

Neo Launches Construction of European Permanent Rare Earth Magnet Plant to Support EV and Wind Turbine Manufacturing

written by Raj Shah | July 7, 2023

Plant will support circular economics by recycling end-of-life magnets and recovering magnet 'swarf' created in the manufacturing process

Phase 1 production of 2,000 tonnes/year is slated to begin in 2025, an amount that can support the manufacturing of ~1.5 million electric cars.

Neo's expected Phase 2 production of 5,000 tonnes/year can support the manufacturing of ~4.5 million electric cars

July 7, 2023 ([Source](#)) – Neo Magnequench, a division of Neo Performance Materials Inc. (“Neo” or the “**Company**”) (TSX: [NEO](#)), has launched construction of the first rare earth magnet manufacturing facility in Europe designed to produce specialized rare earth permanent magnets for use in electric vehicles, wind turbines, and other clean energy technologies.

Neo Magnequench officials recently broke ground on the facility in Narva, Estonia, which is strategically located near Neo Performance Material's existing rare earth separations plant in Sillamäe, Estonia. In Sillamäe, Neo takes in rare earth feedstock from a variety of sources around the world – including the United States – and produces the high-purity magnetic rare earth oxides that will be converted in Magnequench's new plant into sintered neodymium-iron-boron

magnets. Such an integrated supply chain for sintered rare earth permanent magnets does not exist in Europe at present.

The groundbreaking event included speeches from notable officials from Estonia, including Narva Mayor Katri Raik, Estonian President Alar Karis, Estonian Investment Agency Director Joonas Vanto, Minister of Economic Affairs Tiit Riisalo, Minister of Regional Affairs Madis Kallas, Also participating were European Union representatives including Deputy Director General of EU Commission's DG GROW Maive Rute and [European Commission President Ursula von der Leyen](#). Also attending the event were ambassadors and embassy staff from multiple countries with commercial interests in Neo's operations in Estonia, such as Canada, the United States, Germany, and France.

The Neo Magnequench permanent rare earth magnet manufacturing facility has been championed over the past two years by Neo CEO Constantine Karayannopoulos. On the occasion of the groundbreaking, Mr. Karayannopoulos said: "We are proud to be the anchoring investment that will help Estonia become a hub for critical raw material supply chains for technologies that are necessary for Europe's transition to electromobility and energy security from renewable sources. This value chain approach to investment attraction and industrial ecosystem development is a bold vision which is supported by the high competency and speed-to-execution of European Commission, Estonian and municipal government leaders. With the support of the European Union's Just Transition Fund, our company is de-risking rare earth supply chains in Europe and globally, which in turn de-risks the million jobs in the transition from the internal combustion engine to electric vehicles in Europe and the production of wind turbines for Europe's energy security."

Neo President Rahim Suleman, who will take over as Neo CEO

on July 7, said: “Neo is embarking on a new chapter of serving the automotive and wind energy industries. We are building the first rare earth permanent magnet manufacturing facility in Europe, with the specifications of our German, French, and other European OEM and Tier 1 customers in mind, suitable for traction motors for electric vehicles.”

[In a video](#) released in conjunction with groundbreaking, several Estonian leaders praised Neo Magnequench’s plans to expand its rare earth supply chain in Estonia, including increasing production of separated rare earth oxides in Sillamäe, Estonia and the coming manufacture of high-performance magnets in Narva.

In this video, Neo’s CEO Constantine Karayannopoulos, Neo President Rahim Suleman, and several European and Estonian government leaders discuss the importance of this initiative. European Commission President Ursula von der Leyen praised the Magnequench initiative as “a leap for Estonia and a stride for Europe.”



To see remarks and a video from European Commission President Ursula von der Leyen that was shown at the Neo groundbreaking, please go here:

https://ec.europa.eu/commission/presscorner/detail/fr/speech_23_3574 (CNW Group/Neo Performance Materials, Inc.)



Participating in the ceremonial groundbreaking, left to right, were: Raivo Vasnu, NPM Silmet Managing Director; Maive Rute, Deputy Director General of the European Commission; Rahim Suleman, Neo President; Claire Kennedy, Chair of the Board of Neo; Constantine Karayannopoulos, Neo's Chief Executive Officer; Tiit Risalo, Estonian Minister of the Economy; Madis Kallas, Estonian Minister of Regional Affairs; Charles Lew, Executive Chairman of Hastings Technology Metals; Greg Kroll, Neo Executive Vice President and head of the company's Magnequench business unit; Greg Heydon, Managing Director, Magnequench (Estonia) NPM Narva OU; and Vivian Loonela, EU Ambassador to Estonia. (CNW Group/Neo Performance Materials, Inc.)

In a [separate video address](#), European Commission President Ursula von der Leyen also praised the project: "The rare earth magnets that will be produced here are indispensable to growth and innovation in sectors like electric mobility, wind energy, and microelectronics," President von der Leyen said. "They promise lighter batteries, less consumption of critical materials, and higher energy efficiency. To guarantee supply, we are co-developing this facility with a rare earth mine in

Greenland. And this is another first: it is Europe's first mine-to-magnet supply chain.

She added: "Neo Performance Materials informed me that, with their worldwide experience, they have never seen such a fast issuance of permits as for this facility. And this is Europe at its best. With the European, the national and the local institutions all equally on board, with fast, decisive action, with a clear vision for the future, the Union of the future is being won right here in Narva. Today, all Europe looks at you with pride and hope." President von der Leyen's video can be seen

here:

https://ec.europa.eu/commission/presscorner/detail/fr/speech_23_3574 .

Alar Karis, President of the Republic of Estonia, said: "This project has a tremendous impact for EU competitiveness, and it will enhance the energy cluster of the EU and especially of Ida-Viru." President Karis' comments can be seen here: <https://youtu.be/l0kV8G8Twbw?t=150>

Narva Mayor Katri Raik, said: "If there are no jobs, there will be no life, no children who go to schools, no people who can go to hospitals. New jobs mean life to every city. We are looking forward to these 350 jobs, and to even more jobs. This is not the old fossil fuel industry. It is the new sustainable innovation industry with bigger salaries, which is very important to the people." Mayor Raik's video remarks can be seen here: <https://youtu.be/l0kV8G8Twbw?t=55>

Greg Kroll, who leads Neo's Magnequench business unit, said: "Market interest in our plans to produce permanent rare earth magnets in Europe continues to be very robust, and we look forward to being able to serve customers across rapidly expanding European automotive and wind energy markets. We

intend to leverage our long experience in the rare earth magnetics industry, and our team's decades of specialized knowledge in this sector, to build and operate a state-of-the-art, high-efficiency facility that maximizes circular economics through recycling of end-of-life magnets and recovering and recycling magnet 'swarf' material created in the manufacturing process."

Sintered rare earth permanent magnets are used in a wide variety of technologies that increase energy efficiency, reduce carbon dioxide emissions, and help enable the European Union's efforts to achieve carbon neutrality. These magnets are especially integral to the drivetrains of the majority of electric vehicles manufactured today, where they increase the power and efficiency of the motors. Other rare earth magnets made by Neo are used in electric motors in battery electric, hybrid electric, and conventional vehicles, as well as in electronics, water circulation pumps, high-efficiency home appliances, and many high-efficiency industrial applications.

Neo Magnequench currently plans to launch Phase 1 production in 2025, with a goal of producing approximately 2,000 tonnes/year of rare earth magnet block. Commercial discussions with customers of these magnets indicate demand in excess of Neo's Phase 1 plants, and the Company is likely to expand to a Phase 2 production rate of 5,000 tonnes/year in the near future.

Neo Magnequench's plant is the first such project proceeding with financial assistance from the European Union's Just Transition Fund ("JTF"), a financial instrument that seeks to provide support to territories such as Estonia facing serious socio-economic challenges arising from the transition towards climate neutrality.

[Go here to see photos from the Neo Magnequench groundbreaking](#)

ceremony: <https://www.neomaterials.com/neo-launches-construction-of-re-magnet-manufacturing-plant/>

Website: www.neomaterials.com

About Neo Performance Materials

Neo manufactures the building blocks of many modern technologies that enhance efficiency and sustainability. Neo's advanced industrial materials – magnetic powders and magnets, specialty chemicals, metals, and alloys – are critical to the performance of many everyday products and emerging technologies. Neo's products help to deliver the technologies of tomorrow to consumers today. The business of Neo is organized along three segments: Magnequench, Chemicals & Oxides and Rare Metals. Neo is headquartered in Toronto, Ontario, Canada; with corporate offices in Greenwood Village, Colorado, United States; Singapore; and Beijing, China. Neo has a global platform that includes ten manufacturing facilities located in Canada, China, Estonia, Germany, Thailand, the United Kingdom, and the United States, as well as one dedicated research and development centre in Singapore.

For more information, please visit www.neomaterials.com.

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