

25 July 2023

Quarterly Activities Report

MELBOURNE, Australia – Sunrise Energy Metals Limited (**Sunrise Energy Metals** or **Company**) (ASX:SRL and OTC:SREMF) is pleased to provide an update on its activities for the quarter ended 30 June 2023.

Key Developments:

- **Ongoing work streams to advance the Sunrise Project continued with activities focussed on:**
 - **Advancing work on the electrical transmission line work scope;**
 - **Progression of the detailed Oversize Transportation Corridor Study;**
 - **Completion of test work and process development assessing opportunities for recycling of spent battery materials; and**
 - **Ongoing drilling of water bores for Project water supply.**
- **The Company has filed a patent application in order to protect the intellectual property relating to the LiB cathode chemistry which was developed utilising the Sunrise sulphate formulation.**
- **The Company continues to progress discussions with potential equity funding and offtake partners for the Sunrise Project.**
- **Field exploration activities continued to advance during the quarter with a focus on expanding our understanding of the geological potential of our large tenement package in the Macquarie Arc, New South Wales. Key developments include:**
 - **Limestone 2023 RC Drilling Program final report completed and submitted.**
 - **Targeting & field work undertaken at the Minore tenement.**
 - **ELA6627 application was submitted, and work plan drafted.**

OCCUPATIONAL HEALTH AND SAFETY & ENVIRONMENTAL PERFORMANCE

The Company had no lost time injuries or reportable environmental incidents recorded during the quarter.

SUNRISE BATTERY MATERIALS COMPLEX

During the quarter, the Company continued to advance the development of the Sunrise Project. A range of workstreams remain ongoing to progress several value-adding deliverables aimed at minimising Project start time once a financing package is secured and a final investment decision (**FID**) is made. Key work programs included:

- Advancement of the long-lead electrical transmission line (**ETL**) work scope.
- Work is continuing with Essential Energy on the Connection Agreement process. The planned network connection point is a new substation located 2km north of the existing Transgrid 132kV substation at Parkes. The new substation is planned to be constructed to support a new solar farm project (Quorn Park) and other future large connections such as the Parkes Special Activation Precinct. Connecting to this new substation shortens the planned transmission line by 1.5 km and results in a simplified connection process as we only have to engage with one network service provider (Essential Energy) rather than two (Essential Energy and Transgrid). Construction is scheduled to commence on the Quorn Park solar farm in October 2023.
- Test work and process development programs assessing opportunities for recycling of spent battery materials and further downstream processing of sulphates into precursor cathode active material. These programs were substantively completed during the quarter with the filing of the patent application for the Company's significant lithium-ion battery cathode discovery (further details below).
- The drilling of bores was completed at the Company's borefield, 60km south of the Sunrise Project. The bores are a critical component of the Project infrastructure, supplying the majority of the Project's processing water utilising the Company's existing ground water extraction licences. The Company has existing agreements in place with Forbes and Lachlan shire councils for the placement of a water pipeline from the borefield to the Project.

Permitting and approvals

The Sunrise Project development plan includes a proposal to connect to the electrical grid at Parkes. Connection to the NSW electrical grid is a key enabler of the Company's commitment to procure renewable energy to supply 100% of the Project's external power requirements. Progress continues on the long-lead electrical transmission line (**ETL**) work scope. The application to connect to the NSW electrical grid is currently in progress and will continue through the remainder of 2023.

The Company continues to progress commercial discussions with landowners, local councils, the NSW State Government and other impacted parties required for land access agreements for key infrastructure, including the water pipeline and the ETL.

Work is progressing on the design and planning of civil and overhead services modifications required along the oversized transport route with engagement with key road and power authorities throughout the quarter. Designs to relocate overhead electrical services are approximately 90% complete.

A bridge load assessment has been completed which has identified an initial two bridges on the NSW section which will require strengthening. One bridge (across a floodway) is proposed to be bypassed and the second bridge will require strengthening. This bridge assessment is awaiting feedback from Transport for NSW (**TfNSW**). Cost effective strengthening solutions have been developed and are with TfNSW for review.

Assessment is in progress on bridges along the SA section of the oversized transport route where one bridge has been identified as requiring strengthening. Assessments and strengthening options will follow.

Patent Application Filed for Significant Lithium-Ion Battery Cathode Discovery

As part of ongoing research and development (R&D) activities, the Company has been undertaking test-work programs focused on the conversion of its nickel and cobalt sulphate to precursor and cathode active material (**pCAM** and **CAM**). The Sunrise sulphates used in the test work were produced as part of pilot plant operations undertaken during the most recent feasibility study for the Project (the Project Execution Plan¹), which provided both flow-sheet validation and customer samples.

The Sunrise nickel and cobalt sulphate eluate (being a high concentration metal liquor) was further refined using a lab-scale process to produce a feedstock with a targeted elemental composition for incorporation into cells for electrochemical testing. These cells could then be tested against control cells, manufactured in an identical fashion, using industry standard nickel and cobalt salts.

The first phase of the test work program was undertaken by Queensland University of Technology (**QUT**). QUT used the refined Sunrise sulphate to produce a number of cells with an NCM 6-2-2 cathode and a lithium metal anode². QUT also manufactured a number of 'control' NCM 6-2-2 cells via application of an identical manufacturing process and using industry standard battery-grade nickel and cobalt sulphate sourced from third parties.

¹ For details, including applicable JORC disclosures, see ASX announcement of 28 September 2020

² The Sunrise NCM 6-2-2 cells utilised lithium metal anodes as opposed to the graphite anodes typically used for EV batteries

The results of the QUT NCM 6-2-2 study indicated that the specific elemental composition of the Sunrise sulphate had a highly beneficial impact on the durability of the Sunrise cells relative to the 'control' cells. The results showed that the cells manufactured with the modified Sunrise sulphate retained 90% capacity after 200 cycles, whereas the capacity of the control cells dropped below 80% after 150 cycles.

Based on the initial QUT results, the Company then initiated a second phase of independent test work undertaken by New Jersey based NEI Corporation (**NEI**). NEI provides advanced materials development services including a range of high-tech battery materials development, characterisation and electrochemical testing services. NEI undertook the same program as the QUT work, except that NEI manufactured NCM 8-1-1 cathode for the Sunrise and control cells. NEI also developed full-cells, which use a graphitic anode as typically used in EV batteries.

The test work program has, to date, provided support to the Company's belief that significant improvements in cathode material performance can be achieved further upstream by a more targeted approach to feedstock characterisation and elemental composition. It appears that the incorporation of low levels of specific elements (less than typical doping levels), potentially on the surfaces of the precursor particles, may be driving enhancements in cycle life. While downstream processes typically used in cathode manufacturing to improve the durability of the electrode – coating, drying and screening – will continue to play an important role, more work needs to be undertaken to better understand the opportunities upstream by adjusting feedstock compositions to optimise cathode morphology and processing conditions. Further test work is also required to assess if there are any other impacts (positive or negative) on cell performance and characteristics.

The Company notes that neither the Sunrise cells, nor the control cells, had performance characteristics comparable to commercially available NCM811 cells. Nor were these tests conducted over large sample sizes, as it was not the purpose of this work to produce a commercially comparable cell. Rather, it was to demonstrate the performance uplift that could be generated by a targeted approach to feedstock characterisation, holding other factors constant. Additional work is required to determine whether the results generated to date can be applied to the commercial production of cells.

The Company has filed a patent application to protect the intellectual property relating to the Sunrise sulphate formulation and is currently assessing next steps in terms of progressing this initial breakthrough, potentially in partnership with one or more existing participants in the EV battery supply chain.

Project Financing

The Company continues to engage proactively with a range of participants in the electric vehicle (**EV**) industry with a view to securing project-level equity funding, in conjunction with offtake, to underpin a complete financing package for Sunrise. The engagement with potential partners,

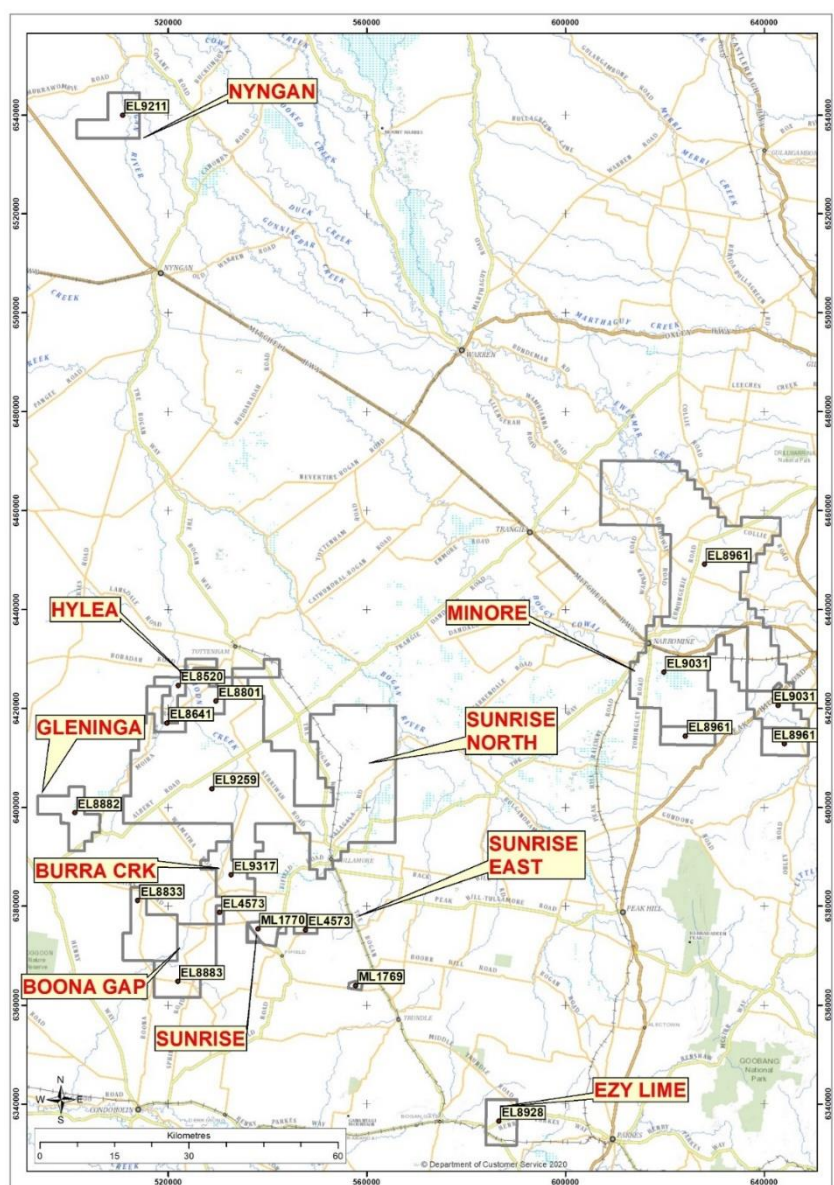
primarily within EV supply chains, continues to be positive. The discussions remain subject to confidentiality agreements, and the Company will update the market as soon as it is able to do so.

The Company remains optimistic on the outlook for demand growth in the EV and lithium-ion battery sectors, and in particular the strategic importance of Sunrise as one of the largest suppliers of battery-grade nickel and cobalt into the global EV supply chain.

The partnering process will continue, however the targeted timing for completion of any transaction is not possible to forecast.

EXPLORATION ACTIVITIES

The Company continues to advance activities across its range of exploration assets in New South Wales.



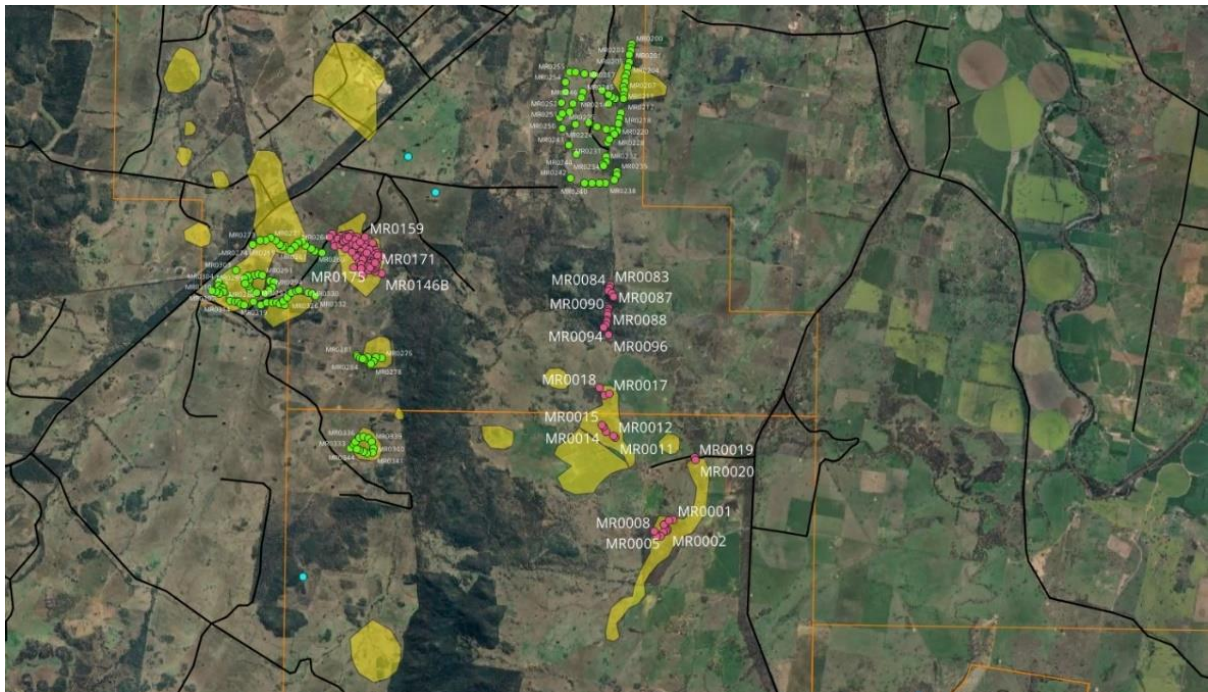
Sunrise Energy Metals' Tenement Holdings in New South Wales

Sunrise East (EL4573)

A basic geological summary for EL4573 and ML1770 was provided to external stakeholders in connection with a study to assess opportunities for sequestration of CO₂ within the local ultramafic lithologies. No further exploration is planned at this stage.

Minore Project (EL8961 and EL9031)

- In the northern and central portions of the tenement, transects were undertaken across rare earth element (REE) targets identified in previous geological reviews and Company sampling from 2022.
- A total of 146 surface samples were collected across the targets, with the aim being to build a reliable geochemical dataset upon which future detailed mapping and reverse circulation (RC) drilling can be based.
- Assaying of a selection of those samples is expected to be undertaken following an assessment of initial hand-held X-ray fluorescence (pXRF) results. Initial observations are encouraging with a range of lithologies observed across the samples.
- A map showing the REE targets (yellow), historical 2022 hand samples (pink) and the June 2023 hand samples (green) is detailed below.



Minore REE Sample Locations, June 2023.

- Field work commenced at the Graves Prospect the southern part of the Minore tenement. During the quarter 33 samples were collected with assaying subject to analysis of initial pXRF results.

Hylea (EL8520, EL8641 and EL8801)

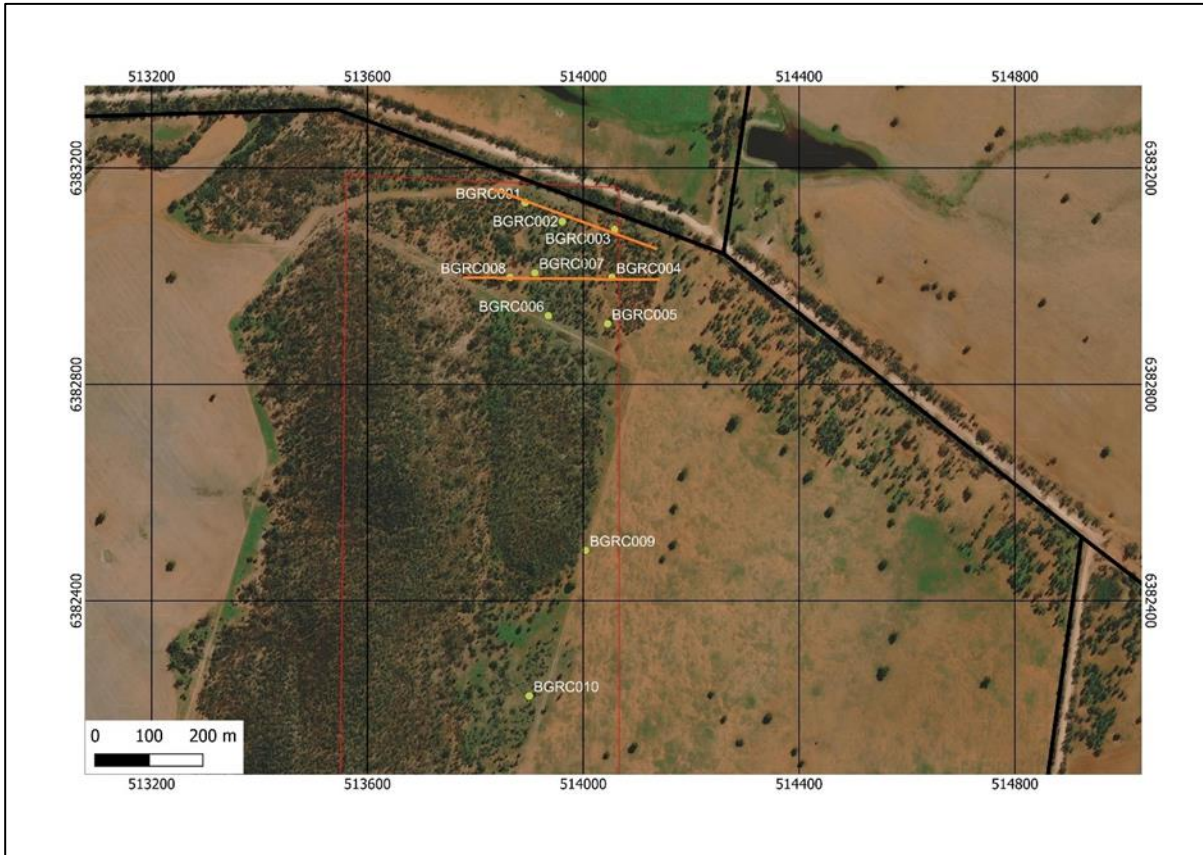
Rehabilitation activities for Hylea EL 8520 / EL 8641 were completed during April 2023.

EL8883 Meloola

- Field mapping, surface sampling and landowner meetings took place across the Meloola Tenement during the quarter. The aim of the sampling and mapping is to provide a comprehensive data set for planning of a future drilling program.
- Initial observations were generally encouraging with limestone float being collected from surface at a number of locations.
- It is proposed to utilise an auger rig to drill through the transported cover and sample underlying limestone, and it is hoped to undertake the drilling concurrently across a number of the Company's limestone bearing tenements.

Boona Gap (EL8833)

- During the quarter, Resolution Drilling drilled an additional grid of holes at Boona Gap EL8833 with the focus being a series of calcium carbonate (limestone) geochemical anomalies identified from field mapping and sampling.
- Upon completion of the drilling, selected limestone intervals from the drill holes were chosen for sampling and laboratory analysis. In total, 215 limestone intervals from Boona Gap were dispatched for initial assays.
- Localised structural elements appear to play a role in the occurrence of limestone, both volumetrically and the analysed grades of calcium carbonate. The limestone bodies appear to be bounded to the west by small faults associated with the Murda Syncline, and to the east by an as yet unidentified structure characterised by intense iron alteration and silica replacement.



EL8833 Boona Gap April 2023 Collar locations

Sunrise Energy Metals – Interests in Mineral Tenements

Licence Number	Project Name	Location	Equity Interest Current Quarter	Equity Interest Prior Quarter
EL8961	Minore	NSW	100%	100%
EL9031	Minore	NSW	100%	100%
EL8520	Hylea	NSW	100%	100%
EL8641	Hylea	NSW	100%	100%
EL8801	Hylea	NSW	100%	100%
EL9211	Nyngan	NSW	100%	100%
EL4573	Sunrise	NSW	100%	100%
EL8928	Sunrise	NSW	100%	100%
EL8833	Sunrise	NSW	100%	100%
EL8882	Sunrise	NSW	100%	100%
EL8883	Sunrise	NSW	100%	100%
EL9259	Sunrise	NSW	100%	100%
EL9317	Sunrise	NSW	100%	100%
ML1770	Sunrise	NSW	100%	100%
ML1769	Sunrise	NSW	100%	100%

Payments to related parties and their associates during the quarter as outlined in Section 6 of the accompanying Appendix 5B to this quarter's activities report were \$215,000. These payments are related to salaries, superannuation, advisory and consultancy fees paid to directors and/or director related entities during the quarter.

In April 2023 the Company received a cash payment of approximately \$350,000 from the Australian Tax Office, representing the refundable tax offset available under the R&D Tax Incentive for FY22.

The Company's R&D activities during FY22 included valuable work to further advance the Company's capability in battery recycling and battery precursor and cathode manufacturing. These efforts are intended to demonstrate the future potential for value-adding downstream activities at the Sunrise Project.

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

For more information, please contact:

Corporate

Ben Stockdale (CFO)
+61 3 9797 6777

Investors

Craig Sainsbury (Automic Group)
craig.sainsbury@automicgroup.com.au

About Sunrise Energy Metals Limited

Sunrise Energy Metals Limited (ASX:SRL) is progressing its world-class Sunrise Battery Materials Complex in New South Wales. The Sunrise Project is one of the largest and most cobalt-rich nickel laterite deposits in the world and is development-ready, with all key permits and approvals in place. Sunrise is also one of the largest and highest-grade scandium deposits globally.

Forward Looking Statements

Certain statements in this news release may 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. 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. For more information about Sunrise Energy Metals please visit the Company's website www.sunriseem.com.

Appendix 5B

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

SUNRISE ENERGY METALS LIMITED

ABN

34 127 457 916

Quarter ended ("current quarter")

30 JUNE 2023

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	(230)	(1,147)
(b) development	-	-
(c) production	-	-
(d) staff costs	(694)	(2,826)
(e) administration and corporate costs	(423)	(2,529)
(f) research and development	(59)	(302)
(g) Sunrise Project expenditure	(1,084)	(2,359)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	185	601
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	349	624
1.8 Other (provide details if material)	-	-
1.9 Net cash from / (used in) operating activities	(1,956)	(7,938)
2. Cash flows from investing activities		
2.1 Receipts from Customers	42	144
2.2 Payments to acquire or for:		
(a) entities		
(b) tenements	-	-
(c) property, plant and equipment	-	(44)
(d) exploration & evaluation	-	-

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
(e) investments	-	-
(f) other non-current assets	-	-
2.3 Proceeds from the disposal of:		
(a) entities	-	-
(b) tenements	-	-
(c) property, plant and equipment	-	-
(d) investments	-	-
(e) other non-current assets	-	-
2.4 Cash flows from loans to other entities	-	-
2.5 Dividends received (see note 3)	-	-
2.6 Other (provide details if material)	-	-
2.7 Net cash from / (used in) investing activities	42	100

3. Cash flows from financing activities		
3.1 Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
3.2 Proceeds from issue of convertible debt securities	-	-
3.3 Proceeds from exercise of options	-	-
3.4 Transaction costs related to issues of equity securities or convertible debt securities	-	-
3.5 Proceeds from borrowings	-	-
3.6 Repayment of borrowings/payment of principal for rental leases	(62)	(246)
3.7 Transaction costs related to loans and borrowings	-	-
3.8 Dividends paid	-	-
3.9 Other (provide details if material):		
(a) Cash backing of security bonds	-	2
3.10 Net cash from / (used in) financing activities	(62)	(244)

4. Net increase / (decrease) in cash and cash equivalents for the period		
4.1 Cash and cash equivalents at beginning of period	18,803	24,908
4.2 Net cash from / (used in) operating activities (item 1.9 above)	(1,956)	(7,937)

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
4.3	Net cash from / (used in) investing activities (item 2.7 above)	42	100
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(62)	(244)
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	16,827	16,827

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	16,827	18,803
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	16,827	18,803

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	215
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
<i>Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.</i>		

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

7. Financing facilities	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
<i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>		
7.1 Loan facilities	-	-
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
7.4 Total financing facilities	-	-
7.5 Unused financing facilities available at quarter end		-
7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from / (used in) operating activities (item 1.9)	(1,956)
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	-
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(1,956)
8.4 Cash and cash equivalents at quarter end (item 4.6)	16,827
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	16,827
8.7 Estimated quarters of funding available (item 8.6 divided by item 8.3)	8.6
<i>Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.</i>	
8.8 If item 8.7 is less than 2 quarters, please provide answers to the following questions:	
8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
Answer:	
8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
Answer:	

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Answer:

Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 25 July 2023

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

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg *Audit and Risk Committee*]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.