



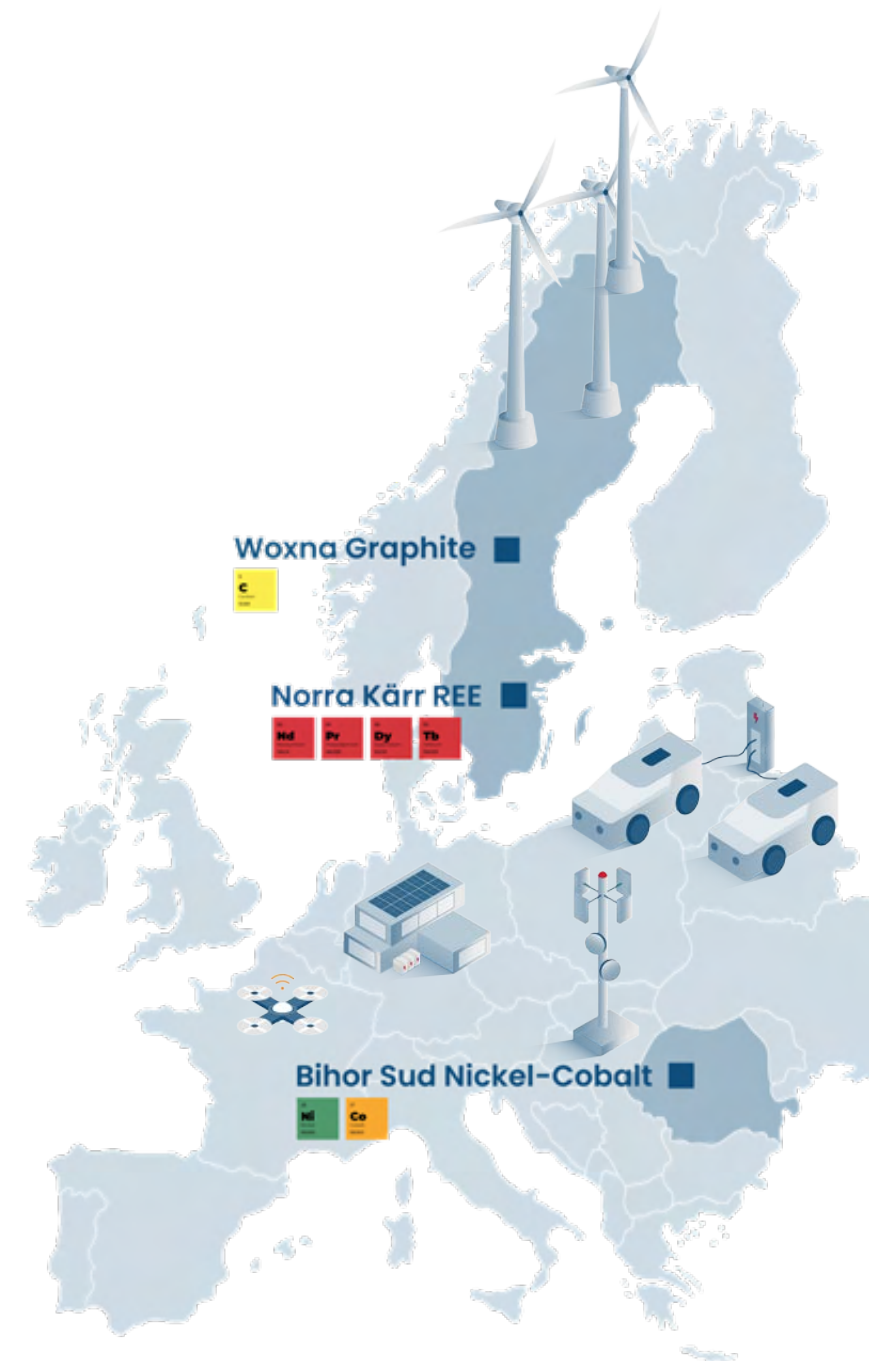
LEADING EDGE
MATERIALS

Critical Raw Materials in Europe

欧洲的关键原材料

February 2022 / 2022年2月

TSX.V: LEM
Nasdaq First North: LEMSE
OTCQB: LEMIF
FRA: 7FL



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The Woxna project has never defined a mineral reserve. 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 Kärr (the "2021 Norra Kärr PEA"), the full details of which are included in a technical 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, available on Leading Edge's website www.leadingedgematerials.com and under its SEDAR profile www.sedar.ca. The 2021 Norra Kärr 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.

This presentation has been prepared by Leading Edge Materials Corp. The scientific, technical and economic information related to the Norra Kärr 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.

Strategy and Project Portfolio / 战略和项目组合



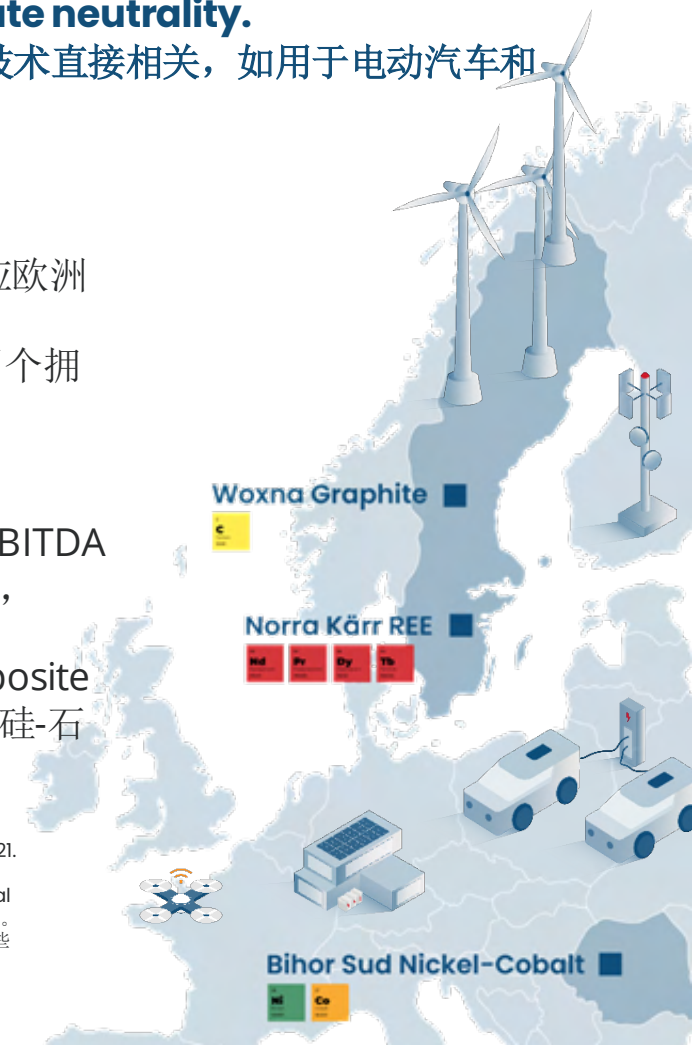
Developing a portfolio of critical raw material projects located in the European Union. Critical raw materials are determined as such by the European Union based on their economic importance and supply risk. They are directly linked to high growth technologies such as batteries for electromobility and energy storage, and permanent magnets for electric motors and wind power that underpin the clean energy transition towards climate neutrality.

开发位于欧盟的关键原材料项目组合。关键原材料是欧盟根据其经济重要性和供应风险确定的，与高增长技术直接相关，如用于电动汽车和能源储存的电池，以及用于电动机和风力发电的永磁体，这些技术是清洁能源向气候中和转变的基础。

Woxna Graphite Woxna 石墨项目 (100%)

- One of few fully-built graphite mines in the western world, ideally located to supply European industry / 西方世界为数不多的完全建成的石墨矿之一，地理位置优越，可供应欧洲工业
- Four deposits under mining leases, fully-built processing plant and infrastructure / 四个拥有采矿租约的矿床，有完全建成的加工厂和基础设施
- Targeting a vertically integrated natural graphite mine to lithium-ion battery anode material production / 目标是将垂直整合的天然石墨矿转向锂离子电池阳极材料生产
- Recent PEA presents post-tax Net Present Value(8%) of US\$248m, IRR of 37.4% and EBITDA of US\$49m* / 最近的PEA显示税后净现值(折现率8%)为2.48亿美元，内部收益率为37.4%，EBITDA为4900万美元*
- Proposed 50/50 JV with Sicona Battery Technologies Pty Ltd for silicon-graphite composite anode materials / 拟与Sicona Battery Technologies Pty各出资50%成立合资公司，生产硅-石墨复合阳极材料

• 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. / 见为Woxna Graphite AB编制的题为“Woxna石墨项目NI 43-101技术报告”，生效日期为2021年6月9日，发布日期为2021年7月23日。请参阅Leading Edge Materials Corp.在SEDAR官网www.sedar.ca上的简介或浏览本公司网站www.leadingedgematerials.com，以获取报告和更多信息。PEA是初步性质的，包括推断矿产资源量，这些资源在地质学上被认为是推测的，无法考虑其经济价值，从而使其被归类为矿产储量，并且不确定PEA是否会实现。



Strategy and Project Portfolio / 战略和项目组合



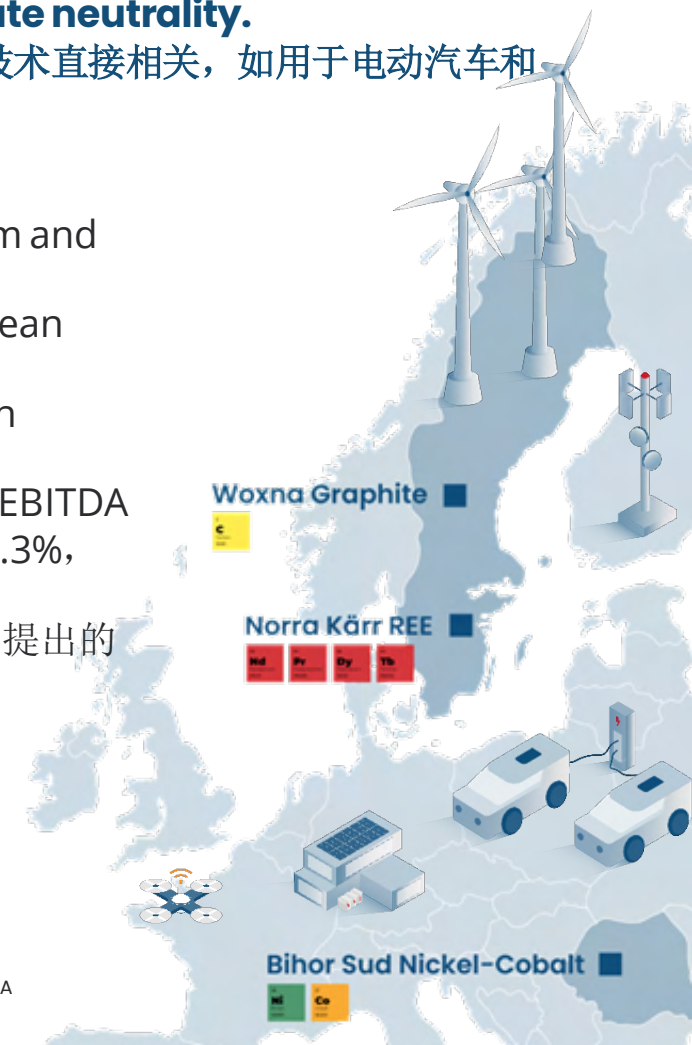
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**Norra
Kärr
REE
Norra
Kärr稀土
元素项目
(100%)**

- Significant heavy rare earth deposit with an unusually high enrichment of dysprosium and terbium / 重要的重稀土矿床，镝和铽的含量异常高
- Ideally located to offer a secure and sustainable supply of rare earth oxides to European industry / 地理位置优越，可为欧洲工业提供安全和可持续的稀土氧化物供应
- Proposed production of nepheline syenite at site and off-site production of rare earth oxides / 拟在现场生产霞石正长岩并在场外生产稀土氧化物
- Recent PEA presents post-tax Net Present Value(10%) of US\$762m, IRR of 26.3% and EBITDA of US\$206m** / 最近的PEA显示税后净现值(折现率10%)为7.62亿美元，内部收益率为26.3%，EBITDA为2.06亿美元**
- Incorporating newly proposed project design towards mining lease application / 将新提出的项目设计纳入采矿租约申请中

** 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. / 见为Leading Edge Materials Corp.编制的题为“瑞典NORRA KÄRR稀土矿床和潜在副产品的初步经济评估”，生效日期为2021年8月18日，发布日期为2021年8月19日。请参阅Leading Edge Materials Corp.在SEDAR官网www.sedar.ca上的简介或浏览本公司网站www.leadingedgematerials.com，以获取报告和更多信息。PEA是初步性质的，包括推断矿产资源量，这些资源在地质学上被认为是推测的，无法考虑其经济价值，从而使其被归类为矿产储量，并且不确定PEA是否会实现。



Strategy and Project Portfolio / 战略和项目组合



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.

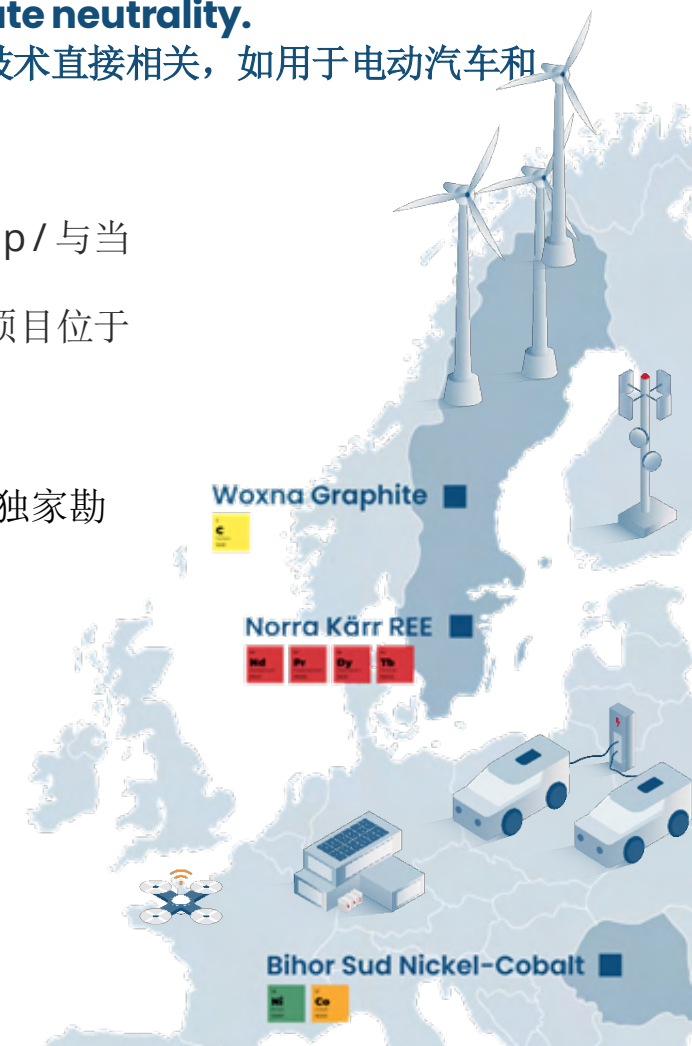
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Bihor Sud Ni-Co Bihor Sud 镍钴 项目 (51%)

- Exploration alliance with local JV partner with the potential to move to 90% ownership / 与当地的合资伙伴建立勘探联盟，并有可能将所有权上升到90%
- Project located in part of the Tethyan Belt in an area with historic mining activities / 项目位于古地中海特提斯造山带的一部分，处在一个有历史采矿活动的矿区
- Initial prospecting and sampling indicates potential for high-grade nickel-cobalt mineralisations / 初步的探矿和取样表明高品位镍钴矿化的潜力
- Awaiting final decision on exclusive exploration license tender application / 等待关于独家勘探许可证招标申请的最终决定

* 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. / 见为Woxna Graphite AB编制的题为“Woxna石墨项目NI 43-101技术报告”，生效日期为2021年6月9日，发布日期为2021年7月23日。请参阅Leading Edge Materials Corp.在SEDAR官网www.sedar.ca上的简介或浏览本公司网站www.leadingedgematerials.com，以获取报告和更多信息。PEA是初步性质的，包括推断矿产资源量，这些资源在地质学上被认为是推测的，无法考虑其经济价值，从而使其被归类为矿产储量，并且不确定PEA是否会实现。

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Board and Management / 董事会和管理层

Canadian public company with experienced EU leadership / 加拿大上市公司，拥有在欧盟经验丰富的领导层


Chairman
董事长

Lars-Eric Johansson

Past / 曾任
President & CEO Ivanhoe Mines / 艾芬豪矿业公司总裁兼首席执行官
CFO Kinross Gold Corporation / Kinross Gold Corporation首席财务官
CFO Noranda Inc / Noranda Inc首席财务官
CFO Falconbridge / Falconbridge首席财务官
Vice President & CFO Boliden Mineral / Boliden Mineral副总裁兼首席财务官


Director
董事

Daniel Major

CEO GoviEx Uranium Inc. (TSXV) / GoviEx Uranium Inc. (TSXV)首席执行官
Past / 曾任职于
Chief Executive and later Non-Executive Chairman of Basic Element Mining and Resource Division in Russia / 俄罗斯Basic Element Mining和资源部的首席执行官和后来的非执行主席
Mining analyst HSBC Plc and JPM / 汇丰银行和摩根士丹利的矿业分析师
Rio Tinto Rossing Uranium Mine / 力拓Rossing铀矿


Director
董事

Eric Krafft

Private investor and largest shareholder. Serves on the boards of numerous private financial holding and ship-owning companies.
Director GoviEx Uranium Inc. (TSXV) / 私人投资者和最大的股东。在多家私人金融控股和船舶公司担任董事。GoviEx Uranium Inc. (TSXV)董事
Past / 曾任职于
Trafalgar Shipping/Dragon Maritime
Corporate Finance DVB Bank AG


CEO
首席执行官

Filip Kozlowski

Past / 曾任
Director Leading Edge Materials / Leading Edge Materials董事
Portfolio Manager Macro HF / Macro HF投资组合经理
Investment Manager Family Office / 家族理财室投资经理
Portfolio Trader Deutsche Bank Ldn / 德意志银行投资组合交易员


CFO
首席财务

Sanjay Swarup

CEO and founder SKS Business Services Ltd. / SKS Business Services Ltd.首席执行官和创始人
Past / 曾任
CFO Mandalay Resources (TSX) / Mandalay Resources (TSX)首席财务官


Ops
运营

Peter Young

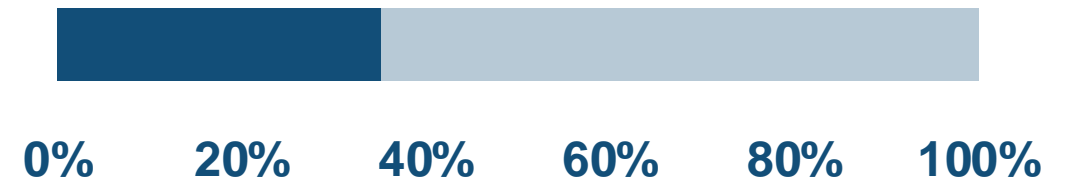
Past / 曾任职于
ORSU Resources
Oriol Resources
MINOPEX
Johannesburg Consolidated Industries


Geo
地质

Magnus Leijd

Past / 曾任职于
Tasman Metals Ltd.
Lundin Mining
North Atlantic Natural Resources

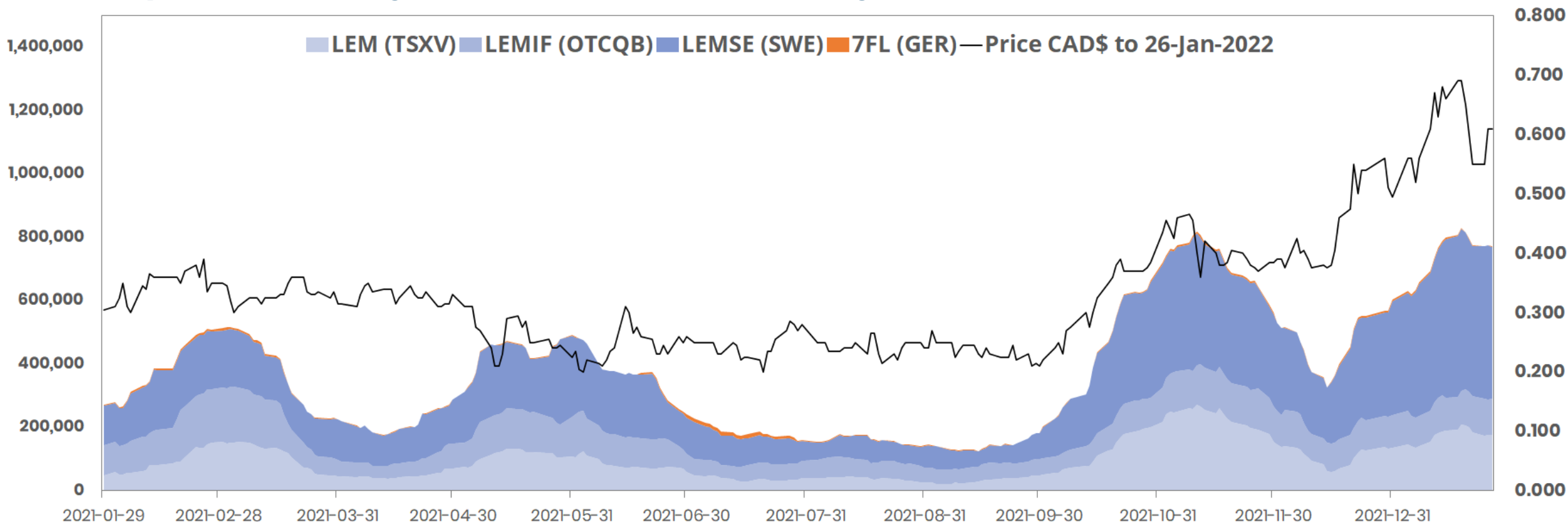
Insider Ownership / 内部人士持股



Share / 股票

- **Tickers / 代码:** LEM.V (TSXV), LEMIF (OTCQB), LEMSE (NFN), 7FL (Fra)
- **Quote / 报价:** CAD \$0.61 / SEK 4.12 (per 26.1.2022) / 0.61加元 / 4.12瑞典克朗 (截至2022年1月26日)
- **Mkt Cap / 市值:** CAD \$93m / SEK 673M (non-diluted) / 9300万加元 / 6.73亿瑞典克朗 (非稀释)
- **Shareholder base / 股东基础:** ~50% North American vs European / 北美和欧洲股东各约占50%

Share price and rolling 20-day volume across listings / 各个上市交易所的股价和20天成交量

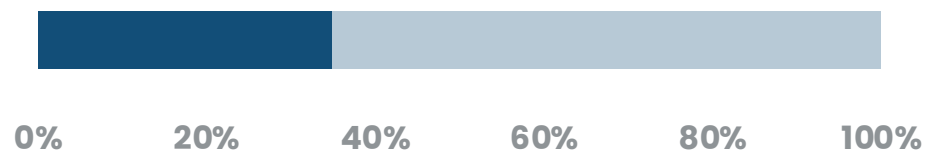


Shares, Warrants and Options / 股票、权证和期权

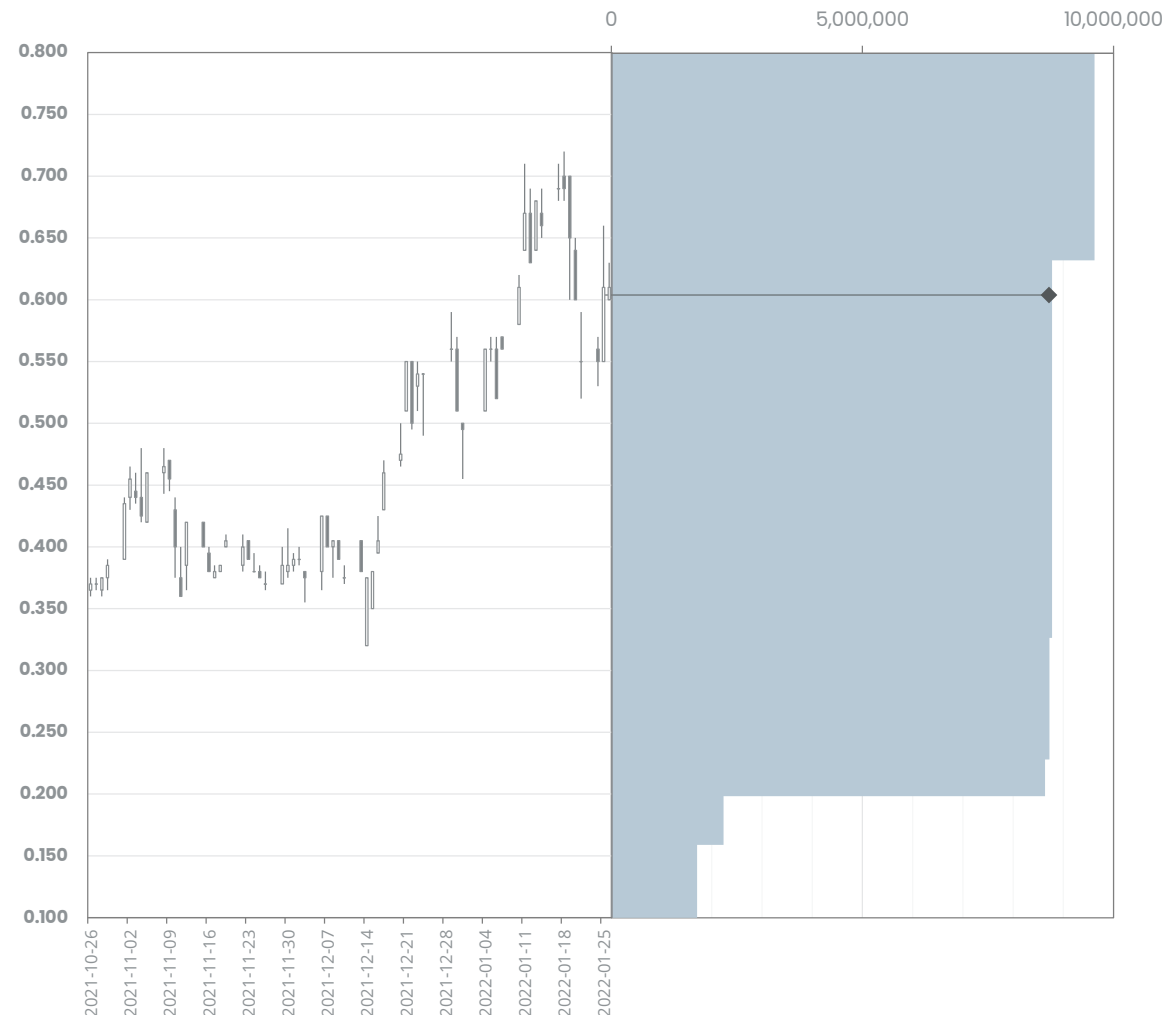
Share Structure / 股票结构

Issued and Outstanding as of Jan 26, 2022:			151,645,499
截至2022年1月26日已发行和流通股总数:			
Stock Options			5,27,000
股票期权			
Expiring May 30/22	@ 0.225	400,000	
2022年5月30日到期			
Expiring Nov 02/22	@ 0.64	1,320,000	
2022年11月2日到期			
Expiring Aug 11/23	@ 0.155	3,400,000	
2023年8月11日到期			
Expiring Aug 14/23	@ 0.33	150,000	
2023年8月14日到期			
Warrants / 认股权证			49,079,286
Expiring Dec 30/2023	@ 0.10	17,079,286	
2023年12月30日到期			
Expiring Aug 7/2024	@ 0.20	32,000,000	
2024年8月7日到期			
Fully Diluted /			205,994,785
完全稀释后股数:			

Insider Ownership / 内部人士持股



Potential proceeds from exercise (CAD) 行权的潜在收益（加元）



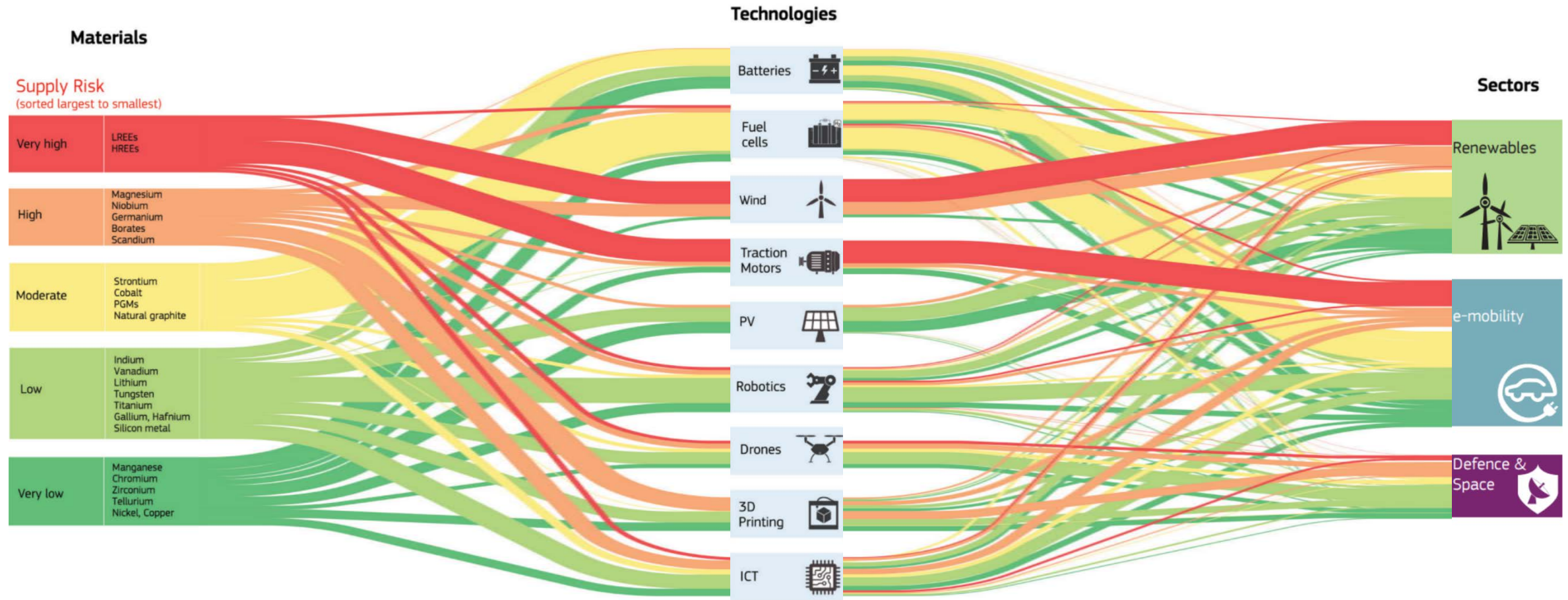
Critical Raw Materials / 关键原材料

Supply Risk / 供应风险

- EU is dependent on imports of CRMs / 欧盟依赖关键原材料进口
- A few single countries dominate the export of CRMs which leave the EU vulnerable for supply disruptions / 少数单一国家主导了关键原材料的出口，使欧盟容易受到供应中断的影响

Economic Importance / 经济价值的重要性

- CRMs are directly linked to technologies such as batteries and permanent magnets that are critical for growth industries like renewables, energy storage and electromobility / 关键原材料与电池和永磁体等技术直接相关，而这些技术对可再生能源、能源储存和电动汽车等增长行业至关重要
- CRMs enable the transition to a green, digital and autonomous EU / 关键原材料有助于欧盟向绿色、数字化和自主化过渡



The Challenge for Europe / 欧洲面临的挑战

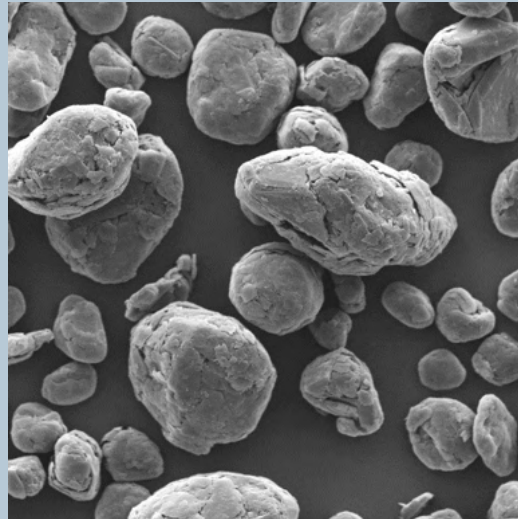


“Green and digital technologies currently depend on a number of scarce raw materials. We import lithium for electric cars, platinum to produce clean hydrogen, silicon metal for solar panels. 98% of the rare earth elements we need come from a single supplier: China. This is not sustainable. So we must diversify our supply chains.”

“绿色和数字技术目前依赖于诸多稀缺的原材料。我们的电动汽车需要进口锂，生产清洁氢气要进口铂金，太阳能电池板要进口金属硅。我们所需98%的稀土元素来自中国这一个供应国，这是不持续的。因此，我们必须使我们的供应链多样化”。

- **Opening speech by European Commission President von der Leyen at the EU Industry Days 2021 / 欧盟委员会主席冯德莱恩在2021年欧盟工业日上的开幕词**





Woxna Graphite Anode project

Woxna 石墨阳极项目

European Battery Industry / 欧洲电池行业

Woxna Graphite is ideally positioned to become a Swedish supplier to the European battery industry

Woxna石墨项目具有天时地利，将成为欧洲电池行业的瑞典供应商

1,000,000 tpa / 年均100万吨

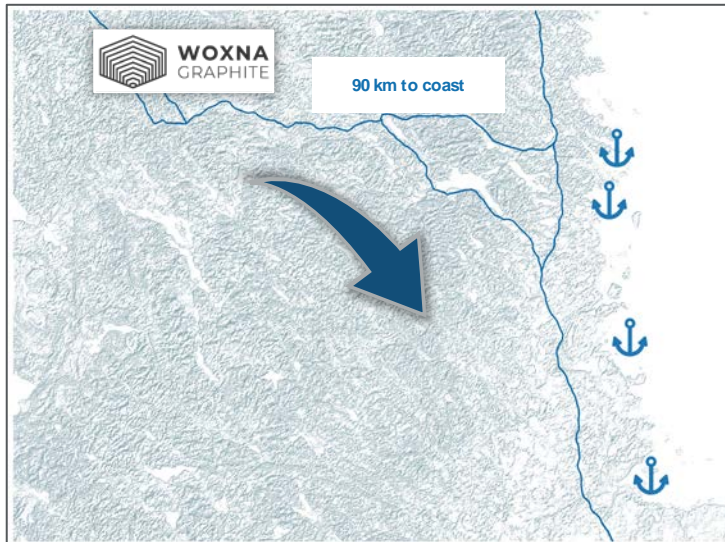
of anode demand by 2030 based on 1,000 GWh battery production planned in Europe
根据欧洲规划的1000GWh电池生产，到2030年阳极的需求量将达到

25x / 25倍

Expected increase in demand for graphite by 2040 / 预计到2040年对石墨的需求会增加
(IEA, SDS)

71% - 100%

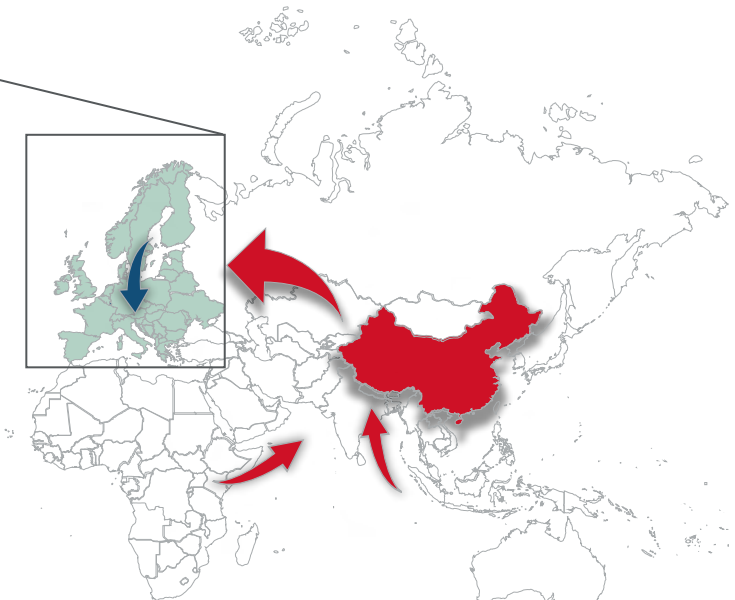
China's global supply dominance of graphite raw material and spherical graphite / 中国在石墨原材料和球形石墨的全球供应中占据主导地位
(Benchmark Mineral Intelligence)



Transport routes on sealed roads from mine site to various port options / 从矿区到各类港口的封闭道路运输路线选择



Announced gigafactory plans in Europe / 宣布在欧洲的千兆工厂计划



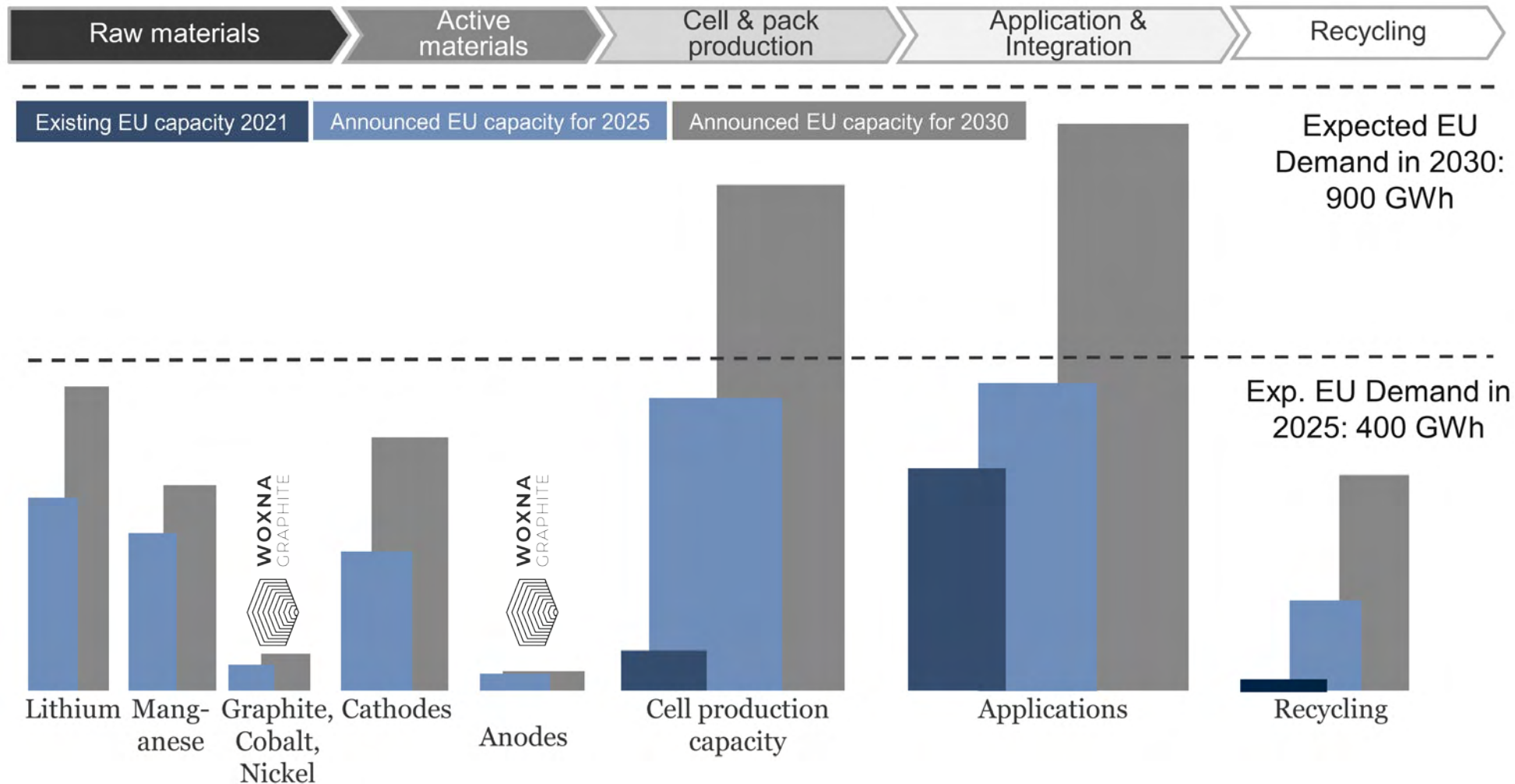
Global raw material imports to China and processed materials exports out of China / 全球原材料进口到中国和加工材料从中国出口的情况

Battery Value Chain Gap / 电池价值链上的缺口



Predicted share of EU supply vs. expected EU demand until 2030 per value chain step

2030年前欧盟供应量预测份额与欧盟每个价值链环节的预期需求量对比



Woxna Graphite Anode PEA* / Woxna 石墨阳极项目初步经济评估*



The PEA indicates the potential viability of a Swedish operation producing battery grade graphite anode material utilizing an existing graphite mine and concentrator with the addition of a value-add processing facility offsite / 初步经济评估表明，利用现有的石墨矿和选矿厂，以及在场外增加一个增值加工设施，生产电池级石墨阳极材料瑞典业务的潜在可行性

- Thermal purification process which, combined with access to low cost hydropower offers a low carbon footprint for the Project demonstrated through a recently announced life cycle assessment (LCA) report / 热净化工艺，结合低成本的水电，为该项目提供了低碳足迹，在最近公布的生命周期评估(LCA)报告中得到了证明
- Improved waste management process for tailings further improving the sustainability ambitions of the Project / 改进了尾矿废料管理过程，进一步提高该项目的可持续性目标
- The PEA utilizes one out of four deposits currently owned by Woxna under granted exploitation concessions, where two of the other deposits also have indicated and inferred mineral resource estimates offering potential upside for further expansion in future development or studies / 此次初步经济评估用到了Woxna目前拥有并授予开采权的四个矿床中的一个，其他两个矿床也有了指示和推断矿产资源量估测，在未来的开发或研究中提供了进一步扩大的潜在上升空间



* 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. / 见为Woxna Graphite AB编制的题为“Woxna石墨项目NI 43-101技术报告”，生效日期为2021年6月9日，发布日期为2021年7月23日。请参阅Leading Edge Materials Corp.在SEDAR官网www.sedar.ca上的简介或浏览本公司网站www.leadingedgematerials.com，以获取报告和更多信息。PEA是初步性质的，包括推断矿产资源量，这些资源在地质学上被认为是推测的，无法考虑其经济价值，从而使其被归类为矿产储量，并且不确定PEA是否会实现。

Woxna Graphite Anode PEA* / Woxna 石墨阳极项目初步经济评估*



Financial Highlights / 财务亮点

- Post-tax Net Present Value (NPV 8%) of \$248m / 税后净现值(折现率8%)为\$2.48 亿
- Post-tax IRR of 37.4% / 税后内部收益率为37.4%
- Accumulated project revenues of \$1,425m / 累计项目收入为\$14.25亿
- Average annual EBITDA of \$49m / 平均每年的EBITDA为\$4900万
- Initial Capital Expenditures (CAPEX) of \$121m / 初始资本支出(CAPEX)为\$1.21亿

Operational Highlights / 运营亮点

- Life of Mine (LOM) is 15 years / 矿山寿命(LOM)为15年
- LOM average annual plant feed of 159,967 tonnes / 矿山寿命期内年均工厂进料量为159,967吨
- LOM average annual CSPG product 7,435 tonnes / 矿山寿命期内年均涂层球状纯化石墨产量7435吨

Mineral Resource Estimate – Measured and Indicated / 矿产资源量估测-测定和指示资源量

Property / 项目区	Classification of Mineral Resource / 矿产资源量分类	Tonnes / 吨 (Mt / 百万吨)	Grade C / 品位 (%)
Kringel	Measured / 测定	0.96	9.21
	Indicated / 指示	1.65	9.09
	Sub-total Measured + Indicated / 测定加指示资源量小计	2.61	9.13
Gropabo	Indicated / 指示	2.33	7.72
Mattssmyra		5.83	7.14
Total / 汇总	Measured + Indicated / 测定加指示	10.77	7.75

Mineral Resource Estimate – Inferred / 矿产资源量估测-推断

Property / 项目区	Classification of Mineral Resource / 矿产资源量分类	Tonnes / 吨 (Mt / 百万吨)	Grade C / 品位 (%)
Kringel	Inferred / 推断	0.39	8.72
Gropabo		0.61	8.07
Mattssmyra		1.51	8.06
Total / 汇总	Inferred / 推断	2.51	8.16

Source / 来源: ReedLeyton 2021

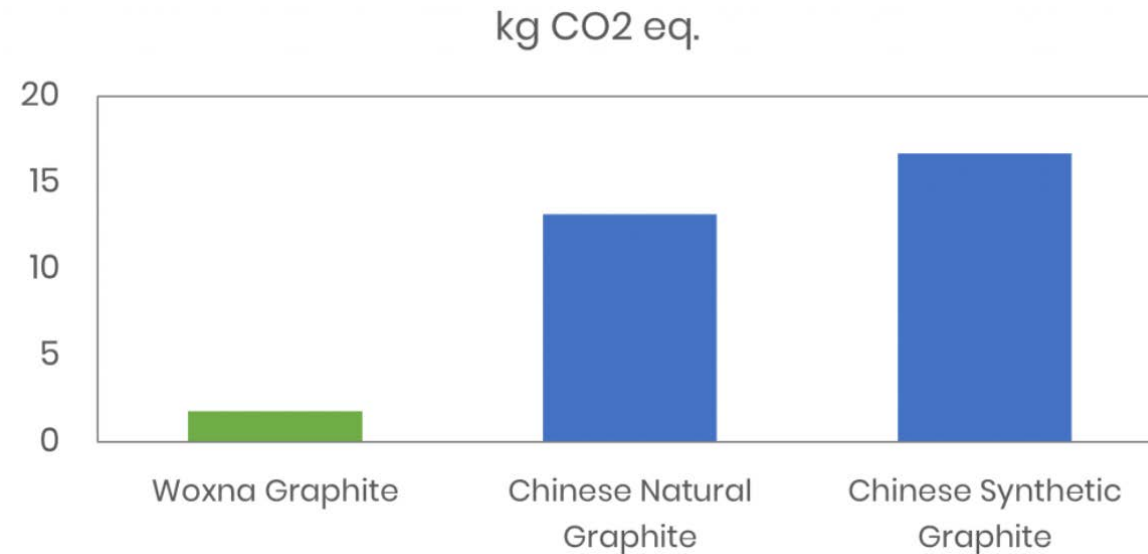
Notes: Inconsistencies in totals are due to rounding; 4% Cg mill cut-off grade applied for reporting purposes constrained within the MPlan 2021 pitshell; Reported according to CIM Definition Standards 2011; Reported according to CIM Mineral Exploration Best Practice Guidelines (Nov 2018); No geological losses applied; Default Density of 2.7 t/m³ applied to in situ, then Density of 2.82 t/m³ applied to Type A Graphite and Density of 2.86 t/m³ applied to Type B Graphite for Gropabo and Mattssmyra; and Default Density for Kringel remained at 2.7 t/m³; The previous Mineral Resource Estimates for the Project were developed without the constraint of an applied mine plan and open-pit shell. In the light of more rigorous compliance requirements, the Mineral Resources were reported by ReedLeyton within the constraints of the PEA mine plan as a means of demonstrating “reasonable prospects for economic extraction” as required by numerous international reporting codes. No new exploration data was included in the reporting process; Effective date of Mineral Resource Estimate is June 9, 2021; and Mineral resources are not mineral reserves and do not have demonstrated economic viability; / 注：总数的不一致是由于四舍五入造成的；为报告目的，在矿山计划2021坑道内采用了4%的石墨加工边际品位；根据2011年CIM定义标准进行报告；根据CIM矿产勘探最佳实践指南（2018年11月）进行报告；没有采用地质损失；默认采用2.7吨/立方米的原地密度，A型石墨密度2.82吨/立方米，对Gropabo和Mattssmyra的B型石墨采用2.86吨/立方米密度；Kringel的默认密度仍为2.7吨/立方米；该项目之前的矿产资源量估测是在没有采矿计划和露天矿外形的约束下进行的。鉴于更严格的合规要求，ReedLeyton在PEA采矿计划的限制下报告了矿产资源量，作为证明“合理的经济开采前景”的方式，这也是众多国际报告准则的要求。报告过程中没有纳入新的勘探数据；矿产资源量估测的有效日期是2021年6月9日；矿产资源量并非矿产储量，没有证明经济可行性；

* 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. / 见为Woxna Graphite AB编制的题为“Woxna石墨项目NI 43-101技术报告”，生效日期为2021年6月9日，发布日期为2021年7月23日。请参阅Leading Edge Materials Corp.在SEDAR官网www.sedar.ca上的简介或浏览本公司网站www.leadingedgematerials.com，以获取报告和更多信息。PEA是初步性质的，包括推断矿产资源量，这些资源在地质学上被认为是推测的，无法考虑其经济价值，从而使其被归类为矿产储量，并且不确定PEA是否会实现。

Woxna Graphite LCA Results* / Woxna石墨项目生命周期评估结果*



- 1 tonne of natural graphite anode material (coated spherical purified graphite ("CSPG")) from natural graphite extracted at the Woxna Graphite mine is forecast to have an impact of 1.8 tonnes CO2 eq / 从Woxna石墨矿开采的天然石墨中提取1吨天然石墨阳极材料（涂层球形纯化石墨("CSPG")）预计将产生1.8吨二氧化碳当量
- 85% to 90% lower impact than the current market dominant Chinese alternatives / 对环境的影响比目前市场上占主导地位的中国替代品低85%至90%
- Significant factor influencing the dramatically reduced carbon footprint for Woxna Graphite is the access to hydropower as the main electricity source / 导致Woxna石墨项目碳足迹大幅减少的重要因素是以水电作为主要电力来源
- 62.5% of the 1.8 tonnes CO2 eq. for Woxna contributed by argon and nitrogen. Local suppliers can offer climate neutral alternatives which would lead to further improvements in Woxna's footprint / Woxna这1.8吨二氧化碳当量中62.5%是氩气和氮气。当地供应商可以提供气候中立的替代品，这将导致Woxna的碳足迹进一步减少
- The LCA study was conducted according to the requirements of the ISO-104040:2006 and ISO-14044:2006 standards and used a cradle-to-gate approach / 生命周期评估研究是根据ISO-104040:2006和ISO-14044:2006标准的要求进行的，采用了所谓的“摇篮到大门”的方式



Woxna Graphite Overview / Woxna石墨项目概况



Mine
矿山

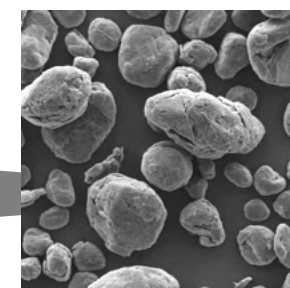
Concentrator
选矿机

Sizing
精压加工

Shaping
塑形

Purification
纯化

Coating
涂层



**Coated
Spherical
Purified
Graphite**
涂层球形纯化石墨

**Graphite
Concentrate**
石墨精矿

**Spherical
Graphite**
球形石墨

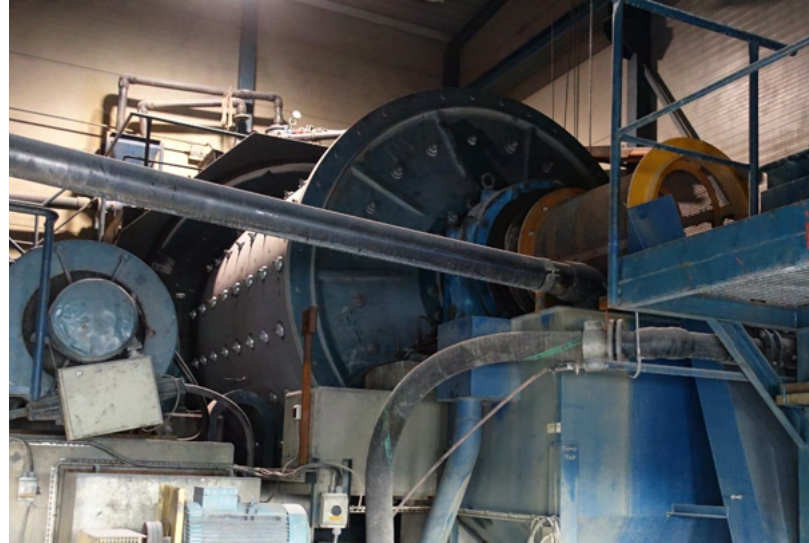
**Spherical
Purified
Graphite**
球形纯化石墨

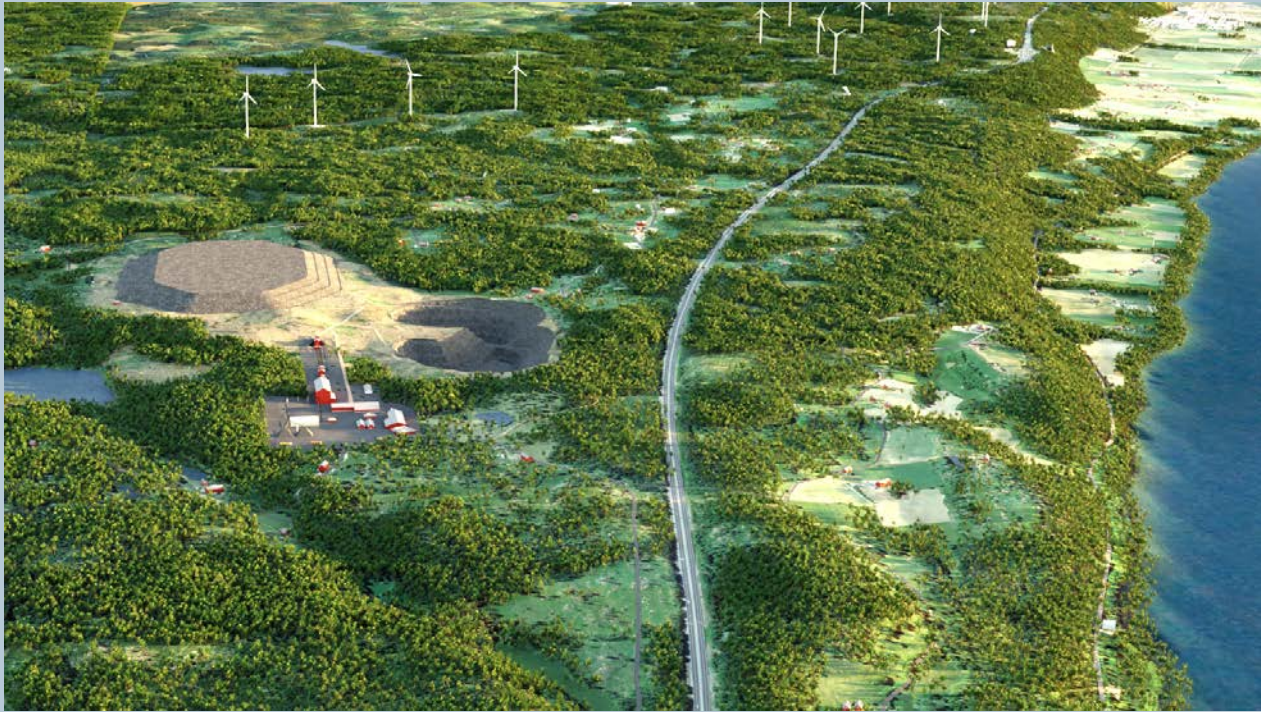
Existing / 现有的

Planned / 规划的



Woxna Graphite Mine / Woxna石墨矿

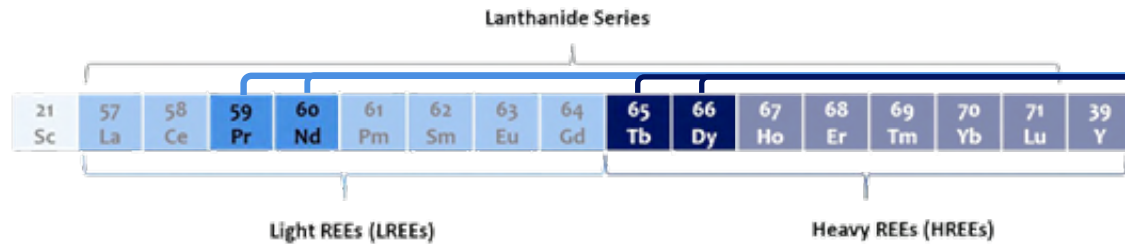




Norra Kärr HREE Project

Norra Kärr重稀土元素项目

Rare Earth Elements and permanent magnets / 稀土元素和永磁体

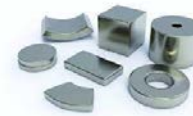


Permanent Magnets Electric Vehicles Wind Power

永磁体

电动车

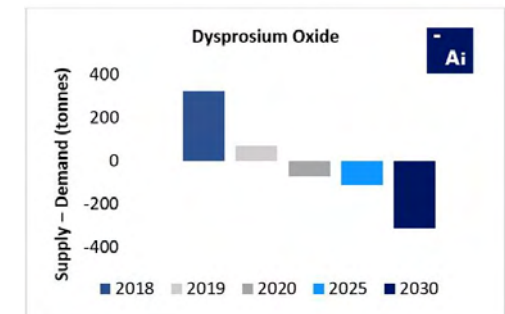
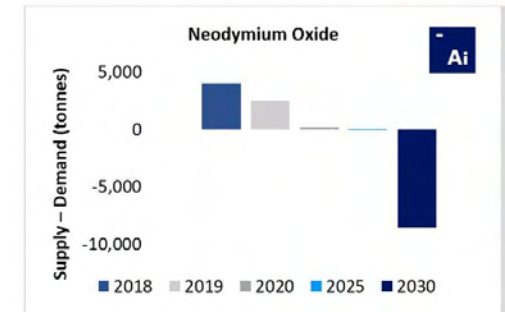
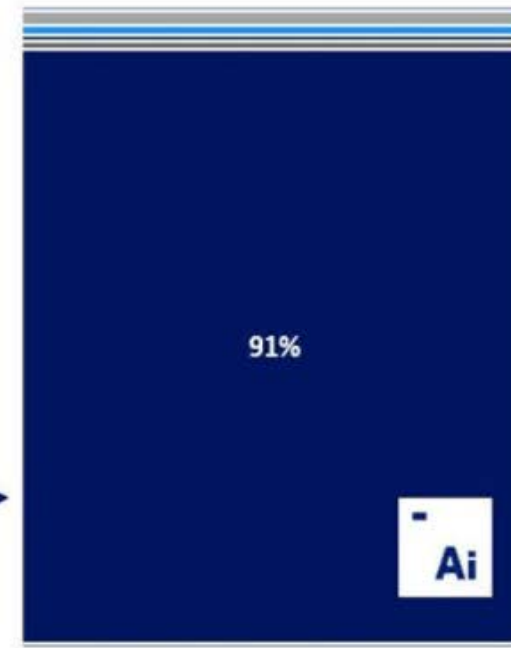
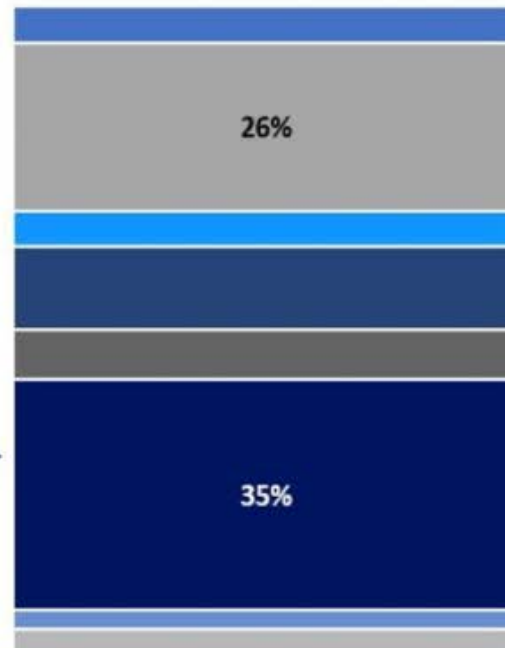
风电



Categories

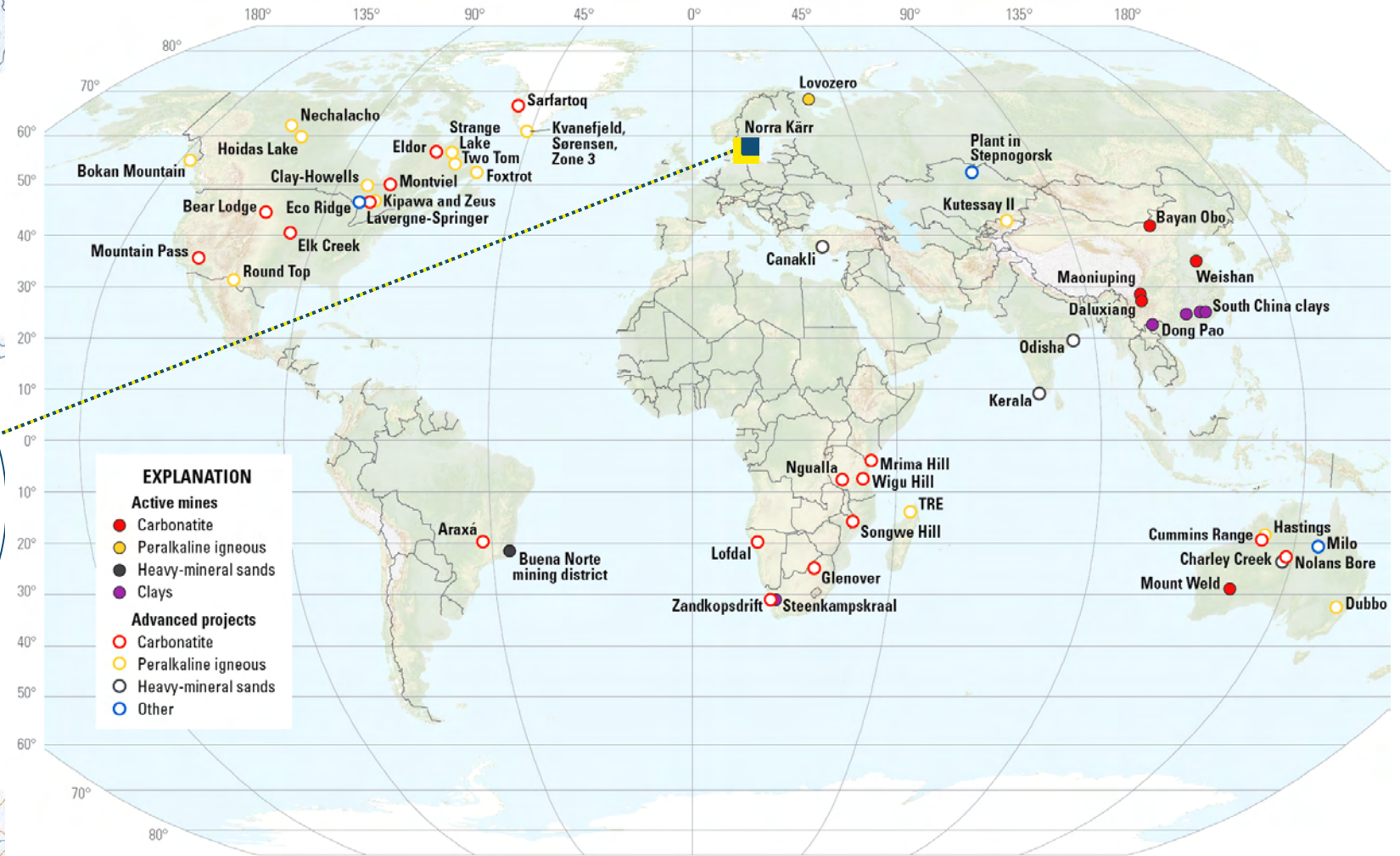
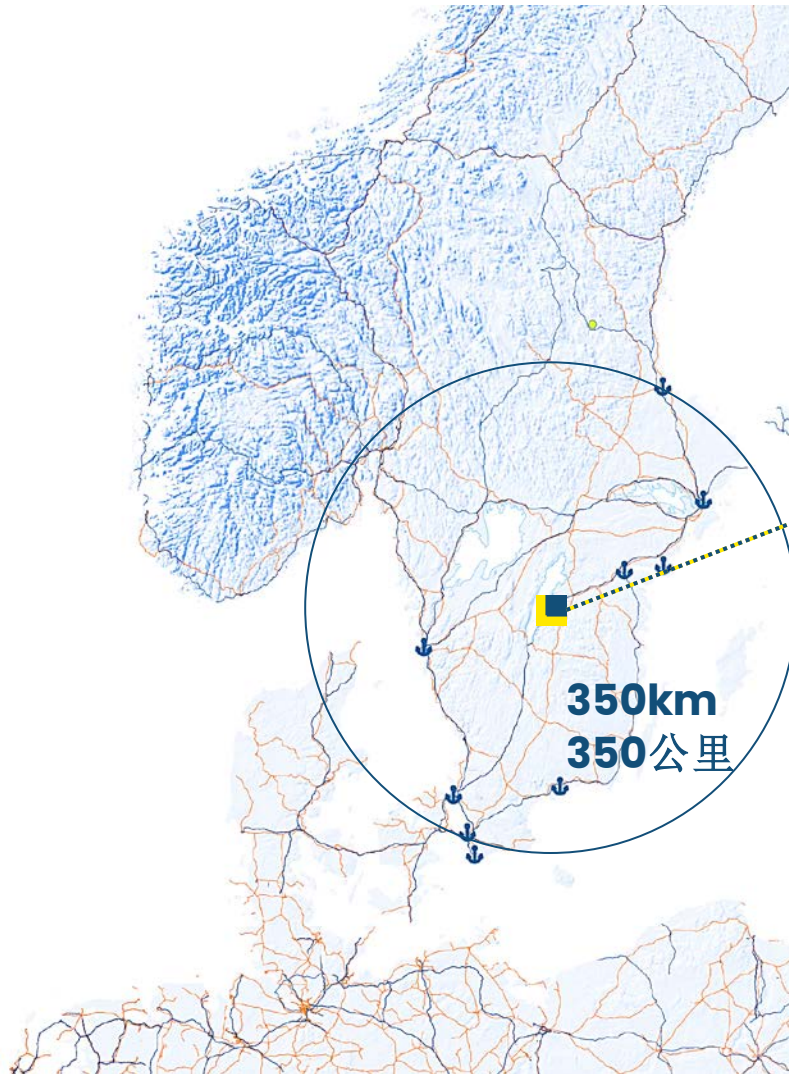
By Volume

By Value



Source: Adamas Intelligence

Location of Norra Kärr / Norra Kärr 项目位置



Base from U.S. Geological Survey Global 30 arc-second elevation data (1996) and from Natural Earth (2014); Robinson projection; World Geodetic System 1984 datum

Norra Kärr Mineral Resource Statement / Norra Kärr矿产资源量声明



Norra Kärr Mineral Resource Statement (SRK, 18 August 2021)*

Mineral Resource Classification	Tonnes (Mt)	TREO (%)	ZrO ₂ (%)	Nb ₂ O ₅ (%)	Nepheline Syenite (%)
Inferred	110	0.5	1.7	0.05	65

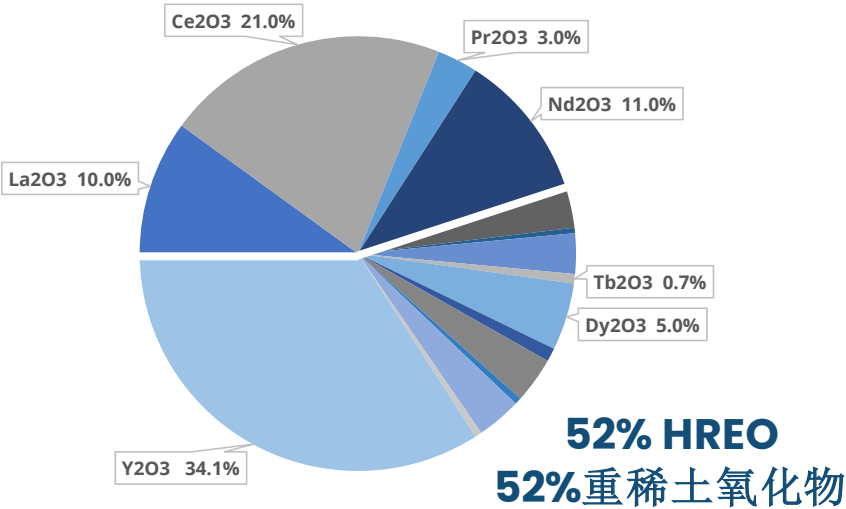
*Notes:

- Effective date 18 August 2021.
- Qualified Person Mr Martin Pittuck MSc C.Eng
- Mineral Resources are not Mineral Reserves until they have Indicated, or Measured confidence and they have modifying factors applied and they have demonstrated economic viability based on a Feasibility Study or Prefeasibility Study.
- There is no guarantee that Inferred Mineral Resources will convert to a higher confidence category after future work is conducted.
- The Mineral Resources reported have been constrained using an open pit shell assuming the deposit will be mined using open pit bulk mining methods and above a cut-off grade of USD150/t., including a 30% premium on projected commodity prices and unconstrained by commodity production rates and the 260m highway buffer zone.
- The Mineral Resources reported represent estimated contained metal in the ground and has not been adjusted for metallurgical recovery.
- Total Rare Earth Oxides (TREO) includes: La₂O₃, Ce₂O₃, Pr₂O₃, Nd₂O₃, Sm₂O₃, Eu₂O₃, Gd₂O₃, Tb₂O₃, Dy₂O₃, Ho₂O₃, Er₂O₃, Tm₂O₃, Yb₂O₃, Lu₂O₃, Y₂O₃.
- Heavy Rare Earth Oxides (HREO) include: Eu₂O₃, Gd₂O₃, Tb₂O₃, Dy₂O₃, Ho₂O₃, Er₂O₃, Tm₂O₃, Yb₂O₃, Lu₂O₃, Y₂O₃
- HREO is 52% of TREO

Norra Kärr Rare Earth Element Distribution

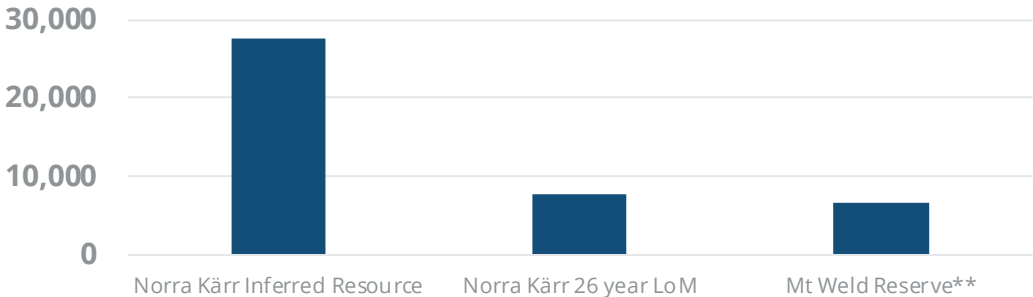
Light REO proportion of Total REO					Heavy REO proportion of Total REO									
La ₂ O ₃	Ce ₂ O ₃	Pr ₂ O ₃	Nd ₂ O ₃	Sm ₂ O ₃	Eu ₂ O ₃	Gd ₂ O ₃	Tb ₂ O ₃	Dy ₂ O ₃	Ho ₂ O ₃	Er ₂ O ₃	Tm ₂ O ₃	Yb ₂ O ₃	Lu ₂ O ₃	Y ₂ O ₃
0.100	0.210	0.030	0.110	0.030	0.004	0.030	0.007	0.050	0.010	0.034	0.005	0.033	0.005	0.340
0.48					0.52									

Resource REO Distribution



Contained dysprosium

含镝



* 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. / 见为Leading Edge Materials Corp.编制的题为“瑞典NORRA KÄRR稀土矿床和潜在副产品的初步经济评估”，生效日期为2021年8月18日，发布日期为2021年8月19日。请参阅Leading Edge Materials Corp.在SEDAR官网www.sedar.ca上的简介或浏览本公司网站www.leadingedgematerials.com，以获取报告和更多信息。PEA是初步性质的，包括推断矿产资源量，这些资源在地质学上被认为是推测的，无法考虑其经济价值，从而使其被归类为矿产储量，并且不确定PEA是否会实现。

** August 6, 2018 – Lynas Corporation Ltd, Reserve update / 2018年8月6日-Lynas Corporation Ltd, 储量更新

Norra Kärr 2021 PEA* vs 2015 PFS

Norra Kärr项目2021年初步经济评估*与2015年预可行性研究对比



- More than 50% of total mined material is planned to be sold as products compared with less than 1% in the previously project submitted for permitting / 超过50%的开采材料计划作为产品出售，而之前提交许可的项目中这一比例不到1%
 - Opportunity for further improvement with waste rock for construction material and aegirine for paint pigment or block colouring / 用废石做建筑材料，用霓石做油漆颜料或色块，有机会进一步改善
- Only mining, crushing, milling and magnetic separation at site. / 只在现场进行采矿、破碎、碾磨和磁选。
- Chemical processing moves to a more suitable off-site location / 化学品加工转移到一个更合适的场外地点
- Waste at site is aegirine, dry stacked in a lined impoundment together with waste rock / 现场的废料是霓石，与废石一起干式堆放在有衬里的蓄水池中
- No wet tailings at site / 现场没有湿尾矿
- 80% reduction in land area usage / 减少80%的土地面积使用
- 50% reduction in water requirements, and no processing water discharge planned / 减少50%的水需求，并且无需计划工艺水排放

* 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. / 见为Leading Edge Materials Corp.编制的题为“瑞典NORRA KÄRR稀土矿床和潜在副产品的初步经济评估”，生效日期为2021年8月18日，发布日期为2021年8月19日。请参阅Leading Edge Materials Corp.在SEDAR官网www.sedar.ca上的简介或浏览本公司网站www.leadingedgematerials.com，以获取报告和更多信息。PEA是初步性质的，包括推断矿产资源量，这些资源在地质学上被认为是推测的，无法考虑其经济价值，从而使其被归类为矿产储量，并且不确定PEA是否会实现。

Norra Kärr 2021 PEA*

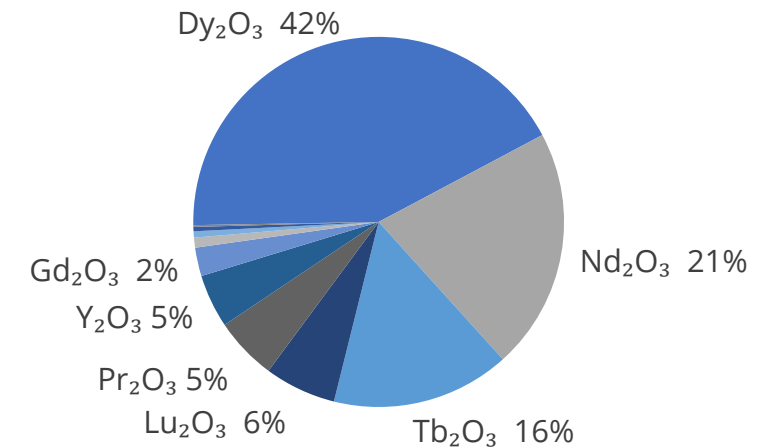
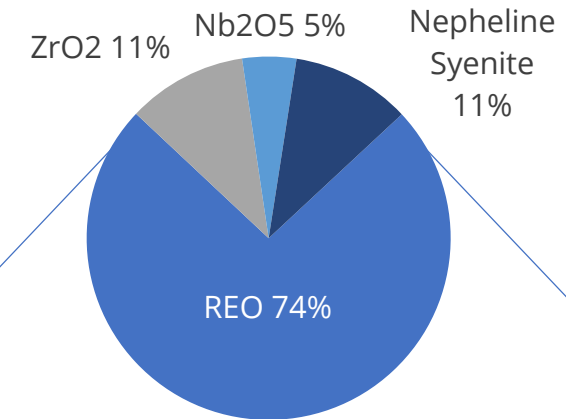
Norra Kärr项目2021年初步经济评估*



Financial Highlights / 财务亮点

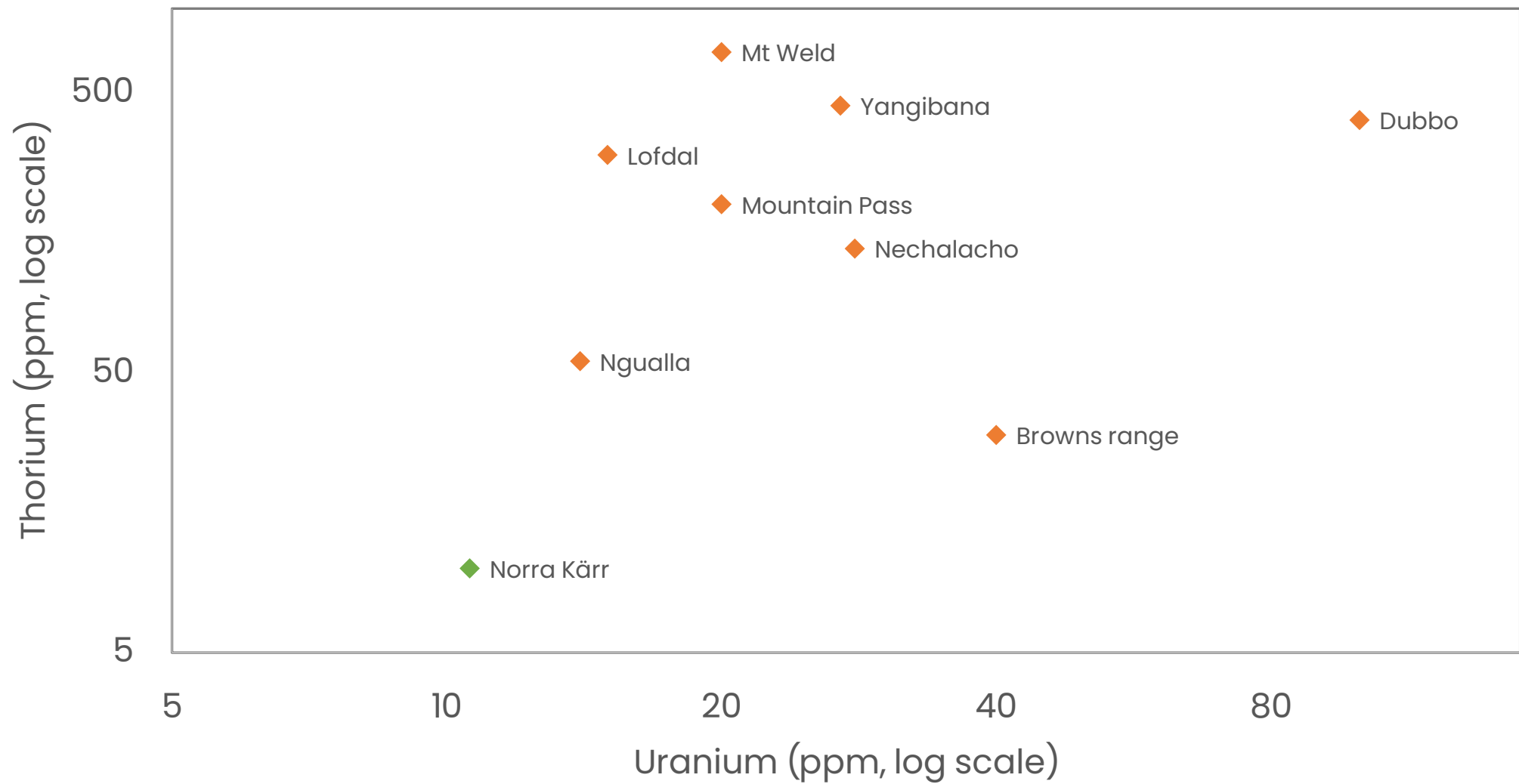
- Post-tax Net Present Value (NPV 10%) of \$762M / 税后净现值(折现率10%)为\$7.62亿美元
- Post-tax Internal Rate of Return (IRR) of 26.3% / 税后内部收益率(IRR)为26.3%
- Accumulated LoM project revenues of \$9,962M / 项目寿命期内累计收入为\$99.62亿
- Average annual EBITDA of \$206M / 年均EBITDA为\$2.06亿
- Initial Capital Expenditures (CAPEX) of \$487M / 初始资本支出(CAPEX)为\$4.87亿
 - Split across \$165m on-site and \$323m off-site / 分别为现场\$1.65亿和场外\$3.23亿
- Pre-tax Payback Period from first production of 5.1 years / 从首次生产开始的税前投资回收期为5.1年
- Life of mine average gross basket price per kg of separated mixed REO product at \$53 / 矿山寿命期内分离混合稀土氧化物产品毛筐平均每公斤价格为\$53

Revenue Distribution



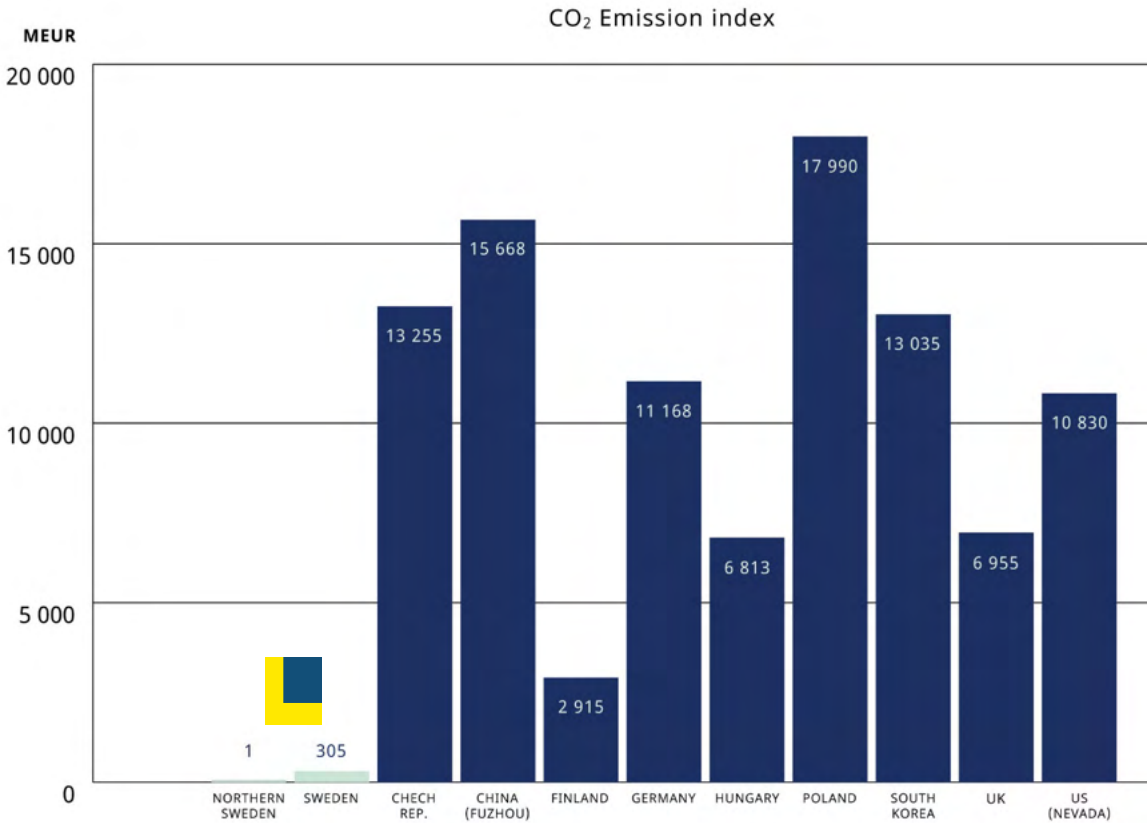
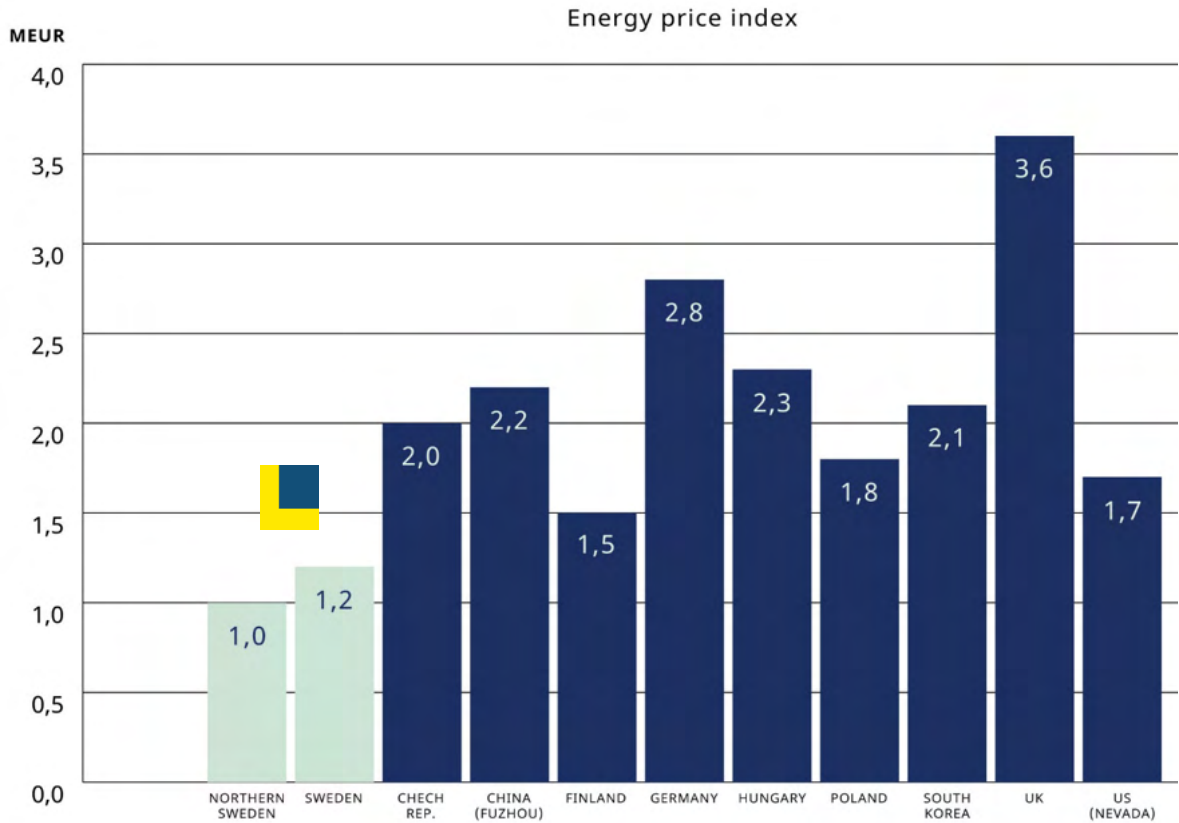
* See National Instrument 43-101 report titled "PRELIMINARY ECONOMIC ASSESSMENT OF NORRA KÄRR RARE EARTH DEPOSIT AND POTENTIAL BY-PRODUCTS, SWEDEN" prepared for Leading Edge Materials Corp. with effective date August 18, 2021 and issue date August 19, 2021. See Leading Edge Materials Corp.'s SEDAR profile 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. / 见为Leading Edge Materials Corp.编制的题为“瑞典NORRA KÄRR稀土矿床和潜在副产品的初步经济评估”，生效日期为2021年8月18日，发布日期为2021年8月19日。请参阅Leading Edge Materials Corp.在SEDAR官网www.sedar.ca上的简介或浏览本公司网站www.leadingedgematerials.com，以获取报告和更多信息。PEA是初步性质的，包括推断矿产资源量，这些资源在地质学上被认为是推测的，无法考虑其经济价值，从而使其被归类为矿产储量，并且不确定PEA是否会实现。

Radionuclide Content / 放射性核素含量



Data for peer projects is managements estimates based on publicly available data. Leading Edge Materials Corp. does not guarantee the exact accuracy of these estimates.
同行项目的数据是管理层根据公开数据做出的估计。Leading Edge Materials Corp. 不保证这些数据的完全准确性。

Sweden's Power Advantage / 瑞典的电力优势



Source / 来源: NodePole



Bihor Sud Exploration Project

Bihor Sud 勘探项目

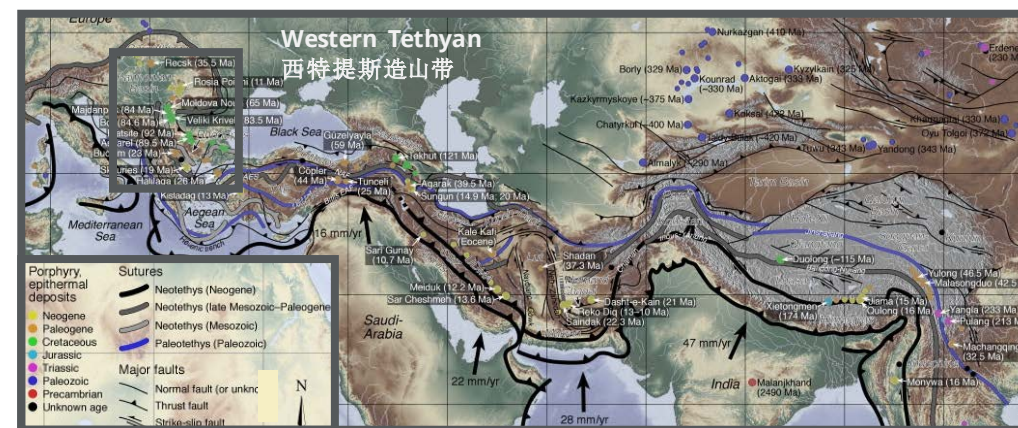
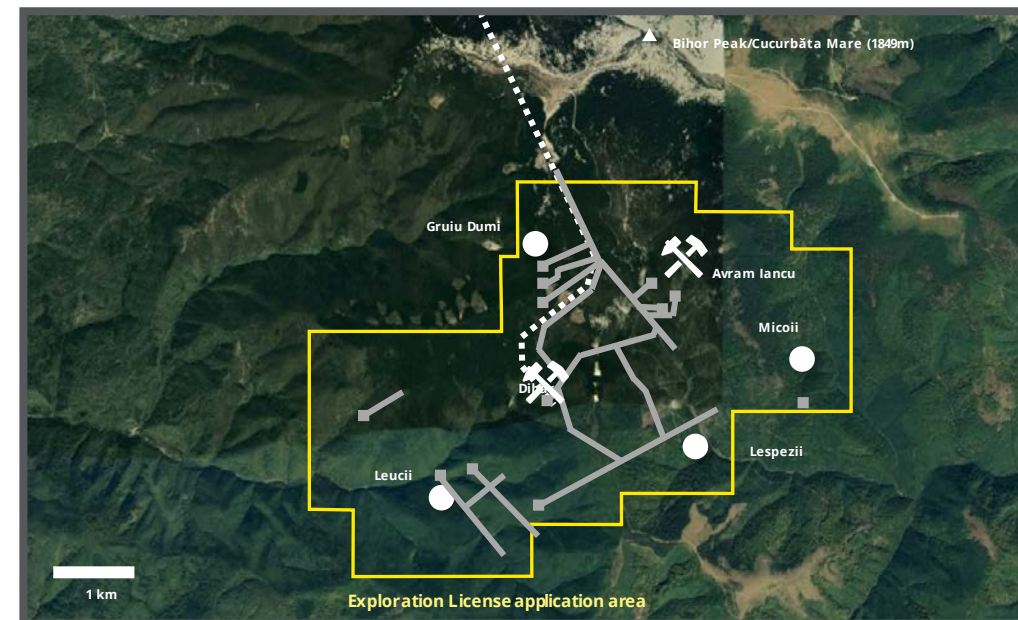
Bihor Sud Nickel-Cobalt Project / Bihor Sud 镍钴项目

Overview / 概述

- JV from 2018 with 51% ownership with potential to move to 90%. Local JV partner operates a Dolomite mine in the area offering shared resources and local knowledge / 合资公司从2018年开始，拥有51%的所有权，并有可能升至90%。当地的合资伙伴在该地区经营一个白云石矿，提供共享资源和本地知识
- Located in the upper Cretaceous megallogenic belt, part of the Tethyan Belt in a historic mining area with a number of historic mines, one being a significant uranium mine / 位于上白垩纪成矿带，是特提斯造山带的一部分，处在一个历史悠久的矿区，有许多历史悠久的矿山，包括其中重要的一个铀矿
- Initial prospecting campaign and sampling from past mine workings indicates potential for high grade nickel-cobalt mineralizations / 初步探矿活动和对过去矿山巷道的取样表明高品位镍钴矿化的潜力

Opportunity / 机会

- Bihor Sud is relatively isolated site whilst the road and power network is well developed due to prior mining and forestry. No permanent residences lie within 5km of the Exploration License boundary. / Bihor Sud是一个相对孤立的地点，而由于之前的采矿和林业，道路和电力网络都很发达。勘探许可证边界方圆5公里内没有永久居民。
- Awaiting final ruling from court on tender process for exclusive exploration license for the Bihor Sud perimeter which would launch prepared exploration program / 等待法院对Bihor Sud周边地区独家勘探许可证的招标程序作出最终裁决，将启动准备好的勘探计划
- Romania is a historic mining country but nowadays one of Europe's poorest countries which should attract interest from strategic investors / 罗马尼亚是一个历史悠久的矿业国家，但如今是欧洲最贫穷的国家之一，应该会吸引战略投资者的兴趣





LEADING EDGE
MATERIALS

 www.leadingedgematerials.com

info@leadingedgematerials.com

 @LeadingEdgeMtls

TSX.V: LEM
Nasdaq First North: LEMSE
OTCQB: LEMIF
FRA: 7FL

