# Mining industry's transformation in the global energy transition



The mining industry is undergoing significant transformation as it assumes a critical role in the global energy transition, particularly concerning the demand for essential minerals that support renewable energy technologies. According to BDO’s Annual Mining Report 2025, produced by BDO in the UK, the demand for key minerals such as copper, nickel, rare earth elements, and lithium is expected to nearly triple by 2030 and quadruple by 2040.

The report outlines crucial themes that impact the sector, focusing on economic and social influences, health and safety considerations, and the anticipated challenges regarding the future workforce. These issues highlight the need for businesses within the mining industry to balance supply challenges with sustainable practices and the cultivation of innovation to underpin both the energy transition and broader economic growth.

Four key areas for mining companies to maintain competitiveness are highlighted in the report. Firstly, technological innovations such as robotics and automation are set to revolutionise the industry, improving efficiency, safety, and reducing emissions significantly. Secondly, the economic and social impacts of mining on local communities cannot be ignored, with the report noting that failure to engage and address community interests poses significant operational and legal risks.

Health and safety remain paramount, with advancements like drones for hazard identification and AI-powered monitoring systems enhancing safety measures. However, challenges including illegal mining and mental health issues continue to present obstacles that must be addressed through strong governance and safety culture. Finally, attracting younger generations to the mining sector and addressing skills shortages is essential for future workforce stability. Companies are increasingly focusing on strategic workforce planning and promoting diversity and inclusion in their hiring practices.

The report also delves into the historical negative impacts of mining, such as pollution, deforestation, and adverse social issues like forced relocations and damage to cultural heritage. As of 2023, approximately 64 per cent of all allegations concerning transition mineral mining centred on local communities and environmental impacts, with prevalent issues including human rights violations and health concerns affecting Indigenous communities.

In June 2023, two prominent mining companies withdrew their permit requests to explore minerals beneath the Jarrah forests in Western Australia following considerable community pressure and more than 1,500 complaints. This situational shift represents an increasing recognition of the necessity for mining companies to invest in local infrastructure and social services, as community investments globally surged from $0.3 billion to $1 billion from 2019 to 2022.

Global miners are also engaging with community stakeholders: one company invested in the Pilbara Air Quality Programme, while another is involved in consultations for an Indigenous Land Use Agreement. Proactive community engagement is deemed essential for sustaining long-term mining operations.

Looking forward, the report underscores the importance of prioritising environmental and social governance while planning for a future workforce equipped to meet the demands for critical minerals. The path ahead remains challenging but bears significant potential for the mining sector to contribute to a sustainable future by embracing innovation alongside robust community relationships.

In a related development, Dogecoin, originally launched in 2013 as a meme coin, is evolving into a noteworthy player within the cryptocurrency market. New initiatives are looking at integrating Dogecoin into smart contracts, thereby expanding its utility beyond speculative trading. The Dogecoin Foundation is actively working on enhancing the cryptocurrency's scalability and transaction speeds, paving the way for applications in microtransactions.

Furthermore, with the advent of Dogecoin 2.0, the community-driven project aims to harmonise innovative advancements with the core values of Dogecoin, potentially establishing new standards in decentralised finance. Elon Musk has endorsed Dogecoin's potential to reshape financial transactions significantly, advocating for lower transaction costs and greater efficiency in payment systems.

Nevertheless, environmental concerns associated with cryptocurrencies remain pertinent. The push toward adopting sustainable technologies is essential to mitigate the energy-intensive processes involved in cryptocurrency mining. As the industry grapples with balancing innovation and ecological responsibility, the future of Dogecoin reflects a broader narrative of how digital currencies adapt to market pressures and societal expectations.

Overall, Dogecoin's trajectory reveals intriguing possibilities as it shifts towards becoming a more mainstream financial tool, while mining companies also seek to evolve in response to changing global demands, social expectations, and environmental imperatives. This multifaceted evolution across both industries illustrates both the opportunities and challenges of navigating an increasingly complex economic landscape.

Source: [Noah Wire Services](https://www.noahwire.com)

## References

* <https://www.bdo.com/getmedia/647c2636-4ed1-4db7-9aeb-47c216160292/NRE-Report-BDO-UK-Annual-Mining-Report-2025.pdf> - This URL supports the claim about BDO's Annual Mining Report 2025 highlighting the mining industry's transformation and the growing demand for critical minerals like copper, nickel, and lithium. It also addresses economic, social, and health and safety concerns.
* <https://www.bdo.com.au/en-au/insights/natural-resources-energy/annual-mining-report-2025-global-trends-for-sustainable-growth> - This URL corroborates the report's focus on technological innovations, economic and social impacts, health and safety, and future workforce challenges in the mining industry.
* <https://www.iea.org/reports/global-critical-minerals-outlook-2024> - This URL from the International Energy Agency supports the growing demand for critical minerals due to the energy transition and their role in renewable energy technologies.
* <https://www.dogecoin.com/> - This URL provides information about Dogecoin, supporting the claim about its evolution and potential integration into smart contracts and decentralized finance applications.
* <https://www.coindesk.com/learn/dogecoin-2-0/> - This URL discusses Dogecoin's advancements, including Dogecoin 2.0, which aligns with the narrative of its evolving role in the cryptocurrency market.
* <https://www.bloomberg.com/news/articles/2023-06-15/mining-companies-face-growing-pressure-over-environmental-impact> - This URL highlights the environmental and social pressures faced by mining companies, aligning with the report's emphasis on community engagement and environmental governance.
* <https://news.google.com/rss/articles/CBMisgFBVV95cUxOdnFVdjZKOGZ2TTJ2T1lNbFVyQW1KazNwZWVJX1VRUndnN2txUDI4T1lPSlZkN0JXVGEwQjRoVmU1MGJhVEtySE5xaWs3X29aR0dLRy12UHdzVXlhZDhjTGpKSkNEZFEtME5vVmdKMmR5UUlFTDRQTE50Ry0ybU5UU2JmYlFuX0N1Z0lfRlRKOFdKNEo1YW1vTmZQd3dlSThIcHM0RG5MNEhFVzZZZWd5S01R?oc=5&hl=en-US&gl=US&ceid=US:en> - Please view link - unable to able to access data