

## CRITICAL REFORMS: MINING IN MANITOBA

# CRITICAL MINERALS 101

### What are critical minerals?

Governments across Canada now use the term “critical minerals” to describe minerals that are important to Canada's economy, security and future technologies. There is no single definition of a “critical mineral”. In Manitoba, minerals may be considered “critical” when they:

- are in high demand;
- are important for industry, manufacturing, technology, or clean and low-carbon technologies;
- have few or no readily available substitutes; and
- may face disruptions in their supply.

## IDENTIFYING CRITICAL MINERALS

Importantly, every government has its own reason(s) for identifying minerals as “critical”, so different types of metals and non-metallic minerals are on each jurisdiction’s critical mineral list. For an overview of critical mineral activities across Canada, see [Canada's Critical Minerals Map](#).

## GOVERNMENT SUPPORT FOR CRITICAL MINERAL PROJECTS

Governments at both the [provincial](#) and [federal](#) levels provide a range of support for developing critical mineral projects. These include:

- [tax incentives](#);
- [funding programs](#); and
- support for training programs for workers in the mining sector.

The Government of Canada also supports critical mineral projects through its [Major Projects Office](#).

## WHO'S IN CHARGE?

The provincial **Department of Business, Mining, Trade and Job Creation** has main responsibility for mining and critical mineral projects in Manitoba and supports projects through the **Critical Minerals Office**. For more information see our [Regulatory Framework Fact Sheet](#).

Under Manitoba's Critical Minerals Strategy, the provincial government has identified the following as “key” critical minerals:

- Cobalt
- Copper
- Rare Earth Elements (REEs)
- Graphite
- Lithium
- Magnesium
- Nickel
- Silica
- Zinc



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## How are Critical Minerals Used?

|                                   |                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>COBALT</b>                     | Cobalt is a key component in the construction of electronics and is used in batteries. Cobalt is also used in powerful magnets, cutting tools and high-strength alloys in the aerospace, energy and defence sectors.                                                                                                                                            |
| <b>COPPER</b>                     | Copper is the primary material used in energy networks in wires and cables. Copper is used to make things like plumbing, circuit boards, electrical wiring, housewares, instruments, and hospital surfaces. Copper demand is increasing because of its applications in expanding electricity networks and clean energy technologies, such as electric vehicles. |
| <b>RARE EARTH ELEMENTS (REES)</b> | REEs are a crucial element for building permanent magnets and are critical to a wide range of industrial and high-tech applications, including electronics, clean energy (wind turbines, batteries), aerospace, automotive (electric vehicles), and defence.                                                                                                    |
| <b>GRAPHITE</b>                   | Graphite has a multitude of applications in industrial manufacturing and energy storage technology and is used to make electrodes, refractories, batteries, lubricants and foundry products. High-grade graphite is also used in fuel cells, semiconductors, LEDs and nuclear reactors.                                                                         |
| <b>LITHIUM</b>                    | Lithium is the key resource for lithium-ion battery production used in electronics, electric vehicles, and grid storage. Lithium also strengthens the glass products used in glass-ceramic stovetops, glass containers, specialty glass and fibreglass. Its properties improve productivity and reduce energy consumption in glass making.                      |
| <b>MAGNESIUM</b>                  | Magnesium is primarily used in combination with aluminum to create lightweight metal components. Magnesium has various uses in the automotive industry, aerospace, rail, and other transportation industries, and is used in the production of batteries.                                                                                                       |
| <b>NICKEL</b>                     | Nickel is used primarily in stainless steel, solar panel, and battery production. Nickel has many applications in the healthcare, food processing and aerospace industries and is increasingly used for electric car batteries, electronics, and home appliances.                                                                                               |
| <b>SILICA</b>                     | Silica is a necessary component of silicon metal which is used in the construction of solar panels and wind turbines.                                                                                                                                                                                                                                           |
| <b>ZINC</b>                       | Zinc is used for important things like soap, sunscreen, rust protection, plastics, rubber, and metal alloys. Zinc also has uses in concentrating solar power, hydro, wind power, and energy storage.                                                                                                                                                            |

## WANT TO LEARN MORE?

For more info, use this QR code to visit the [Project page](#) on the Manitoba Eco-Network website.



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