



LEADING EDGE MATERIALS CORP.

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LEADING EDGE MATERIALS CEO'S REPORT TO THE SHAREHOLDERS

Pandemic, war and climate change - the world as we know it is changing dramatically. Our vision, materials for change, is right in the middle of these societal challenges. A change in the energy system towards renewables and energy storage, electrified mobility solutions and resilient and sustainable supply-chains will need new materials and new sources for those materials. This is where the projects we have and the work we do on them becomes critically important.

Graphite is a key material to enable the energy transition, where most lithium-ion battery chemistries use graphite for the anode. As demand for lithium-ion batteries grows exponentially, demand for graphite is expected to grow by a factor of three by 2030ⁱ. Currently production of graphite for batteries is dominated by China.

Our Woxna graphite mine is one of few already built and permitted graphite mines in the western world. The Company's strategy is to establish a vertically integrated mine to anode material production unit which could offer a secure and sustainable supply of anode materials for European battery producers at the same time demand is expected to grow significantly.

Rare earth elements are needed to produce the high strength permanent magnets that are critical for the motors for electric vehicles and generators for wind turbines. As these technologies are set to grow significantly the market for magnet rare earth oxides is forecasted to increase five times by 2030ⁱⁱ. China is again the dominant supplier of rare earth oxides and permanent magnets.

Our Norra Karr rare earth project is one of the world's most significant deposits for heavy rare earth elements such as dysprosium and terbium, and the only deposit of its kind in the European Union. In addition, the project has the potential to supply by-products such as the industrial mineral nepheline syenite, zirconium and niobium. Bringing the project into production could be a key enabler for a European mine-to-magnet value-chain.

As we entered last year, we were working on 4 main objectives; demonstrate the economic potential of our Woxna graphite mine to anode material project, redesign the Norra Karr rare earth project to improve the conditions for a granted mining lease, focus our resources on the two main Swedish projects, and get the exploration license in Romania granted.

- We successfully completed the preliminary economic assessment for the Woxna graphite anode projectⁱⁱⁱ (the "Woxna PEA") with exceptional economic figures for the project with a post-tax NPV(8%) at US\$248m and a post-tax internal rate of return of 37.4%. Using the inputs and outputs from the Woxna PEA we commissioned UK-based consultancy firm Minviro Ltd. to perform an ISO-compliant life-cycle assessment on the project, which demonstrated a potential 85-90% reduction in CO2 footprint of anode material to be produced from Woxna compared with current Chinese supply alternatives^{iv}. Lastly, we signed a non-binding heads of agreement with the Australian company Sicona Battery Technologies Pty Ltd for the establishment of a Sweden based 50/50 joint venture targeting the production of advanced natural graphite and silicon-graphite-carbon composite anode materials^v;
- The redesign of the Norra Karr project resulted in the release of a preliminary economic assessment report^{vi} (the "Norra Karr PEA") delivering strong financial results with a post-tax NPV(10%) of US\$762m and post-tax IRR of 26.3%. More importantly, the redesign presented a revised flowsheet where operations at the deposit site only includes mining and physical beneficiation whereas chemical leaching and recovery of the rare earth oxides is moved to a more suitable off-site location. The

benefits of this new flowsheet are a significant improvement in resource utilization, the removed need for wet chemical tailings dams and an 80% reduction in land area usage at site. All changes are expected to improve the conditions for a granted mining lease for the project;

- We completed the sale of our Swedish lithium exploration project^{vii};
- The granting of the exploration license for our nickel-cobalt project in Romania unfortunately continued to be evaluated with no news.

The fundamental drivers underpinning our vision and strategies continue to be supportive. Increasing demand coupled with ongoing supply side issues such as a global power crunch and shipping disruptions have led to significant price increases over the last 12 months. Graphite prices in Europe, including spherical purified graphite (being the anode material feedstock), are recently reported^{viii} to be up almost 40-50% compared to the same period last year^{ix}. Key magnet rare earth oxide prices are up between 27 and 150% year on year^x.

Governments in the western world launching initiatives to support the development of domestic sources of critical raw materials to reduce reliance on China, the European Union being no exception. The European Raw Materials Alliance released its action plan on rare earth elements^{xi} including a proposed bridge fund of up to €200m per year to fund projects, the European Parliament adopted a European strategy for critical raw materials^{xii} and more recently the EU leaders addressed strategic dependencies on critical raw materials in the Versailles Declaration^{xiii} as a response to the Russian invasion of Ukraine.

Considering the improved graphite market conditions, we are evaluating the potential restart of production of flake graphite concentrate at Woxna and we will update on this in the near future. This is in parallel, but ultimately connected to our anode material development project where we are producing bulk samples of material together with our preferred suppliers. This material will be further refined by Sicona and subsequently tested internally and provided to potential customers for evaluation. Subject to a successful outcome of this test program we will then negotiate the formal joint venture and decide on the establishment of a commercial demonstration plant.

For Norra Karr we are continuing our work with our consultants to update our mining lease application based on the new plans for the project. A recent decision by the Swedish government to grant a mining lease on a separate project in Sweden^{xiv} might positively influence the scope of assessment required for a mining lease compared with the subsequent environmental permit application process.

We continue to work with our Romanian joint venture partner in preparation of a hopefully positive outcome on our exploration license application. Should this materialize we have a prepared exploration program that we look forward to putting into motion to test the potential for high-grade nickel and cobalt mineralizations. Both nickel and cobalt prices have risen sharply over recent months making the opportunity for this project even more attractive lately.

None of this work would have been possible without the support of our shareholders, which we thank you for. In the recently closed first fiscal quarter of 2022 we saw continuing support from long-term shareholders through the exercise of options and warrants for proceeds of C\$1,665,500, with many warrants and options still outstanding with exercise prices deep in the money. During fiscal 2021 our share price increased by 120%, and as of this letter's date it is up 479% from May 4, 2020, when the new Board of Directors joined the Company, and I was given the opportunity to lead the Company as the CEO. Looking forward, we are committed to do our utmost to uphold this track-record of delivering shareholder returns.

**On behalf of the Board of Directors,
Leading Edge Materials Corp.**

Filip Kozlowski, CEO

For further information, please contact the Company at:

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Qualified Person

The scientific, technical and economic information related to the Norra Karr project has been reviewed and approved by Dr. Rob Bowell of SRK Consulting (UK) Ltd, a chartered chemist of the Royal Society of Chemistry, a chartered geologist of the Geological Society of London, and a Fellow of the Institute of Mining, Metallurgy and Materials, who is an independent Qualified Person under the terms of NI 43-101 for REE deposits.

The scientific, technical and economic information related to the Woxna Graphite project has been reviewed and verified by Christopher Stinton of Zenito Limited, BSc (Hons), CEng MIMMM, an independent Qualified Person as defined by NI 43-101.

About Leading Edge Materials

Leading Edge Materials is a Canadian public company focused on developing a portfolio of critical raw material projects located in the European Union. Critical raw materials are determined as such by the European Union based on their economic importance and supply risk. They are directly linked to high growth technologies such as batteries for electromobility and energy storage and permanent magnets for electric motors and wind power that underpin the clean energy transition towards climate neutrality. The portfolio of projects includes the 100% owned Woxna Graphite mine (Sweden), Norra Karr HREE project (Sweden) and the 51% owned Bihor Sud Nickel Cobalt exploration alliance (Romania).

Reader Advisory

Certain information in this news release may constitute forward-looking statements or forward-looking information within the meaning of applicable Canadian securities laws (collectively, "Forward-Looking Statements"). All statements, other than statements of historical fact, addressing activities, events or developments that the Company believes, expects or anticipates will or may occur in the future are Forward-Looking Statements. Forward-Looking Statements are often, but not always, identified by the use of words such as "seek," "anticipate," "believe," "plan," "estimate," "expect," and "intend" and statements that an event or result "may," "will," "can," "should," "could," or "might" occur or be achieved and other similar expressions. Forward-Looking Statements are based upon the opinions and expectations of the Company based on information currently available to the Company. Forward-Looking Statements are subject to a number of factors, risks and uncertainties that may cause the actual results of the Company to differ materially from those discussed in the Forward-Looking Statements including, among other things, the Company has yet to generate a profit from its activities; there can be no guarantee that the estimates of quantities or qualities of minerals disclosed in the Company's public record will be economically recoverable; uncertainties relating to the availability and costs of financing needed in the future; competition with other companies within the mining industry; the success of the Company is largely dependent upon the performance of its directors and officers and the Company's ability to attract and train key personnel; changes in world metal markets and equity markets beyond the Company's control; the possibility of write-downs and impairments; the risks associated with uninsurable risks arising during the course of exploration; development and production; the risks associated with changes in the mining regulatory regime governing the Company; the risks associated with tenure to the Norra Karr property; the risks associated with the various environmental regulations the Company is subject to; rehabilitation and restitution costs; the Woxna project has never defined a mineral reserve or a feasibility study and the associated increased risk of technical and economic failure in case of restarting production; risks relating to the preliminary and non-binding nature of the MOU with Sicona. On June 9, 2021, Leading Edge announced the results of an independent preliminary economic assessment for the development of Woxna (the "2021 Woxna PEA"), the full details of which are included in a technical report entitled "NI 43-101 Technical Report – Woxna Graphite" prepared for Woxna Graphite AB with effective date June 9, 2021 and issue date July 23, 2021, available on Leading Edge's website www.leadingedgematerials.com and under its SEDAR profile www.sedar.ca. The 2021 Woxna PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability. On July 22, 2021, Leading Edge announced the results of an independent preliminary economic assessment for the development of Norra Karr (the "2021 Norra Karr PEA"), the full details of which are included in a technical report titled "PRELIMINARY ECONOMIC ASSESSMENT OF NORRA KARR RARE EARTH DEPOSIT AND POTENTIAL BY-PRODUCTS, SWEDEN" prepared for Leading Edge Materials Corp. with effective date August 18, 2021 and issue date August 19, 2021, available on Leading Edge's website www.leadingedgematerials.com and under its SEDAR profile www.sedar.ca. The 2021 Norra Karr PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability. On March 11, 2020, the World Health Organization ("WHO") declared the novel coronavirus outbreak identified as "COVID-19", as a global pandemic. In order to combat the spread of COVID-19 governments worldwide have enacted emergency measures including travel bans, legally enforced or self-imposed quarantine periods, social distancing and business and organization closures. These measures have caused material disruptions to businesses, governments and other organizations resulting in an economic slowdown and increased volatility in national and global equity and commodity markets. The Company has implemented safety and physical distancing procedures, including working from home where possible and ceased all travel, as recommended by the various governments. The Company will continue to monitor the impact of the COVID-19 outbreak, the duration and impact which is unknown at this time, as is the efficacy of any intervention. It is not possible to reliably estimate the length and severity of these developments and the impact on the financial results and condition of the Company and its operations in future periods.

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- ⁱ <https://www.spglobal.com/commodity-insights/en/market-insights/latest-news/energy-transition/021622-feature-graphite-supply-a-concern-in-meeting-growing-battery-demand>
- ⁱⁱ <https://www.mining.com/magnet-rare-earth-oxides-market-to-increase-fivefold-by-2030-report/>
- ⁱⁱⁱ See National Instrument 43-101 report entitled "NI 43-101 Technical Report – Woxna Graphite" prepared for Woxna Graphite AB with effective date June 9, 2021 and issue date July 23, 2021. See Leading Edge Materials Corp.'s SEDAR profile on www.sedar.ca or www.leadingedgematerials.com for report and more information. The PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized.
- ^{iv} <https://leadingedgematerials.com/wp-content/uploads/2022/03/2021-Woxna-Graphite-LCA-report-by-Minviro.pdf>
- ^v <https://leadingedgematerials.com/leading-edge-materials-announces-proposed-joint-venture-plans-for-advanced-anode-materials-business-with-sicona/>
- ^{vi} See National Instrument 43-101 report titled "PRELIMINARY ECONOMIC ASSESSMENT OF NORRA KÄRR RARE EARTH DEPOSIT AND POTENTIAL BY-PRODUCTS, SWEDEN" prepared for Leading Edge Materials Corp. with effective date August 18, 2021 and issue date August 19, 2021. See Leading Edge Materials Corp.'s SEDAR profile on www.sedar.ca or www.leadingedgematerials.com for report and more information. The PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized.
- ^{vii} <https://leadingedgematerials.com/leading-edge-materials-completes-sale-of-100-of-the-bergby-lithium-project/>
- ^{viii} <https://www.indmin.com/Article/5089795/Graphite/Strong-demand-in-China-tightening-supply-support-graphite-markets.html>
- ^{ix} <https://www.indmin.com/Article/3978011/Graphite-LatestNews/GLOBAL-GRAPHITE-SNAPSHOT-Prices-stable-but-freight-costs-new-material-sources-add-uncertainty.html>
- ^x <https://treo.substack.com/p/trust-is-no-entitlement-russia-ukraine?s=r>
- ^{xi} <https://erma.eu/european-call-for-action/>
- ^{xii} https://www.europarl.europa.eu/doceo/document/TA-9-2021-0468_EN.pdf
- ^{xiii} <https://www.consilium.europa.eu/media/54773/20220311-versailles-declaration-en.pdf>
- ^{xiv} <https://www.regeringen.se/pressmeddelanden/2022/03/regeringen-beviljar-bearbetningskoncession-for-kallak-k-nr-1/>