

GOVERNMENT POLICY TO MAXIMIZE NICKEL POTENTIAL IN INDONESIA

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Abstract

With the world's largest nickel reserves, Indonesia is well-positioned to benefit from the global shift toward electric vehicles (EVs). Nickel, essential for lithium-ion batteries, has seen growing demand as the EV market expands. The government's downstream policy, established under ESDM Ministerial Regulation No. 17 of 2020, prohibits the export of raw nickel to prioritize domestic processing, adding value and fostering economic growth. This article examines government policies to maximize Indonesia's nickel reserves and production potential. Despite Indonesia's extensive nickel production, challenges remain, such as the need for more smelters and improved labor skills. The DPR RI's energy-related organs support policies to build 53 smelters by 2024. Indonesia can enhance its global market position and unlock new economic opportunities by leveraging nickel potential through developing EV smelting and battery industries.

Introduction

The global shift towards electric vehicles (EVs) presents substantial opportunities for Indonesia. As the world's largest holder of nickel reserves, Indonesia is strategically positioned to become a key center for global EV battery production. Nickel, a vital component in lithium-ion batteries, has grown in demand with the increased push for EVs. Leveraging this potential supports Indonesia's economic growth and contributes to global climate change mitigation efforts.

Minister of Energy and Mineral Resources Bahlil Lahadalia emphasizes that Indonesia's abundance of natural resources, particularly nickel, provides a unique comparative advantage in the green energy and industry sectors. According to 2023 data from the U.S. Geological Survey, Indonesia holds 20 percent of the world's nickel reserves (Alamsyah, 2024).

Nickel is essential for EV battery production, a priority as the world transitions from fossil fuels to renewable energy.



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Standard EV materials comprise about 60 percent car and 40 percent battery components. Within battery production are four main materials—manganese, cobalt, lithium, and nickel—with nickel comprising up to 80 percent of the required materials (Alamsyah, 2024). This article examines government policies to maximize Indonesia's nickel reserves to support sustainable growth and strengthen Indonesia's role in the global EV industry.

Reserves and Production Potential in Indonesia

Indonesia is recognized as a country with substantial nickel reserves. Total nickel resources in Indonesia are estimated at 17.7 billion tons of ore and 177.8 million tons of metal, with accessible reserves of 5.2 billion tons of ore and 57 million tons of metal (Meilanova, 2024). These figures place Indonesia among the world's largest nickel reserves, though much remains to be fully explored and utilized.

Indonesia has contributed significantly in terms of production, producing 1.8 million metric tons of nickel—representing 50 percent of global nickel output (Anam, 2024). This substantial contribution has established Indonesia as a leader in the global nickel industry, impacting international markets and reinforcing Indonesia's pivotal role in meeting the world's nickel demands.

Increased nickel production, particularly in 2021, led to a remarkable surge in Indonesian nickel exports. Export volumes rose by 520 percent, or sixfold,

compared to the previous year (Kusnandar, 2022), boosting Indonesia's economic growth. Nickel exports are now one of the largest contributors to state revenue. Despite these advantages, Indonesia requires additional energy, specialized expertise, technology, and infrastructure to efficiently process its abundant nickel resources.

Policy for Downstreaming the Nickel Industry

As one of the world's leading producers and exporters of nickel, Indonesia has implemented policies to prohibit the export of raw nickel. This initiative began with Law No. 4 of 2009 on Mineral and Coal Mining. It was further specified in the Minister of Energy and Mineral Resources (ESDM) Regulation No. 1 of 2014, which focused on increasing added value. However, these initial regulations were deemed insufficient for effectively managing raw mineral exports and were subsequently revised. In 2020, Law No. 3, amending Law No. 4 of 2009, was introduced, followed by ESDM Ministerial Regulation No. 17 of 2020. These measures reinforce Indonesia's commitment to prohibiting raw nickel exports, focusing instead on maximizing the economic potential of domestic nickel processing.

Internal and external factors influence Indonesia's mineral and coal policy. Key internal objectives include (1) advancing downstream processing, (2) creating employment opportunities, (3) attracting investment, and (4)

driving national development (Firdaus, 2022). The primary focus is on downstreaming, or “hilirisasi,” a process that transforms raw materials (upstream industry) into finished products (downstream industry) to increase value-added for commodities like nickel. ESDM Ministerial Regulation No. 17 of 2020 further reinforces the government’s commitment to advancing downstreaming programs effectively.

The downstreaming policy aims to optimize Indonesia’s nickel potential by developing smelters and the EV industry. This approach supports national economic development by focusing on increasing the added value of nickel products and fostering growth in related industries.

The government’s commitment includes constructing smelters and enforcing a strict prohibition on exporting raw nickel, strengthening Indonesia’s position as a reliable nickel supplier for international markets. Downstreaming efforts are expected to generate jobs, improve economic conditions, and enhance quality of life. Additionally, foreign companies investing in Indonesia will require a skilled workforce, creating training and professional development opportunities. This policy naturally accelerates investment growth in Indonesia, as the country’s increasing investment appeal fosters easier and more impactful national development.

Maximizing Nickel Processing

Following the downstreaming policy that limits nickel exports, Indonesia’s revenue has surged to IDR510 trillion, a substantial increase from pre-downstreaming figures of only IDR17 trillion in 2023 (Putri, 2023). This rise in state revenue is a key reason behind the export ban, as the downstreaming approach aims to increase domestic value-added. With the export prohibition, nickel needs to undergo further processing within Indonesia before being exported. This ensures that consumer countries do not predominantly control nickel, a vital and strategic resource (Agung & Adi, 2022). The export ban represents Indonesia’s sovereign right as the resource owner.

However, adequate processing infrastructure is necessary to transform nickel into a higher-value product. Smelters, which are essential for purifying nickel, remain limited in Indonesia. To address this, the government has set a target of building 53 smelters by 2024 to optimize production and enhance nickel’s value as a refined commodity.

Conclusion

With vast nickel reserves and a significant contribution to global production, Indonesia is strategically positioned in the international nickel market. The Indonesian government has implemented protectionist policies through ESDM Ministerial Regulation No. 17 of 2020 and the updated Ministerial Regulation No. 25 of 2018 on Mineral and Coal

Mining, strongly focusing on downstreaming. These policies aim to protect Indonesia's nickel resources in global trade, foster domestic economic growth, and increase the value added by processing nickel into higher-value products. Additionally, downstreaming supports the establishment of an EV production ecosystem in Indonesia.

The DPR RI's energy-related commission needs to prioritize efforts to maximize Indonesia's nickel potential. Effective oversight is essential to meeting the target of building 53 smelters by 2024. By increasing smelter capacity, Indonesia will enhance nickel processing and generate higher-value-added products. The government should also focus on developing a skilled workforce to support Indonesia's emergence as a global center for battery production.

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Expertise Agency DPR RI
<http://pusaka.dpr.go.id>
ISSN 2088-2351

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