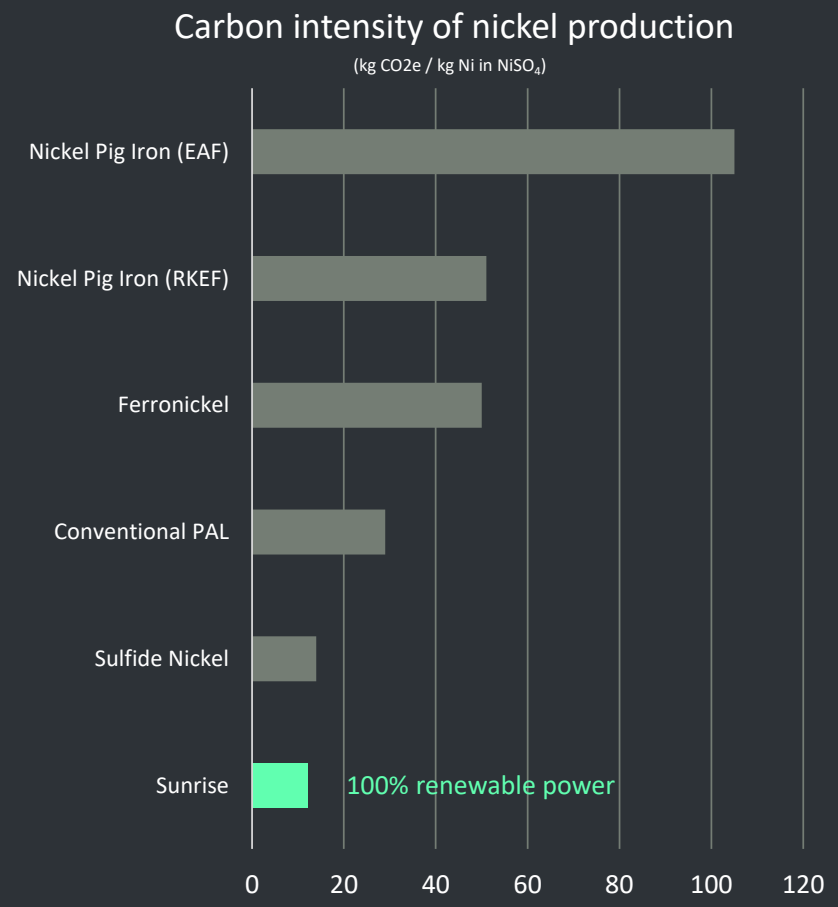
Deforestation from nickel mining in SE Asia



Source: Energetics, Life Cycle Assessment Report: greenhouse gas emission comparison for nickel production routes (Feb 2020). The GHG emission intensities of alternative processing routes are based on literature data that cannot be effectively harmonized. For comparison purposes the only harmonization that has occurred has been on end product (NiSO4) and using economic allocation to end products. Comparisons against Sunrise should be considered indicative. Sea also Nickel Institute, Life Cycle Data Assessment. Conventional PAL assumes Indonesian development utilizing coal as primary power source. Sulfide nickel data varies between 9 and 19 kg CO2e depending on power source.

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Recycling

- The cathode makes up over one-third of all raw materials in the battery cell by weight, with nickel, cobalt and lithium generating the most value for recovered metals
- The EU mandates a minimum use of recycled nickel, cobalt and lithium in each battery by 2030
- The Sunrise flow sheet can reject a large range of impurities, hence it has the flexibility to potentially treat different feedstocks in the future including black mass
- Integrated refineries are the logical sites to recycle battery materials because declining head grades will open up additional refining capacity to profitably recover secondary metal

Recycle Feed

Source: For discussion on operating costs see the Company's ASX release of 28 September 2020. Cash breakeven analysis based on Project Execution Plan assumptions. Scandium by-product credits assume scandium oxide sales progressively ramp up from 2tpa to 20tpa over first 10 years.

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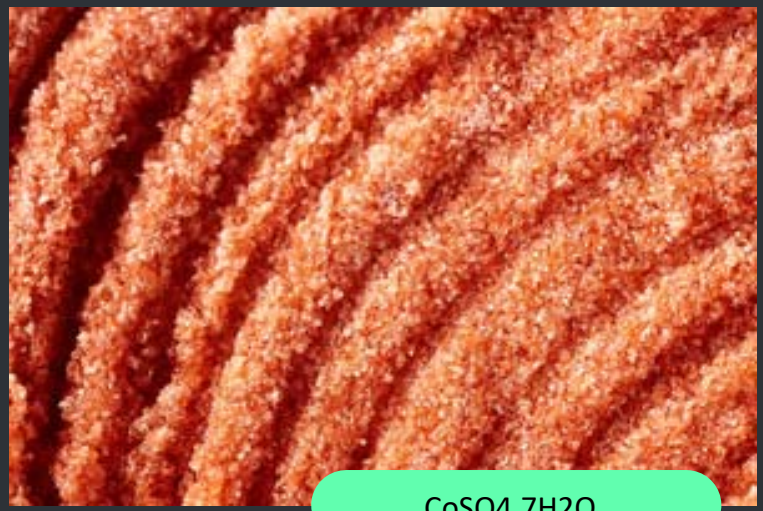
Direct to Precursor (D2P)

- Ion exchange keeps metal in solution
- Instead of separating and crystallising, metals remain in solution, are standardised to the correct molar ratio and are directly converted to p-CAM
- Significant energy and transport savings
- Also, waste can be managed more effectively at the mine site



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