

# South Africa's manganese economy is ready to meet global demand

South Africa is witnessing a shift in its minerals and economic landscape. Gold production has dwindled over the years, with the precious metal now accounting for a mere 23% of sales in 2022. However, the nation's abundant mineral wealth presents new opportunities for economic growth, with manganese emerging as a key player.



Mner holds a manganese ore sample in South Africa.

Manganese, a versatile mineral with wide-ranging applications, has seen a surge in local production and sales over the past decade. It is now spearheading South Africa's mineral renaissance. As the world's largest producer of manganese ore, South Africa contributes approximately 36% to the global production.

Most of the country's manganese deposits can be found in the Northern Cape, where the mining industry serves as a significant economic pillar. In 2022, the manganese mining sector employed over 14,500 South Africans and generated more than R7bn in tax revenue. Furthermore, the industry contributed over R47bn to the country's foreign exchange reserves through export earnings in the last 12 months. This shift signifies South Africa's awakening to the economic potential of its diverse mineral wealth.



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The Northern Cape is well-positioned to capitalise on the growing international demand for manganese, as the province has abundant manganese resources in addition to a skilled workforce which has a long history of mining manganese. This region falls within the Kalahari basin which, at one time was home to 75% of the world's identified manganese deposits.

It's also noteworthy that the rise in demand for manganese is also sure to boost South Africa's copper industry, as manganese and copper are complementary minerals that are frequently used together.

## Critical mineral for batteries

Manganese is a crucial element in manufacturing of lithium-ion batteries, such as those used in electrical backup systems and electric vehicles. Recent years have seen a dramatic rise in demand for electric vehicles all over the world, and South Africa is in the perfect position to respond to that need.

Analysts estimate that the demand for manganese in lithium-ion batteries will increase by an average of 10% per year over the next decade, and South Africa's manganese ore production is expected to concomitantly reach about 50% of the world's additional manganese ore output over this period.

Manganese-rich cathode materials are also being developed to boost the efficiency of electric vehicles. This, in turn, will increase the demand for the metal. In addition to its use in batteries, manganese is essential to producing several other green power technologies.

However, the versatility of this metal extends even beyond the power industry. As an alloying element, it is essential in several types of steel production (often together with copper) and services the food processing, agricultural, chemical, construction, medical and aircraft industries. Further enhancing its reputation as a green-friendly mineral is that it can also treat wastewater and extract pollutants from soil and air.

The local manganese industry is keenly aware, however, that these exciting opportunities come with their attendant responsibilities. Primarily, there is the need to support local communities by providing jobs and training opportunities. Our people are our strength, and we, therefore, invest heavily in social development programs, such as education and healthcare, within our local communities.

## **Operate in an environmentally responsible manner**

To be globally competitive, the manganese mining industry must enjoy the reputation of operating in an environmentally responsible manner. This includes taking stringent measures to reduce water and air pollution and to manage waste products responsibly. Both the government and the mining industry are investing in new technologies to support the growth of the manganese industry.

This will not only improve South Africa's operational efficiency and competitiveness in this field but will also enhance our environmental sustainability. Industry leaders firmly believe that SA is already world leaders in that respect.

Given the sudden acceleration of green power strategies in the developed west, the manganese industry is set to provide increasing opportunities for employment and economic growth in the Northern Cape, thus playing the role that gold had done in Johannesburg's formative years.

This will benefit not solely the manganese mining industry but the province, thus boosting the country's overall economic prospects. South Africa is indeed fortunate to be in the position in which we have both the material and operational capacity to rise to the demands of a rapidly changing world.

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