



MKANGO RESOURCES LTD.  
550 Burrard Street  
Suite 2900  
Vancouver  
BC V6C 0A3  
Canada

## **MKANGO ANNOUNCES GRANT FUNDED HYPROMAG PROJECT TO DEVELOP GERMANY'S FIRST RARE EARTH MAGNET RECYCLING HPMS PLANT WITH FIRST PRODUCTION TARGETED FOR 2024**

### **Highlights**

- **HyProMag GmbH has been awarded a €3.7 million grant for a new project to further develop the local knowledge base, infrastructure and recycled NdFeB production capacity to underpin its transition to commercial production in Germany**
- **Initial capacity will be a minimum of 100tpa NdFeB, comprising recycled rare earth sintered magnets, alloy pellets and powders and will be the first in Germany using the patented HPMS (Hydrogen Processing of Magnet Scrap) process, with first production targeted for 2024**
- **HyProMag GmbH is 80% owned by HyProMag Limited (42% Mkango), which is developing a similar sized recycling plant at Tyseley Energy Plant in the UK together with the University of Birmingham, with first production targeted for 2023**
- **HyProMag GmbH is 20% owned by Professor Carlo Burkhardt of Pforzheim University, co-ordinator of the €14m SusMagPro ([www.susmagpro.eu](http://www.susmagpro.eu)) and €13m REEsilience ([www.reesilience.eu](http://www.reesilience.eu)) EU funded recycling projects, with approximately 40 partners across the European supply chain**
- **Rare earth magnet recycling and related downstream processes are core components of Mkango's "mine, refine, recycle" strategy and the Company continues to evaluate further opportunities to grow the business in Europe, North America and Asia**

**London / Vancouver: November 23, 2022** – Mkango Resources Ltd. (AIM/TSX-V: MKA) (the "Company" or "Mkango") is pleased to announce that HyProMag GmbH has been awarded grants totalling €3.7 million for a new project, entitled "Innovation Centre for Science & Economy Northern Black Forest IZWW" (the "Project"), comprising a €2.5 million grant from the European Regional Development Fund (ERDF) and a €1.2 million grant from the Ministry of Economic Affairs, Labour and Tourism Baden-Württemberg.

The total cost of the Project is expected to be €6.1 million, of which approximately 60% will be funded by the grants, on the basis that for each €1 spent on the Project by HyProMag GmbH, a further €1.50 contribution can be claimed from the grants. The first phase of the Project includes development of a production facility in Baden-Württemberg State with a minimum capacity of 100tpa NdFeB comprising recycled rare earth sintered magnets, alloy pellets and powders.

The initial production facility would be a similar size to the £4.3 million project being developed by HyProMag Limited and the University of Birmingham at Tyseley Energy Park in the UK, funded by Driving the Electric Revolution, an Industrial Strategy Challenge Fund challenge delivered by UK Research and Innovation ("UKRI").

HyProMag GmbH was established to commercialise HPMS technology in Germany and EU, and to further support Government initiatives to strengthen European rare earth supply chains and accelerate the green transition, and the Project is a major milestone in fulfilment of this strategy.

**William Dawes, Chief Executive of Mkango stated:** *“This is an exciting milestone for Mkango, HyProMag GmbH, HyProMag Limited, which significantly enhances the group’s production pipeline, targeting first production in the UK in 2023 and Germany in 2024, with North America developed in parallel. We envisage that the recycling of rare earth magnets will play a key role in the development of robust supply chains to catalyse and support growth in the electric vehicle sector and in other clean technologies.*

*“This Project further cements Mkango’s and HyProMag’s early mover advantage in the rare earth magnet recycling sector, highlighting its competitive position and benefiting from a very strong network of industry and academic partners.”*

**Professor Carlo Burkhardt, Director of HyProMag GmbH stated:** *“Setting up this ultra-efficient manufacturing facility for rare earth permanent magnets is a unique opportunity to establish technological leadership along the entire value chain for rare earth magnets. By combining the competencies of industry and science in the Northern Black Forest and further locations in Baden-Württemberg, the Project will play a pivotal role in supporting the structural change from internal combustion engines to electromobility. Furthermore, it will enable development of further high-performance applications, where permanent magnets and rare earths already have a central role as critical components, which will become even more important in the foreseeable future.”*

Rare earth magnets play a key role in clean energy technologies including electric vehicles and wind turbine generators, and they are also a key component in electronic devices including mobile phones, hard disk drives and loudspeakers. The development of domestic sources of recycled rare earths in Germany via HPMS is a significant opportunity to fast-track the development of sustainable and competitive recycled rare earth magnet production.

### **Market Abuse Regulation (MAR) Disclosure**

The information contained within this announcement is deemed by the Company to constitute inside information as stipulated under the Market Abuse Regulations (EU) No. 596/2014 ('MAR') which has been incorporated into UK law by the European Union (Withdrawal) Act 2018. Upon the publication of this announcement via Regulatory Information Service, this inside information is now considered to be in the public domain.

### **About Mkango Resources Limited**

Mkango's corporate strategy is to develop new sustainable primary and secondary sources of neodymium, praseodymium, dysprosium and terbium to supply accelerating demand from electric vehicles, wind turbines and other clean technologies. This integrated Mine, Refine, Recycle strategy differentiates Mkango from its peers, uniquely positioning the Company in the rare earths sector.

Mkango is developing Songwe Hill in Malawi with a Feasibility Study completed in July 2022. Malawi is known as "The Warm Heart of Africa", a stable democracy with existing road, rail and power infrastructure, and new infrastructure developments underway.

In parallel, Mkango and Grupa Azoty PULAWY, Poland's leading chemical company and the second largest manufacturer of nitrogen and compound fertilizers in the European Union, have agreed to work together towards development of a rare earth Separation Plant at Pulawy in Poland (the “Pulawy Separation Plant”). The Pulawy Separation Plant will process the purified mixed rare earth carbonate produced at Songwe Hill.

Through its ownership of Maginito ([www.maginito.com](http://www.maginito.com)), Mkango is also developing green technology opportunities in the rare earths supply chain, encompassing neodymium (NdFeB) magnet recycling as well as innovative rare earth alloy, magnet, and separation technologies. Maginito holds a 42% interest in UK rare earth (NdFeB) magnet recycler, HyProMag ([www.hypromag.com](http://www.hypromag.com)), with an option to increase its interest to 49%.

Mkango also has an extensive exploration portfolio in Malawi, including the Mchinji rutile exploration project, the Thambani uranium-tantalum-niobium-zircon project and Chimimbe nickel-cobalt project.

For more information, please visit [www.mkango.ca](http://www.mkango.ca)

### **Cautionary Note Regarding Forward-Looking Statements**

This news release contains forward-looking statements (within the meaning of that term under applicable securities laws) with respect to Mkango. Generally, forward looking statements can be identified by the use of words such as “plans”, “expects” or “is expected to”, “scheduled”, “estimates” “intends”, “anticipates”, “believes”, or variations of such words and phrases, or statements that certain actions, events or results “can”, “may”, “could”, “would”, “should”, “might” or “will”, occur or be achieved, or the negative connotations thereof. Readers are cautioned not to place undue reliance on forward-looking statements, as there can be no assurance that the plans, intentions or expectations upon which they are based will occur. By their nature, forward-looking statements involve numerous assumptions, known and unknown risks and uncertainties, both general and specific, that contribute to the possibility that the predictions, forecasts, projections and other forward-looking statements will not occur, which may cause actual performance and results in future periods to differ materially from any estimates or projections of future performance or results expressed or implied by such forward-looking statements. Such factors and risks include, without limiting the foregoing, governmental action relating to COVID-19, COVID-19 and other market effects on global demand and pricing for the metals and associated downstream products for which Mkango is exploring, researching and developing, factors relating the development of the Pulawy Separation Plant, the production facilities in Baden-Württemberg State and Tyseley Energy Park (the “Plants”), including the outcome and timing of the completion of the feasibility studies, cost overruns, complexities in building and operating the Plants, changes in economics and government regulation, the positive results of feasibility studies and delays in obtaining financing or governmental approvals for, and the impact of environmental and other regulations relating to, Songwe and the Plants. The forward-looking statements contained in this news release are made as of the date of this news release. Except as required by law, the Company disclaims any intention and assume no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law. Additionally, the Company undertakes no obligation to comment on the expectations of, or statements made by, third parties in respect of the matters discussed above.

### **For further information on Mkango, please contact: Mkango Resources Limited**

William Dawes  
Chief Executive Officer  
[will@mkango.ca](mailto:will@mkango.ca)  
Canada: +1 403 444 5979  
[www.mkango.ca](http://www.mkango.ca)  
@MkangoResources

Alexander Lemon  
President  
[alex@mkango.ca](mailto:alex@mkango.ca)

**BlytheRay**  
Financial Public Relations  
Tim Blythe  
UK: +44 207 138 3204

**SP Angel Corporate Finance LLP**  
Nominated Adviser and Joint Broker  
Jeff Keating, Caroline Rowe  
UK: +44 20 3470 0470

**Alternative Resource Capital**

Joint Broker

Alex Wood, Keith Dowsing

UK: +44 20 7186 9004/5

***The TSX Venture Exchange has neither approved nor disapproved the contents of this press release. Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.***

*This press release does not constitute an offer to sell or a solicitation of an offer to buy any equity or other securities of the Company in the United States. The securities of the Company will not be registered under the United States Securities Act of 1933, as amended (the "U.S. Securities Act") and may not be offered or sold within the United States to, or for the account or benefit of, U.S. persons except in certain transactions exempt from the registration requirements of the U.S. Securities Act.*